BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the matter of:

DOCKET NO. 20220067-GU

Petition for rate increase by Florida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company - Fort Meade, and Florida Public Utilities Company - Indiantown Division.
_____/

VOLUME 5
PAGE 749 - 942

PROCEEDINGS:	HEARING
COMMISSIONERS PARTICIPATING:	CHAIRMAN ANDREW GILES FAY COMMISSIONER GARY F. CLARK COMMISSIONER GABRIELLA PASSIDOMO
DATE:	Wednesday, October 26, 2022
TIME:	Commenced: 9:30 a.m. Concluded: 4:15 p.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	DEBRA R. KRICK Court Reporter
APPEARANCES:	(As heretofore noted.)

PREMIER REPORTING
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I N D E X

EXHIBITS

NUMBER:		ID	ADMITTED
125	Prehearing order	872	
36-58	As identified on the CEL		888
61-63	As identified on the CEL		888
59-60	As identified on the CEL		922
64-65	As identified on the CEL		922
66	As identified on the CEL		928
67-69	As identified on the CEL		940

P R O C E E D I N G S

(Transcript follows in sequence from Volume 4.)

CHAIRMAN FAY: All right. Welcome back, everybody. We will get started with this afternoon's testimony.

I want to get with our staff real quick just before we take up the first witness. I know the parties are working on some stipulations. We will try to see if those -- that language can get verified by the time we finish up this afternoon.

With that, any other matters before we take up Witness Garrett, I believe is the next witness.

MR. SANDY: No, Mr. Chair.

CHAIRMAN FAY: Okay. Great.

Mr. Munson, you are ready to call your next witness? Oh, I apologize, this is OPC's witness. It would have been interesting to see you called OPC's witness. To be fair, you did consider it. I saw that, Mr. Munson.

All right. Ms. Christensen, you are recognized.

MS. CHRISTENSEN: Thank you, we call Mr. Garrett to the stand.

Can you please state your full -- well, let me

ask you this, first. Have you been sworn in yet?

THE WITNESS: I have not.

MS. CHRISTENSEN: Mr. Chairman, I don't believe Mr. Garrett was here yesterday and sworn in with the other witnesses. Can I ask to have him sworn in at this time?

CHAIRMAN FAY: Absolutely, yeah. If you wouldn't mind just stand real quick. We will just ask -- okay, yeah, the other witness is sworn in, correct?

MS. CHRISTENSEN: Yes, he was here yesterday.

CHAIRMAN FAY: Okay.

Whereupon,

DAVID J. GARRETT

was called as a witness, having been first duly sworn to speak the truth, the whole truth, and nothing but the truth, was examined and testified as follows:

CHAIRMAN FAY: Okay. Great.

Thank you, Ms. Christensen.

MS. CHRISTENSEN: Great.

EXAMINATION

BY MS. CHRISTENSEN:

Q Mr. Garrett, can you please state your full name and business address for the record?

A My name is David Garrett. My address is 101

Park Avenue, Suite 1125, Oklahoma City, Oklahoma, 73102.

Q And did you cause to be prefiled in this docket prefiled direct testimony consisting of 97 pages?

A Yes.

Q And do you have any corrections to your prefiled testimony?

A No.

Q And if I were to ask you those same questions today as were asked in your prefiled testimony, would your answers be the same?

A Yes.

Q Now, did your prefile testimony also include 23 exhibits attached to that prefiled testimony labeled DJ-1 through DJ-23?

A Yes.

Q Do you have any corrections to make to any of your exhibits?

A No.

Q And did you cause to be filed supplemental testimony on September 27, 2022, consisting of five pages in this docket?

A Yes.

Q Do you have any corrections to that supplemental testimony?

A No.

Q And if I were to ask you the same questions, would your answers be the same today?

A Yes.

Q And did you -- did your supplemental testimony contain prefiled exhibits which were attached and labeled DJ-S18, DJ-S20 and DJ-S21?

A Yes.

Q Do you have any corrections to any of those exhibits?

A No.

Q I would ask at this time that you provide a summary of both your prefiled testimony and your supplemental testimony.

A Okay. Good afternoon, Commissioners.

In my testimony, I addressing the cost of capital, fair rate of return and capital structure for FPUC in response to the direct testimony of company witness Paul Moul. I also address the company's proposed depreciation rates in response to the direct testimony of company witness Patricia Lee, who sponsors the company's depreciation study.

Regarding the company's cost of capital, the Commission should reject FPUC's proposed return on equity of 11.25 percent as it is excessive and unsupported. An objective cost of equity analysis shows

that FPUC's cost of equity is about 7.8 percent based upon review of the company's proxy group.

The legal standards governing this issue do not mandate that the rewarded ROE equate to the result of a particular financial model, but rather, that it be reasonable under the circumstances. In my opinion, it is not appropriate to consider and awarded ROE that is significantly higher than the regulated utility's cost of equity.

Accordingly, I recommend the Commission award FPUC an authorized ROE of 9.25 percent. Although, 9.25 percent is still clearly above FPUC's market-based cost of equity estimate of 7.8 percent, it represents a gradual, yet meaningful move, towards market-based cost of equity.

The Commission should also reject FPUC's proposed capital structure consisting of 55.1 percent equity. This is entirely inconsistent with the capital structures of FPUC's proxy group. The proxy group's average capital structure equates to a long-term debt ratio of 52 percent and a common equity ratio of 48 percent. The company's proposed equity rich capital structure has the effect of increasing capital costs beyond a reasonable level.

To arrive at my cost of equity estimate of 7.8

percent I averaged the results of two variations of the DCF model, the result of the CAPM, and the CAPM adjusted to the proxy group's average debt ratio under the Hamada model.

Regarding the DCF model, I used the same proxy group as company witness Mr. Moul, and considered recent stock prices and dividends of the proxy group, I also estimated two different long-term growth rates. The highest of my DCF models produced a cost of equity estimate of only 8.5 percent, which is still notably lower than my a 9.25 percent.

With the CAPM model, I also used the same proxy group as Mr. Moul. The base CAPM model considers three primary inputs, the risk-free rate, beta and the equity risk premium.

For the risk tree rate, I considered recent fields yields on 30-year bonds, analysts commonly use as a proxy for the risk-free rate. For the beta term, I used betas published by Value Line, which is also a common practice in rate proceedings. For the equity risk premium, I considered the results of expert surveys and the published equity risk premiums from respected analysts in academics. I also conducted my own ERP estimate. All of these sources for the equity risk premium produced a tight range for the equity risk

premium of only 30 basis points, with an average ERP of 5.6 percent, which is what I used in my CAPM model.

My capital structure analysis primarily considered the average capital structures of the proxy group. The other inputs we obtained from the proxy group to conduct the DCF and CAPM are necessarily intertwined with the capital structures of the proxy group. Ignoring the capital structures of the proxy group while accepting stock prices, dividends, earnings, growth, betas and the other factors from the same proxy group using the CAPM and DCF model essentially amounts to cherrypicking the results.

Furthermore, each one of the proxy companies is financially healthy, providing yet another indication that the average capital structure of the proxy group should be it strongly considered when setting a fair ratemaking capital structure for FPUC. The average capital structure of the proxy group consists of 52 percent debt and 48 percent equity.

For my depreciation analysis, I reviewed the depreciation study conducted by the company. Unfortunately, the company did not provide the data required to conduct actuarial service life analysis, where Iowa curves can be fitted to observe life tables or relatively more accurate service life indications.

Instead, FPUC is primarily relying on a comparative analysis using only Florida utilities. Service lives approved for other gas utilities indicate longer service lives could be considered reasonable for the several accounts at issue.

In her testimony, Ms. Lee acknowledges that any statistical analysis would likely yield extremely long lives due to the minimal retirement data. But unfortunately, the other parties and Commission don't have the opportunity to draw their own conclusions from that data, which was not provided by the company.

This concludes my testimony summary.

MS. CHRISTENSEN: Commissioner, I would ask, if I hadn't done it before, to have his prefiled testimony and the prefiled supplemental testimony inserted into the record as though read.

CHAIRMAN FAY: Okay. Show the testimony and including the supplemental from September 27th entered into the record as though read.

MS. CHRISTENSEN: Correct. And we will address the exhibits at the end of cross-examination.

(Whereupon, prefiled direct testimony of David J. Garrett was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Florida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company – Fort Meade, and Florida Public Utilities Company Indiantown Division	DOCKET NO. 20220067-GU

DIRECT TESTIMONY

OF

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ON BEHALF OF THE FLORIDA OFFICE OF PUBLIC COUNSEL

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TABLE OF CONTENTS

LIST OF EXHIBITS

Part One: Cost of Capital

Part Two: Depreciation

LIST OF APPENDICES

I. INTRODUCTION

Q. STATE YOUR NAME AND OCCUPATION.

A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I am the managing member of Resolve Utility Consulting PLLC.

Q. SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I received a B.B.A. with a major in Finance, an M.B.A., and a Juris Doctor from the University of Oklahoma. I worked in private legal practice for several years before accepting a position as assistant general counsel at the Oklahoma Corporation Commission in 2011. At the commission, I worked in the Office of General Counsel in regulatory proceedings. In 2012, I began working for the Public Utility Division as a regulatory analyst providing testimony in regulatory proceedings. After leaving the commission, I formed Resolve Utility Consulting PLLC, where I have represented various consumer groups and state agencies in utility regulatory proceedings, primarily in the areas of cost of capital and depreciation. I am a Certified Depreciation Professional with the Society of Depreciation Professionals. I am also a Certified Rate of Return Analyst with the Society of Utility and Regulatory Financial Analysts. A more complete description of my qualifications and regulatory experience is included in my curriculum vitae.[1]

[1] Exhibit DJG-1.

Q. DESCRIBE THE PURPOSE AND SCOPE OF YOUR TESTIMONY IN THIS PROCEEDING.

A. I am testifying on behalf of the Florida Office of Public Counsel ("OPC") in response to the petition for rate increase by Florida Public Utilities Company-Gas Division, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company – Fort Meade, and Florida Public Utilities Company – Indiantown Division (collectively "FPUC" or the "Company"). I address the cost of capital and fair rate of return for FPUC in response to the direct testimony of Company witness Paul Moul. I also address the appropriate proposed capital structure for the combined companies. I also address the Company's proposed depreciation rates in response to the direct testimony of Company witness Patricia Lee, who sponsors the Company's depreciation study.

II. EXECUTIVE SUMMARY – COST OF CAPITAL

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION TO THE COMMISSION.

A. My cost of capital testimony can be distilled to the following recommendations:

- The Commission should reject the Company's proposed return on equity ("ROE") of 11.25% as excessive and unsupported. An objective cost of equity analysis shows that FPUC's cost of equity is about 7.8%, based upon review of the Company's proxy group.

- The legal standards governing this issue do not mandate that the awarded ROE equate to the result of a particular financial model, but rather that it be reasonable under the circumstances. In my opinion, it is not appropriate to consider an awarded ROE that is significantly higher than a regulated utility's cost of equity. Accordingly, I recommend the Commission award FPUC an authorized ROE of 9.25%. Although 9.25% is still clearly above FPUC's market-based cost of equity estimate of 7.8%, it represents a gradual yet meaningful move towards market-based cost of equity.

- I recommend the Commission reject FPUC's proposed capital structure equating to a long-term debt ratio of 39.4% and a common equity ratio of 55.1% or a debt-equity ratio of 0.72. This is entirely inconsistent with the capital structures of FPUC's proxy group which I adopted. The proxy group's average capital structure equates to a long-term debt ratio of 52 % and a common equity ratio of 48 %. The debt-equity ratio of the proxy group is 1.08, which means that debt exceeds equity in the capital structure. The Company's proposed capital structure has the effect of increasing capital costs beyond a reasonable level for customers because it does not contain enough low-cost debt relative to high-cost equity.

- My recommended ROE of 9.25% coupled with adjustments to the Company's proposed capital structure equate to an overall weighted average rate of return of 5.2%, which is reflected in the following table.[2]

Figure 1:
OPC'S Weighted Average Rate of Return Proposal

Capital Component	Proposed Ratio	Cost Rate	Weighted Cost
Common Equity	39.670%	9.25%	3.67%
Long Term Debt	38.130%	3.48%	1.33%
Short Term Debt	4.570%	3.28%	0.15%
Customer Deposits	2.370%	2.37%	0.06%
Deferred Taxes	9.270%		
Deferred Tax Common	0.020%		
Regulatory Tax Liability	5.980%		
Reg Tax Liability Common	0.010%		
Total	100.0%		5.20%

Adopting my proposed adjustments would result in an overall weighted average authorized rate of return of 5.2%. The details supporting my proposed adjustments are discussed further in my testimony.[3]

[2] *See also* Exhibit DJG-17.

[3] See also the direct testimony of OPC witness Ralph Smith.

A. Overview

Q. PLEASE EXPLAIN THE CONCEPT AND SIGNIFICANCE OF THE COST OF CAPITAL.

A. The term cost of capital, or Weighted Average Cost of Capital (WACC),[4] refers to the weighted average cost of the components within a company's capital structure, including the costs of both debt and equity. The three primary components of a company's WACC include the following:

1. Cost of Debt;
2. Cost of Equity; and
3. Capital Structure.

Determining the cost of debt is relatively straight-forward. Interest payments on bonds are contractual, embedded costs that are generally calculated by dividing total interest payments by the book value of outstanding debt. Determining the cost of equity, on the other hand, is more complex. Unlike the known, contractual, and embedded cost of debt, there is not any explicitly quantifiable "cost" of equity. Instead, the cost of equity must be estimated through various financial models. Cost of capital is expressed as a weighted average because it is based upon a company's relative levels of debt and equity, as defined by the particular capital structure of that company. The basic WACC equation used in regulatory proceedings is presented as follows:

[4] The terms cost of capital and WACC are synonymous and used interchangeably throughout this testimony.

Equation 1:
Weighted Average Cost of Capital

$$WACC = \left(\frac{D}{D+E}\right)C_D + \left(\frac{E}{D+E}\right)C_E$$

where: $WACC$ = *weighted average cost of capital*
D = *book value of debt*
C_D = *embedded cost of debt capital*
E = *book value of equity*
C_E = *market-based cost of equity capital*

Companies in the competitive market often use their WACC as the discount rate to determine the value of capital projects, so it is important that this figure be estimated accurately.

Q. HOW DO EXPERTS AND REGULATORS TYPICALLY ASSESS THE ROES AWARDED TO UTILITIES AND THE CORRESPONDING OPPORTUNITY FOR SHAREHOLDERS?

A. Investors, company managers, and academics around the world have used models, such as the Capital Asset Pricing Model ("CAPM") and Discounted Cash Flow ("DCF") to closely estimate cost of equity for many years, and weigh the results achieved against the results from proxy groups. Each of these concepts will be discussed in more detail later in my testimony.

Q. HAVE YOU CONSIDERED THE EFFECTS OF INFLATION IN YOUR COST OF EQUITY ESTIMATE?

A. Yes. The recent increase in inflation has affected the entire U.S. market, including utility customers. Arguably the negative impacts of inflation disproportionately affect utility customers relative to utility shareholders. Regardless, I have taken an objective approach when considering the impacts of inflation on the cost of equity. Specifically, in cost of

equity modeling, we are primarily concerned with the yield on U.S. Treasury securities (which can fluctuate given the Federal Reserve's response to inflation) more directly than the current level of inflation. I have directly considered the yields on 30-year Treasury bonds as a proxy for the risk-free rate in my CAPM analysis, which is discussed in more detail later in my testimony.

B. Recommendation

Q. PLEASE SUMMARIZE YOUR ROE RECOMMENDATION TO THE FLORIDA PUBLIC SERVICE COMMISSION (COMMISSION).

A. Pursuant to the legal and technical standards guiding this issue, the awarded ROE should be based on, or reflective of, the utility's cost of equity. FPUC's estimated cost of equity is about 7.8%, when using reasonable inputs. However, legal standards do not mandate the awarded ROE be set exactly equal to the cost of equity. Rather, in *Federal Power Commission v. Hope Natural Gas Co*., the U.S. Supreme Court found that, although the awarded return should be based on a utility's cost of equity, the "end result" should be just and reasonable.[5] Therefore, I recommend the Commission award FPUC an ROE of 9.25%. In my opinion, an awarded ROE that is set too far above a regulated utility's cost of equity (which in this case is only about 7.8%) runs the risk of being at odds with the standards set forth in *Hope*[6] and *Bluefield Water Works & Improvement Co. v. Public Service*

[5] *See Federal Power Commission v. Hope Natural Gas Co*., 320 U.S. 591, 603 (1944). Here, the Court states that it is not mandating the various permissible ways in which the rate of return may be determined, but instead indicates that the end result should be just and reasonable. This is sometimes called the "end result" doctrine.

[6] *Id*.

Commission of West Virginia.[7] In other words, setting the awarded ROE far above the cost of equity results in an excess transfer of wealth from customers to the utility, which is never appropriate.

Q. HOW DOES YOUR RECOMMENDED ROE IN THIS CASE COMPARE WITH THE COMPANY'S CURRENT AUTHORIZED ROE?

A. The average current pre-consolidation ROEs for Florida Public Utilities Company-Gas Division (10.85%), Florida division of Chesapeake Utilities (10.8%), and Florida Public Utilities Company- Indiantown (11.5%), is 11.0%.[8] This pre-consolidation amount clearly exceeds any reasonable estimate for the Company's current cost of equity as a consolidated Company under current market conditions (which is about 7.8%). Thus, a gradual, yet meaningful move towards market-based cost of equity is appropriate in order to mitigate the excess wealth transfer from customers to shareholders. An authorized ROE of 9.25% represents a move of slightly more than halfway between the Company's existing pre-consolidation authorized ROEs and a post consolidation market-based cost of equity. In that regard, it would be reasonable and appropriate for the Commission to authorize an ROE of 9.25% for the Company in this case, when applied to the appropriate capital structure reflecting an equity ratio of approximately 48.2%.

[7] *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 692–93 (1923).

[8] See Florida Public Utilities Company's Objections and Reponses to Citizen's First Set of Interrogatories, Interrogatory No. 1.

III. EXECUTIVE SUMMARY – DEPRECIATION

Q. SUMMARIZE THE KEY POINTS OF YOUR TESTIMONY REGARDING DEPRECIATION.

A. In the context of utility ratemaking, "depreciation" refers to a cost allocation system designed to measure the rate by which a utility may recover its capital investments in a systematic and rational manner. There are two primary components of depreciation rates that must be estimated and are often the most pertinent issues in regulatory proceedings – service life and net salvage. Typically, the service lives proposed in depreciation studies are based on voluminous amounts of historical data. Through a combination of actuarial and simulated analysis, depreciation analysts can observe retirement patterns and trends in the historical data in order to make reasonably accurate projections of remaining life. In this case, however, FPUC did not provide the historical data required to conduct an accurate, company-specific analysis of the service life of its assets. Instead, FPUC based its service life proposals primarily on the approved service lives of other Florida utilities. To the extent the approved service lives among the Florida peer group on which FPUC relied were also based on a similar peer group comparison, it runs the risk of creating a feedback loop that may not be adequately reflective of objective historical retirement data.

As discussed further in my testimony, the legal standards governing depreciation rates require that the utility make a convincing showing that its proposed depreciation rates are not excessive. Again, this showing is typically based on adequate amounts of historical retirement data upon which reasonable service life estimates can be made. The fact that FPUC has not provided such information in this case does not absolve it from its burden to

make a convincing showing that its proposed depreciation rates (including service lives) are reasonable.

Since FPUC did not provide adequate historical retirement data upon which to conduct an accurate service life analysis, a peer group comparison is an approach we can use to establish a relatively objective basis for service life estimates. My testimony not only discusses the service lives of other Florida utilities, but also looks at the approved service lives of other utilities over several other utilities in other jurisdictions. The approved service lives from the utilities outside of Florida were based on the type of actuarial analysis typically conducted to estimate service lives. It is important for the Commission to see the approved service lives of utilities that are not only in other regions, but that were also based on a thorough statistical analysis of voluminous amounts of historical retirement data. The costal utilities group provides a comparison of utilities in similar environmental conditions outside of Florida. The results of my peer group analyses are summarized in the table below.

Figure 2:
Peer Group Analysis Summary

Acct	Description	FPUC Proposed	Liberty	NIPSCO	PNG	FCG	PGS
3761	Mains - Plastic	75	71	85	65	55	75
3762	Mains - Steel	65	71	85	65	55	65
378	M&R Equip. - General	40	51	55	55	30	40
379	M&R Equip. - City Gate	40	51	55	55	35	50
3801	Services - Plastic	55	50	68	60	54	55
381	Meters	28	45	36	29	20	19
	Average	**51**	**57**	**64**	**55**	**42**	**51**

As shown in this table, the approved lives from the outside peer group indicate slightly longer lives for several of the accounts in dispute. This is information the Commission can consider when setting fair depreciation rates in this case.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION TO THE COMMISSION REGARDING DEPRECIATION RATES.

A. I recommend the Commission adopt the depreciation rates presented in Exhibit DJG-20.[9] Adopting my proposed depreciation rates would result in an adjustment reducing the Company's proposed annual depreciation accrual by $671,930 when applied to the filed plant and reserve balances as of the depreciation study date.[10]

[9] OPC's adjustment to depreciation expense is presented in the direct testimony of Ralph Smith.

[10] Exhibit DJG-18.

PART ONE: COST OF CAPITAL

IV. LEGAL STANDARDS

Q. DISCUSS THE LEGAL STANDARDS GOVERNING THE AWARDED RATE OF RETURN ON CAPITAL INVESTMENTS FOR REGULATED UTILITIES.

A. In *Wilcox v. Consolidated Gas Co. of New York*, the U.S. Supreme Court first addressed the meaning of a fair rate of return for public utilities.[11] The Court found that "the amount of risk in the business is a most important factor" in determining the appropriate allowed rate of return.[12] As referenced earlier, in two subsequent landmark cases, the Court set forth the standards by which public utilities are allowed to earn a return on capital investments. First, in *Bluefield*, the Court held:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public. . . but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. 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.[13]

Then, in *Hope*, the Court expanded on the guidelines set forth in *Bluefield* and stated:

[11] *Wilcox v. Consolidated Gas Co. of New York*, 212 U.S. 19 (1909).

[12] *Id.* at 48.

[13] *Bluefield* at 692–93.

> From the investor or company point of view, it is important that there be enough revenue not only for operating expenses, but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard, the 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.[14]

The cost of capital models I have employed in this case are designed to be in accordance with the foregoing legal standards.

Q. IS IT IMPORTANT THAT THE AWARDED RATE OF RETURN BE BASED ON THE COMPANY'S ACTUAL COST OF CAPITAL?

A. Yes. The U.S. Supreme Court in *Hope* makes it clear that the allowed return should be based on the actual cost of capital.[15] Moreover, the awarded return must also be fair, just, and reasonable under the circumstances of each case. Among the circumstances that must be considered in each case are the broad economic and financial impacts to the cost of equity and awarded return caused by market forces and other factors. As a starting point, however, scholars agree that the actual cost of capital must be considered:

[14] *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944) (emphasis added) (internal citations omitted).

[15] The term "cost of capital" includes both debt and equity. The overall awarded rate of return should be based on the utility's cost of capital, which the awarded ROE should be based in the utility's cost of equity.

> Since by definition the cost of capital of a regulated firm represents precisely the expected return that investors could anticipate from other investments while bearing no more or less risk, and since investors will not provide capital unless the investment is expected to yield its opportunity cost of capital, the correspondence of the definition of the cost of capital with the court's definition of legally required earnings appears clear.[16]

The models I have employed in this case closely estimate the Company's true cost of equity. If the Commission sets the awarded return based on my lower and more reasonable rate of return, it will better comply with the U.S. Supreme Court's standards, allow the Company to maintain its financial integrity, and achieve reasonable returns for its investors. On the other hand, if the Commission sets the allowed rate of return much higher than the true cost of capital, as requested by FPUC, it will result in an inappropriate transfer of wealth from ratepayers to shareholders.[17]

Q. WHAT DOES THIS LEGAL STANDARD MEAN FOR DETERMINING THE AWARDED RETURN AND THE COST OF CAPITAL?

A. The awarded return and the cost of capital are different but related concepts. On the one hand, the legal and technical standards encompassing this issue require that the awarded return reflect the true cost of capital. Yet on the other hand, the two concepts differ in that the legal standards do not mandate that awarded returns exactly match the cost of capital. Instead, awarded returns are set through the regulatory process and may be influenced by various factors other than objective market drivers. By contrast, the cost of capital should

[16] A Lawrence Kolbe, James A. Read, Jr. & George R. Hall, *The Cost of Capital: Estimating the Rate of Return for Public Utilities* 21 (The MIT Press 1984).

[17] Roger A. Morin, *New Regulatory Finance* 23–24 (Public Utilities Reports, Inc. 2006) (1994) ("[I]f the allowed rate of return is greater than the cost of capital, capital investments are undertaken and investors' opportunity costs are more than achieved. Any excess earnings over and above those required to service debt capital accrue to the equity holders, and the stock price increases. In this case, the wealth transfer occurs from ratepayers to shareholders.").

be evaluated objectively and be closely tied to economic realities, such as stock prices, dividends, growth rates, and, most importantly, risk. The cost of capital can be estimated by financial models used by firms, investors, and academics around the world for decades. The problem is, with respect to regulated utilities, there has been a trend in which awarded returns fail to closely track with market-based cost of capital, as further discussed below. To the extent this occurs, the results are detrimental to ratepayers and the state's economy.

Q. DESCRIBE THE ECONOMIC IMPACT THAT OCCURS WHEN THE AWARDED RETURN STRAYS TOO FAR FROM THE U.S. SUPREME COURT'S COST OF EQUITY STANDARDS.

A. When the awarded ROE is set far above the cost of equity, it runs the risk of violating the U.S. Supreme Court's standards. This has the effect of diverting dollars from ratepayers for their internal or business uses that would otherwise support the local or state economy to the utility's shareholders at large. Moreover, establishing an awarded return that far exceeds true cost of capital effectively prevents the awarded returns from changing along with economic conditions. This is especially true given the fact that regulators tend to be influenced by the awarded returns in other jurisdictions, regardless of the various unknown factors influencing those awarded returns. If regulators rely too heavily on the awarded returns from other jurisdictions, they can create a cycle over time that bears little relation to the market-based cost of equity. In fact, this is exactly what we have observed since 1990. This is yet another reason why it is crucial for regulators to put more emphasis on the target utility's actual cost of equity than on the awarded returns from other jurisdictions. Awarded returns may be influenced by settlements and other political factors not based on

true market conditions. In contrast, the true cost of equity as estimated through objective models is not influenced by these factors but is instead driven by market-based factors.

Q. CAN YOU ILLUSTRATE AND PROVIDE A COMPARISON OF THE RELATIONSHIP BETWEEN AWARDED UTILITY RETURNS AND MARKET COST OF EQUITY SINCE 1990?

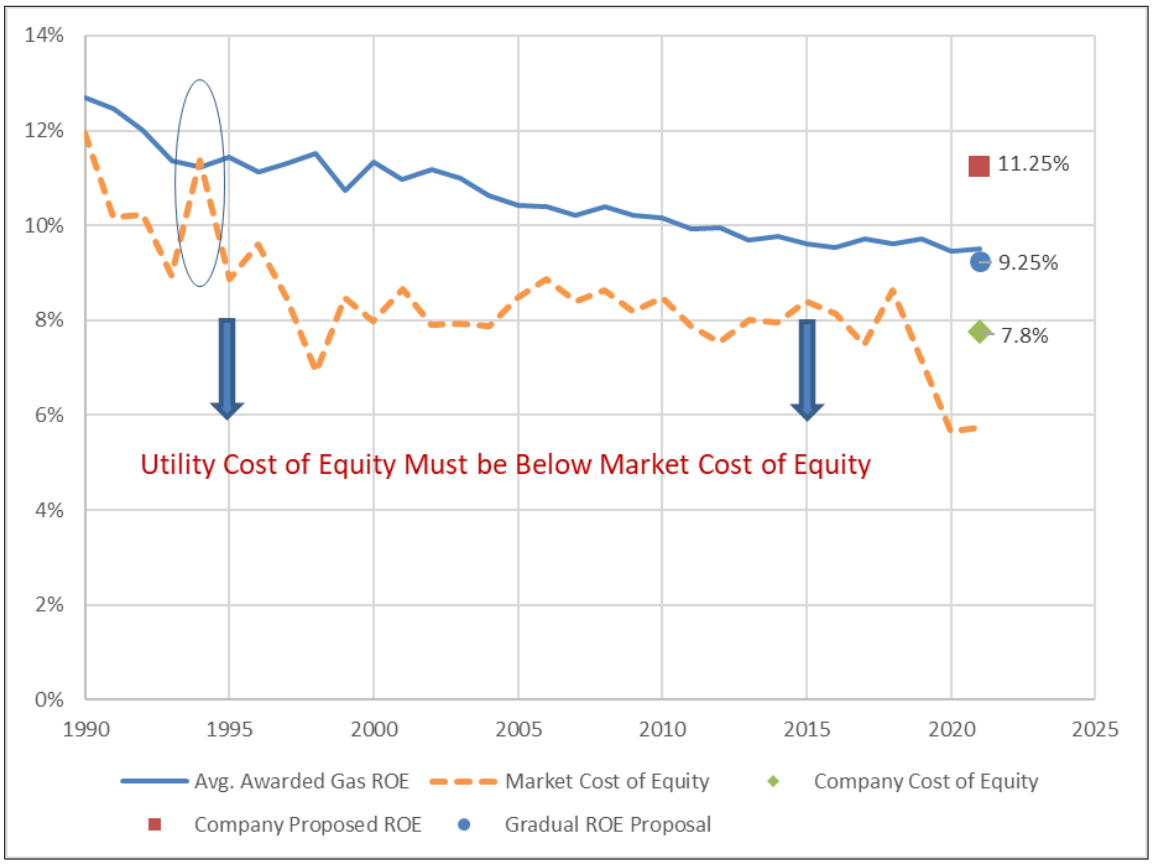
A. Yes. As shown in the figure below, awarded returns for electric and gas utilities have been above the average required market return since 1990.[18] Because utility stocks are consistently far less risky than the average stock in the marketplace, the cost of equity for utility companies is less than the market cost of equity.

