BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 20220069-GU

Petition for rate increase
by Florida City Gas.
_____/

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PROCEEDINGS:	HEARING
COMMISSIONERS PARTICIPATING:	CHAIRMAN ANDREW GILES FAY COMMISSIONER MIKE LA ROSA COMMISSIONER GABRIELLA PASSIDOMO
DATE:	Monday, December 12, 2022
TIME:	Commenced: 1:00 p.m. Concluded: 5:25 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.)

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I N D E X

P R O C E E D I N G S

(Transcript follows in sequence from Volume 1.)

(Whereupon, prefiled direct testimony of Helmuth W. Schultz was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Florida City Gas.	DOCKET NO. 20220069-GU
	FILED: August 26, 2022

DIRECT TESTIMONY

OF

HELMUTH SCHULTZ III

ON BEHALF OF THE OFFICE OF PUBLIC COUNSEL

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DIRECT TESTIMONY

OF

Helmuth W. Schultz, III

On Behalf of the Office of Public Counsel
Before the
Florida Public Service Commission
Docket No. 20220069-GU

I. STATEMENT OF QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

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

Q. PLEASE DESCRIBE THE FIRM LARKIN & ASSOCIATES, P.L.L.C.

A. Larkin performs independent regulatory consulting primarily for public service/utility commission staffs and consumer interest groups (public counsels, public advocates, consumer counsels, attorneys general, etc.). Larkin has extensive experience in the utility regulatory field as expert witnesses in over 600 regulatory proceedings, including water and sewer, gas, electric and telephone utilities.

Q. HAVE YOU PREPARED AN EXHIBIT WHICH DESCRIBES YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE?

A. Yes. I have attached Exhibit HWS - 1, which is a summary of my background, experience and qualifications.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA PUBLIC COMMISSION AS AN EXPERT WITNESS?

A. Yes. I have provided testimony before the Florida Public Service Commission ("Commission" or "FPSC") as an expert witness in the area of regulatory accounting and storm recovery in numerous cases as listed in Exhibit HWS - 1.

Q. BY WHOM WERE YOU RETAINED, AND WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. Larkin was retained by the Florida Office of Public Counsel ("OPC") to review the request for Florida City Gas Company's ("Company" or "FCG") two different alternative base revenue increases. The initial total base revenue increase of $31.993 million based on a projected 2023 test year, which to be offset by the $3.828 million revenue requirements for the previously approved Liquefied Natural Gas ("