To illustrate this fact, the graph in the figure below shows three trend lines. The top two line are the average annual awarded returns since 1990 for U.S. regulated electric and gas utilities. The bottom line is the required market return over the same period. As discussed in more detail later in my testimony, the required market return is essentially the return that investors would require if they invested in the entire market and, as such, the required market return is essentially the cost of equity of the entire market. It is undisputed that utility stocks are less risky than the average stock in the market. Accordingly, the utilities' cost of equity must be less than the market cost of equity.[19] Thus, awarded returns (the solid line) should generally be below the market cost of equity (the dotted line), since awarded returns are supposed to be based on true cost of equity.

[18] Exhibit DJG-13.

[19] This fact can be objectively measured through a term called "beta," as discussed later in the testimony. Utility betas are less than one, which means utility stocks are less risky than the "average" stock in the market.

Figure 3:
Awarded ROEs vs. Market Cost of Equity



Notwithstanding the data in this graph, awarded ROEs have been consistently above the market cost of equity for many years. Also as shown in this graph, since 1990, there was only one year in which the average awarded ROE was below the market cost of equity. In 1994, regulators awarded ROEs that were the closest to utilities' market-based cost of equity. In my opinion, when awarded ROEs for utilities are below the market cost of equity, regulators more closely conform to the standards set forth by *Hope* and *Bluefield* and minimize the excess wealth transfer from ratepayers to shareholders.

Q. HAVE OTHER ANALYSTS COMMENTED ON THIS NATIONAL PHENOMENON OF AWARDED ROES EXCEEDING MARKET-BASED COST EQUITY FOR UTILITIES?

A. Yes. In his article published in Public Utilities Fortnightly in 2016, Steve Huntoon observed that even though utility stocks are less risky than the stocks of competitive industries, utility stocks have nonetheless outperformed the broader market.[20] Specifically, Mr. Huntoon notes the following three points which lead to a problematic conclusion:

1. Jack Bogle, the founder of Vanguard Group and a Wall Street legend, provides rigorous analysis that the long-term total return for the broader market will be around 7 percent going forward. Another Wall Street legend, Professor Burton Malkiel, corroborates that 7 percent in the latest edition of his seminal work, A Random Walk Down Wall Street.

2. Institutions like pension funds are validating the first point by piling on risky investments to try and get to a 7.5 percent total return, as reported by the Wall Street Journal.

3. Utilities are being granted returns on equity around 10 percent.[21]

Other scholars have also observed that awarded ROEs have not appropriately tracked with declining interest rates over the years, and that excessive awarded ROEs have negative economic impacts. In a white paper issued in 2017, Charles S. Griffey stated:

[20] Steve Huntoon, "Nice Work If you can Get It," Public Utilities Fortnightly (Aug. 2016).

[21] *Id*.

> The "risk premium" being granted to utility shareholders is now higher than it has ever been over the last 35 years. Excessive utility ROEs are detrimental to utility customers and the economy as a whole. From a societal standpoint, granting ROEs that are higher than necessary to attract investment creates an inefficient allocation of capital, diverting available funds away from more efficient investments. From the utility customer perspective, if a utility's awarded and/or achieved ROE is higher than necessary to attract capital, customers pay higher rates without receiving any corresponding benefit.[22]

It is interesting that both Mr. Huntoon and Mr. Griffey use the word "sticky" in their articles to describe the fact that awarded ROEs have declined at a much slower rate than interest rates and other economic factors resulting in a decline in capital costs and expected returns on the market. It is not hard to see why this phenomenon of "sticky" ROEs has occurred. Because awarded ROEs are often based primarily on a comparison with other awarded ROEs around the country, the average awarded returns effectively fail to adapt to true market conditions, and regulators seem reluctant to deviate from the average. Once utilities and regulatory commissions become accustomed to awarding rates of return higher than market conditions actually require, this trend becomes difficult to reverse. The fact is, utility stocks are less risky than the average stock in the market, and thus, awarded ROEs should be less than the expected return on the market. However, that is rarely the case. My proposal assists the Commission in "see[ing] the gap between allowed returns and cost of capital,"[23] and reconciling this issue in an equitable manner.

[22] Charles S. Griffey, "When 'What Goes Up' Does Not Come Down: Recent Trends in Utility Returns," White Paper (February 2017).

[23] Leonard Hyman & William Tilles, "Don't Cry for Utility Shareholders, America," Public Utilities Fortnightly (October 2016).

Q. SUMMARIZE THE LEGAL STANDARDS GOVERNING THE AWARDED ROE ISSUE.

A. The Commission should strive to move the awarded return to a level more closely aligned with the Company's actual, market-derived cost of capital while keeping in mind the following two legal principles outlined below.

1. Risk is the most important factor when determining the awarded return. The awarded return should be commensurate with those returns on investments of corresponding risk.

The legal standards articulated in *Hope* and *Bluefield* demonstrate that the U.S. Supreme Court understands one of the most basic, fundamental concepts in financial theory: the more (or less) risk an investor assumes, the more (or less) return the investor requires. Since utility stocks are low risk, the return required by equity investors should be relatively low. I have used financial models to closely estimate the Company's cost of equity, and these financial models account for risk. The cost of equity models confirm the industry experiences relatively low levels of risk by producing relatively low cost of equity results. In turn, the awarded ROE in this case should reflect FPUC's relatively low market risk.

2. The awarded return should be sufficient to assure financial soundness and integrity under efficient management.

Because awarded returns in the regulatory environment have not closely tracked market-based trends and commensurate risk, utility companies have been able to remain more than financially sound, perhaps despite management inefficiencies. In fact, the transfer of wealth from ratepayers to shareholders has been so far removed from actual cost-based drivers that a utility could remain financially sound even under relatively inefficient management. Therefore, regulatory commissions should strive to set utilities' returns

based on actual market conditions to promote prudent and efficient management and minimize economic waste.

V. GENERAL CONCEPTS AND METHODOLOGY

Q. DISCUSS YOUR APPROACH TO ESTIMATING THE COST OF EQUITY IN THIS CASE.

A. While a competitive firm must estimate its own cost of capital to assess the profitability of competing capital projects, regulators determine a utility's cost of capital to establish a fair rate of return. The legal standards set forth above do not include specific guidelines regarding the models that must be used to estimate the cost of equity for utilities. Over the years, however, regulatory commissions have consistently relied on several models. The models I have employed in this case have been the two most widely used and accepted in regulatory proceedings for many years. The specific inputs and calculations for these models are described in more detail below.

Q. PLEASE EXPLAIN WHY YOU USED MULTIPLE MODELS TO ESTIMATE THE COST OF EQUITY.

A. These models attempt to measure the return on equity required by investors by estimating several different inputs. It is preferable to use multiple models because the results of any one model may contain a degree of imprecision, especially depending on the reliability of the inputs used at the time of conducting the model. By using multiple models, the analyst can compare the results of the models and look for outlying results and inconsistencies. Likewise, if multiple models produce a similar result, it may indicate a narrower range for the cost of equity estimate.

Q. PLEASE DISCUSS THE BENEFITS OF CHOOSING A PROXY GROUP OF COMPANIES IN CONDUCTING COST OF CAPITAL ANALYSES.

A. The cost of equity models in this case can be used to estimate the cost of capital of any individual, publicly traded company. There are advantages, however, to conducting cost of capital analysis on a proxy group of companies that are comparable to the target company. First, it is better to assess the financial soundness of a utility by comparing it to a group of other financially sound utilities. Second, using a proxy group provides more reliability and confidence in the overall results because there is a larger sample size. Finally, the use of a proxy group is often a pure necessity when the target company is a subsidiary that is not publicly traded, as is the case here. This is because the financial models used to estimate the cost of equity require information from publicly traded firms, such as stock prices and dividends.

Q. DESCRIBE THE PROXY GROUP YOU SELECTED IN THIS CASE.

A. In this case, I chose to use the same proxy group used by Mr. Moul. There could be reasonable arguments made for the inclusion or exclusion of a particular company in a proxy group; however, the cost of equity results are influenced far more by the underlying assumptions and inputs to the various financial models than the composition of the proxy group.[24] By using the same proxy group, we can remove a relatively insignificant variable from the equation and focus on the primary factors driving FPUC's cost of equity estimate.

[24] Exhibit DJG-2.

VI. RISK AND RETURN CONCEPTS

Q. DISCUSS THE GENERAL RELATIONSHIP BETWEEN RISK AND RETURN.

A. Risk is among the most important factors for the Commission to consider when determining the allowed return. Thus, it is necessary to understand the relationship between risk and return. There is a direct relationship between risk and return: the more (or less) risk an investor assumes, the larger (or smaller) return the investor will demand. There are two primary types of risk: firm-specific risk and market risk. Firm-specific risk affects individual companies, while market risk affects all companies in the market to varying degrees.

Q. DISCUSS THE DIFFERENCES BETWEEN FIRM-SPECIFIC RISK AND MARKET RISK.

A. Firm-specific risk affects individual companies, rather than the entire market. For example, a competitive firm might overestimate customer demand for a new product, resulting in reduced sales revenue. This is an example of a firm-specific risk called "project risk."[25] There are several other types of firm-specific risks, including: (1) "financial risk" – the risk that equity investors of leveraged firms face as residual claimants on earnings; (2) "default risk" – the risk that a firm will default on its debt securities; and (3) "business risk" – which encompasses all other operating and managerial factors that may result in investors realizing less than their expected return in that particular company. While firm-specific risk affects individual companies, market risk affects all companies in the market to varying degrees. Examples of market risk include interest rate risk, inflation risk, and the

[25] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 62–63 (3rd ed., John Wiley & Sons, Inc. 2012).

risk of major socio-economic events. When there are changes in these risk factors, they affect all firms in the market to some extent.[26]

Analysis of the U.S. market in 2001 provides a good example for contrasting firm-specific risk and market risk. During that year, Enron Corp.'s stock fell from $80 per share to its low when the company filed bankruptcy at the end of the year. If an investor's portfolio had held only Enron stock at the beginning of 2001, this irrational investor would have lost the entire investment by the end of the year due to assuming the full exposure of Enron's firm-specific risk (in that case, imprudent management). On the other hand, a rational, diversified investor who invested the same amount of capital in a portfolio holding every stock in the S&P 500 would have had a much different result that year. The rational investor would have been relatively unaffected by the fall of Enron because his or her portfolio included about 499 other stocks. Each of those stocks, however, would have been affected by various market risk factors that occurred that year. Thus, the rational investor would have incurred a relatively minor loss due to market risk factors, while the irrational investor would have lost everything due to firm-specific risk factors.

Q. CAN EQUITY INVESTORS REASONABLY MINIMIZE FIRM-SPECIFIC RISK?

A. Yes. A fundamental concept in finance is that firm-specific risk can be eliminated through diversification.[27] If someone irrationally invested all his or her funds in one firm, he or she would be exposed to all the firm-specific risk and the market risk inherent in that single firm. Rational investors, however, are risk-averse and seek to eliminate risk they can

[26] *See* Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments* 149 (9th ed., McGraw-Hill/Irwin 2013).

[27] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 179–80 (3rd ed., South Western Cengage Learning 2010).

control. Investors can eliminate firm-specific risk by adding more stocks to their portfolio through a process called "diversification." There are two reasons why diversification eliminates firm-specific risk.

First, each stock in a diversified portfolio represents a much smaller percentage of the overall portfolio than it would in a portfolio of just one or a few stocks. Thus, any firm-specific action that changes the stock price of one stock in the diversified portfolio will have only a small impact on the entire portfolio.[28]

The second reason why diversification eliminates firm-specific risk is that the effects of firm-specific actions on stock prices can be either positive or negative for each stock. Thus, in large, diversified portfolios, the net effect of these positive and negative firm-specific risk factors will be essentially zero and will not affect the value of the overall portfolio.[29] Firm-specific risk is also called "diversifiable risk" because it can be easily eliminated through diversification.

Q. IS IT WELL-KNOWN AND ACCEPTED THAT, BECAUSE FIRM-SPECIFIC RISK CAN BE EASILY ELIMINATED THROUGH DIVERSIFICATION, THE MARKET DOES NOT REWARD SUCH RISK THROUGH HIGHER RETURNS?

A. Yes. Because investors eliminate firm-specific risk through diversification, they know they cannot expect a higher return for assuming the firm-specific risk in any one company. Thus, the risks associated with an individual firm's operations are not rewarded by the market. In fact, firm-specific risk is also called "unrewarded" risk for this reason. Market

[28] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 64 (3rd ed., John Wiley & Sons, Inc. 2012).

[29] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 64 (3rd ed., John Wiley & Sons, Inc. 2012).

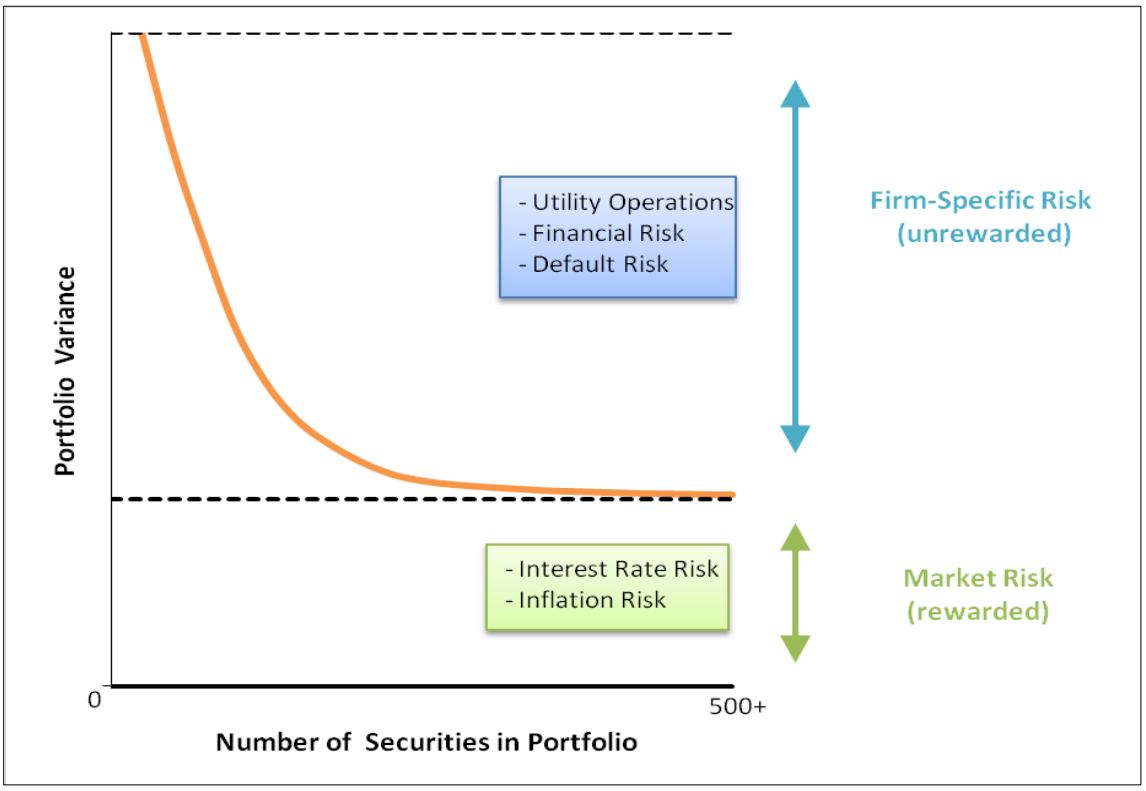
risk, on the other hand, cannot be eliminated through diversification. Because market risk cannot be eliminated through diversification, investors expect a return for assuming this type of risk. Market risk is also called "systematic risk." Scholars recognize the fact that market risk, or systematic risk, is the only type of risk for which investors expect a return for bearing:

> If investors can cheaply eliminate some risks through diversification, then we should not expect a security to earn higher returns for risks that can be eliminated through diversification. Investors can expect compensation only for bearing systematic risk (i.e., risk that cannot be diversified away).[30]

These important concepts are illustrated in the figure below. Some form of this figure is found in many financial textbooks.

[30] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 180 (3rd ed., South Western Cengage Learning 2010) (emphasis added).

Figure 4:
Effects of Portfolio Diversification



This figure shows that as stocks are added to a portfolio, the amount of firm-specific risk is reduced until it is essentially eliminated. No matter how many stocks are added, however, there remains a certain level of fixed market risk. The level of market risk will vary from firm to firm. Market risk is the only type of risk that is rewarded by the market and is thus the primary type of risk the Commission should consider when determining the allowed return.

Q. DESCRIBE HOW MARKET RISK IS MEASURED.

A. Investors who want to eliminate firm-specific risk must hold a fully diversified portfolio. To determine the amount of risk that a single stock adds to the overall market portfolio, investors measure the covariance between a single stock and the market portfolio. The

result of this calculation is called "beta."[31] Beta represents the sensitivity of a given security to the market as a whole. The market portfolio of all stocks has a beta equal to one. Stocks with betas greater than 1.0 are relatively more sensitive to market risk than the average stock. For example, if the market increases (or decreases) by 1.0%, a stock with a beta of 1.5 will, on average, increase (or decrease) by 1.5%. In contrast, stocks with betas of less than 1.0 are less sensitive to market risk, such that if the market increases (or decreases) by 1.0%, a stock with a beta of 0.5 will, on average, only increase (or decrease) by 0.5%. Thus, stocks with low betas are relatively insulated from market conditions. The beta term is used in the CAPM to estimate the cost of equity, which is discussed in more detail later.[32]

Q. ARE PUBLIC UTILITIES CHARACTERIZED AS DEFENSIVE FIRMS THAT HAVE LOW BETAS, HAVE LOW MARKET RISK, AND ARE RELATIVELY INSULATED FROM OVERALL MARKET CONDITIONS?

A. Yes. Although market risk affects all firms in the market, it affects different firms to varying degrees. Firms with high betas are affected more than firms with low betas, which is why firms with high betas are riskier. Stocks with betas greater than one are generally known as "cyclical stocks." Firms in cyclical industries are sensitive to recurring patterns of recession and recovery known as the "business cycle."[33] Thus, cyclical firms are exposed to a greater level of market risk. Securities with betas less than one, on the other

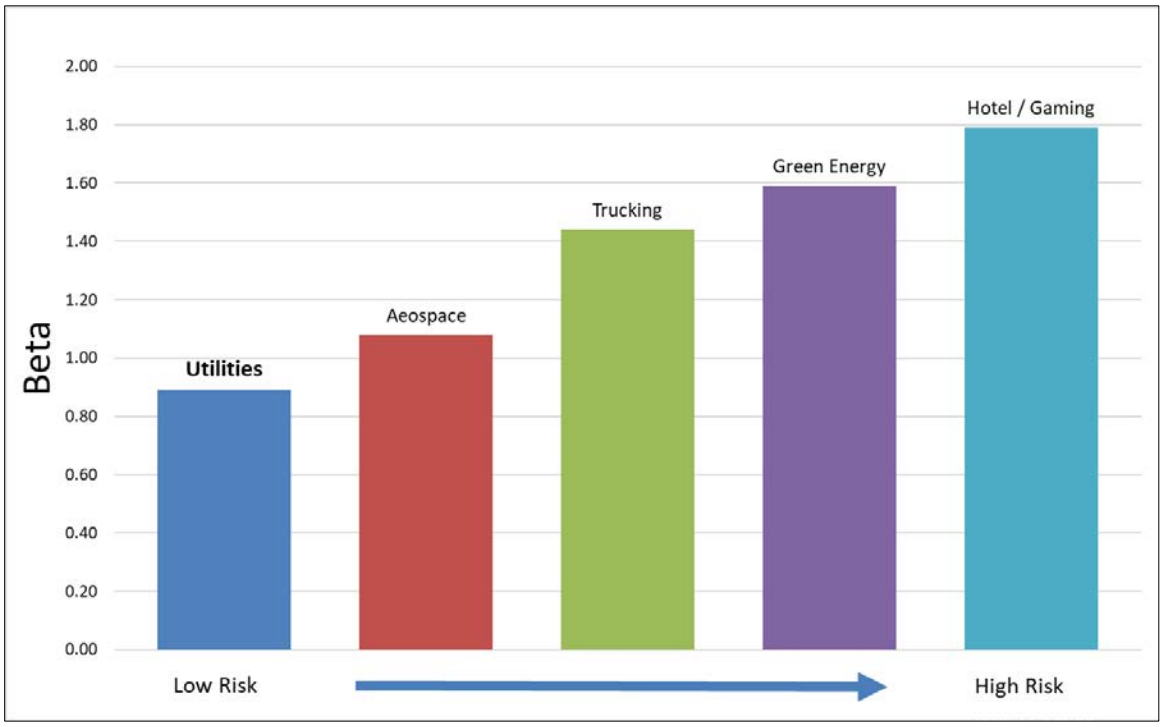
[31] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 180–81 (3rd ed., South Western Cengage Learning 2010).

[32] Though it will be discussed in more detail later, Exhibit DJG-8 shows that the average beta of the proxy group was less than 1.0. This confirms the well-known concept that utilities are relatively low-risk firms.

[33] *See* Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments* 382 (9th ed., McGraw-Hill/Irwin 2013).

hand, are known as "defensive stocks." Companies in defensive industries, such as public utility companies, "will have low betas and performance that is comparatively unaffected by overall market conditions."[34] In fact, financial textbooks often use utility companies as prime examples of low-risk, defensive firms.[35] The figure below compares the betas of several industries and illustrates that the utility industry is one of the least risky industries in the U.S. market.[36]

Figure 5:
Beta by Industry



[34] Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments* 383 (9th ed., McGraw-Hill/Irwin 2013).

[35] *See e.g.*, Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments* 382 (9th ed., McGraw-Hill/Irwin 2013); *see also* Aswath Damodaran, Investment Valuation: Tools and Techniques for Determining the Value of Any Asset 196 (3rd ed., John Wiley & Sons, Inc. 2012).

[36] *See* Betas by Sector (US) at http://pages.stern.nyu.edu/~adamodar/. The exact beta calculations are not as important as illustrating the well-known fact that utilities are low-risk companies. The fact that the utility industry is one of the lowest risk industries in the country should not change from year to year.

The fact that utilities are defensive firms that are exposed too little market risk is beneficial to society. When the business cycle enters a recession, consumers can be assured that their utility companies will be able to maintain normal business operations and provide safe and reliable service under prudent management. Likewise, utility investors can be confident that utility stock prices will not fluctuate widely. So, while it is preferable for utilities to be defensive firms that experience little market risk and relatively insulated from market conditions, this should also be appropriately reflected in FPUC's awarded return.

VII. DCF ANALYSIS

Q. DESCRIBE THE DCF MODEL.

A. The DCF Model is based on a fundamental financial model called the "dividend discount model," which maintains that the value of a security is equal to the present value of the future cash flows it generates. Cash flows from common stock are paid to investors in the form of dividends. There are several variations of the DCF Model. These versions, along with other formulas and theories related to the DCF Model are discussed in more detail in Exhibit DJG-23 - Appendix A.

Q. DESCRIBE THE INPUTS TO THE DCF MODEL.

A. There are three primary inputs in the DCF Model: (1) stock price; (2) dividend; and (3) the sustainable growth rate. The stock prices and dividends are known inputs based on

recorded data, while the growth rate projection must be estimated. I discuss each of these inputs separately below.

A. Stock Prices and Dividends

Q. HOW DID YOU DETERMINE THE STOCK PRICE INPUT OF THE DCF MODEL?

A. For the stock price (P_0), I used a 30-day average of stock prices for each company in the proxy group.[37] Analysts sometimes rely on average stock prices for longer periods (e.g., 60, 90, or 180 days). According to the efficient market hypothesis, however, markets reflect all relevant information available at a particular time, and prices adjust instantaneously to the arrival of new information.[38] Past stock prices, in essence, reflect outdated information. The DCF Model used in utility rate cases is a derivation of the dividend discount model, which is used to determine the current value of an asset. Thus, according to the dividend discount model and the efficient market hypothesis, the value for the "P_0" term in the DCF Model should technically be the current stock price, rather than an average.

Q. WHY DID YOU USE A 30-DAY AVERAGE FOR THE CURRENT STOCK PRICE INPUT?

A. Using a short-term average of stock prices for the current stock price input adheres to market efficiency principles while avoiding any irregularities that may arise from using a single current stock price. In the context of a utility rate proceeding, there is a significant

[37] Exhibit DJG-3.

[38] *See* Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, Vol. 25, No. 2 The Journal of Finance 383 (1970).

length of time from when an application is filed and testimony is due. Choosing a current stock price for one particular day could raise a separate issue concerning which day was chosen to be used in the analysis. In addition, a single stock price on a particular day may be unusually high or low. It is arguably ill-advised to use a single stock price in a model that is ultimately used to set rates for several years, especially if a stock is experiencing some volatility. Thus, it is preferable to use a short-term average of stock prices, which represents a good balance between adhering to well-established principles of market efficiency while avoiding any unnecessary contentions that may arise from using a single stock price on a given day. The stock prices I used in my DCF analysis are based on 30-day averages of adjusted closing stock prices for each company in the proxy group.[39]

Q. DESCRIBE HOW YOU DETERMINED THE DIVIDEND INPUT OF THE DCF MODEL.

A. The dividend term in the DCF Model represents dividends per share (d_0). I obtained the most recent quarterly dividend paid for each proxy company and annualized those dividends.[40]

Q. ARE THE STOCK PRICE AND DIVIDEND INPUTS FOR EACH PROXY COMPANY A SIGNIFICANT ISSUE IN THIS CASE?

A. No. Although my stock price and dividend inputs are more recent than those used by Mr. Moul, there is not a statistically significant difference between them because utility stock

[39] Exhibit DJG-3. Adjusted closing prices, rather than actual closing prices, are ideal for analyzing historical stock prices. The adjusted price provides an accurate representation of the firm's equity value beyond the mere market price because it accounts for stock splits and dividends.

[40] Exhibit DJG-4. Nasdaq Dividend History, http://www.nasdaq.com/quotes/dividend-history.aspx.

prices and dividends are generally quite stable. This is another reason that cost of capital models such as the CAPM and the DCF Model are well-suited to be used for utilities. The differences between my DCF Model and Mr. Moul's DCF Model are primarily driven by differences in our growth rate estimates, which are further discussed below.

B. Growth Rate

Q. SUMMARIZE THE GROWTH RATE INPUT IN THE DCF MODEL.

A. The most critical input in the DCF Model is the growth rate. Unlike the stock price and dividend inputs, the growth rate input (g) must be estimated. As a result, the growth rate is often the most contentious DCF input in utility rate cases. The DCF model used in this case is based on the sustainable growth valuation model. Under this model, a stock is valued by the present value of its future cash flows in the form of dividends. Before future cash flows are discounted by the cost of equity, however, they must be "grown" into the future by a sustainable growth rate. As stated above, one of the inherent assumptions of this model is that these cash flows in the form of dividends grow at a sustainable rate forever. For young, high-growth firms, estimating the growth rate to be used in the model can be especially difficult, and may require the use of multi-stage growth models. For mature, low-growth firms such as utilities, however, estimating the sustainable growth rate is more transparent. The growth term of the DCF Model is one of the most important, yet apparently most misunderstood, aspects of cost of equity estimations in utility regulatory proceedings. Therefore, I have devoted a more detailed explanation of this issue in the following sections, which are organized as follows:

(1) The Various Determinants of Growth;

(2) Reasonable Estimates for Long-Term Growth;

(3) Quantitative vs. Qualitative Determinants of Utility Growth: Circular References, "Flatworm" Growth, and the Problem with Analysts' Growth Rates; and

(4) Growth Rate Recommendation.

1. <u>The Various Determinants of Growth</u>

Q. DESCRIBE THE VARIOUS DETERMINANTS OF GROWTH.

A. Although the DCF Model directly considers the growth of dividends, there are a variety of growth determinants that should be considered when estimating growth rates. It should be noted that these various growth determinants are used primarily to determine the short-term growth rates in multi-stage DCF models. For utility companies, it is necessary to focus primarily on a long-term growth rate in dividends. This is also known as a "sustainable" growth rate, since this is the growth rate assumed for the company's dividends in perpetuity. That is not to say that these growth determinants cannot be considered when estimating sustainable growth; however, as discussed below, sustainable growth must be constrained much more than short-term growth, especially for young firms with high growth opportunities. Additionally, I briefly discuss these growth determinants here because it may reveal some of the source of confusion in this area.

A. <u>Historical Growth</u>

Looking at a firm's actual historical experience may theoretically provide a good starting point for estimating short-term growth. However, past growth is not always a good indicator of future growth. Some metrics that might be considered here are a historical growth in revenues, operating income, and net income. Since dividends are paid from

earnings, estimating historical earnings growth may provide an indication of future earnings and dividend growth. In general, however, revenue growth tends to be more consistent and predictable than earnings growth because it is less likely to be influenced by accounting adjustments.[41]

B. Analyst Growth Rates

Analyst growth rates refer to short-term projections of earnings growth published by institutional research analysts such as Value Line and Bloomberg. A more detailed discussion of analyst growth rates, including the problems with using them in the DCF Model to estimate utility cost of equity, is provided in a later section.

C. Fundamental Determinants of Growth

Fundamental growth determinants refer to firm-specific financial metrics that arguably provide better indications of near-term sustainable growth. One such metric for fundamental growth considers the return on equity and the retention ratio. The idea behind this metric is that firms with high ROEs and retention ratios should have greater opportunities for growth.[42]

Q. DID YOU USE ANY OF THESE GROWTH DETERMINANTS IN YOUR DCF MODEL?

A. No. Primarily, these growth determinants discussed above would provide better indications of short- to mid-term growth for firms with average to high growth opportunities. Utilities, however, are mature, low-growth firms. While it may not be

[41] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 279 (3rd ed., John Wiley & Sons, Inc. 2012).

[42] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 279 (3rd ed., John Wiley & Sons, Inc. 2012).

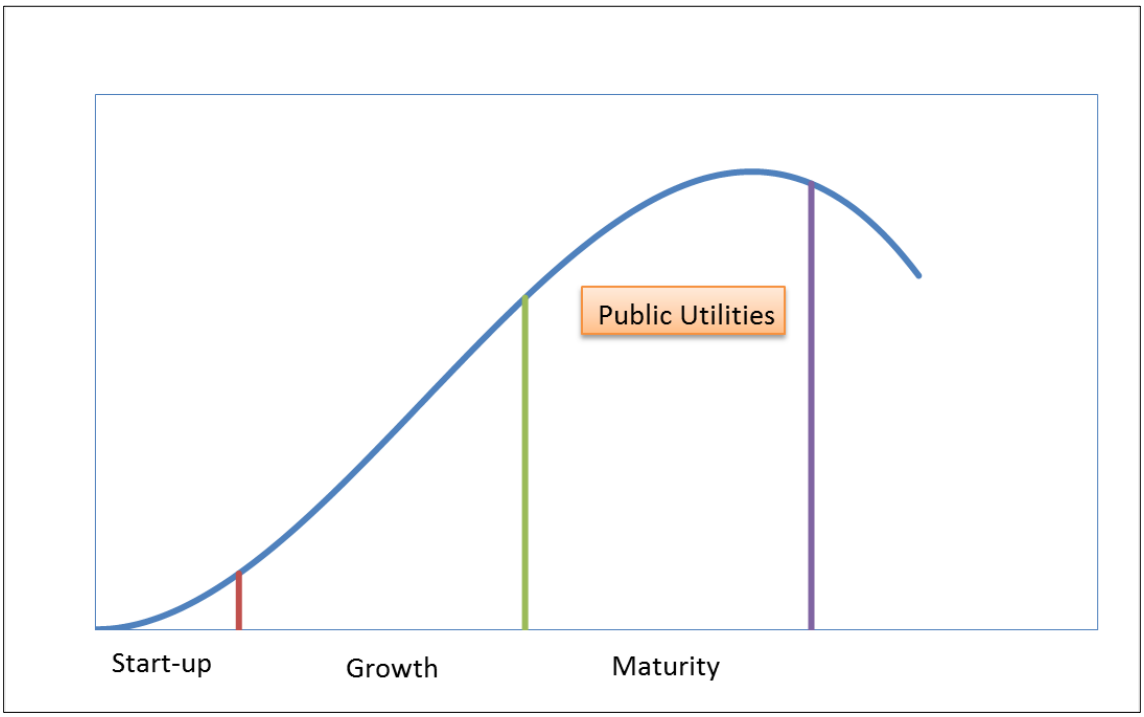
unreasonable on its face to use any of these growth determinants for the growth input in the DCF Model, we must keep in mind that the stable growth DCF Model considers only sustainable growth rates, which are constrained by certain economic factors, as discussed further below.

2. Reasonable Estimates for Sustainable Growth

Q. DESCRIBE WHAT IS MEANT BY SUSTAINABLE GROWTH.

A. In order to make the DCF Model a viable, practical model, an infinite stream of future cash flows must be estimated and then discounted back to the present. Otherwise, each annual cash flow would have to be estimated separately. Some analysts use "multi-stage" DCF Models to estimate the value of high-growth firms through two or more stages of growth, with the final stage of growth being sustainable. However, it is not necessary to use multi-stage DCF Models to analyze the cost of equity of regulated utility companies. This is because regulated utilities are already in their "sustainable," low growth stage. Unlike most competitive firms, the growth of regulated utilities is constrained by physical service territories and limited primarily by ratepayer and load growth within those territories. The figure below illustrates the well-known business/industry life-cycle pattern.

Figure 6:
Industry Life Cycle



In an industry's early stages, there are ample opportunities for growth and profitable reinvestment. In the maturity stage however, growth opportunities diminish, and firms choose to pay out a larger portion of their earnings in the form of dividends instead of reinvesting them in operations to pursue further growth opportunities. Once a firm is in the maturity stage, it is not necessary to consider higher short-term growth metrics in multi-stage DCF Models; rather, it is sufficient to analyze the cost of equity using a stable growth DCF Model with one sustainable, sustainable growth rate.

Q. IS IT TRUE THAT THE SUSTAINABLE GROWTH RATE CANNOT EXCEED THE GROWTH RATE OF THE ECONOMY, ESPECIALLY FOR A REGULATED UTILITY COMPANY?

A. Yes. A fundamental concept in finance is that no firm can grow forever at a rate higher than the growth rate of the economy in which it operates.[43] Thus, the sustainable growth rate used in the DCF Model should not exceed the aggregate economic growth rate. This is especially true when the DCF Model is conducted on public utilities because these firms have defined service territories. As stated by Dr. Damodaran: "[i]f a firm is a purely domestic company, either because of internal constraints . . . or external constraints (such as those imposed by a government), the growth rate in the domestic economy will be the limiting value."[44]

In fact, it is reasonable to assume that a regulated utility would grow at a rate that is less than the U.S. economic growth rate. Unlike competitive firms, which might increase their growth by launching a new product line, franchising, or expanding into new and developing markets, utility operating companies with defined service territories cannot do any of these things to grow. Gross Domestic Product ("GDP") is one of the most widely used measures of economic production and is used to measure aggregate economic growth. According to the Congressional Budget Office's 2021 Long-Term Budget Outlook, the long-term forecast for nominal U.S. GDP growth is 3.8%.[45]

[43] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 306 (3rd ed., John Wiley & Sons, Inc. 2012).

[44] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 306 (3rd ed., John Wiley & Sons, Inc. 2012).

[45] Congressional Budget Office, The 2021 Long-Term Budget Outlook, https://www.cbo.gov/publication/56977.

Q. IS IT REASONABLE TO ASSUME THAT THE SUSTAINABLE GROWTH RATE WILL NOT EXCEED THE RISK-FREE RATE?

A. Yes. In the long term, the risk-free rate will converge on the growth rate of the economy. For this reason, financial analysts sometimes use the risk-free rate for the sustainable growth rate value in the DCF model.[46] I discuss the risk-free rate in further detail later in this testimony.

Q. PLEASE SUMMARIZE THE VARIOUS SUSTAINABLE GROWTH RATE ESTIMATES THAT CAN BE USED AS THE SUSTAINABLE GROWTH RATE IN THE DCF MODEL.

A. The reasonable sustainable growth rate determinants are summarized as follows:

1. Nominal GDP Growth;
2. Real GDP Growth; and
3. Current Risk-Free Rate.

Any of the foregoing growth determinants could provide a basis for a reasonable input for the sustainable growth rate in the DCF Model for a utility company, including FPUC.

3. <u>Qualitative Growth: The Problem with Analysts' Growth Rates</u>

Q. DESCRIBE THE DIFFERENCES BETWEEN "QUANTITATIVE" AND "QUALITATIVE" GROWTH DETERMINANTS.

A. Assessing "quantitative" growth simply involves mathematically calculating a historic metric for growth (such as revenues or earnings) or calculating various fundamental growth

[46] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 307 (3rd ed., John Wiley & Sons, Inc. 2012).

determinants using certain figures from a firm's financial statements (such as ROE and the retention ratio). However, any thorough assessment of company growth should be based upon a "qualitative" analysis. Such an analysis would consider specific strategies that company management will implement to achieve real sustainable growth in earnings. Therefore, it is important to begin the analysis of FPUC's growth rate with this simple, qualitative question: how is this regulated utility going to achieve a real sustained growth in earnings? If this question were asked of a competitive firm, there could be several answers depending on the type of business model, such as launching a new product line, franchising, rebranding to target a new demographic, or expanding into a developing market. Regulated utilities, however, cannot engage in these potential growth opportunities. Generally, regulated utilities growth opportunities in their service areas are limited to providing service to new customers in new or existing developments and replacing or upgrading plant which I discuss in more detail below.

Q. WHY IS IT ESPECIALLY IMPORTANT TO EMPHASIZE REAL, QUALITATIVE GROWTH DETERMINANTS WHEN ANALYZING WHETHER A GROWTH RATE IS FAIR FOR A REGULATED UTILITY?

A. While qualitative growth analysis is important regardless of the entity being analyzed, it is especially important in the context of utility ratemaking. This is because the rate base rate of return model inherently possesses two factors that can contribute to distorted views of utility growth when considered exclusively from a quantitative perspective. These two factors are: (1) rate base and (2) the awarded ROE. I will discuss each factor further below. It is important to keep in mind that the ultimate objective of this analysis is to provide a foundation upon which to base the fair rate of return for the utility. Thus, we should strive

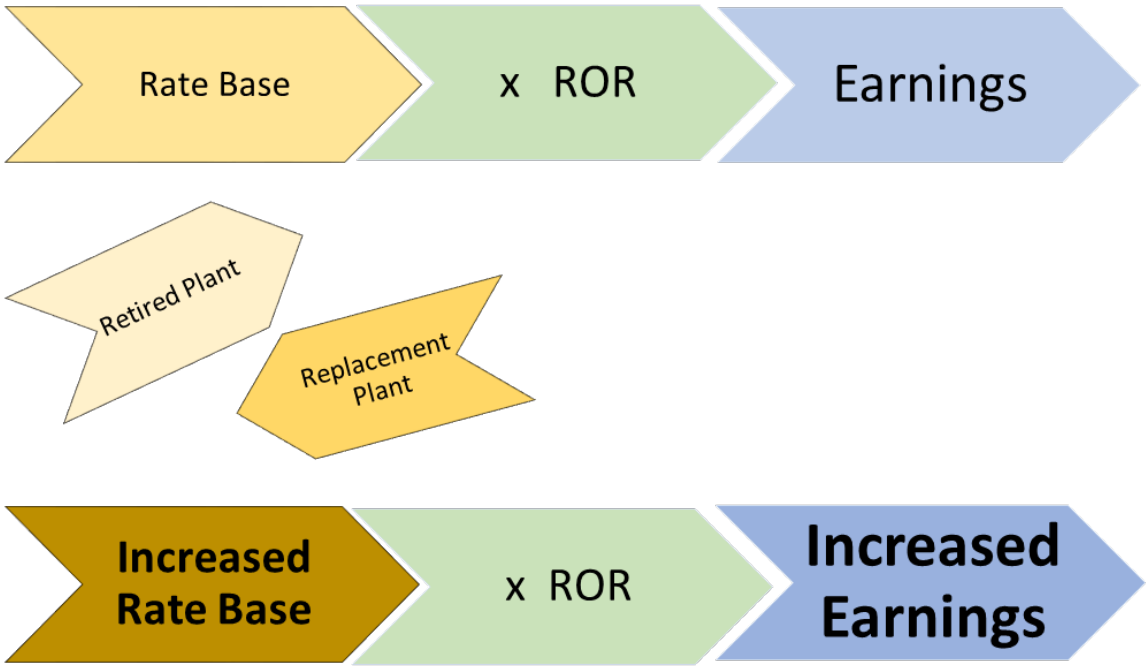
to ensure that each individual component of the financial models used to estimate the cost of equity are also fair. If we consider only quantitative growth determinants, it may lead to projected growth rates that are overstated and ultimately unfair, because they result in inflated cost of equity estimates.

Q. HOW DOES RATE BASE RELATE TO GROWTH DETERMINANTS FOR UTILITIES?

A. Under the rate base rate of return model, a utility's rate base is multiplied by its awarded rate of return to produce the required level of operating income. Therefore, increases to rate base generally result in increased earnings. Thus, utilities have a natural financial incentive to increase rate base. In short, utilities have a financial incentive to increase rate base regardless of whether such increases are driven by a corresponding increase in demand. A good, relevant example of this is seen in the early retirement of old, but otherwise functional coal plants in response to environmental regulations and replacing them with new generation assets. Under these circumstances, utilities have been able to increase their rate bases by a far greater extent than what any concurrent increase in demand would have required. In other words, utilities grew their earnings by simply retiring old assets and replacing them with new assets. This is not "real" or "sustainable" growth. If the tail of a flatworm is removed and regenerated, it does not mean the flatworm actually grew. Likewise, if a competitive, unregulated firm announced plans to close production plants and replace them with new plants, it would not be considered a real determinant of growth unless analysts believed this decision would directly result in increased market share for the company and a real opportunity for sustained increases in revenues and earnings. In the case of utilities, the mere replacement of "old plant" with "new plant"

does not increase market share, attract new ratepayers, create franchising opportunities, or allow utilities to penetrate developing markets, but may result in short-term, quantitative earnings growth. However, this "flatworm growth" in earnings was merely the quantitative byproduct of the rate base rate of return model, and not an indication of real or qualitative growth and, therefore, using that data alone to estimate a growth rate is not fair. The following diagram in the figure below illustrates this concept.

Figure 7:
Analysts' Earnings Growth Projections: The "Flatworm Growth" Problem

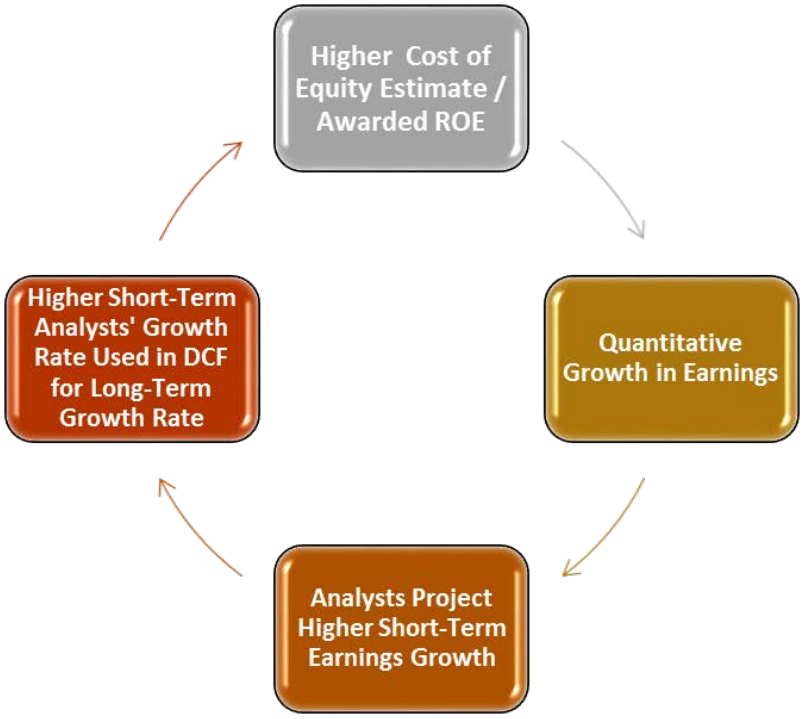


Of course, utilities might sometimes add "new plant" to meet a modest growth in ratepayer demand. However, as the foregoing discussion demonstrates, it would be more appropriate to consider load growth projections and other qualitative indicators, rather than mere increases to rate base or earnings, to attain a fair assessment of growth.

Q. PLEASE DISCUSS THE OTHER WAY IN WHICH ANALYSTS' EARNINGS GROWTH PROJECTIONS DO NOT PROVIDE INDICATIONS OF REAL, QUALITATIVE GROWTH FOR REGULATED UTILITIES.

A. If we give undue weight to analysts' projections for utilities' earnings growth, it will not provide an accurate reflection of real, qualitative growth because a utility's earnings are heavily influenced by the ultimate figure that all this analysis is supposed to help us estimate: the awarded return on equity. This creates a circular reference problem or feedback loop. In other words, if a regulator awards an ROE that is above market-based cost of capital (which is often the case, as discussed above), this could lead to higher short-term growth rate projections from analysts. If these same inflated, short-term growth rate estimates are used in the DCF Model (as they often are by utility witnesses), it could lead to higher awarded ROEs; and the cycle continues, as illustrated in the figure below.

Figure 8:
Analysts' Earnings Growth Projections: The "Circular Reference" Problem



Therefore, it is not advisable to simply consider the quantitative growth projections published by analysts, as this practice will not necessarily provide fair indications of real, sustainable utility growth.

Q. ARE THERE ANY OTHER PROBLEMS WITH RELYING ON ANALYSTS' GROWTH PROJECTIONS?

A. Yes. While the foregoing discussion shows two reasons why we cannot rely on analysts' growth rate projections to provide fair, qualitative indicators of utility growth in a stable growth DCF Model, the third reason is perhaps the most obvious and undisputable. Various institutional analysts—such as Zacks, Value Line, and Bloomberg—publish estimated projections of earnings growth for utilities. These estimates are short-term growth rate projections, ranging from 3 to 10 years. However, many utility ROE analysts

inappropriately insert these short-term growth projections into the DCF Model as if they were *long-term* growth rate projections. For example, assume that an analyst at Bloomberg estimates that a utility's earnings will grow by 7% per year over the next 3 years. This analyst may have based this short-term forecast on a utility's plans to replace depreciated rate base (*i.e.*, "flatworm" growth) or on an anticipated awarded return that is above market-based cost of equity (*i.e.*, the "circular reference" problem). When a utility witness uses this figure in a DCF Model, however, it is the witness, not the Bloomberg analyst, who is testifying to the regulator that the utility's earnings will qualitatively grow by 7% per year over the long-term, which is an unrealistic assumption and a fundamentally different conclusion than that of the Bloomberg analyst.

Q. DO THE LIMITED GROWTH OPPORTUNITIES YOU DISCUSSED APPLY TO BOTH ELECTRIC AND GAS UTILITIES?

A. Yes. I have conducted cost of capital analyses on many gas and electric utilities, which always include a growth rate analysis under the DCF model. In my experience, the growth rates of firm-specific growth indicators, such as load growth and customer growth for both gas and electric utilities, have annual growth rates that are typically less than 1%, and are sometimes even negative.

4. <u>Sustainable Growth Rate Recommendation</u>

Q. DESCRIBE THE GROWTH RATE INPUT USED IN YOUR DCF MODEL.

A. I considered various qualitative determinants of growth for FPUC, along with the maximum allowed growth rate under basic principles of finance and economics. The

following chart in the figure below summarizes the sustainable growth determinants discussed in this section.[47]

Figure 9:
Sustainable Growth Rate Determinants[48]

Sustainable Growth Determinants	Rate
Nominal GDP	3.8%
Real GDP	1.8%
Risk Free Rate	3.2%
Highest	**3.8%**

For the sustainable growth rate in my DCF model, I selected the maximum, reasonable sustainable growth rate of 3.8%, which means my model assumes that FPUC's qualitative growth in earnings will qualitatively match the nominal growth rate of the entire U.S. economy over the long run – a charitable assumption.

Q. WHAT ARE THE RESULTS OF YOUR DCF MODEL USING A SUSTAINABLE GROWTH RATE?

A. Using a sustainable growth rate equal to long-term GDP growth projections, the DCF indicates of cost of equity of 6.7% for FPUC.[49]

[47] Exhibit DJG-5.

[48] Exhibit DJG-5.

[49] Exhibit DJG-6.

Q. DID YOU ALSO CONDUCT A DCF ANALYSIS THAT CONSIDERS ANALYSTS' SHORT-TERM GROWTH RATE ESTIMATES FOR THE SUSTAINABLE GROWTH RATE INPUT?

A. Yes. Despite my criticisms of using short-term analysts' growth rate projections for the sustainable growth rate input of the DCF Model, I also conducted a DCF analysis with such an assumption in the event the Commission would like to understand the sensitivity impact of this variable on the results.

Q. WHAT ARE THE RESULTS OF YOUR DCF MODEL USING ANALYSTS' SHORT-TERM GROWTH RATES?

A. Using analysts' unreasonably high short-term growth rates in the DCF model, I calculate a result of 8.3% for information purposes only as I do not recommend this result should be considered at all.[50]

C. Response to Mr. Moul's DCF Model

Q. MR. MOUL'S DCF MODEL YIELDED A NOTABLY HIGHER RESULT. DID YOU FIND ANY PROBLEMS WITH HIS ANALYSIS?

A. Yes. Mr. Moul's DCF Model produced cost of equity result of 11.65%, which includes a "leverage adjustment" of 1.45%.[51] As mentioned earlier, the results of Mr. Moul's DCF Model are overstated primarily because of a fundamental error regarding his growth rate inputs and his leverage adjustment.

[50] Exhibit DJG-6.

[51] Exhibit PRM-1, Sch. 1.

Q. DESCRIBE THE PROBLEMS WITH MR. MOUL'S ASSUMED SUSTAINABLE GROWTH INPUT.

A. Mr. Moul assumes a sustainable growth rate of 6.75% in his DCF Model.[52] This effectively means that he assumes the Company's earnings will grow at a rate of 6.75% per year, every year, in perpetuity. In arriving at this aggregate growth rate input, Mr. Moul considered growth rates as high as 10.5% for the proxy group,[53] which is more than two times the projected annual long-term nominal U.S. GDP growth. This means Mr. Moul's growth rate assumption violates the basic principle that no company can grow at a greater rate than the economy in which it operates *over the long-term*, especially a regulated utility company with a defined service territory. Furthermore, Mr. Moul relies on short-term, quantitative growth estimates published by analysts to support his assumptions. Mr. Moul acknowledges that his growth rate projections cover only a five-year period.[54] This period of time is not sufficient for a sustainable growth estimate. As discussed above, these analysts' estimates are inappropriate to use in the DCF Model as sustainable growth rates because they are estimates for short-term growth. For example, Mr. Moul assumes a sustainable growth rate estimate of 10.5% for NiSource Inc. (among other estimates), as reported by Value Line Investment Survey.[55] This means that an analyst at Value Line apparently thinks that NiSource's earnings will quantitatively increase by 10.5% each year over the next several years (*i.e.*, the short-term). However, it is Mr. Moul, not the

[52] *Id*.

[53] Exhibit PRM-1, Sch. 9.

[54] Direct testimony of Paul R. Moul, pp. 29-30.

[55] Exhibit PRM-1, Sch. 9.

commercial analyst, who is suggesting to the Commission that (NiSource Inc.') earnings will increase by 10.5% (more than twice the level of projected U.S. GDP growth) each year, every year, in perpetuity. Again, Mr. Moul is extrapolating the analyst's conclusions well beyond what the analyst actually projects. Furthermore, this assumption is simply not realistic, and it contradicts fundamental concepts of sustainable growth. Many of Mr. Moul's other short-term growth rate estimates also exceed projected U.S. GDP growth.

Q. PLEASE DESCRIBE MR. MOUL'S LEVERAGE ADJUSTMENT.

A. According to Mr. Moul, a leverage adjustment is necessary when "the DCF return applies to a capital structure used for ratemaking that is computed with book-value weighting rather than market-value weighting."[56]

Q. ARE YOU AWARE OF A WITNESS APPLYING A LEVERAGE ADJUSTMENT LIKE THE ONE MR. MOUL IS PROPOSING?

A. No. I have testified in numerous proceedings on the issue of cost of capital and other regulatory issues and have reviewed extensive amounts of testimony from many witnesses on cost of capital issues. Other than Mr. Moul's proposed leverage adjustments in prior cases, I cannot recall a witness applying a "leverage adjustment" in the way Mr. Moul proposes. Mr. Moul is taking his base DCF cost of equity estimate and adding a significant amount of basis points to it to account for "leverage," but without a corresponding increase in the Company's ratemaking debt ratio (i.e., actual leverage). This means that essentially all other ROE witnesses (representing both utilities and customers) are underestimating

[56] Direct testimony of Paul R. Moul, p. 31, lines 10-11.

their cost of equity estimates by the amount of a leverage adjustment, or consistent with my experience Mr. Moul is overestimating his cost of equity estimate.

Q. DOES THE ORIGINAL DCF MODEL HAVE AN INPUT FOR A LEVERAGE ADJUSTMENT?

A. No. The DCF model has been used by investors, analysts, managers, and academics for decades to assist with pricing assets and estimate the cost of equity of various assets and projects. I have not seen a variation of the DCF model in any financial textbook or other reliable source that presents the model with a "leverage adjustment" input similar to the way in which Mr. Moul presents the model in his testimony.

Q. HAVE OTHER COMMISSIONS REJECTED MR. MOUL'S LEVERAGE ADJUSTMENT IN PRIOR CASES?

A. Yes, the Pennsylvania Commission has rejected Mr. Moul's leverage adjustment in multiple cases.[57] In PPL's 2012 rate case, Mr. Moul proposed a substantially similar leverage adjustment. The Pennsylvania Commission found that "[f]or the reasons developed by the OCA and I&E, the Company's leverage adjustment should be denied."[58] In FPUC's (no relation to the Florida Company) 2020 base rate case and PECO Gas' 2020 base rate case, the Pennsylvania Commission allowed ROEs based upon DCF dividend yield and growth rate inputs, without leverage adjustments.[59] In Aqua PA's recent base

[57] *Pa. P.U.C. v. PPL Elec. Util. Corp.*, Docket No. R-2012-2290597, Order at 52 (Dec. 28, 2012),

[58] *Id*. at p. 52.

[59] *Pa. P.U.C. v. FPUC Gas of Pennsylvania, Inc.*, Docket No. R-2020-3018835, Order at141 (Feb. 19, 2021) (FPUC 2020 Order). *Pa. P.U.C. v. PECO Energy – Gas Div.*, Docket No. R-2020-3018929, Order at 151-152 (June 22, 2021) (PECO 2020 Order).

rate case, the Pennsylvania Commission denied Aqua PA's request to include a leverage adjustment as contrary to the public interest.[60]

Q. HAVE OTHER COMMISSIONS REJECTED MR. MOUL'S LEVERAGE ADJUSTMENT?

A. Yes. Recently, in the Application of Palmetto Wastewater Reclamation ("PWR"), the Public Service Commission of South Carolina rejected Mr. Moul's leverage adjustment.[61] Relying in part on my testimony in the PWR case, the South Carolina commission agreed that "Mr. Moul's 0.97% leverage adjustment is not appropriate."[62]

Q. DO YOU AGREE WITH MR. MOUL'S LEVERAGE ADJUSTMENT?

A. No. Mr. Moul's proposed leverage adjustment is entirely unnecessary and inappropriate, and it has the effect of further inflating a DCF result that is already overestimated. Mr. Moul's leverage adjustment is based on the Hamada formula, which is further discussed below.

Q. WHAT IS THE PREMISE OF THE HAMADA FORMULA?

A. The Hamada formula can be used to analyze changes in a firm's cost of capital as it adds or reduces financial leverage, or debt, in its capital structure by starting with an "unlevered" beta and then "relevering" the beta at different debt ratios. As leverage increases, equity investors bear increasing amounts of risk, leading to higher betas. Before the effects of financial leverage can be accounted for, however, the effects of leverage must first be

[60] *Pa. P.U.C. v. Aqua Pennsylvania, Inc., et al.*, Docket Nos., R-2021-3027385, R-2021-3027386, Order at 166-167 (May 16, 2022) (Aqua 2021 Order).

[61] *In re Application of Palmetto Wastewater Reclamation, Inc. for an Adjustment of Rates and Charges*, 2021 S.C. PUC LEXIS *1, *23 (Dec. 21, 2021).

[62] *Id*.

removed, which is accomplished through the Hamada formula. The Hamada formula for unlevering beta is stated as follows:[63]

Equation 2:
Hamada Formula

$$\beta_U = \frac{\beta_L}{\left[1 + (1 - T_c)\left(\frac{D}{E}\right)\right]}$$

where: β_U = *unlevered beta (or "asset" beta)*
β_L = *average levered beta of proxy group*
T_C = *corporate tax rate*
D = *book value of debt*
E = *book value of equity*

Using this equation, the beta for the firm can be unlevered, and then "relevered" based on various debt ratios (by rearranging this equation to solve for β_L).

Q. DID MR. MOUL APPLY THE HAMADA FORMULA CORRECTLY?

A. No. Mr. Moul's application of the Hamada formula is incorrect. I conducted the Hamada Model and present my results in my exhibits.[64] Using the Company's proposed capital structure and the levered betas published by Value Line, I calculate an unlevered beta of 0.51. When that beta is relevered to the proxy group debt ratio of 52%, I calculate a cost of equity of 8.49% for illustration purposes.[65] The indicated cost of equity from the financial models are necessarily connected to the capital structures of the proxy group. In other words, the fact that FPUC has proposed a debt ratio that is lower than the average debt ratio of the proxy group should not necessarily result in an increase in the Company's indicated cost of equity when the proxy beta is "unlevered" based on FPUC's unreasonably

[63] Damodaran *supra* n. 18, at 197. This formula was originally developed by Hamada in 1972.

[64] *See* Exhibit DJG-16.

[65] *Id*.

low debt ratio, and then relevered to the debt ratio of the proxy group that was influencing the other cost of equity model inputs relied upon. The indicated cost of equity should only increase with leverage if we actually increase the Company's proposed debt ratio, as I have demonstrated in the Hamada formula. The Commission should reject Mr. Moul's leverage adjustment in this case, as it has done in prior cases.

VIII. CAPM ANALYSIS

Q. DESCRIBE THE CAPM.

A. The CAPM is a market-based model founded on the principle that investors expect higher returns for incurring additional risk.[66] The CAPM estimates this expected return. The various assumptions, theories, and equations involved in the CAPM are discussed further in Exhibit DJG-23 - Appendix B. Using the CAPM to estimate the cost of equity of a regulated utility is consistent with the legal standards governing the fair rate of return. The U.S. Supreme Court has recognized that "the amount of risk in the business is a most important factor" in determining the allowed rate of return,[67] and that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."[68] The CAPM is a useful model because it directly considers the amount of risk inherent in a business.

[66] William F. Sharpe, *A Simplified Model for Portfolio Analysis* 277–93 (Management Science IX 1963).

[67] *Wilcox*, 212 U.S. at 48.

[68] *Hope Natural Gas Co.*, 320 U.S. at 603.

Q. DESCRIBE THE INPUTS FOR THE CAPM.

A. The basic CAPM equation requires only three inputs to estimate the cost of equity: (1) the risk-free rate; (2) the beta coefficient; and (3) the equity risk premium. Here is the CAPM formula:

Equation 3:
Basic CAPM

Cost of Equity = Risk-free Rate + (Beta × Equity Risk Premium)

Each input is discussed separately below.

A. The Risk-Free Rate

Q. EXPLAIN THE RISK-FREE RATE.

A. The first term in the CAPM is the risk-free rate (R_F). The risk-free rate is simply the level of return investors can achieve without assuming any risk. The risk-free rate represents the bare minimum return that any investor would require on a risky asset. Even though no investment is technically void of risk, investors often use U.S. Treasury securities to represent the risk-free rate because they accept that those securities essentially contain no default risk. The Treasury issues securities with different maturities, including short-term Treasury bills, intermediate-term Treasury notes, and long-term Treasury bonds.

Q. IS IT PREFERABLE TO USE THE YIELD ON LONG-TERM TREASURY BONDS FOR THE RISK-FREE RATE IN THE CAPM?

A. Yes. In valuing an asset, investors estimate cash flows over long periods of time. Common stock is viewed as a long-term investment, and the cash flows from dividends are assumed to last indefinitely. Thus, short-term Treasury bill yields are rarely used in the CAPM to represent the risk-free rate. Short-term rates are subject to greater volatility and thus can

lead to unreliable estimates. Instead, long-term Treasury bonds are usually used to represent the risk-free rate in the CAPM. I considered a 30-day average of daily Treasury yield curve rates on 30-year Treasury bonds in my risk-free rate estimate, which resulted in a risk-free rate of 3.2%.[69]

B. The Beta Coefficient

Q. HOW IS THE BETA COEFFICIENT USED IN THIS MODEL?

A. As discussed above, beta represents the sensitivity of a given security to movements in the overall market. The CAPM states that in efficient capital markets, the expected risk premium on each investment is proportional to its beta. Recall that a security with a beta greater (or less) than one is more (or less) risky than the market portfolio. An index such as the S&P 500 Index is used as a proxy for the market portfolio. The historical betas for publicly traded firms are published by various institutional analysts. Beta may also be calculated through a linear regression analysis, which provides additional statistical information about the relationship between a single stock and the market portfolio. As discussed above, beta also represents the sensitivity of a given security to the market as a whole. The market portfolio of all stocks has a beta equal to one. Stocks with betas greater than 1.0 are relatively more sensitive to market risk than the average stock. For example, if the market increases (or decreases) by 1.0%, a stock with a beta of 1.5 will, on average, increase (or decrease) by 1.5%. In contrast, stocks with betas of less than 1.0 are less sensitive to market risk. For example, if the market increases (or decreases) by 1.0%, a stock with a beta of 0.5 will, on average, only increase (or decrease) by 0.5%.

[69] Exhibit DJG-7.

Q. DESCRIBE THE SOURCE FOR THE BETAS YOU USED IN YOUR CAPM ANALYSIS.

A. I used betas recently published by Value Line Investment Survey. The average beta for the proxy group is less than 1.0. Thus, this is an objective measure to prove the well-known concept that utility stocks are generally less risky than the average stock in the market. While there is evidence suggesting that betas published by sources such as Value Line may actually overestimate the risk of utilities (and thus overestimate the CAPM), I used the betas published by Value Line to be conservative.[70]

C. The Equity Risk Premium

Q. DESCRIBE THE EQUITY RISK PREMIUM (ERP).

A. The final term of the CAPM is the ERP, which is the required return on the market portfolio less the risk-free rate ($R_M - R_F$). In other words, the ERP is the level of return investors expect above the risk-free rate in exchange for investing in risky securities. Many experts would agree that "the single most important variable for making investment decisions is the equity risk premium."[71] Likewise, the ERP is arguably the single most important factor in estimating the cost of capital in this matter. There are three basic methods that can be used to estimate the ERP: (1) calculating a historical average; (2) taking a survey of experts; and (3) calculating the implied ERP. I will discuss each method in turn, noting advantages and disadvantages of these methods.

[70] Exhibit DJG-8; *see also* Exhibit DJG-23 - Appendix B for a more detailed discussion of raw beta calculations and adjustments.

[71] Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns* 4 (Princeton University Press 2002).

1. Historical Average

Q. DESCRIBE THE HISTORICAL ERP.

A. The historical ERP may be calculated by simply taking the difference between returns on stocks and returns on government bonds over a certain period of time. Many practitioners rely on the historical ERP as an estimate for the forward-looking ERP because it is easy to obtain. However, there are disadvantages to relying on the historical ERP.

Q. WHAT ARE THE LIMITATIONS OF RELYING SOLELY ON A HISTORICAL AVERAGE TO ESTIMATE THE CURRENT OR FORWARD-LOOKING ERP?

A. Many investors use the historic ERP because it is convenient and easy to calculate. What matters in the CAPM model, however, is not the actual risk premium from the past, but rather the current and forward-looking risk premium.[72] Some investors may think that a historic ERP provides some indication of the prospective risk premium; however, there is empirical evidence to suggest the prospective, forward-looking ERP is actually lower than the historical ERP. In a landmark publication on risk premiums around the world, *Triumph of the Optimists*, the authors suggest through extensive empirical research that the prospective ERP is lower than the historical ERP.[73] This is due in large part to what is known as "survivorship bias" or "success bias" – a tendency for failed companies to be excluded from historical indices.[74] From their extensive analysis, the authors make the following conclusion regarding the prospective ERP: "[t]he result is a forward-looking,

[72] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 330 (3rd ed., South Western Cengage Learning 2010).

[73] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 194 (3rd ed., South Western Cengage Learning 2010).

[74] Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns* 34 (Princeton University Press 2002).

geometric mean risk premium for the United States . . . of around 2½ to 4 percent and an arithmetic mean risk premium . . . that falls within a range from a little below 4 to a little above 5 percent."[75] Indeed, these results are lower than many reported historical risk premiums. Other noted experts agree:

> The historical risk premium obtained by looking at U.S. data is biased upwards because of survivor bias. . . . The true premium, it is argued, is much lower. This view is backed up by a study of large equity markets over the twentieth century (*Triumph of the Optimists*), which concluded that the historical risk premium is closer to 4%.[76]

Regardless of the variations in historic ERP estimates, many scholars and practitioners agree that simply relying on a historic ERP to estimate the risk premium going forward is not ideal. Fortunately, "a naïve reliance on long-run historical averages is not the only approach for estimating the expected risk premium."[77]

Q. DID YOU RELY ON THE HISTORICAL ERP AS PART OF YOUR CAPM ANALYSIS IN THIS CASE?

A. No. Due to the limitations of this approach, I relied on the ERP reported in expert surveys and the implied ERP method discussed below.

2. <u>Expert Surveys</u>

Q. DESCRIBE THE EXPERT SURVEY APPROACH TO ESTIMATING THE ERP.

A. As its name implies, the expert survey approach to estimating the ERP involves conducting a survey of experts including professors, analysts, chief financial officers, and other

[75] Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns* 194 (Princeton University Press 2002).

[76] Aswath Damodaran, *Equity Risk Premiums: Determinants, Estimation and Implications – The 2015 Edition* 17 (New York University 2015).

[77] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 330 (3rd ed., South Western Cengage Learning 2010).

executives around the country and asking them what they think the ERP is. The IESE Business School conducts such a survey each year. Their 2022 expert survey reported an average ERP of 5.6%.[78]

3. Implied ERP

Q. DESCRIBE THE IMPLIED ERP APPROACH.

A. The third method of estimating the ERP is arguably the best. The implied ERP relies on the stable growth model proposed by Gordon, often called the "Gordon Growth Model," which is a basic stock valuation model widely used in finance for many years.[79] This model is a mathematical derivation of the DCF Model. In fact, the underlying concept in both models is the same: the current value of an asset is equal to the present value of its future cash flows. Instead of using this model to determine the discount rate of one company, one can use it to determine the discount rate for the entire market by substituting the inputs of the model. Specifically, instead of using the current stock price (P_0), one will use the current value of the S&P 500 (V_{500}). Similarly, instead of using the dividends of a single firm, one will consider the dividends paid by the entire market. Additionally, one should consider potential dividends. In other words, stock buybacks should be considered in addition to paid dividends, as stock buybacks represent another way for the firm to transfer free cash flow to shareholders. Focusing on dividends alone without considering stock

[78] Pablo Fernandez, Pablo Linares & Isabel F. Acin, *Market Risk Premium used in 171 Countries in 2016: A Survey with 6,932 Answers*, at 3 (IESE Business School 2015), copy available at http://www.valumonics.com/wp-content/uploads/2017/06/Discount-rate-Pablo-Fern%C3%A1ndez.pdf. IESE Business School is the graduate business school of the University of Navarra. IESE offers Master of Business Administration (MBA), Executive MBA and Executive Education programs. IESE is consistently ranked among the leading business schools in the world.

[79] Myron J. Gordon and Eli Shapiro, *Capital Equipment Analysis: The Required Rate of Profit* 102–10 (Management Science Vol. 3, No. 1 Oct. 1956).

buybacks could understate the cash flow component of the model, and ultimately understate the implied ERP. The market dividend yield plus the market buyback yield gives us the gross cash yield to use as our cash flow in the numerator of the discount model. This gross cash yield is increased each year over the next five years by the growth rate. These cash flows must be discounted to determine their present value. The discount rate in each denominator is the risk-free rate (R_F) plus the discount rate (K). The following formula shows how the implied return is calculated. Since the current value of the S&P is known, one can solve for K: the implied market return.[80]

Equation 4:
Implied Market Return

$$V_{500} = \frac{CY_1(1+g)^1}{(1+R_F+K)^1} + \frac{CY_2(1+g)^2}{(1+R_F+K)^2} + \cdots + \frac{CY_5(1+g)^5 + TV}{(1+R_F+K)^5}$$

where:

V_{500}	=	*current value of index (S&P 500)*
$CY_{1\text{-}5}$	=	*average cash yield over last ten years (includes dividends and buybacks)*
g	=	*compound growth rate in earnings over last five years*
R_F	=	*risk-free rate*
K	=	*implied market return (this is what we are solving for)*
TV	=	*terminal value* $= CY_5 (1+R_F) / K$

The discount rate is called the "implied" return here because it is based on the current value of the index as well as the value of free cash flow to investors projected over the next five years. Thus, based on these inputs, the market is "implying" the expected return; or in other words, based on the current value of all stocks (the index price), and the projected value of future cash flows, the market is telling us the return expected by investors for investing in the market portfolio. After solving for the implied market return (K), one simply subtracts the risk-free rate from it to arrive at the implied ERP.

[80] *See* Exhibit DJG-9 for detailed calculation.

Equation 5:
Implied Equity Risk Premium

$$Implied\ Expected\ Market\ Return - R_F = Implied\ ERP$$

Q. DISCUSS THE RESULTS OF YOUR IMPLIED ERP CALCULATION.

A. After collecting data for the index value, operating earnings, dividends, and buybacks for the S&P 500 over the past six years, I calculated the dividend yield, buyback yield, and gross cash yield for each year. I also calculated the compound annual growth rate (g) from operating earnings. I used these inputs, along with the risk-free rate and current value of the index to calculate a current expected return on the entire market of 8.8%. I subtracted the risk-free rate to arrive at the implied equity risk premium of 5.8%.[81] Dr. Damodaran, one of the world's leading experts on the ERP, promotes the implied ERP method discussed above. He calculates monthly and annual implied ERPs with this method and publishes his results. Dr. Damodaran's average ERP estimate for May 2022 using several implied ERP variations was 5.5%.[82]

Q. WHAT ARE THE RESULTS OF YOUR FINAL ERP ESTIMATE?

A. For the final ERP estimate I used in my CAPM analysis, I considered the results of the ERP surveys along with the implied ERP calculations and the ERP reported by Kroll (formerly Duff & Phelps).[83] The results are presented in the following figure:

[81] Exhibit DJG-9.

[82] Aswath Damodaran, *Implied Equity Risk Premium Update*, DAMODARAN ONLINE http://pages.stern.nyu.edu/~adamodar/.

[83] Exhibit DJG-10.

Figure 10:
Equity Risk Premium Results

IESE Business School Survey	5.6%
Kroll (formerly Duff & Phelps)	5.5%
Damodaran (average)	5.5%
Garrett	5.8%
Average	**5.6%**

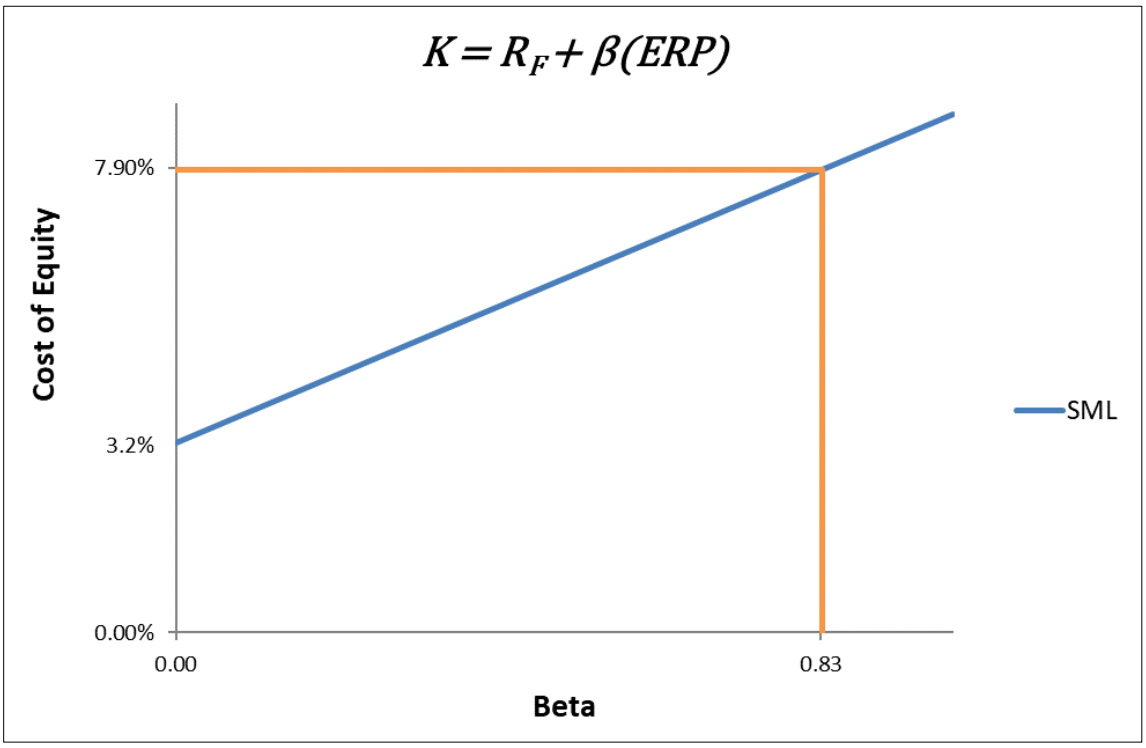
The average ERP from these sources is 5.6%.

Q. PLEASE EXPLAIN THE FINAL RESULTS OF YOUR CAPM ANALYSIS.

A. Using the inputs for the risk-free rate, beta coefficient, and ERP discussed above, I estimate that FPUC's CAPM cost of equity is 7.9%.[84] The CAPM may be displayed graphically through what is known as the Security Market Line ("SML"). The following figure shows the expected return (cost of equity) on the y-axis, and the average beta for the proxy group on the x-axis. The SML intercepts the y-axis at the level of the risk-free rate. The slope of the SML is the equity risk premium.

[84] Exhibit DJG-11.

Figure 11:
CAPM Graph



The SML provides the rate of return that will compensate investors for the beta risk of that investment. Thus, at an average beta of 0.83 for the proxy group, the estimated CAPM cost of equity for FPUC is 7.9%.

D. Response to Mr. Moul's CAPM Analysis

Q. MR. MOUL'S CAPM ANALYSIS YIELDS NOTABLY HIGHER RESULTS. DID YOU FIND SPECIFIC PROBLEMS WITH MR. MOUL'S CAPM ASSUMPTIONS AND INPUTS?

A. Yes, I did. Mr. Moul estimates a CAPM cost of equity of 14.41%.[85] Mr. Moul has overestimated several inputs to the CAPM, including beta and the equity risk premium. He

[85] Exhibit PRM-1, Sch. 1.

also includes an inappropriate size premium in his model. Each of these problems is discussed further below.

1. Beta

Q. DESCRIBE MR. MOUL'S BETA INPUT TO THE CAPM.

A. Mr. Moul used a beta of 1.04 in his CAPM.[86] This beta is much higher than the average beta of Mr. Moul's proxy group as reported by Value Line, which is only 0.83.[87] The difference between a beta of 0.83 and 1.04 is significant, especially considering the fact that the beta of the entire market is 1.0. The betas reported by Value Line show that the proxy group is less risky than the market average, while the inflated beta derived by Mr. Moul would indicate the proxy group of utilities is riskier than the market average. Mr. Moul is essentially suggesting that the betas published by Value Line, an objective and widely-used source in utility regulation, are notably underestimated.

Q. DO YOU AGREE WITH MR. MOUL'S BETA INPUT?

A. No. By using a beta of 1.04, Mr. Moul is implying that FPUC is riskier than the market portfolio of stocks in the U.S. market. Such a proposition contradicts any objective or intuitive understanding of a regulated utility's position and operations. In fact, it is more accurate to say that FPUC, and its utility peers, are among the least risky companies in the world. FPUC is a regulated monopoly with a captive customer base who provides an essential product with a relatively inelastic demand – operating under a regulatory framework that would essentially prevent it from experiencing financial failure.

[86] *Id.*

[87] Exhibit DJG-8.

Competitive firms in the market do not enjoy the same risk-mitigating framework and protections. I have also discussed my disagreement with Mr. Moul's beta input from a technical perspective when I addressed his leverage adjustment above. In short, it is inappropriate to use Value Line betas as a starting point and then increase them to account for leverage. The Commission should reject Mr. Moul's CAPM results for his beta input alone. However, his estimate for the ERP is also unreasonably high, as further discussed below.

2. Equity Risk Premium

Q. DID MR. MOUL RELY ON A REASONABLE MEASURE FOR THE ERP?

A. No, he did not. Mr. Moul used an input of 10.23% for the ERP, which is not realistic.[88] The ERP is one of three inputs in the CAPM equation, and it is one of the most important factors for estimating the cost of equity in this case. As discussed above, I used three widely accepted methods for estimating the ERP, including consulting expert surveys, calculating the implied ERP based on aggregate market data, and considering the ERPs published by reputable analysts. The highest ERP found from my research and analysis is only 5.8%.

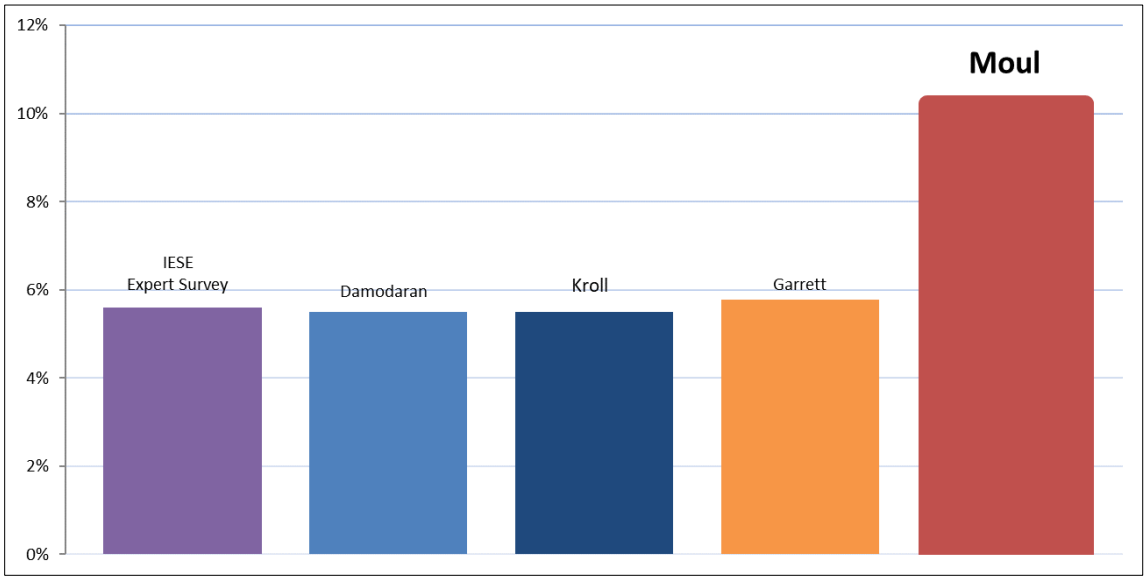
Q. PLEASE DISCUSS AND ILLUSTRATE HOW MR. MOUL'S ERP COMPARES WITH OTHER ESTIMATES FOR THE ERP.

A. The 2022 IESE Business School expert survey reports an average ERP of 5.6%. Similarly, Kroll (formerly Duff & Phelps) recently estimated an ERP of 5.5%. Dr. Damodaran, a

[88] Exhibit PRM-1, Sch. 1.

leading expert on the ERP, recently estimated an average ERP of only 5.5%.[89] The chart in the following figure illustrates that Mr. Moul's ERP estimate is far out of line with other reasonable, objective estimates for the ERP.[90]

Figure 12:
Equity Risk Premium Comparison



When compared with other independent sources for the ERP, as well as my estimate, Mr. Moul's ERP estimate is clearly not within the range of reasonableness. As a result, his CAPM cost of equity estimate is overstated.

3. Size Premium

Q. DESCRIBE MR. MOUL'S SIZE PREMIUM ADJUSTMENT TO HIS CAPM.

A. Mr. Moul adds 1.02% to his CAPM on the basis that FPUC is smaller than the proxy group.[91]

[89] Aswath Damodaran, *Implied Equity Risk Premium Update*, DAMODARAN ONLINE, http://pages.stern.nyu.edu/~adamodar/. Dr. Damodaran estimates several ERPs using various assumptions.

[90] The ERP estimated by Dr. Damodaran is the average of several ERP estimates using different assumptions.

[91] Exhibit PRM-1, Sch. 1.

Q. DO YOU AGREE WITH MR. MOUL'S SIZE PREMIUM?

A. No. The "size effect" phenomenon arose from a 1981 study conducted by Banz, which found that "in the 1936 – 1975 period, the common stock of small firms had, on average, higher risk-adjusted returns than the common stock of large firms."[92] According to Ibbotson, Banz's size effect study was "[o]ne of the most remarkable discoveries of modern finance."[93] Perhaps there was some merit to this idea at the time, but the size effect phenomenon was short lived. Banz's 1981 publication generated much interest in the size effect and spurred the launch of significant new small cap investment funds. However, this "honeymoon period lasted for approximately two years. . . ." [94] After 1983, U.S. small-cap stocks actually underperformed relative to large cap stocks. In other words, the size effect essentially reversed. In *Triumph of the Optimists*, the authors conducted an extensive empirical study of the size effect phenomenon around the world. They found that after the size effect phenomenon was discovered in 1981, it disappeared within a few years:

> It is clear . . . that there was a global reversal of the size effect in virtually every country, with the size premium not just disappearing but going into reverse. Researchers around the world universally fell victim to Murphy's Law, with the very effect they were documenting – and inventing explanations for – promptly reversing itself shortly after their studies were published.[95]

In other words, the authors assert that the very discovery of the size effect phenomenon likely caused its own demise. The authors ultimately concluded that it is "inappropriate to

[92] Rolf W. Banz, *The Relationship Between Return and Market Value of Common Stocks* 3-18 (Journal of Financial Economics 9 (1981)).

[93] 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook 99 (Morningstar 2015).

[94] Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns* 131 (Princeton University Press 2002).

[95] *Id*. at 133.

use the term 'size effect' to imply that we should automatically expect there to be a small-cap premium," yet, this is exactly what utility witnesses often do in attempting to artificially inflate the cost of equity with a size premium. Other prominent sources have agreed that the size premium is a dead phenomenon. According to Ibbotson:

> The unpredictability of small-cap returns has given rise to another argument against the existence of a size premium: that markets have changed so that the size premium no longer exists. As evidence, one might observe the last 20 years of market data to see that the performance of large-cap stocks was basically equal to that of small cap stocks. In fact, large-cap stocks have outperformed small-cap stocks in five of the last 10 years.[96]

In addition to the studies discussed above, other scholars have concluded similar results. According to Kalesnik and Beck:

> Today, more than 30 years after the initial publication of Banz's paper, the empirical evidence is extremely weak even before adjusting for possible biases. . . . The U.S. long-term size premium is driven by the extreme outliers, which occurred three-quarters of a century ago. . . . Finally, adjusting for biases . . . makes the size premium vanish. If the size premium were discovered today, rather than in the 1980s, it would be challenging to even publish a paper documenting that small stocks outperform large ones.[97]

For all of these reasons, the Commission should reject the arbitrary size premium proposed by the Company.

Q. HAVE OTHER COMMISSIONS RECENTLY REJECTED MR. MOUL'S SIZE ADJUSTMENT?

A. Yes. Recently, in the Application of Palmetto Wastewater Reclamation ("PWR"), the Public Service Commission of South Carolina rejected Mr. Moul's size premium

[96] 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook 112 (Morningstar 2015).

[97] Vitali Kalesnik and Noah Beck, *Busting the Myth About Size* (Research Affiliates 2014), available at https://www.researchaffiliates.com/Our%20Ideas/Insights/Fundamentals/Pages/284_Busting_the_Myth_About_Size.aspx (emphasis added).

adjustment.[98] Relying in part on my testimony in the PWR case, the South Carolina commission agreed that "Mr. Moul's 1.02% size adjustment is not appropriate."[99]

IX. OTHER COST OF EQUITY ISSUES

Q. ARE THERE ANY OTHER ISSUES RAISED IN THE COMPANY'S TESTIMONY TO WHICH YOU WOULD LIKE TO RESPOND?

A. Yes. In his testimony, Mr. Moul suggests that certain firm-specific risks and other factors should have an increasing effect on the cost of equity, apparently beyond that which is indicated by the CAPM and DCF Model. Mr. Moul also relies on comparable and expected earnings to support his cost of equity estimate. Finally, Mr. Moul also suggests that flotation costs should have an increasing effect on FPUC's authorized ROE.

A. Firm-Specific Business Risks

Q. DESCRIBE MR. MOUL'S TESTIMONY REGARDING BUSINESS RISKS.

A. In his Direct Testimony, Mr. Moul suggests that the Company is exposed to additional risks beyond those inherent in the proxy group. According to Mr. Moul, such risks include competition, economic regulation, and the business cycle, among other risks.[100]

[98] Order issued December 21, 2021, Application of Palmetto Wastewater Reclamation, before the Public Service Commission of South Carolina, p. 24.

[99] *Id*.

[100] *See* Direct testimony of Paul R. Moul, pp. 9-12.

Q. DO YOU AGREE WITH MR. MOUL THAT THESE FIRM-SPECIFIC RISK FACTORS SHOULD INFLUENCE FPUC'S COST OF EQUITY OR AWARDED ROE?

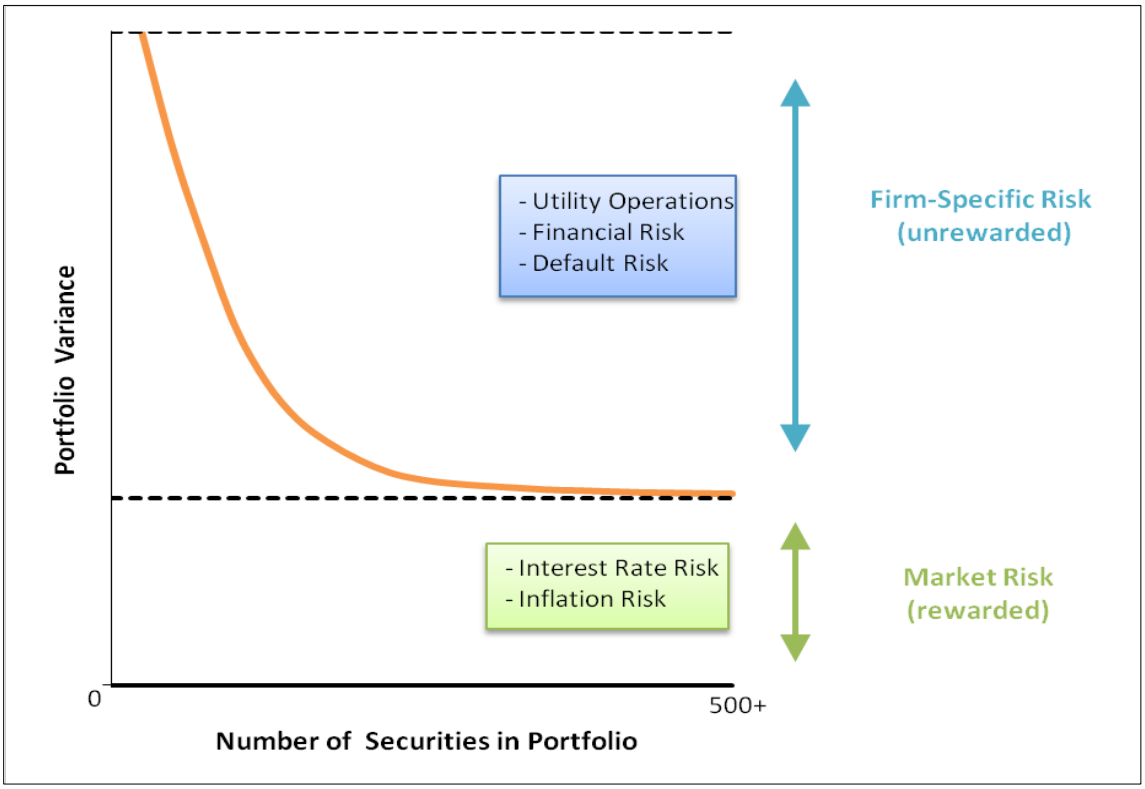
A. No. All companies face business risks, including the other utilities in the proxy group; business risks are not unique to FPUC. As discussed above, it is a well-known concept in finance that firm-specific risks are unrewarded by the market. This is largely because firm-specific risk can be eliminated through portfolio diversification. Scholars widely recognize the fact that market risk, or "systematic risk," is the only type of risk for which investors expect a return for bearing.[101]

Unlike market risks that affect all companies in the stock market, the risk factors discussed by Mr. Moul are merely business risks are specific to FPUC. Investors do not require an additional return for these firm-specific business risks. Another way to consider this issue is to look at the CAPM and DCF Model. Neither model includes an input for business risks due to the well-known truth that investors do not expect a return for such risks. Therefore, the Company's firm-specific business risks, while perhaps relevant to other issues in the rate case, have no meaningful effect on the cost of equity estimate. Rather, it is market risk that is rewarded by the market, and this concept is thoroughly addressed in my CAPM analysis discussed above. Thus, the Commission should reject any additional premium Mr. Moul has added to an already overstated cost of equity

[101] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 180 (3rd ed., South Western Cengage Learning 2010).

estimate to account for any firm-specific risks. .[102] These important concepts are again illustrated in the figure below.

Figure 13:
Effects of Portfolio Diversification



The financial models presented in my testimony (particularly the CAPM) directly measure market risk, which is the type of risk the Commission should focus on when determining a fair authorized ROE.

[102] *See* Section IV above.

B. Comparable Earnings

Q. PLEASE SUMMARIZE MR. MOUL'S COMPARABLE EARNINGS APPROACH.

A. Mr. Moul also analyzed the returns realized by non-regulated companies as an indication of FPUC's cost of equity.[103] The results of his comparable earnings approach indicate a cost of equity for FPUC of 12.05%.[104]

Q. DO YOU AGREE WITH MR. MOUL'S ANALYSES?

A. No. There are three notable problems with Mr. Moul's comparable earnings approach: (1) earned returns do not indicate the cost of equity; (2) using earned returns in a model used to set the awarded ROE in regulatory proceedings creates an echo chamber, void of technical value; and (2) there is no marginal value in analyzing competitive firms beyond those of the utility proxy group in terms of assessing a comparable risk profile. First, "earned" returns and "expected" returns are entirely different concepts. For example, we might conduct a cost of equity analysis on ABC Corp's stock and determine that, based on the risk inherent in that investment, we should "expect" a 50% return on our investment based on the (relatively high) risk assumed in the investment. Suppose, however, the ABC Corp actually earns a return of only 2% in a particular period. This does not mean that the 2% return has any bearing on what investors actually "required" given the company's risk profile, or that they will not continue to require a 50% in their risky investment going forward. In this example, it is also impossible for 2% to represent an expected return in any risky asset since this return would be lower than the risk-free rate. Thus, Mr. Moul's

[103] Direct testimony of Paul R. Moul, pp. 46-49.

[104] Exhibit PRM-1, Sch. 1.

analysis of earned returns does not add any value for assessing the cost of equity for FPUC beyond the results of the CAPM and DCF Model.

The second problem with Mr. Moul's comparable earnings model is that it simply creates an echo chamber that necessarily excludes the most critical component in determining the Company's most fair authorized return on equity: the actual *cost* of equity. If an earned return is particularly high in a given period, and that earned return is the primary driver for setting the authorized ROE, it will result in an unfairly high ROE and potentially lead to another inflated, earned return, which starts the cycle over again. Moreover, none of these factors would relate to the utility's actual cost of equity, which is most appropriately measured by the CAPM and DCF Model.

The final problem with Mr. Moul's comparable earnings approach is that it uses the earned returns of non-regulated, non-utility companies as an indication of FPUC's cost of equity. Despite the title of Mr. Moul's model, competitive, non-utility companies are relatively *incomparable* to FPUC. Primarily, the risk profiles of competitive firms will tend to be higher than those of low-risk utilities; thus, their cost of equity estimates will generally be higher. Not surprisingly, the results of Mr. Moul's "comparable" earnings approach are higher than those produced by some of his other cost of equity models.[105] There is simply no marginal value added to the process of estimating utility cost of equity by using non-utility, non-regulated firms in a proxy group that should contain firms with relatively similar risk profiles to the regulated utility being analyzed.

[105] Exhibit PRM-1, Sch. 1.

C. Flotation Costs

Q. PLEASE SUMMARIZE MR. MOUL'S POSITION REGARDING FLOTATION COSTS.

A. Mr. Moul states that the cost of equity must also include an adjustment to cover flotation costs.[106] Mr. Moul quantifies a flotation cost adjustment of 0.17% (or 17 basis points) to his DCF Model.

Q. DO YOU AGREE WITH MR. MOUL'S FLOTATION COST ADJUSTMENT?

A. No. When companies issue equity securities, they typically hire at least one investment bank as an underwriter for the securities. "Flotation costs" generally refer to the underwriter's compensation for the services it provides in connection with the securities offering. Mr. Moul's flotation cost allowance is inappropriate for several reasons, as discussed further below.

1. Flotation costs are not actual "out-of-pocket" costs.

The Company has not experienced any out-of-pocket costs for flotation. Underwriters are not compensated in this fashion. Instead, underwriters are compensated through an "underwriting spread." An underwriting spread is the difference between the price at which the underwriter purchases the shares from the firm, and the price at which the underwriter sells the shares to investors.[107] Furthermore, FPUC is not a publicly traded company, which means it does not issue securities to the public and thus would have no need to retain an underwriter. Accordingly, the Company has not experienced any out-of-

[106] Direct Testimony of Paul R. Moul, p. 38, lines 12-13.

[107] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 509 (3rd ed., South Western Cengage Learning 2010).

pocket flotation costs, and if it has, those costs should be included in the Company's expense schedules.

2. The market already accounts for flotation costs.

When an underwriter markets a firm's securities to investors, the investors are well aware of the underwriter's fees. In other words, the investors know that a portion of the price they are paying for the shares does not go directly to the company, but instead goes to compensate the underwriter for its services. In fact, federal law requires that the underwriter's compensation be disclosed on the front page of the prospectus.[108] Thus, investors have already considered and accounted for flotation costs when making their decision to purchase shares at the quoted price. As a result, there is no need for FPUC' shareholders to receive additional compensation to account for costs they have already considered and agreed to. Similar compensation structures are in other kinds of business transactions. For example, a homeowner may hire a realtor and sell a home for $100,000. After the realtor takes a six percent commission, the seller nets $94,000. The buyer and seller agreed to the transaction notwithstanding the realtor's commission. Obviously, it would be unreasonable for the buyer or seller to demand additional funds from anyone after the deal is completed to reimburse them for the realtor's fees. Likewise, investors of competitive firms do not expect additional compensation for flotation costs. Thus, it would not be appropriate for a commission standing in the place of competition to award a utility's investors with this additional compensation.

[108] *See* Regulation S-K, 17 C.F.R. § 229.501(b)(3) (requiring that the underwriter's discounts and commissions be disclosed on the outside cover page of the prospectus). A prospectus is a legal document that provides details about an investment offering.

3. It is inappropriate to add any additional basis points to an awarded ROE proposal that is already far above the Company's cost of equity.

For the reasons discussed above, flotation costs should be disallowed from a technical standpoint; they should also be disallowed from a practical standpoint. FPUC is asking this Commission to award it a cost of equity that is more than 300 basis points above its market-based cost of equity. Under these circumstances, it is especially inappropriate to suggest that flotation costs should be considered in any way to increase an already inflated ROE proposal.

X. COST OF EQUITY SUMMARY

Q. PLEASE SUMMARIZE THE RESULTS OF THE CAPM AND DCF MODEL DISCUSSED ABOVE.

A. The following figure shows the cost of equity results from each model I employed in this case.[109]

[109] Exhibit DJG-12.

Figure 14:
Cost of Equity Summary

Cost of Equity Model	Result
DCF (Sustainable Growth)	6.7%
DCF (Analyst Growth)	8.3%
Capital Asset Pricing Model	7.9%
Hamada (at proposed debt ratio)	8.5%
Average	**7.8%**
Highest	**8.5%**

The average cost of equity resulting from these various models is 7.8.

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR HAMADA MODEL INCLUDED IN THE TABLE ABOVE.

A. As discussed above in response to Mr. Moul's inaccurate leverage adjustment to his DCF analysis, a proper consideration of leverage (as an increasing factor to the cost of equity estimate), would actually include an adjustment to increase FPUC's ratemaking debt ratio. In this case, I am proposing a debt-equity ratio of 1.08, which is based on the average debt ratio of 52% for the proxy group. Since this represents an upward adjustment to FPUC's actual debt ratio, it is not unreasonable to consider its impact on the Company's cost of equity. This impact is most appropriately measured through the Hamada formula. Thus, if the Commission were to authorize a debt-equity ratio of 1.08 for FPUC, then the CAPM

cost of equity indication for the Company would be about 8.5%, which is still significantly lower than my authorized ROE recommendation of 9.25%.[110] The capital structure issue is discussed in more detail below.

XI. CAPITAL STRUCTURE

Q. DESCRIBE IN GENERAL THE CONCEPT OF A COMPANY'S CAPITAL STRUCTURE.

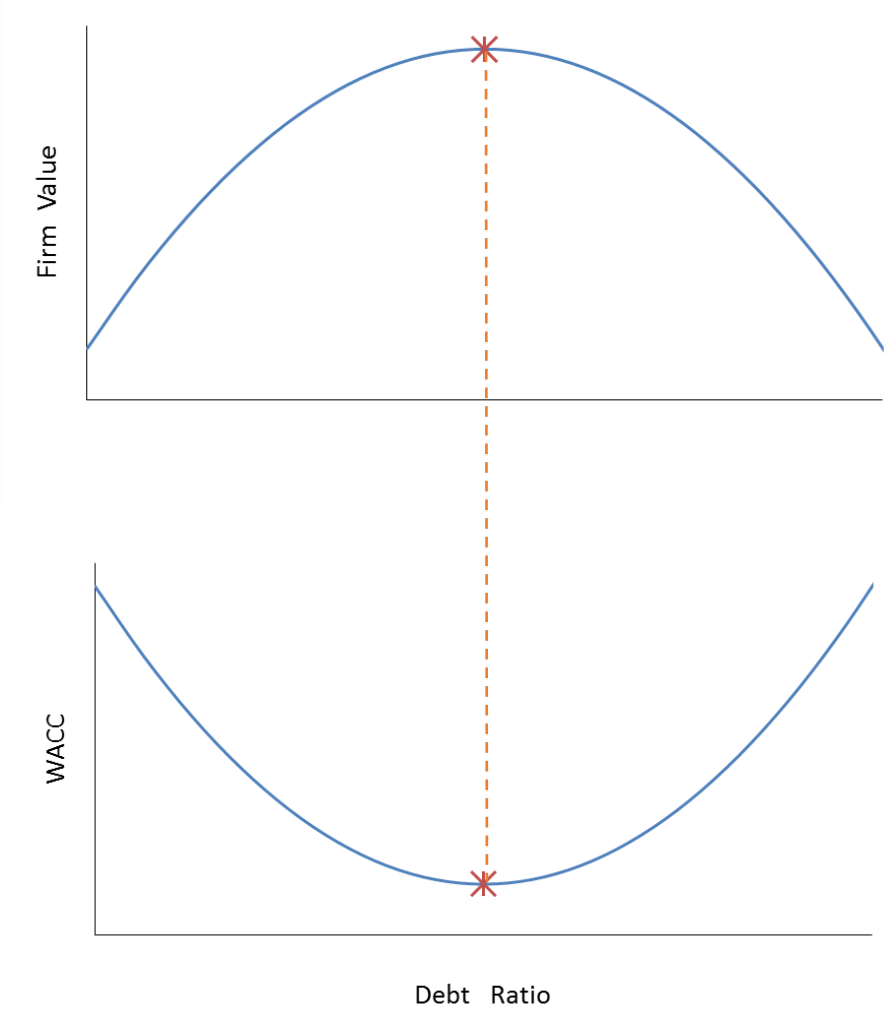
A. "Capital structure" refers to the way a company finances its overall operations through external financing. The primary sources of long-term, external financing are debt capital and equity capital. Debt capital usually comes in the form of contractual bond issues that require the firm to make payments, while equity capital represents an ownership interest in the form of stock. Because a firm cannot pay dividends on common stock until it satisfies its debt obligations to bondholders, stockholders are referred to as "residual claimants." The fact that stockholders have a lower priority to claims on company assets increases their risk and the required return relative to bondholders. Thus, equity capital has a higher cost than debt capital. Firms can reduce their WACC by recapitalizing and increasing their debt financing. In addition, because interest expense is deductible, increasing debt also adds value to the firm by reducing the firm's tax obligation.

[110] Exhibit DJG-16.

Q. IS IT TRUE THAT, BY INCREASING DEBT, COMPETITIVE FIRMS CAN ADD VALUE AND REDUCE THEIR WACC?

A. Yes, it is. A competitive firm can add value by increasing debt. After a certain point, however, the marginal cost of additional debt outweighs its marginal benefit. This is because the more debt the firm uses, the higher interest expense it must pay, and the likelihood of loss increases. This also increases the risk of non-recovery for both bondholders and shareholders, causing both groups of investors to demand a greater return on their investment. Thus, if debt financing is too high, the firm's WACC will increase instead of decrease. The following figure illustrates these concepts.

Figure 15:
Optimal Debt Ratio



As shown in this figure, a competitive firm's value is maximized when the WACC is minimized. In both graphs, the debt ratio is shown on the x-axis. By increasing its debt ratio, a competitive firm can minimize its WACC and maximize its value. At a certain point, however, the benefits of increasing debt do not outweigh the costs of the additional

risks to both bondholders and shareholders, as each type of investor will demand higher returns for the additional risk they have assumed.[111]

Q. DOES THE RATE BASE RATE OF RETURN MODEL EFFECTIVELY INCENTIVIZE UTILITIES TO OPERATE AT THE OPTIMAL CAPITAL STRUCTURE?

A. No. While it is true that competitive firms maximize their value by minimizing their WACC, this is not the case for regulated utilities. Under the rate base rate of return model, a higher WACC results in higher rates, all else held constant. The basic revenue requirement equation is as follows:

Equation 6:
Revenue Requirement for Regulated Utilities

$$RR = O + d + T + \boldsymbol{r}(A - D)$$

where:

RR	=	*revenue requirement*
O	=	*operating expenses*
d	=	*depreciation expense*
T	=	*corporate tax*
$\boldsymbol{r}$	=	***weighted average cost of capital (WACC)***
A	=	*plant investments*
D	=	*accumulated depreciation*

As shown in this equation, utilities can increase their revenue requirement by <u>increasing</u> their WACC, not by minimizing it. Thus, because there is no incentive for a regulated utility to minimize its WACC, a commission standing in the place of competition must ensure that the regulated utility is operating at the lowest reasonable WACC.

[111] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 440-41 (3rd ed., South Western Cengage Learning 2010).

Q. CAN UTILITIES GENERALLY AFFORD TO HAVE HIGHER DEBT LEVELS THAN OTHER INDUSTRIES?

A. Yes. Because regulated utilities have large amounts of fixed assets, stable earnings, and low risk relative to other industries, they can afford to have relatively higher debt ratios (or "leverage"). As aptly stated by Dr. Damodaran:

> Since financial leverage multiplies the underlying business risk, it stands to reason that firms that have high business risk should be reluctant to take on financial leverage. It also stands to reason that firms that operate in stable businesses should be much more willing to take on financial leverage. Utilities, for instance, have historically had high debt ratios but have not had high betas, mostly because their underlying businesses have been stable and fairly predictable.[112]

Note that the author explicitly contrasts utilities with firms that have high underlying business risk. Because utilities have low levels of risk and operate a stable business, they should generally operate with relatively high levels of debt to achieve their optimal capital structure.

Q. ARE THE CAPITAL STRUCTURES OF THE PROXY GROUP A SOURCE THAT CAN BE USED TO ASSESS A PRUDENT CAPITAL STRUCTURE?

A. Yes. Since we consider other metrics of the proxy group when estimating cost of equity, it is also appropriate to consider the financing mix of these companies when assessing a fair ratemaking debt ratio for FPUC.

[112] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 196 (3rd ed., John Wiley & Sons, Inc. 2012) (emphasis added).

Q. HOW CAN UTILITY REGULATORY COMMISSIONS HELP OVERCOME THE FACT THAT UTILITIES DO NOT HAVE A NATURAL FINANCIAL INCENTIVE TO MINIMIZE THEIR COST OF CAPITAL?

A. While under the rate base rate of return model utilities do not have a natural financial incentive to minimize their cost of capital, competitive firms, in contrast, can and do maximize their value by minimizing their cost of capital. Competitive firms minimize their cost of capital by including a sufficient amount of debt in their capital structures. They do not do this because it is required by a regulatory body, but rather because their shareholders demand it in order to maximize value. The Commission can provide this incentive to FPUC by acting as a surrogate for competition and setting rates consistent with a capital structure that is similar to what would be appropriate in a competitive, as opposed to a regulated, environment.

Q. PLEASE DESCRIBE HOW YOU ASSESSED THE REASONABLENESS OF FPUC'S PROPOSED CAPITAL STRUCTURE IN THIS CASE.

A. FPUC proposed capital structure consists of 39.4% long-term debt and 55.1% common equity, which equates to a debt-equity ratio of only 0.72. In this case, I examined the capital structures of the proxy group, as well as the capital structures observed in other competitive industries to assess the overall reasonableness of my recommendation compared to FPUC's proposed capital structure.

Q. PLEASE DESCRIBE THE DEBT RATIOS OF THE PROXY GROUP.

A. Again, Mr. Moul and I used the same proxy group of utilities for our cost of capital analyses. The proxy group of utilities reported an average debt ratio of 52%, which equates

to a debt-equity ratio of 1.08. This is a significantly higher debt-equity ratio than the debt-equity ratio of 0.72 proposed by the Company, which is only a debt ratio of 39.4%.[113]

Q. DID YOU ALSO LOOK AT OTHER COMPETITIVE FIRMS AROUND THE COUNTRY TO COMPARE THEIR DEBT RATIOS?

A. Yes. In fact, there are currently nearly 2,000 firms in various industries across the country with debt ratios of 50% or greater, with an average debt ratio of 61 percent.[114] The following figure shows a sample of these industries, with debt ratios of at least 56%.

[113] Exhibit DJG-14.

[114] Exhibit DJG-15.

Figure 16:
Industries with Debt Ratios of 56% or Greater

Industry	# Firms	Debt Ratio
Air Transport	21	85%
Hospitals/Healthcare Facilities	31	80%
Hotel/Gaming	66	77%
Brokerage & Investment Banking	31	76%
Retail (Automotive)	32	72%
Food Wholesalers	15	68%
Retail (Grocery and Food)	15	68%
Rubber& Tires	2	67%
Bank (Money Center)	7	67%
Advertising	49	67%
Computers/Peripherals	46	67%
Auto & Truck	26	66%
Real Estate (Operations & Services)	51	66%
Retail (Special Lines)	76	64%
Cable TV	11	63%
Oil/Gas Distribution	21	63%
Packaging & Container	26	62%
Telecom. Services	42	61%
Recreation	60	61%
Broadcasting	28	60%
Transportation (Railroads)	4	60%
R.E.I.T.	238	60%
Power	50	60%
Telecom (Wireless)	17	59%
Transportation	17	59%
Beverage (Soft)	32	58%
Utility (Water)	14	57%
Retail (Distributors)	68	57%
Office Equipment & Services	18	57%
Aerospace/Defense	73	57%
Household Products	118	56%
Computer Services	83	56%
Green & Renewable Energy	20	56%
Total / Average	**1,408**	**64%**

Many of the industries shown here, like public utilities, are generally well-established industries with large amounts of capital assets. The shareholders of these industries demand

higher debt ratios in order to maximize their profits. There are several notable industries that are relatively comparable to public utilities in some respects. These debt ratios, as well as the average debt ratio of the utility proxy group, are notably higher than FPUC's proposed debt ratio.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S CAPITAL STRUCTURE?

A. The analysis strongly indicates that FPUC's proposed long-term debt ratio of 39.4% for the newly consolidated company is too low to be considered fair for ratemaking. An insufficiently low debt ratio causes the weighted average cost of capital to be unreasonably high. Based on my findings, I recommend the Commission impute a capital structure for ratemaking purposes consisting of long-term debt of 52%, which adopts the proxy group's debt-equity ratio of 1.08. Along with my proposed return on equity of 9.25%, this equates to an overall awarded rate of return of 5.2%.[115]

[115] Exhibit DJG-17.

PART TWO: DEPRECIATION

XII. LEGAL STANDARDS

Q. DISCUSS THE STANDARD BY WHICH REGULATED UTILITIES ARE ALLOWED TO RECOVER DEPRECIATION EXPENSE.

A. In *Lindheimer v. Illinois Bell Telephone Co.*, the U.S. Supreme Court stated that "depreciation is the loss, not restored by current maintenance, which is due to all the factors causing the ultimate retirement of the property. These factors embrace wear and tear, decay, inadequacy, and obsolescence."[116] The *Lindheimer* Court also recognized that the original cost of plant assets, rather than present value or some other measure, is the proper basis for calculating depreciation expense.[117] Moreover, the *Lindheimer* Court found:

> [T]he company has the burden of making a convincing showing that the amounts it has charged to operating expenses for depreciation have not been excessive. That burden is not sustained by proof that its general accounting system has been correct. The calculations are mathematical but the predictions underlying them are essentially matters of opinion.[118]

Thus, the Commission must ultimately determine if the Company has met its burden of proof by making a convincing showing that its proposed depreciation rates are not excessive.

[116] *Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 169 (1934).

[117] *Id*. Referring to the straight-line method, the *Lindheimer* Court stated that "[a]ccording to the principle of this accounting practice, the loss is computed upon the actual cost of the property as entered upon the books, less the expected salvage, and the amount charged each year is one year's pro rata share of the total amount.". The original cost standard was reaffirmed by the Court in *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 606 (1944). The *Hope* Court stated: "Moreover, this Court recognized in [*Lindheimer*], supra, the propriety of basing annual depreciation on cost. By such a procedure the utility is made whole and the integrity of its investment maintained. No more is required." (footnotes omitted).

[118] *Id*. at 169.

Q. SHOULD DEPRECIATION REPRESENT AN ALLOCATED COST OF CAPITAL TO OPERATION, RATHER THAN A MECHANISM TO DETERMINE LOSS OF VALUE?

A. Yes. While the *Lindheimer* case and other early literature recognized depreciation as a necessary expense, the language indicated that depreciation was primarily a mechanism to determine loss of value.[119] Adoption of this "value concept" would require annual appraisals of extensive utility plant, and thus, is not practical in this context. Rather, the "cost allocation concept" recognizes that depreciation is a cost of providing service, and that in addition to receiving a "return on" invested capital through the allowed rate of return, a utility should also receive a "return of" its invested capital in the form of recovered depreciation expense. The cost allocation concept also satisfies several fundamental accounting principles, including verifiability, neutrality, and the matching principle.[120] The definition of "depreciation accounting" published by the American Institute of Certified Public Accountants ("AICPA") properly reflects the cost allocation concept:

[119] *See* Frank K. Wolf & W. Chester Fitch, *Depreciation Systems* 71 (Iowa State University Press 1994).

[120] National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices* 12 (NARUC 1996).

> Depreciation accounting is a system of accounting that aims to distribute cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation.[121]

Thus, the concept of depreciation as "the allocation of cost has proven to be the most useful and most widely used concept."[122]

Q. DESCRIBE WHY IT IS IMPORTANT NOT TO OVERESTIMATE DEPRECIATION RATES.

A. Under the rate base rate of return model, the utility is allowed to recover the original cost of its prudent investments required to provide service. Depreciation systems are designed to allocate those costs in a systematic and rational manner – specifically, over the service life of the utility's assets. If depreciation rates are overestimated (i.e., service lives are underestimated), it encourages economic inefficiency. Unlike competitive firms, regulated utility companies are not always incentivized by natural market forces to make the most economically efficient decisions. If a utility is allowed to recover the cost of an asset before the end of its useful life, this could incentivize the utility to unnecessarily replace the asset in order to increase its rate base, which results in economic waste. Thus, from a public policy perspective, it is preferable for regulators to ensure that assets are not depreciated before the end of their true useful lives. While underestimating the useful lives of depreciable assets could financially harm current ratepayers and encourage economic waste, unintentionally overestimating depreciable lives (i.e., underestimating depreciation

[121] American Institute of Accountants, *Accounting Terminology Bulletins Number 1: Review and Résumé* 25 (American Institute of Accountants 1953).

[122] Wolf *supra* n. 118, at 73.

rates) does not necessarily harm the Company financially. This is because if an asset's life is overestimated, there are a variety of measures that regulators can use to ensure the utility is not financially harmed. One such measure would be the use of a regulatory asset account. In that case, the Company's original cost investment in these assets would remain in the Company's rate base until they are recovered. Thus, the process of depreciation strives for a perfect match between actual and estimated useful life. When these estimates are not exact, however, it is better that useful lives are not underestimated for these reasons

XIII. SERVICE LIFE ANALYSIS

Q. DESCRIBE THE ACTUARIAL PROCESS TYPICALLY USED TO ANALYZE A UTILITY'S DEPRECIABLE PROPERTY.

A. The study of retirement patterns of industrial property is derived from the actuarial process used to study human mortality. Just as actuarial analysts study historical human mortality data in order to predict how long a group of people will live, depreciation analysts study historical plant data in order to estimate the average lives of property groups. The most common actuarial method used by depreciation analysts is called the "retirement rate method." In the retirement rate method, original property data, including additions, retirements, transfers, and other transactions, are organized by vintage and transaction year.[123] The retirement rate method is ultimately used to develop an "observed life table," ("OLT") which shows the percentage of property surviving at each age interval. This pattern of property retirement is described as a "survivor curve." The survivor curve

[123] The "vintage" year refers to the year that a group of property was placed in service (aka "placement" year). The "transaction" year refers to the accounting year in which a property transaction occurred, such as an addition, retirement, or transfer (aka "experience" year).

derived from the observed life table, however, must be fitted and smoothed with a complete curve in order to determine the ultimate average life of the group.[124] The most widely used survivor curves for this curve fitting process were developed at Iowa State University in the early 1900s and are commonly known as the "Iowa curves."[125] A more detailed explanation of how the Iowa curves are used in the actuarial analysis of depreciable property is set forth in Exhibit DJG-23 - Appendix C. However, FPUC did not provide the type of aged data required to conduct actuarial analysis and traditional Iowa curve fitting techniques. As acknowledged by Ms. Lee in her testimony, "[s]urvivor curves were not generated by statistical analysis for any account in the [depreciation] Study."[126] Nonetheless, I describe the process typically used to conduct service life estimates because, in the account-specific discussion below, I will illustrate this process using the actual OLT curve and Iowa curves from another case to show how the Iowa curves selected by FPUC are generally shorter than those of other utilities in my peer group for the accounts in dispute.

Q. GENERALLY DESCRIBE YOUR APPROACH IN ESTIMATING THE SERVICE LIVES OF MASS PROPERTY WHEN ADEQUATE AGED DATA ARE AVAILABLE.

A. When adequate data is available, I use all of a utility's aged property data to create an OLT for each account. The data points on the OLT can be plotted to form a curve (the "OLT

[124] *See* Exhibit DJG-23 - Appendix C for a more detailed discussion of the actuarial analysis used to determine the average lives of grouped industrial property.

[125] *See* Exhibit DJG-23 - Appendix B for a more detailed discussion of the Iowa curves.

[126] Direct Testimony of Patricia Lee, p. 11, lines 12-13.

curve"). The OLT curve is not a theoretical curve, rather, it is actual observed data from the Company's records that indicate the rate of retirement for each property group. An OLT curve by itself, however, is rarely a smooth curve, and is often not a "complete" curve (i.e., it does not end at zero percent surviving). In order to calculate average life (the area under a curve), a complete survivor curve is needed. The Iowa curves are empirically derived curves based on the extensive studies of the actual mortality patterns of many different types of industrial property. The curve-fitting process involves selecting the best Iowa curve to fit the OLT curve. This can be accomplished through a combination of visual and mathematical curve-fitting techniques, as well as professional judgment. The first step of my approach to curve-fitting involves visually inspecting the OLT curve for any irregularities. For example, if the "tail" end of the curve is erratic and shows a sharp decline over a short period of time, it may indicate that this portion of the data is less reliable, as further discussed below. After inspecting the OLT curve, I use a mathematical curve-fitting technique which essentially involves measuring the distance between the OLT curve and the selected Iowa curve in order to get an objective, mathematical assessment of how well the curve fits. After selecting an Iowa curve, I observe the OLT curve along with the Iowa curve on the same graph to determine how well the curve fits. I may repeat this process several times for any given account to ensure that the most reasonable Iowa curve is selected. I will illustrate this process further in the discussions below.

Q. PLEASE SUMMARIZE YOUR SERVICE LIFE ADJUSTMENTS.

A. Since FPUC did not provide the type of adequate aged data that is typically used for an accurate service life analysis, we must rely on the approved service lives of other utilities

for some objective indication of an appropriate service life. The approved service lives I considered are summarized in the tables below.[127]

Figure 17:
Peer Group Summary

Acct	Description	Liberty	NIPSCO	PNG	FCG	PGS	Avg
378	M&R Equip. - General	51	55	55	30	40	46
379	M&R Equip. - City Gate	51	55	55	35	50	49
3801	Services - Plastic	50	68	60	54	55	57
381	Meters	45	36	29	20	19	30
	Average	**49**	**54**	**50**	**35**	**41**	**46**

I selected these in part because I was involved in the depreciation analysis in each case, and the depreciation studies in these cases included voluminous historical retirement data that was adequate for actuarial analysis. As shown in this figure, the approved service lives for these accounts are generally longer than those approved in Florida for the same accounts.[128]

Q. CAN YOU PROVIDE AN EXAMPLE OF THE ACTUARIAL ANALYSIS ON WHICH THE APPROVED SERVICE LIVES OF YOUR PEER GROUP WERE BASED?

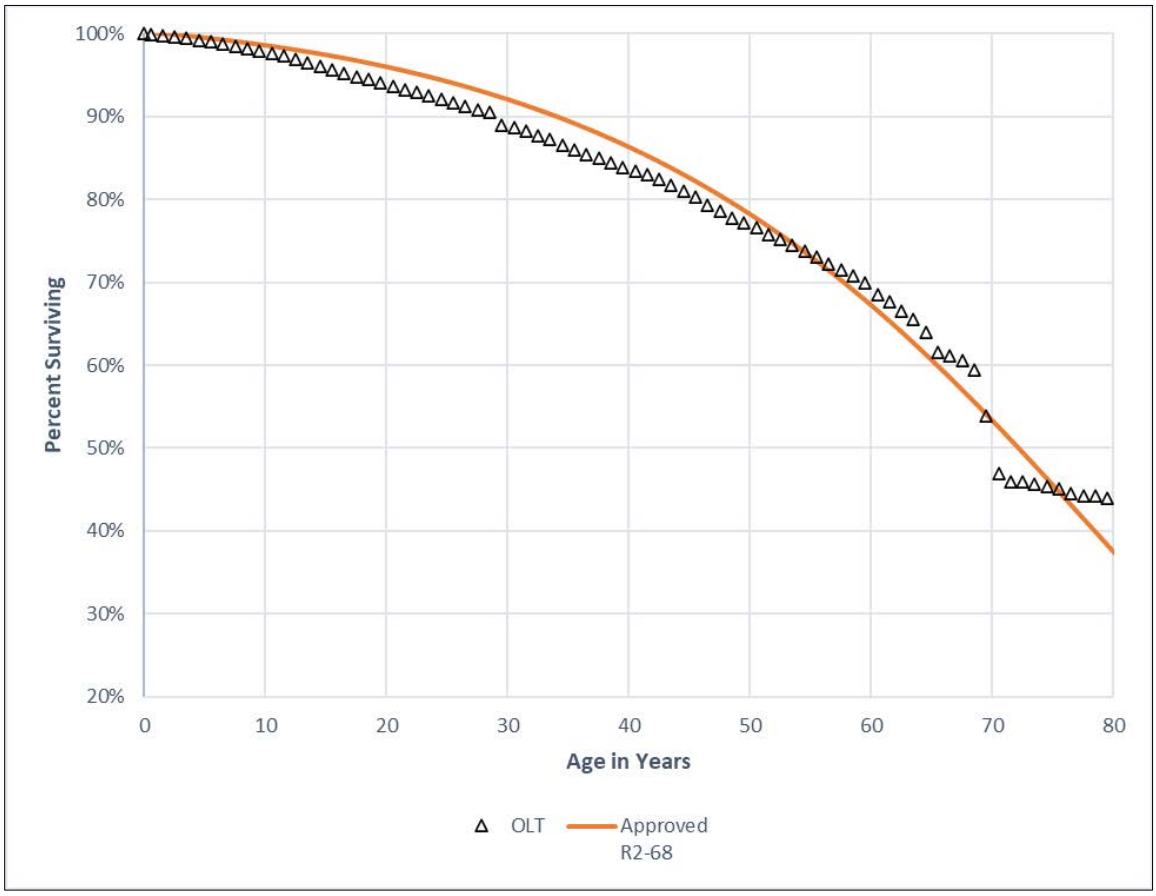
A. Yes. I will use Account 380 (Services) from the Northern Indiana Public Service Company ("NIPSCO") case. The OLT curve derived from NIPSCO's historical plant data is well-suited for conventional Iowa curve fitting techniques. That is, the OLT curve is relatively smooth, has adequate retirement experience (i.e., it is long enough), and follows a typical

[127] *See* Exhibit DJG-19 for more details.

[128] *See* Exhibits DJG-20 and DJG-21 for depreciation rate calculations and comparisons.

retirement pattern for utility property. The OLT curve is presented in the graph below, along with the Iowa R2-68 curve that was ultimately approved for that account.

Figure 18:
NIPSCO Account 380 - Services



As shown in this graph, the R2-68 curve provided a relatively good fit to the historical retirement pattern derived from the company's historical data as presented in the OLT curve.[129]

[129] *See* Exhibit DJG-22.

I. INTRODUCTION

Q. STATE YOUR NAME AND OCCUPATION.

A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I am the managing member of Resolve Utility Consulting PLLC.

Q. DID YOU FILE DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes. I filed direct testimony on August 24, 2022. A summary of my qualifications was included in my testimony.[1]

Q. DESCRIBE THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY.

A. In my direct testimony, I testified on behalf of the Florida Office of Public Counsel ("OPC") in response to the petition for rate increase by Florida Public Utilities Company-Gas Division, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company – Fort Meade, and Florida Public Utilities Company – Indiantown Division (collectively "FPUC" or the "Company"). I addressed the Company's proposed depreciation rates in response to the direct testimony of Company witness Patricia Lee, who sponsors the Company's depreciation study. On September 9, 2022, Ms. Lee filed revised testimony, which included revisions to a number of the Company's proposed depreciation parameters. I am filing this supplemental testimony to reflect OPC's position regarding depreciation pursuant to the Company's revised testimony.

[1] Exhibit DJG-1.

Q. WERE THE ANY CHANGES TO THE NARRATIVE OF YOUR DIRECT TESTIMONY AS A RESULT OF MS. LEE'S REVISED TESTIMONY?

A. Yes, there is one change. On page 10, line 8 of my direct testimony, the dollar amount is now $250,098.

Q. ARE YOU FILING ANY REVISED EXHIBITS AS PART OF YOUR SUPPLEMENTAL TESTIMONY?

A. Yes. I am filing supplemental versions of Exhibits DJG-18, 20 and 21.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Q. HAS FPUC MADE A CONVINCING SHOWING THAT ITS PROPOSED DEPRECIATION EXPENSE FOR THIS ACCOUNT IS NOT EXCESSIVE?

A. No, it has not. The Company proposes a 55-year service life for this account, Services – plastics, and has not presented the type of evidence from which an adequate OLT curve can be derived. As shown in my Figure 17, the Services-plastic has an average service life of 57 years based on my peer group. Adopting FPUC proposed service life would underestimate the Services-plastic service life by 2 years and result in overstated depreciation rates. Thus, the Commission should consider the approved service lives presented in my peer group.

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION REGARDING DEPRECIATION RATES?

A. I recommend the Commission approve the depreciation rates presented in Exhibit DJG-20.[130] These rates are based on the average of approved service life presented in my peer group analysis.[131]

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes. I reserve the right to supplement this testimony as needed with any additional information that has been requested from the Company but not yet provided. To the extent I have not addressed an issue, method, calculation, account, or other matter relevant to the Company's proposals in this proceeding, it should not be construed that I am in agreement with the same.

[130] OPC's adjustment to depreciation expense is presented in the direct testimony of Ralph Smith.

[131] *See* Exhibit DJG-19.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Florida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company - Fort Meade, and Florida Public Utilities Company - Indiantown Division.	DOCKET NO. 20220067-GU FILED: August 30, 2022

CITIZENS' NOTICE OF SERVICE OF ERRATA TO THE TESTIMONY AND EXHIBITS OF WITNESS DAVID J. GARRETT

Pursuant to Section 350.0611, Florida Statutes, the Citizens of the State of Florida, by and through Richard Gentry, Public Counsel, hereby give notice of service of the attached Errata Sheet to the Direct Testimony and Exhibits of David J. Garrett, filed on August 24, 2022.

Respectfully submitted,

Richard Gentry
Public Counsel

/s/Patricia A. Christensen
Patricia A. Christensen
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of the State of Florida

CERTIFICATE OF SERVICE
DOCKET NO. 20220067-GU

I HEREBY CERTIFY that a true and correct copy has been furnished by electronic mail on this 30th day of August 2022, to the following:

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Of the State of Florida

ERRATA SHEET

WITNESS: David J. Garrett

The following table contains the corrected errata in her direct testimony.

Page	**Line**	**Original**	**Revision**
15	10	To illustrate this fact, the graph in the figure below shows three trend lines.	To illustrate this fact, the graph in the figure below shows two trend lines.
15	11-12	top two line are the average annual awarded returns since 1990 for U.S. regulated electric and gas utilities.	top line is the average annual award returns since 1990 for U.S. regulated gas utilities.

MS. CHRISTENSEN: And at this point, I would tender the witness for cross.

CHAIRMAN FAY: Okay. Great.

Mr. Munson?

MR. MUNSON: Thank you, Mr. Chair.

EXAMINATION

BY MR. MUNSON:

Q Good afternoon, Mr. Garrett. How are you?

A Good. How are you?

Q Good. Thank you.

So let's start with cost of capital. Just to confirm, you have adopted Mr. Moul's proxy group for use in your analysis, correct?

A Yes.

Q Okay. And an ROE, you said you calculated a 7.8 percent cost of equity for FPUC, but you are recommending a 9.25 percent, is that correct?

A That's correct.

Q Okay. The movement from 7.8 to 9.25 percent is based on your interpretation of what's required under the Hope and Bluefield standards, right?

A Yes. That decision just necessarily requires some judgment. If the -- the Hope standard, ultimately, is that the end result should be reasonable, and it comes down to a judgment call under the totality of the

circumstances and evidence of what would be considered reasonable.

Q That's exactly right. It's a judgment call on your part, is that right?

A It is.

Q And you didn't perform any calculations to get from 7.8 to 9.25 percent, did you?

A That's correct.

Q All right. Now, that 9.25 percent, that's still below the 2021 average annual awarded ROE for natural gas utilities in the United States, isn't that right?

A Yes. That's my understanding.

Q Would you agree with me right now that inflation is running higher than at any of time in about the last 30 to 40 years?

A I think that's correct.

Q Okay. And if I were to tell you the federal funds rate is currently three to 3.25 percent, does that sound about right?

A It does.

Q Okay. On the leverage adjustment made by Mr. Moul, are you familiar with that?

A I am generally familiar with it.

Q Okay. And you don't agree with it, correct?

A I don't.

Q Okay. And one of your assertions was that Mr. Moul's application of the Hamada formula in the DCF model wasn't correct, right?

A Yes, I believe it is.

Q Okay. Are you familiar with an alternative approach, the Modigliani and Miller approach?

A I am generally familiar with it.

Q Okay. And did you have a chance to read Mr. Moul's rebuttal testimony?

A I did.

Q Okay. And you saw in there where he was using the Modigliani and Miller approach in his DCF model and not the Hamada formula?

A I -- I recall him -- him saying that.

Q Okay. I want to turn now to depreciation. I may ask you some questions based on Ms. Pat Lee's revised testimony, and I think you should have a copy of that sitting up there. You may want to have it available.

A I do.

Q All right. But first, if you could direct your attention to your Exhibit DJG-S20. Let's start there. Let me know when your there, please.

A Is that the supplemental --

Q That's correct?

A -- exhibit?

Q Yep. Yeah, this is one of those cases where it may be faster not to use the acronym DJS. It's DJG-S20?

A And I apologize, I do not have a copy of the -- I forgot to print a copy of my supplemental testimony exhibits.

Q We are going to need that.

A Yeah, I apologize for that. Normally I am not filing supplemental and I --

Q No problem. I'm sure we can --

CHAIRMAN FAY: Let me check with our folks. Do we have a fairly easily accessible version of that supplemental we could print for him? Just hold tight with us real quick, Mr. Garrett, we will see if we can get you -- yes.

Okay. Mr. Garrett, does that look familiar?

THE WITNESS: Yes, it looks like I have a copy. Sorry again about that.

CHAIRMAN FAY: Okay. No worries.

BY MR. MUNSON:

Q Well, and I should, while I am on it. I am going to ask you questions about supplemental DJG-S21 as well.

A Okay. I have that too.

Q Okay. Very good. The rest of the questions on your exhibits are largely confined to your original testimony, which I understand you have with you, correct?

A Yes. I do have those.

Q Okay. All right. So turning, please, to DJG-S20, if I can direct your attention, please, to the line at the bottom called Revised General Plant Amortization, do you see that?

A Yes.

Q Okay. And the OPC proposed annual accrual for that amount is $288,819, is that right?

A Yes.

Q And do you know, that's -- would you agree with me, that's the same as the company's accrual for these accounts, right?

A Yes.

Q Okay. So let me see if we can do this without reference to Ms. Lee's exhibit, but would you agree with me that that results in a five-year reserve amortization period?

A I am not -- I am not exactly sure.

Q Okay. Let's do this. I think you have -- up there, you have Ms. Lee's revised testimony. Do you see

that you there?

A Yes.

Q Okay. And if you would, please, turn to her Revised Exhibit PSL-2?

A Okay.

Q And let me know when you are there.

A I am there. Which page is it?

Q She's on -- thank you. I am on page 32 of 93.

A You said page 32?

Q Yes, sir.

A Okay, I am there.

Q Okay. And just to confirm, the most applicable heading appears to me to be Revised General Plant Amortization True-Up. Do you see that near the top?

A Yes.

Q Okay. And you see in the, what I would call the bottom right-hand column, it's labeled Revised Reserve Imbalance 1/1/2023?

A Yes.

Q Okay. And there is that $288,819 that was the same as your proposal, correct?

A Yes.

Q And you see in the column immediately to the left of that, it says, reserve amortization period?

A Yes.

Q And those all show five years for all of those listed accounts, right?

A Yes. That's correct.

Q Okay. Do you agree with that five-year amortization period now that you have had a chance to receive Ms. Lee's exhibit?

A We didn't take issue with that in testimony.

Q Okay. Well, assuming it's correct, would you agree that a zero amortization period of five years is shorter than the average service life for those accounts? And this is where DJG-S21 may come in handy.

A Yes, I would agree with that.

Q Okay. So you would agree with me, then, that there is a reserve imbalance for these accounts, is that right?

A Yes, I believe that's correct.

Q Okay. Up at your station there, you should -- staff handed out a series of documents, and one of them should have an order number and say, Prehearing Order. Can I get you to turn to that for me, please?

A Is this in -- which stack is it in?

Q It should have a cover sheet on it with some handwritten notes, if that helps.

CHAIRMAN FAY: I think you were handed out

four documents. They have got handwritten descriptions on them.

THE WITNESS: Okay.

BY MR. MUNSON:

Q And if you would, please, there is no page numbers on this, but if you would turn to sort of the middle of the document, Issue No. 7, and just let me know when you are there.

MS. CHRISTENSEN: Do you have the prehearing order?

THE WITNESS: Oh, this is the response. I am sorry.

MS. CHRISTENSEN: Yeah, it's prehearing.

THE WITNESS: Okay, I am on Issue 7.

BY MR. MUNSON:

Q All right. And do you see Issue 7 is framed as -- where it says: What, if any, corrective depreciation reserve measures should be taken with respect to any imbalances identified in Issue 6? Do you see that?

A Yes.

Q Okay. And if you turn the page, you will see it says, OPC. Can you take a minute -- let me ask you this: Have you seen this document before?

A Yes, I believe I have.

Q Okay. Have you seen this issue before?

A I believe I have.

Q Okay. Can you -- are you familiar with the write-up there that's for OPC that begins: Any imbalances identified by adoption?

A Yes, I see that.

Q Okay. And it says: Any imbalances identified by adoption of the depreciation parameters and resulting depreciation rates shown in OPC Witness Garrett's direct and supplemental testimonies and exhibits should be allocated over the service lives of the assets using the parameters included in OPC Witness Garrett's direct and supplemental testimonies and exhibits; do you see that?

A Yes. I see it.

Q A five-year amortization period is not the same thing as allocating imbalance over the life of the asset though, is it?

A That's correct.

Q I want to turn briefly to survivor curves. You can put Ms. Lee's testimony -- or the hearing order aside.

A Okay.

Q So let's just start with some background here. A survivor curve is -- I am sorry, let me know when you are ready.

CHAIRMAN FAY: Mr. Munson, let's go ahead and give that exhibit a number.

MR. MUNSON: Okay.

CHAIRMAN FAY: Let me get with our folks to see, are we on -- does 125 sound right?

MS. CIBULA: 124, I think.

MR. SANDY: 125.

MS. CIBULA: Okay, I am sorry.

CHAIRMAN FAY: That's okay. 125.

(Whereupon, Exhibit No. 125 was marked for identification.)

MR. MUNSON: And I don't intend to move these into evidence, Mr. Chair. I understand you need to give them a number, but just to let you know, although I have put a number of documents up there, and they have cover sheets, it's not my intent to move them into evidence.

CHAIRMAN FAY: Okay. Thank you.

MR. MUNSON: Okay.

MR. SANDY: And 125 was the prehearing order, were you referencing something else? I am sorry I just want to be clear for the record.

MR. MUNSON: If we are going to number it, it would -- I believe it was 125, and it is the prehearing order.

MR. SANDY: Okay. I am just double checking. Thank you.

CHAIRMAN FAY: And just for clarity, Mr. Munson, these are already within the record --

MR. MUNSON: Yes, sir.

CHAIRMAN FAY: -- so you are saying we don't need to --

MR. MUNSON: Yes, sir.

CHAIRMAN FAY: Okay. Ms. Christensen, any issue, we are just not going to put these into the record because it's already in there?

MS. CHRISTENSEN: If they are an order of the Commission and within the record already.

CHAIRMAN FAY: Great. All right. We will hold 125 then.

Go ahead, Mr. Munson. Thank you.

MR. MUNSON: Thank you.

BY MR. MUNSON:

Q All right. So on survivor curves, Mr. Garrett, a survivor curve is a mathematical function that allows an actuary to do an analysis of so-called mortality for different types of equipment, right?

A Yes. That's right.

Q Okay. These sometimes are referred to Iowa cuffs as well?

A Yes.

Q Okay. And there are different shapes of Iowa curves that can be used to describe the service life of any given equipment, right?

A Yes.

Q So there might be right modal curves, like R3, or left modal curves and symmetrical curves, and that sort of thing, right?

A That's right.

Q And there is also a square curve as a form of an Iowa curve, right?

A Yes.

Q And on square curves, those are used for depicting retirements which are all planned to retire at the same page age, correct?

A Yes. That's right.

Q And you haven't disputed any of FPUC's proposed curves presented in Ms. Lee's revised testimony, have you?

A You mean the curve shapes?

Q Correct.

A That's correct.

Q Okay. And actually, while we are all in agreement, you also haven't disputed any of FPUC's proposed net salvage values, is that correct?

A That's right.

Q Okay. All right. I am going to ask you now to go to page -- excuse me, Exhibit DJG-19 of yours, please.

A Okay.

Q Okay. And this exhibits show the average service life for four counts for each of the peer group companies of your peer group companies, correct?

A Yes.

Q And your primary dispute with FPUC is the proposed service life for the four counts listed in the left-hand column of this exhibit, is that right?

A Yes.

Q Okay. So just to have these out there in the record, those are account numbers 378, 379, 3801 and 381, correct?

A Yes, that's right.

Q Okay. And just so we know what we are talking about, those equipment -- these accounts, rather, are for measuring and regulating equipment. There is two types of those General and City Gate, and then there is two other types Services - Plastic, and then Meters, right?

A Yes.

Q Okay. And, in fact, for account 381, in your

supplemental testimony, you agree with FPUC's service life of 28 years, is that right?

A In the supplemental testimony?

Q Yeah, so that would be in DJ-S21.

A I thought we had kept those lives the same. Let me see. Yes, it's 28 years.

Q Okay. And -- okay. So it's really just those three remaining accounts, 378, 379 and 3801 where you have a disagreement with FPUC, correct?

A Yes, that's correct, in the supplemental.

Q So keep, if you would, please, DJ-S21 open, page three of three. And then just to confirm we are all looking at the same thing, these same four accounts are shown on your DJG-S21, correct?

A Yes, it looks like it.

Q Okay. And what's labeled column two there, where it says Iowa curve, the type under Iowa curve shows the recommended curve for this type of equipment for determining average service life, correct?

A Yes.

Q And the recommended curves for those four accounts are -- and I will just read them off here starting with 378 -- R3, R3, S3, I am sorry, and then R3, correct?

A R3, R3, S3 and -- yes, that's correct.

Q Okay. You didn't use these curves for these accounts, correct?

A You mean as far as the -- I believe I did use them.

Q Okay. Well, let me ask you this: Would you agree with me that the average service life minus the age of each account indicates use of a square curve?

A Are you talking about the remaining life calculation?

Q I think that's right.

A I would have to think about that a little bit more. I mean, it's different in this case because we don't have the dispersion patterns that we are using for remaining life calculations combined with the rounding convention that I, as I understood for calculating remaining life, but -- so I would have to -- I would have to think about that a little bits more. But the remaining life calculations are different than how I would say they are normally done.

Q Okay. Well, let me -- let's go -- maybe this will help clear things up. You have should have another one of those documents with the cover sheet handwritten, partly handwritten cover sheet. And it should be entitled OPC Response to Staff First Interrogatories.

A Yes, I see that.

Q Okay. Again, that -- you are doing better than me. Give me one minute.

MS. CRAWFORD: I am sorry, could I ask for some clarification? Unless I am misreading, I have two documents, one that says OPC's response -- oh, I am sorry, I did misread that -- to staff versus FPUC. Which one were we looking at? The response to the staff discovery or the FPUC discovery?

MR. MUNSON: That's correct. Staff.

MS. CRAWFORD: Staff. Thank you. My confusion.

MR. MUNSON: What did I do with that? Here we go. Sorry. I lost my own -- I lost my own exhibits. I apologize.

BY MR. MUNSON:

Q So on that document, please, if you can turn to No. 13.

A Okay.

Q And do you see there where it says -- actually, so -- sorry. No. 13 asks if you performed any analyses or any studies to determine what form of -- I am sorry. I am on the wrong one here. I am sorry, No. 15. I apologize.

A Okay.

Q So you would asked you, the question No. 15A

asked you whether witness -- whether you -- Witness Garrett's proposed average remaining liviers were different from the average remaining life years proposed by FPUC Witness Lee, do you see that question?

A Yes.

Q Okay. And do you see your response, where it says: Mr. Garrett calculated remaining life in this case by subtracting the age for each account from the average life estimate and references us to DJG-21?

A Yes.

Q Okay. And does that help you recall whether or not that the average service life minus each account indicates use of a square curve?

A I don't know if it helps me recall that. I mean, that's what I was saying I would need to think a little more about because I never thought about it in that way.

If I understand your question, I think it could be interpreted that way. And also with the rounding convention, it kind of -- it's not quite an exact science from that perspective anyway, but -- so I don't know if -- my answer to this question doesn't really help me answer the previous one about square curves, but you did read it correctly.

Q Okay. Let's go back, if you would, please, to

DJG-19?

A The exhibit?

Q Correct.

A Okay.

Q You see it's that peer group detailed parameter group comparison, do you see that?

A Yes.

Q Okay. So in the right-hand column, No. 7, you show the average service life for each of those four accounts across your peer companies, is that right?

A Yes.

Q And you chose this peer group because, in part, these were cases in which you were involved, right?

A Yes.

Q Okay. And I say these cases, I am referring to the cases of the companies listed there in columns two through six, right?

A Yes.

Q Okay. So based on this experience, do you know in which state Liberty -- data for Liberty in this table is based?

A Are you talking about Georgia? Are you asking about the state?

Q Yeah.

A Yes.

Q Okay. And how about NIPSCO, what state is that associated with?

A That is Indiana.

Q Okay. And PNG, how about that, which state is that associated with?

A That's South Carolina.

Q Okay. Now, FCG and PGS are both Florida companies, right?

A Yes.

Q Would you agree with me that FCG and PGS are relatively comparable to FPUC?

A Yes.

Q Okay. So let's just look for a minute at columns five and columns six there for FCG and PGS. I may ask you to do a little math. I will try to keep it simple.

If I were to average the service lives for FCG and PGS for those four accounts, would I -- let's just go ahead and go line by line. So the service lives would be for the M&R equipment general, would be 35 years, an average of 30 and 40, right?

A Yes.

Q And then would be an average of 32.5 years for M&R equipment City Gate, right?

A Right.

Q And then account 3801 for Services - Plastic, it would be 54.5 years, right?

A Yes.

Q And for the last line, 381 meters, it would be 19.5 years, right?

A Yes.

Q Okay. So if that's correct, then FPUC would have a service live that's five years longer for account 378 for those two entities compared to those two entities?

A Yes.

Q And 2.5 years shorter for account 379?

A Correct.

Q 0.5 years longer than for account 3801, services - plastic?

A That's right.

Q And 8.5 years longer for account 381, correct?

A That's correct.

Q Okay. So instead of a group average of 46 across your entire group as to what you have shown, if we were to average just those numbers that we've just read, the average of FCG and PGS, that would work out to about 38 years; does that sound right?

A Oh, it sounds about right, yeah.

Q Okay. Which is actually three years shorter than the service life proposed for these accounts by FPUC, correct?

A That's right.

MR. MUNSON: Okay. Nothing further. Thank you.

CHAIRMAN FAY: Okay. Great. Thank you.

Staff?

MR. SANDY: No cross, Mr. Chairman.

CHAIRMAN FAY: Okay. Commissioners?

Okay. Ms. Christensen, redirect?

FURTHER EXAMINATION

BY MS. CHRISTENSEN:

Q Good afternoon, Mr. Garrett. I just wanted to ask you a few questions, follow up with some of the line of questioning while you are on DJG-19. Do you know if those two Florida companies, did you have an opportunity to look at statistical data to propose those service lives?

A As part of my review in this case, I didn't look at the statistical -- I didn't go back and reexamine and take an in-depth view of those.

Q Okay. And let me ask you this: Even though you did not use, just restrict your analysis to Florida only companies, why did you include states outside of

Florida in your analysis?

A Well, this has been -- this was an issue in it seems like the last FPUC case too, but it's really just to give the Commission an alternative viewpoint to see what's going on in other jurisdictions, I think is the main reason. It's certainly not unreasonable to consider Florida companies, as I would say are relatively comparable, but I think it's also good to try to incorporate a little bit bigger sample size if you can.

Q Okay. And do you think your analysis should be limited to just Florida companies based on conditions which may affect the facilities differently than other states?

A I am sorry, can you repeat that?

Q Since you opted to use companies outside the state of Florida, do you think the fact there are certain conditions Florida specific, that it should be limited to only Florida, or do you think that the environmental conditions and their affect on the facilities, while impactful, is not addition positive?

A Well, I think it -- I mean, it's -- it can be considered. You know, we do these kind of comparable analysis -- of course, ideally, the utilities presenting age data, some of the other Florida companies I

understand do this, and most utilities -- most depreciation studies I review, the data is presented this way, where you can actual actually see a retirement dispersion pattern through an original survivor curve, you are fitting Iowa curves over that, but it gives everybody kind of a visual representation, too, of a retirement rate in what's going on.

So if you don't have that data, I suppose the next best thing is some kind of a comparable comparative type analysis, which is what both Ms. Lee is doing, and then any intervening witness is going to have to do something like that too, because they don't have the requisite data.

And so I just think when this type of a situation is brought up, and you are doing a comparable analysis, every -- in my experience, the utility's witness is discussing aspects about their environment in their state that might have a -- usually it's a downward price err on service lives, or proposing a shorter service life because they have more hurricanes, or tornadoes, or dry weather, or humid weather, but there is usually not a really in-depth type of analysis that's presented to directly tie the service life recommendations with those environmental conditions. And there hasn't been presented in this case. I haven't

done one myself either, but I think at that point, it's good to incorporate other information if you can and present alternative viewpoints to the regulator.

Q Okay. Do you recall the line of questioning regards OPC's position on the prehearing order, Issue 6, regarding the remaining life, if you have an imbalance, in OPC's position, that that would be -- flow back to customers over the remaining life. Do you have -- and then I think you were taken to Ms. Lee's supplement testimony where she amortized it over five years. Do you have an opinion on which position should be adopted as of this hearing?

A Well, yeah, I just -- I -- normally what we are doing when we have remaining life depreciation rates is any imbalance between the theoretical reserve and book reserve is just automatically allocated over the remaining life of plant. Sometimes, you know, it's not uncommon to see a general plant separate amortization period for those. And typically -- well, typically dollar-wise, and I think in this case I think, it's fairly immaterial, and so usually I am not taking a position with those types of issues. But in this case, I think it would be -- it would be reasonable to allocate it over the remaining life of plant.

Q Okay. And do you recall early on in your

cross-examination, you -- the leverage formula was brought up and you were directed to Mr. Moul's rebuttal testimony, where he used the Modini methodology. Are you aware of any state that has adopted that use or Mr. Moul's approach to the leverage formula?

MR. MUNSON: Objection. Outside the scope.

MS. CHRISTENSEN: I think he opened up the door when he -- when he was talking about the different methodologies, but --

CHAIRMAN FAY: Can you ask it in a more limited way maybe?

MS. CHRISTENSEN: I can certainly try.

CHAIRMAN FAY: Okay.

MS. CHRISTENSEN: Okay.

BY MS. CHRISTENSEN:

Q I believe you -- did you say you were familiar with the Modini methodology for the leverage formula that Mr. Moul used?

A I am generally familiar with it, but it's not a formula that I have ever specifically used as a rate adjustment.

Q Okay. Are you aware of any states where you have seen that type of a leverage formula adopted?

A Not that I can recall.

MS. CHRISTENSEN: Okay. I have no further

requests. Thank you.

CHAIRMAN FAY: Okay. Ms. Christensen, we have a lengthy list of exhibits here that --

MS. CHRISTENSEN: Yeah.

CHAIRMAN FAY: -- we need to enter into -- I have Comprehensive Exhibit List 36 through 58 and then DJG-S18, S20 and S21.

MS. CHRISTENSEN: 36 through 56 -- no, 58.

CHAIRMAN FAY: 58.

MS. CHRISTENSEN: Yeah, I see that, and supplemental additional three that are listed as 61 through 63, yes. I would ask that those exhibits be moved into the record.

CHAIRMAN FAY: Okay. Showing no objections.

MR. MUNSON: No objections.

CHAIRMAN FAY: Okay. They are entered into the record.

(Whereupon, Exhibit Nos. 36-58 & 61-63 were received into evidence.)

CHAIRMAN FAY: All right. Ms. Christensen, would you like to excuse your witness?

MS. CHRISTENSEN: Yes, I would. I would ask that Mr. Garrett be excused.

CHAIRMAN FAY: Okay. Thank you, Mr. Garrett. Travel safe.

THE WITNESS: Thank you.

(Witness excused.)

CHAIRMAN FAY: All right. Ms. Christensen, whenever you are ready.

MS. CHRISTENSEN: I would ask, as soon as Mr. Garrett is able to collect his things, that Mr. Ralph Smith take the stand.

Whereupon,

RALPH C.SMITH

was called as a witness, having been previously duly sworn to speak the truth, the whole truth, and nothing but the truth, was examined and testified as follows:

EXAMINATION

BY MS. CHRISTENSEN:

Q Good afternoon, Mr. Smith.

Can you please state your name and your business address for the record, please?

A Yes. My name is Ralph C. Smith. My business address is Larkin & Associates, PLLC, 15728 Farmington Road, Livonia, Michigan.

Q And did you cause to be prefiled direct testimony consisting of 42 pages in this docket?

A Yes.

Q Do you have any corrections to that prefiled testimony?

A No.

Q Okay. And if I were to ask you those same questions today, would your answers be the same?

A One answer would be different concerning the amount of the payroll tax adjustment.

Q Okay. Can you please -- can you please say how you would change your testimony today?

A Yes. In my direct testimony, I noted that her payroll taxes expense adjustment was $188,619. The company pointed out that we had included in that calculation some stock risk compensation paid to directors that wasn't subject to payroll taxes. So I would agree that that portion of the payroll tax adjustment needs to be removed. That would reduce that adjustment by $12,937. So the adjustment would be $175,682.

CHAIRMAN FAY: Ms. Christensen, is there an adjustment in the testimony for that?

THE WITNESS: It's mentioned on page 29, line 21.

CHAIRMAN FAY: Okay. Okay. Great. Thank you.

Go ahead, Ms. Christensen.

MS. CHRISTENSEN: Thank you.

BY MS. CHRISTENSEN:

Q With that modification to your prefiled testimony, if I were to ask you those questions today, including that modified answer, would your answers be the same --

A Yes.

Q -- otherwise?

MS. CHRISTENSEN: Okay. I would ask that the prefiled direct testimony of Mr. Smith be entered into the record as though read.

CHAIRMAN FAY: Okay. Show it entered as read.

(Whereupon, prefiled direct testimony of Ralph C. Smith was inserted.)

VI. OTHER CONCERNS

Q. DO YOU HAVE ANY CONCERNS ABOUT WHETHER PROJECTED AND FORECAST RATEBASE AND NET OPERATING INCOME ARE REPRESENTATIVE OF THE OPERATIONS OF THE COMPANY DURING THE TIME WHEN PROPOSED RATES ARE EXPECTED TO BE IN EFFECT?

A. Yes. There are a number of concerns that I have along this line after considering the filing and discovery and other information I have reviewed.

Q. PLEASE ELABORATE.

A. The Company was asked in OPC Interrogatory Nos. 143-148 about whether there are current and/or planned internal discussions for the Company to merge or be acquired. The Company objected to answering those requests, but stated in response to OPC Interrogatory No. 143 that:

> Notwithstanding and without waiving this objection, the Company states that, Chesapeake, frequently assesses "potential" transactions that would benefit all stakeholders. The Company is not aware of any such discussions that would impact this proceeding.

Were there to be no such discussions ongoing, a simple "no" would have been sufficient and the OPC and Commission could rely on it. The qualifier "that would impact this proceeding" does not put the matter to rest. In fact, it suggests that FPUC believes that it gets to decide whether any possible discussions impact the determination of a projected test year revenue requirement. The Commission is entitled to be the judge of that and the OPC is entitled to inquire about it to determine if the test year is representative of future operations.

I understand the OPC intends to pursue a motion to compel a substantive response to this. In the likely event that this discovery dispute is not resolved before the deadline for

filing testimony, I reserved the right to file supplemental testimony if material information bearing on a potential acquisition of the Company is revealed.

I have also observed that the Company has increased its employee complement to a projected 2023 test year amount of 240.02 from a 2021 year-end amount of 221.83.[8] This type of cost is especially susceptible to modification in merger synergies. I have a serious concern about whether the payroll related costs are reflective of going forward operations if there is a sale or merger of the Company under discussion or likely to occur in the time in which rates are to be in effect.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes, it does.

[8] See the response to OPC Interrogatory No. 30.

BY MS. CHRISTENSEN:

Q And did you prefile two exhibits with that testimony labeled RCS-1 through RCS-2?

A I did.

Q Do you have any corrections to make to those exhibits?

A Yes. A minor correction in the labeling on Exhibit RCS-2, page three of 38, on line four, it says per FPL. It should say FPUC.

Q Okay. And with that correction, are those exhibits correct otherwise?

A Yes. I should mention the same type of correction also appears on Exhibit RCS-2R, on the same page and line number that was filed with my supplemental testimony.

Q Okay. Did you also cause to be filed supplemental prefiled direct testimony on September 27th, 2022, consisting of 11 pages in this docket?

A Yes.

Q And do you have any corrections to your supplemental prefiled testimony?

A No.

Q Okay. And if I were to ask you the same questions today, would your answers be the same?

A Yes.

MS. CHRISTENSEN: I would ask that the prefiled supplemental testimony be entered into the record as though read.

CHAIRMAN FAY: Okay. Show it entered as though read.

(Whereupon, prefiled supplemental direct testimony of Ralph C. Smith was inserted.)

SUPPLEMENTAL DIRECT TESTIMONY

OF

RALPH SMITH

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 20220067-GU

I. INTRODUCTION

Q. WHAT IS YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS?

A. My name is Ralph Smith. I am a Certified Public Accountant licensed in the State of Michigan and a senior regulatory consultant at the firm Larkin & Associates, PLLC, Certified Public Accountants, with offices at 15728 Farmington Road, Livonia, Michigan, 48154.

Q. ARE YOU THE SAME RALPH C. SMITH WHO PREVIOUSLY FILED DIRECT TESTIMONY ON BEHALF OF THE OFFICE OF PUBLIC COUNSEL?

A. Yes. I previously filed direct testimony on August 24, 2022 on behalf of the Florida Office of Public Counsel ("OPC") concerning the results of my review of the rate request of Florida Public Utilities Company ("FPUC" or "Company"). Accordingly, I am appearing on behalf of the Citizens of the State of Florida ("Citizens").

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMETNAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my supplemental testimony is to reflect the impact of corrections filed by FPUC on September 9, 2022 concerning errors discovered by the Company in the direct testimony of Company witness Patricia Lee and in the Depreciation Study that was filed with Ms. Lee's direct testimony. I have reflected revisions to the OPC's overall recommended revenue requirement in this case based on incorporating the FPUC error corrections and reflecting the impacts on OPC's previously filed schedules. In reflecting these impacts, I have incorporated information provided to me from OPC witness David Garrett concerning depreciation rates and depreciation expense.

Q. WHAT EXHIBITS HAVE YOU ATTACHED TO YOUR SUPPLEMENTAL TESTIMONY?

A. I have attached the following exhibits:

RCS-2R, Revised Revenue Requirement and Adjustment Schedules for projected 2023 Test Year.

RCS-3, a listing of dollar amounts mentioned in my direct testimony that have changed, with page and line number references.

Q. ARE ANY ADDITIONAL WITNESSES APPEARING ON BEHALF OF THE FLORIDA OFFICE OF PUBLIC COUNSEL ALSO PRESENTING SUPPLEMENTAL TESTIMONY CONCERNING THE IMPACTS OF THOSE FPUC CORRECTIONS?

A. Yes. David Garrett addresses the impact of those FPUC corrections upon his recommended depreciation rates.

II. UPDATED OPC REVENUE REQUIREMENT AND ADJUSTMENT SCHEDULES

Q. WHAT IS THE JANUARY 2023 BASE RATE REVENUE REQUIREMENT DEFICIENCY OR EXCESS FOR FPUC, BASED ON YOUR UPDATES TO REFLECT THE IMPACT OF THE COMPANY'S DEPRECIATION STUDY ERROR CORRECTIONS?

A. As shown on Exhibit RCS-2R, Schedule A, the OPC's recommended adjustments in this case result in a recommendation that FPUC not be authorized a revenue increase in January 2023 of any more than approximately $7.88 million exclusive of the GRIP revenue requirement transfer into base rates. This is $16.18 million less than the base rate revenue increase of $24.06 million (exclusive of the GRIP investments) requested by FPUC in its Petition.

Q. WHAT SCHEDULES IN EXHBIT RCS-2R ARE AFFECTED BY REFLECTING THE IMPACTS OF THE COMPANY'S DEPRECIATION STUDY ERROR CORRECTIONS?

A. The cover page of Exhibit RCS-2R identifies which schedules in that Exhibit are being revised or updated to reflect impacts on the OPC's presentation of the depreciation study errors that the Company has identified and for which the Company filed corrections on September 9, 2022.

Q. PLEASE DISCUSS THE SCHEDULES IN EXHIBIT RCS-2R THAT HAVE BEEN REVISED AS A RESULT OF THE IMPACT OF THE COMPANY'S DEPRECIATION STUDY ERROR CORRECTIONS.

A. Exhibit RCS-2R consists of the same Summary Schedules A, A-1, B, B.1, C, C.1 and D and the same Adjustment Schedules B-1 through B-6 and C-1 through C-12, that were filed with my direct testimony. Of those, the following schedules have been updated to reflect the impacts of the Company's depreciation study error corrections:

Summary Schedules

Schedule A

Schedule A-1

Schedule B

Schedule B.1

Schedule C

Schedule C.1

Schedule D

Adjustment Schedules

Schedule B-3 Revised – Accumulated Depreciation – New Depreciation Rates

Schedule C-1 Revised – Depreciation Expense – New Depreciation Rates

Schedule C-10 Revised – Interest Synchronization

Schedule C-11 Revised – Parent Company Debt Adjustment

Adjustment Schedules B-3 Revised and C-1 Revised present the updated impacts on Accumulated Depreciation and Depreciation Expense, respectively. In addition, adjustment Schedules C-10 Revised and C-11 Revised present the updated impact on income tax expense as a result of the revised adjustment to Accumulated Depreciation, which impacted rate base.

The other revised schedules are summary schedules into which the impacts of those revisions, along with OPC's other adjustments that were previously presented in my direct testimony, have been summarized.

Accumulated Depreciation - New Depreciation Rates

Q. PLEASE EXPLAIN THE UPDATED ADJUSTMENT TO ACCUMULATED DEPRECIATION EXPENSE FOR NEW DEPRECIATION RATES.

A. As shown on Exhibit RCS-2R, Schedule B-3, average rate base for the 2023 projected test year is increased by $870,378 for the updated impact of the new depreciation rates being recommended by Witness Garrett. His updated recommendation for new depreciation rates results in lower 2023 depreciation expense than that contained in FPUC's proposal. Thus, a lower amount of average 2023 accumulated depreciation results from his depreciation rate recommendation. The 2023 rate base impact was calculated by calculating a 13-month average of the impact on depreciation expense from Mr. Garrett's recommended depreciation rates. The impact of Mr. Garrett's depreciation rate recommendations is discussed below in conjunction with the related adjustment to depreciation expense.

Depreciation Expense - New Depreciation Rates – Updated OPC Adjustment

Q. PLEASE SUMMARIZE YOUR UPDATED ANNUAL DEPRECIATION EXPENSE AMOUNT AND RELATED ADJUSTMENT AS COMPARED TO THE AMOUNT DISCUSSED IN YOUR DIRECT TESTIMONY.

A. As shown in the table below, annual depreciation expense is $12.49 million based on Mr. Garrett's updated depreciation rates. This compares to the $12.36 million of annual depreciation expense that was discussed in my direct testimony, which resulted in an adjustment to reduce depreciation expense by $2.205 million, which is an increase to depreciation expense of $131,196 versus the amount used in my direct testimony.

Description	Pro Forma Depreciation Expense Col. B, Line 1	Depreciation Expense Adjustment Col. C, Line 15
Exh. RCS-2R Supplemental Amounts	$ 12,487,591	$ (2,073,621)
Exh. RCS-2 As-Filed Amounts	$ 12,356,395	$ (2,204,818)
Difference	$ 131,196	$ 131,196

As shown in the above table, there is an increase of $131,196 in depreciation expense.

Q. WHAT IS YOUR SOURCE FOR THE UPDATED ADJUSTMENT TO DEPRECIATION EXPENSE FOR NEW DEPRECIATION RATES.

A. The amounts on Exhibit RCS-2R, Schedule C-1 Revised, page 4 in column A, were supplied to me by Witness Garrett, who is recommending new depreciation rates that differ from those proposed by FPUC. FPUC's original filing proposed depreciation rates that were applied to FPUC's projected 2023 test year Plant, which produced annual depreciation expense accruals of approximately $14.56 million, as summarized in column A, line 1 of Schedule C-1 Revised, page 1. In comparison, Mr. Garrett's updated recommended new depreciation rates produce annual depreciation accruals of approximately $12.49 million, as summarized on Schedule C-1 Revised, page 1 in column B, line 1. The revised annual depreciation expense resulting from Mr. Garrett's updated depreciation rates is $131,196 higher than the annual depreciation accruals of approximately $12.36 million that was previously discussed in my direct testimony that was filed on August 24, 2022. As shown on Schedule C-1 Revised, page 1, column C, Mr. Garrett's updated recommended new depreciation rates for FPUC results in an annual depreciation expense for 2023 that is $2.074 million less than the annual depreciation accruals computed using FPUC's depreciation rates from its original filing.

Q. IS THERE A CORRESPONDING RATE BASE ADJUSTMENT RELATED TO THE ADJUSTMENT FOR THE NEW DEPRECIATION RATES FOR FPUC?

A. Yes. As shown on Exhibit RCS-2R, Schedule B-3 Revised, and discussed above in conjunction with rate base adjustments, there is a related adjustment which decreases accumulated depreciation (and increases rate base). The impacts on 2023 average rate base shown on Schedule B-3 Revised were derived by calculating a 13-month average of the depreciation expense adjustment that is shown on Schedule C-1 Revised, page 5.

Interest Synchronization

Q. DID THE AFOREMENTIONED REVISIONS HAVE AN IMPACT ON THE INTEREST SYNCHRONIZATION ADJUSTMENT?

A. Yes. The interest synchronization adjustment allows the adjusted rate base and cost of debt to coincide with the income tax calculation. Since interest expense is deductible for income tax purposes, any revisions to the rate base or to the weighted cost of debt will impact the test year income tax expense related to the amount of the regulated utility's jurisdictional debt supporting the jurisdictional rate base. OPC's proposed rate base was impacted by the revision to accumulated depreciation that was discussed above. This results in a revised reduction to income tax expense in the amount of $133,877 as shown on Exhibit RCS-2R, Schedule C-10 Revised.

Parent Company Debt Adjustment

Q. WAS THE IMPACT ON FEDERAL INCOME TAX EXPENSE FOR THE EFFECT OF PARENT DEBT AFFECTED BY THE REVISIONS TO RATE BASE?

A. Yes. As shown on Exhibit RCS-2R, Schedule C-11 Revised, page 1, I have updated the parent company debt adjustment to now reduce federal income tax expense by $679,881.

Q. DOES THIS COMPLETE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

A. Yes, it does.

BY MS. CHRISTENSEN:

Q Okay. And with that prefiled supplemental testimony, do you also have two exhibits attached labeled RCS-2R through RCS-3?

A Yes.

Q Okay. And I believe you already identified a correction in your prefiled testimony exhibit. Would that same correction be made to your Exhibit RCS-2R, line four on page -- what was it --

A Page three. Yes.

Q Page three?

A To the same typo appears on that page and should also be corrected.

Q Okay. And with that correction, is the exhibits that you provided otherwise correct?

A Yes.

MS. CHRISTENSEN: I would ask that -- did we already move the supplemental testimony into the record as though read?

CHAIRMAN FAY: You did.

BY MS. CHRISTENSEN:

Q Okay. Then I would ask, Mr. Smith, if you could provide us with a summary of both your prefiled and your supplemental testimonies.

A Okay. Good afternoon, Chairman and

Commissioners.

My testimony addresses the base rate revenue increase and the base -- rate base and adjusted net operating income for the FPUC gas utilities.

The summary of the approximate revenue requirement impact of each OPC adjustment is presented on Exhibit RCS-2R, page three of 33, that was filed with my supplemental testimony.

In total, the OPC adjustments reduce the base rate revenue increase that was presented in FPUC's original application by about 16.2 million. I have reflected the recommendations of OPC witness David Garrett concerning cost of capital. Mr. Garrett has recommended a 9.25 percent return on equity and a capital structure for FPUC which I have reflected on Exhibit RCS-2R Schedule D.

As shown on page three, line four, the impact of Mr. Garrett's cost of capital recommendations reduce FPUC's requested revenue requirement by about 7.536 million. I have made various adjustments to FPUC's proposed rate base, the adjustment to remove unamortized rate case expense from rate base reduces the revenue requirement by about 131,000. And the adjustment to remove FPUC's acquisition adjustment from rate base reduces the revenue requirement about 1.3 million.

I have also reflected a number of adjustments to operating income, which are listed on RCS-2R, page three, on lines 17 through 29, along with the approximate revenue requirement impact of each adjustment. Those include an adjustment to reflect OPC Witness Garrett's recommendation for new depreciation rates, which reduces the revenue requirement by about 2.1 million, and adjustment to remove amortization of the FPUC acquisition adjustment, which reduces the revenue requirement by about 1.15 million; an adjustment to remove the portion of incentive compensation that ties to Chesapeake corporate earnings per share and consolidated return on equity, which reduces the revenue requirement by about 1.1 million; and to remove stock-based compensation expense, which links participants' compensation to increases in the place of Chesapeake Utilities Corporation common stock, which reduces the revenue requirement by about 1.4 million.

There is a related adjustment to payroll tax expense. Other adjustments include the removal of cost for supplemental executive retirement plan, and adjustment to remove one-half of the expense for directors and officers liability insurance, which protects against shareholder lawsuits; an adjustment to rent expense and adjustment to remove lobbying expense,

and adjustment to income tax expense for interest synchronization, a parent company debt adjustment, which reduces federal income tax expense, and an adjustment to remove expense for company sponsored events.

Referring back to my Exhibit RCS-2R, page three, the adjusted net operating income after such adjustments is approximately 16.8 million, which is shown on line 30, as opposed to the amount of 11.4 million in FPUC's original application, which is reproduced on line 15.

In total, the OPC's adjustments presented in my testimony reduce the company's original requested revenue increase of about 24.1 million by about 16.2 million to amount of base rate revenue increase of no more than approximately 7.9 million. That is shown on Exhibit RCS-2R, page two, line eight, in Column B.

That completes my summary.

MS. CHRISTENSEN: I tender the witness for cross.

CHAIRMAN FAY: Okay. Ms. Keating, you are recognized.

MS. KEATING: Thank you, Mr. Chairman.

EXAMINATION

BY MS. KEATING:

Q Good afternoon, Mr. Smith.

A Good afternoon.

Q I really just want to understand how you calculated one particular number, so this should be pretty quick.

In your original direct testimony at page eight, starting at lines 22 through 23, you calculated an increase to FPUC's base of 928,851 based on Witness Garrett's depreciation rates, is that correct?

A Yes. Mr. Garrett's depreciation expense was lower than the company, so that would have reflected a lower build up of accumulated depreciation. So we are actually increasing rate base by 928,000 mentioned on page eight.

Q Got you. So in your supplemental direct, I think you revise that number?

A That was revised in the supplemental, correct.

Q Okay. And if you have that in front of you, page five of your supplemental, line five, your revised number is 870,378?

A Just bear with me a minute while I get there. Yes, the amount of the supplemental was lower because the adjustment to depreciation expense was lower in the supplemental.

Q Okay. When you were calculating that increase, did you base that on the -- on a comparison to

the depreciation expense in the company's MFRs?

A The depreciation expense adjustment used the rates recommended by Mr. Garrett, and we applied those to the plant amounts in the company's MFRs, and we compared that with the company's depreciation expense in the MFRs, and then we projected out, on a monthly basis, the depreciation accruals that would -- the difference in the depreciation accrual expense that would occur in the 2023 test year with the assumption that the new depreciation rates would go into effect on January 1st, 2023, which was the start of the fully projected future test year, and we calculated a 13-month average.

Q But you based your calculation of the increase on the amount that was in the MFRs, correct?

A Essentially, yes. I mean, we did -- we did the depreciation expense calculation first. Then we computed the differential in depreciation expense between using the depreciation rates that were passed to us by Mr. Garrett, which he recommends, and the depreciation rates that the company used in its MFRs. And based on that -- those differences in depreciation expense that would have occurred each month in 2023, we calculated an average impact of that on the 2023 test year. And that's -- that resulted in the adjustment to accumulated depreciation, which increases rate base by

that amount because the accumulation depreciation buildup on average in 2023 would have been less.

Q So, Mr. Garrett, let me bring you back around. You are familiar with the fact -- are you familiar with Ms. Napier's testimony?

A With whose testimony?

Q Ms. Napier.

A Yes.

Q And do you understand the -- that the MFRs were calculated based upon the company's current depreciation rates?

A Yes.

Q And are you familiar with the testimony of Ms. Lee?

A To some extent. I mean, Ms. Lee basically recommended the depreciation rates for the company, so we did look through that, but that was, kind of reviewing the depreciation rates was Mr. Garrett's, one of his areas, so we didn't delve extremely deeply into Ms. Lee's depreciation rate recommendations, other than to understand what they were and how Mr. Garrett's depreciation rates were different.

Q Would you agree with me that once Ms. Lee's recommendations are taken -- if approved by the Commission, and then applied to the company's rate

request and rate base, that there would be a decrease in depreciation expense once Ms. Lee's recommendations are applied?

A I am not sure I would agree with that. It was our understanding that the new depreciation rates were to go into effect January 1st of 2023, and that was the basis for our calculations.

Q So you are -- just so we are clear, so your 870,378 is inflated and doesn't take into account Ms. Lee's proposed depreciation rates?

A In a sense it does, because it was our understanding that the new depreciation rates would go into effect January 1st of 2023, and, therefore, there would be a different impact on depreciation expense in the 2023 test year. And that's the difference that we've calculated, and we have reflected that as our adjustment to depreciation expense. And then, as I explained earlier, we used our adjustment to depreciation expense to derive to the impact on accumulated depreciation in the 23 -- 2023 test year.

Q I am going to try this one more time. But the number here is based on what's in the MFRs in terms of rate base, and so your number is inflated, correct, because it doesn't take into account that the company is also proposing changes to depreciation rates that would

result in reductions in depreciation expense and corresponding increases in rate base, so that your number is inflated compared to what the company is actually requesting?

A I don't think I agree with that because we isolated the difference in depreciation expense, which would accumulate throughout the 2023 future test year, and we based our adjustment to accumulated depreciation on that.

So we are just isolating the difference between the company's depreciation expense and the dep-- and depreciation expense using the rates that are recommended by Mr. Garrett, and deriving our adjustment to accumulated depreciation based on that difference.

MS. KEATING: No further questions.

CHAIRMAN FAY: Staff?

MR. SANDY: Yes, Mr. Chairman.

EXAMINATION

BY MR. SANDY:

Q Mr. Smith, in your testimony, you are proposing a parent debt adjustment of $679,973 give or take, is that right?

A That's correct. Yes.

Q Now, you are familiar with Rule 25-14.004, yes?

A Is that the rule that discusses the parent debt adjustment?

Q Yes, sir, it is.

A Yeah, I am familiar with that. I just don't have it memorized by rule number.

Q Would you agree with me, from your general knowledge of that rule, that it states in part, in Commission proceedings to establish revenue requirements are addressed overearnings other than those entered into under Rule 25-14.003, the income tax expense of a regulated company shall be adjusted to reflect the income tax expense of the parent debt that may be invested in the equity of the subsidiary where a parent/subsidiary relationship exists and the parties to the relationship join in the filing of a consolidated tax return. Does that sound vaguely familiar to you?

A That sounds familiar. Yes.

Q Okay. Does that make sense to you?

A It does.

Q I am impressed.

With that in mind, it's fair to say that the companies in this proceeding do not issue their own debt or equity?

A That's what the company has represented, yes.

Q Okay. And that the companies in this

proceeding ultimately receive their capital from the Chesapeake Utilities Corporation, I think it's also referenced as CUC, would you agree with me there?

A Well, the companies have equity capital recorded on their books as retained earnings, and that's legitimate equity capital. Then they also have this rather large amount of accounts payable to associated companies, which they then increase rate base for that and are treated -- treating that as also capital. We have some very strong concerns about that particular item.

So they do have some equity on their books, and retained earnings, and then this accounts payable to associated companies seems to be treated as equity capital or else a mix of different source of capital at the parent company level. So it's not a super clean-cut situation with respect to these utilities.

Q My hope is that I can clarify it a little bit. From an investor perspective, are they receiving -- is, for example, Florida Public Utilities Company receiving its capital from investors or from the Chesapeake Utilities Company?

A Well, again, they have a certain amount of capital on their own books, and retained earnings. They have this liability accounts payable to associated

companies in the test year. That was almost $123 million. The company said that they don't charge interest or carrying costs on that, but yet they've tried to increase rate base by that amount, and they are essentially applying, you know, their entire cost of capital on that increased rate base. And then they've indicated that the long-term and short-term debt for these utilities is at the parent company level. The Chesapeake Utilities Corporation parent company level issues all the third-party, what they've called third-party short- and long-term debt. So it's coming in from all those different sources.

Q Did the companies in this docket, in essence, request that the capital structure of CUC would be used for setting rates in this docket?

A They have requested that the CUC capital structure be used. Yes.

Q Okay. And --

A In terms of the common equity long-term debt and short-term debt. Then there are other elements in the capital structure that relate to balances, such as accumulated deferred income taxes, customer deposits that are specific to each of the utilities.

Q Does CUC issue debt to invest in its own equity?

A Well, not directly, but then they have this other item going on, this accounts payable to associated companies, which is apparently how they actually invest on average in these utilities.

Again, that's approximately $123 million in the 2023 test year, and they told us there is no interest charge on that, there is no carrying cost, but the way they are treating it in the rate cases, there is, in fact, a very large cost associated with that that amounts to in the $8 million to $10 million annual revenue requirement per year impact range. So that's also included in the mix.

So we've -- in my direct testimony, and in the supplemental testimony, we tried to address this situation of, you know, what's really in this equity balance that they are claim is supporting rate base. We've tried to address that just by calculating a parent company debt adjustment in the manner in which that calculation would be traditionally made.

I obtained numbers from OPC's cost of capital witness, Mr. Garrett, as to the portion of equity that's financed by debt and applied an interest rate, which was also supplied to me by Mr. Garrett, and just calculated a traditional parent debt adjustment. But then, as we've continued to obtained discovery responses, I think

our understanding of the treatment of this 123 million approximately of accounts payable to affiliated companies has become a bit more clarified, and there is definitely a major concern about that item, and the impact that it's having on the company's rate increase request.

So first we tried to deal with it by the parent company debt adjustment. It's not a crystal clear situation, because this account, super large accounts payable to affiliates, which has no interest cost, no carrying cost supposedly, but the way it's been being treated in the company's revenue calculation, it does, indeed, have a very major cost, and a major impact on the amount of the revenue requirement.

Q I would like to change gears a little bit, a little bit, and ask you about the income tax expense of CUC. And I will just ask this as an open-ended question for you, and I am interested in your thoughts.

How can income tax expense of CUC be invested in the equity of the companies in this proceeding when CUC's capital structure is being used as the capital structure of the companies in this proceeding?

A Well, I think I have kind of touched on that already, that you can't ignore the elephant in the room, which is this $123 million accounts payable to

associated companies. The companies is increase rate base by that. They present it in their case as being an account receivable, but it's actually an account payable. So they are injecting essentially, on an average basis, approximately $123 million of capital investment into these FPUC gas distribution utilities. They have told us that that has a zero cost associated with it, that there is no interest or carrying costs on it, but the fact is they've actually increased rate base by that amount, and they are requesting the cost of capital on the rate base. In both their filing and in our filing, rate base is reconciled with the capital structure, so, I mean, that's how they are financing the utility, and I think -- and that needs to be taken into account in any understanding of how this is actually being financed.

CHAIRMAN FAY: Hold on one second.

Go ahead, Ms. Keating.

MS. KEATING: Mr. Chairman, I really -- I hate to interrupt the witness, but I believe this whole line of the discussion on the accounts receivable, I don't see it anywhere in Mr. Smith's testimony. And I do understand that Ms. Napier was asked, I believe, one question about whether there was interest applied on that, but I feel like he is

supplementing his testimony fairly significantly.

CHAIRMAN FAY: Yeah, I mean, the issue of receivable or payable was brought up as to how it's recovered in rate base. It doesn't sound like you are speaking specifically to how that would occur. You are just trying to make the point that those numbers have been adjusted, is that accurate?

THE WITNESS: Yeah, that our understanding of how these four utilities are actually financed has become more clarified, particularly -- I mean, at first we thought we were dealing a traditional, you know, parent company capital structure, and that's why we did a parent company debt adjustment.

CHAIRMAN FAY: Okay. Mr. Sandy, I mean --

THE WITNESS: Our understanding has evolved as we've gotten more information, more explanation from the company.

CHAIRMAN FAY: Sure. Does that answer the question?

MR. SANDY: Yes, sir, it does, and --

CHAIRMAN FAY: Do you have any follow-up on this?

MR. SANDY: Not on those comments. I have one more question, and then I am finished on cross-examination.

CHAIRMAN FAY: Okay. Great. Thank you.

Let's move on.

BY MR. SANDY:

Q Based on what you have said, do you believe that parent adjustment is necessary?

A I think some adjustment is necessary to address how these utilities are actually being financed.

Q How much?

A We -- originally, we tried the parent company debt adjustment. I think there is a much, much larger concern that has to do with this accounts payable to associated companies, and how that's been treated in terms of the amount of rate base and in terms of the financing of that rate base.

So I think it is an issue here. How are these utilities actually being financed, and what is the appropriate rate base and cost of capital, and what is the appropriate revenue requirement for the financing of these utilities?

Q All other things equal, if the parent company net adjustment is made in this proceeding, will the companies in question be able to recover the actual cost of providing utility services?

A I believe so. Yes.

Q Why is that?

A Well, because of this accounts -- this accounts payable to associated companies item has a much huger magnitude on the revenue requirement, and unless that is understood and adjusted, the parent company debt adjustment is essentially woefully inadequate to cover a revenue requirement impacts of $8 million to $10 million a year.

MR. SANDY: Okay. May I have a moment, Mr. Chair?

CHAIRMAN FAY: Sure.

MR. SANDY: I have no further questions.

CHAIRMAN FAY: Okay. All right. Commissioners?

Okay. OPC, redirect?

MS. CHRISTENSEN: No redirect. Thank you.

CHAIRMAN FAY: Okay. Let's enter in some exhibits. We have CEL 59 and 60, and then RCS-2R and -- excuse me, RCS-3 in the supplemental. Let's see. And those would be numbered 64 and 65?

MS. CHRISTENSEN: 64 and 65 and 59 and 60, yes, we ask those be moved into the record.

CHAIRMAN FAY: Okay. Without objection, Mr. Munson?

MR. MUNSON: No objection.

CHAIRMAN FAY: Okay.

MS. CHRISTENSEN: Received.

(Whereupon Exhibit Nos. 59-60 & 64-65 were received into evidence.)

MS. CHRISTENSEN: I would ask that our witness be excused.

CHAIRMAN FAY: Yes, your witness can be excused. Thank you. Thank you, Mr. Smith.

(Witness excused.)

CHAIRMAN FAY: All right. Next we will move to staff witness. We will give our folks just a minute to get set up here.

MR. SANDY: Mr. Chair, if I may. It appears as if the parties have issue stipulations in place. We are now handing out those copies.

CHAIRMAN FAY: Okay.

MR. SANDY: This may be, with your indulgence, a convenient moment for entering those in the record, and then moving on to staff witness issues.

CHAIRMAN FAY: Okay. Just for clarity, Mr. Sandy, is this just now being put in front of both of them, or is this language that's been reviewed already?

MS. KEATING: FPUC has reviewed it, and I understand, from my conversations with Mr. Rehwinkel, that --

CHAIRMAN FAY: Okay. Let's -- we will confirm that. And then assuming OPC is comfortable with that, then, Mr. Sandy, I am good going ahead and moving these in -- or having the Commission vote on these now, the stipulations.

MR. SANDY: And I believe these would eventually enter into the record as Exhibit 126 by my count.

MS. CHRISTENSEN: Can we ask -- this is Patty Christensen with the Office of Public Counsel. Can we ask for one clarification on Issue 35?

CHAIRMAN FAY: Sure.

MS. CHRISTENSEN: We are -- it's essentially a partial stipulation to the -- my understanding for the benefits portion of that issue only, and with the adjustment for SERP included, but the salaries remain in dispute, which include OPC's compensation plan, and stock compensation and IPP adjustments are still in dispute, and that would be addressed as salaries. I just want to make sure that that's correct.

CHAIRMAN FAY: Okay. So you are essentially saying the caveat there that's in italics, you just want to specify that it speaks to specific compensation, actual compensation --

MS. CHRISTENSEN: Well, the.

CHAIRMAN FAY: -- or are you okay with just the general language that the amounts remain in dispute?

MS. CHRISTENSEN: I am fine with the language as long as we get clarification from the company that the IPP plan and the stock compensation are part of salaries, therefore, we are not stipulating the salaries portion of the issue, and the benefits portion addressed the SERP.

CHAIRMAN FAY: I got you. Okay.

So it sounds like we -- I want to make sure the utility has time to make sure that's accurate. So it sounds like that one may be still working out. Let's -- Ms. Keating, I will give you a minute.

MS. KEATING: We believe that is correct, but we still have not confirmed.

CHAIRMAN FAY: Yeah. So why don't we go ahead then, and what we will do is take up all of these other than 35, and if that gets resolved by then, Mr. Sandy, we will just come back to that as we close and include that.

So with that, for the record, I have Issue 10, 15, 32, 36, 43, 62 and 67 that are stipulated by

the parties, is that correct from both OPC and --

MS. CHRISTENSEN: That's correct for OPC.

CHAIRMAN FAY: Okay. And with that, then, I would move those stipulations for approval hearing any objection from the Commission? No, show those approved by the Commission.

So, Mr. Sandy, we will check those off and we will come back to 35, assuming that the language gets resolved.

MR. SANDY: Yes, sir.

CHAIRMAN FAY: Okay. And then with that, then we will move next to staff. We are now -- I believe we have one stipulation maybe, or --

MR. SANDY: That's correct, Mr. Chairman. The parties have stipulated to Mr. Brown --

CHAIRMAN FAY: Okay.

MR. SANDY: -- and his exhibit as well.

CHAIRMAN FAY: Okay. So if we could go ahead and enter Mr. Brown's testimony as though read into the record without any objections. Show that done.

(Whereupon, prefiled direct testimony of Todd M. Brown was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

COMMISSION STAFF

DIRECT TESTIMONY OF TODD M. BROWN

DOCKET NO. 20220067-GU

AUGUST 24, 2022

Q. Please state your name and business address.

A. My name is Todd M. Brown. My business address is 2540 Shumard Oak Blvd., Tallahassee, Florida 32399.

Q. By whom are you presently employed and in what capacity?

A. I am employed by the Florida Public Service Commission (Commission) as Chief of Auditing in the Office of Auditing and Performance Analysis. I have been employed by the Commission since August 2001.

Q. Briefly review your educational and professional background.

A. In 1993, I received a Bachelor of Business Administration degree with a major in Marketing from East Tennessee State University. In 2001, I received a Master of Business Administration degree from Union University.

Q. Please describe your current responsibilities.

A. Currently, I am Chief of Auditing with the responsibilities of directing, controlling, and supporting the audit staff in the Miami, Tallahassee, and Tampa field districts. I am also responsible for establishing and supervising compliance with operational guidelines, administrative policies, and procedures for the conduct of field audits.

Q. Have you previously presented testimony before this Commission?

A. No.

Q. What is the purpose of your testimony today?

A. The purpose of my testimony is to sponsor the staff auditor's report of Florida Public Utilities Company (FPUC or Utility) which addresses the Utility's filing in Docket No. 20220067-GU, Petition for rate increase by Florida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company - Fort Meade, and Florida Public Utilities Company - Indiantown Division. We issued an auditor's report in this docket on August 24, 2022. This audit report is filed with my testimony and is identified as Exhibit TMB-1.

Q. Was this audit prepared by you or under your direction?

A. Yes, it was prepared under my direction.

Q. Please describe the work you performed in this audit?

A. The procedures that we performed in this audit are listed in the Objectives and Procedures section of the attached Exhibit TMB-1, pages 2 through 7.

Q. Please review the audit findings in this audit report.

A. There were no audit findings.

Q. Does this conclude your testimony?

A. Yes.

CHAIRMAN FAY: And then we will take up Mr. Brown's exhibit. I have CEL 66.

MR. SANDY: Yes, sir.

CHAIRMAN FAY: Okay. Showing no objections entering that exhibit, we will enter 66 into the record.

(Whereupon, Exhibit No. 66 was received into evidence.)

CHAIRMAN FAY: That takes care of Witness Brown.

MR. SANDY: And with that out of the way, sir, we call Angie Calhoun up to the witness stand.

CHAIRMAN FAY: Okay.

MR. SANDY: And I would note for the record, Mr. Chairman, she was not here yesterday, therefore not sworn.

CHAIRMAN FAY: Okay. Thank you.

Whereupon,

ANGELA L. CALHOUN

was called as a witness, having been first duly sworn to speak the truth, the whole truth, and nothing but the truth, was examined and testified as follows:

THE WITNESS: I do.

CHAIRMAN FAY: Great.

All right. Mr. Sandy, whenever you are ready.

MR. SANDY: Yes, sir.

EXAMINATION

BY MR. SANDY:

Q Good afternoon, Ms. Calhoun.

A Good afternoon.

Q All right. Can you state your full name for the record, please?

A Angela Calhoun.

Q And what is your profession, Ms. Calhoun?

A I am the Bureau Chief of the Bureau of Consumer Assistance at the Florida Public Service Commission.

Q Okay. And did you sponsor witness testimony in this proceeding on or about August 24th of this year?

A Yes.

Q And would you like to make any changes or amendments, edits onto that at all at this time?

A No.

MR. SANDY: Okay. At this time, Mr. Chairman, I would move to have her testimony entered into the record as though read.

CHAIRMAN FAY: Okay. Show Ms. Calhoun's testimony as read entered into the record without objection.

(Whereupon, prefiled direct testimony of

Angela L. Calhoun was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220067-GU - Petition for rate increase by Florida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company - Fort Meade, and Florida Public Utilities Company - Indiantown Division.

Witness: Direct Testimony of **Angela L. Calhoun**, Florida Public Service Commission; Appearing on Behalf of the Staff of the Florida Public Service Commission.

DATE FILED: August 24, 2022

DIRECT TESTIMONY OF ANGELA L. CALHOUN

Q. Please state your name and address.

A. My name is Angela L. Calhoun. My address is 2540 Shumard Oak Boulevard; Tallahassee, Florida 32399-0850.

Q. By whom are you employed and in what capacity?

A. I am employed by the Florida Public Service Commission (FPSC or Commission) as Chief of the Bureau of Consumer Assistance in the Office of Consumer Assistance & Outreach.

Q. Please give a brief description of your educational background and professional experience.

A. I graduated from Florida Statue University in 1993 with a Bachelor in Arts degree. I have worked for the Commission for more that 22 years, and I have experience in consumer complaint and consumer outreach. I work in the Bureau of Consumer Assistance within the Office of Consumer Assistance & Outreach where I manage consumer complaints and inquires.

Q. What is the function of the Bureau of Consumer Assistance?

A. The Bureau's function is to resolve disputes between regulated companies and their customers as quickly, effectively, and inexpensively as possible.

Q. Do all consumers that have a dispute with their regulated company contact the Bureau of Consumer Assistance?

A. No. Consumers may initially file their complaint with the regulated company and reach a resolution without the Bureau's intervention. In fact, consumers are encouraged to allow the regulated company the opportunity to resolve the dispute prior to any Commission involvement.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to discuss/outline the number of consumer complaints logged with the Commission against Florida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company – Indian Town Division, and Florida Public Utilities Company – Fort Meade Division under Rule 25-22. 032, Florida Administrative Code, Consumer Complaints, from July 1, 2017 to June 30, 2022. My testimony will also provide information on the type of complaints logged and those complaints that appear to be rule violations.

Q. What do your records indicate concerning the number and type of complaints filed for Florida Public Utilities Company during the period of July 1, 2017, through June 30, 2022?

A. From July 1, 2017, through June 30, 2022, the Commission logged 104 complaints against Florida Public Utilities Company. Of those, 29 were transferred to the company for resolution via Commission's Transfer-Connect (E-mail Transfer) System. This system allows the customer the option to send their complaint filed through the Commission's Online Complaint form directly to Florida Public Utilities Company via e-mail. During the specified time period, approximately sixty-four (64%) percent of the complaints logged with the Commission concerned billing issues, while approximately thirty-six (36%) percent of the complaints involved quality of service issues.

Q. What do your records indicate concerning the number and type of complaints filed for Florida Public Utilities Company – Indiantown Division during the period of July 1, 2017, through June 30, 2022?

A. From July 1, 2017, through June 30, 2022, the Commission logged 2 complaints concerning quality of service issues against Florida Public Utilities Companies – Indiantown Division.

Q. What do your records indicate concerning the number and type of complaints filed for Florida Division of Chesapeake Utilities Corporation during the period of July 1, 2017, through June 30, 2022?

A. From July 1, 2017, through June 30, 2022, the Commission logged 19 complaints against Florida Division of Chesapeake Utilities Corporation. Of those, 13 complaints concerned billing issues, 5 complaints concerned quality of service issues, and 1 complaint concerning a billing issue was transferred to the company for resolution via the Commission's Transfer-Connect (E-mail Transfer) System.

Q. What do your records indicate concerning the number of complaints filed for Florida Public Utilities – Fort Meade Division during the period of July 1, 2017, through June 30, 2022?

A. From July 1, 2017, through June 30, 2022, The Commission logged 1 complaint concerning a billing issue for Florida Public Utilities Company – Fort Meade Division.

Q. Do you have any exhibits attached to your testimony?

A. Yes. I am sponsoring ALC-1 and ALC-2, which are listings of consumer complaints logged with the Commission against Florida Public Utilities Company, Florida Public Utilities Company – Indiantown Division, Florida Division of Chesapeake Utilities Corporation, and Florida Public Utilities Company – Fort Meade Division under Rule 25-22.032, Florida Administrative Code. The complaints listed were received between July 1, 2017, through June 30, 2022, and were captured in the Commission's Consumer Activity Tracking System (CATS). Exhibit ALC-1 lists quality of service complaints and Exhibit ALC-2 lists billing complaints. Both exhibits group the complaints by Close Type.

Q. What is a Close Type?

A. A Close Type is an internal categorization code. It is assigned to each complaint once

staff completes its investigation, and a proposed resolution is provided to the consumer.

Q. Do you have any additional exhibits?

A. Yes. Exhibit ALC-3 is a listing of complaints resolved as Close Type GI-02, Courtesy Call/Warm Transfer.

Q. Can you explain Close Type GI-02?

A. Yes. Florida Public Utilities Company, Florida Public Utilities Company – Indiantown Division, Florida Division of Chesapeake Utilities Corporation, Florida Public Utilities Company – Fort Meade Division participate in the Commission's Transfer-Connect (E-mail Transfer) System. This system gives the customer the option to send their complaint filed with the Commission's Online Complaint form, directly to the company through e-mail. Once the e-mail is received by the company, it will provide the customer with a proposed resolution. Customers who are not satisfied with the company's proposed resolution have the option of re-contacting the Commission. While the Commission is able to categorize each of the complaints in the GI-02 category, a specific Close Type is not assigned because the proposed resolution is provided by the company. Consequently, the GI-02 Close Type only allows staff to monitor the number of complaints resolved via the Commission's Transfer-Connect System.

Q. How many of the complaints summarized on your exhibit has staff determined may be a violation of Commission rules for Florida Public Utilities Company?

A. Staff determined that, of the 104 complaints logged against Florida Public Utilities Company during the period of July 1, 2017, through June 30, 2022, there were 3 service quality complaints and 16 billing complaints that may appeared to demonstrate a violation of Commission Rules.

Q. How many of the complaints summarized on your exhibit has staff determined may be a violation of Commission rules for Florida Public Utilities Company-Indiantown Division?

A. Staff determined that, of the 2 complaints logged against Florida Public Utilities Company-Indiantown Division during the period of July 1, 2017, through June 30, 2022, neither complaint appear to demonstrate a violation of Commission Rules.

Q. How many of the complaints summarized on your exhibit has staff determined may be a violation of Commission rules for Florida Division of Chesapeake Utilities Corporation?

A. Staff determined that, of the 19 complaints logged against Florida Division of Chesapeake Utilities Division during the period of July 1, 2017, through June 30, 2022, there were 2 service quality complaints and 2 billing complaints that appeared to demonstrate a violation of Commission Rules.

Q. How many of the complaints summarized on your exhibit has staff determined may be a violation of Commission rules for Florida Public Utilities Company-Fort Meade Division?

A. Staff determined that the one complaint logged against Florida Public Utilities Company-Fort Meade Division during the period of July 1, 2017, through June 30, 2022, appeared to demonstrate a violation of Commission Rules.

Q. Does that conclude your testimony?

A. Yes.

BY MR. SANDY:

Q And would you like to give a brief summary of your witness testimony?

A Yes.

Good afternoon, Chairman and Commissioners.

My testimony outlines the number of consumer complaints received by the Commission from July 1st, 2017, to June 30th, 2022, for Florida Public Utilities Company, Florida Division of Chesapeake Utility Corporation, Florida Public Utilities Company Fort Meade Division, and Florida Public Utilities Company Indiantown Division.

My testimony provides information on the types of complaints and those which appear to demonstrated violations of Commission rules. This information is contained in Exhibits ALC-1, ALC-2 and ALC-3.

This is the end of my summary.

CHAIRMAN FAY: Thank you.

MR. SANDY: And, Mr. Chairman, I would note for the record that ALC-1 through ALC-3 as referenced a moment ago are set out in the Comprehensive Exhibit List as Exhibits 67, 68 and 69.

And with that, I have no further questions for the witness and offer her for cross-examination.

CHAIRMAN FAY: Okay. Great.

FPUC?

MS. KEATING: No cross.

CHAIRMAN FAY: Okay. OPC?

MS. CHRISTENSEN: Yes.

EXAMINATION

BY MS. CHRISTENSEN:

Q Good afternoon, Ms. Calhoun. I just have a few questions for you regarding your testimony.

You are the staff witness addressing customer complaints related to FPUC in this proceeding?

A Yes.

Q Okay. And the purpose of your testimony was to look at the Commission system to outline the consumer complaints filed against FPUC, correct?

A Correct.

Q And you found approximately 126 complaints, the majority of which were negative to FPUC?

A I found 126 complaints. I am not sure what you mean by negative.

Q They had an issue with FPUC, either regarding a billing issues or regarding quality of service, correct?

A You are talking about consumers. Yes.

Q Correct. And you did your search from July

1st, 2017, through June 30th of 2022, correct?

A Correct.

Q I think we just discussed this, but you said the majority of those complaints were related to billing issues in your testimony, and that would be around 65 percent of those complaints, correct?

A Yes.

Q Okay. And then the remaining 35 percent were complaints to the Commission about FPUC's quality of service, is that right?

A That's correct.

Q Okay. As part of your review of the complaints filed with the Commission, did you look at the correspondence file, or the correspondence side of this docket?

A No.

Q Okay. To your knowledge, has anyone from Commission staff filed -- had has filed testimony that either summarizes or includes the correspondence that was found in the correspondence side of this docket?

A I am sorry, say that again.

Q Your -- let me restate this.

Is anyone other than you filing any testimony regarding the correspondence side of the docket?

A Not to my knowledge.

Q Okay. I think that answers my question.

MR. CHRISTOPHER WRIGHT: Thank you, I have no further questions.

CHAIRMAN FAY: Okay. Let's see here, Commissioners?

Okay. Any redirect?

FURTHER EXAMINATION

BY MR. SANDY:

Q I just want to make the record clear. Is the scope of your testimony including any correspondence in this record at all?

A No.

Q Okay. Well, what is the scope of your testimony?

A The scope of my testimony is the number of complaints received by the Commission for these utilities in the docket.

MR. SANDY: No further questions.

CHAIRMAN FAY: Great. Okay. We will move in CEL 67, 68 and 69 without objection. Okay. Show those entered into the record.

(Whereupon, Exhibit Nos. 67-69 were received into evidence.)

CHAIRMAN FAY: And, Ms. Calhoun, you may be dismissed. Thank you.

(Witness excused.)

MS. CHRISTENSEN: Commissioner, could we take a short break before the next witness is called?

CHAIRMAN FAY: Sure. Why don't we -- let me see -- we are at 3:02. Why don't we -- how long do you need, Ms. Christensen?

MS. CHRISTENSEN: Just a short --

CHAIRMAN FAY: Okay. We'll start back at 3:10.

(Brief recess.)

(Transcript continues in sequence in Volume 6.)

CERTIFICATE OF REPORTER

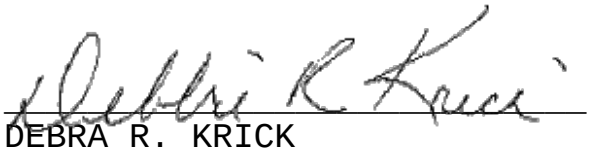
STATE OF FLORIDA)
COUNTY OF LEON)

I, DEBRA KRICK, Court Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED this 1st day of November, 2022.



DEBRA R. KRICK
NOTARY PUBLIC
COMMISSION #HH31926
EXPIRES AUGUST 13, 2024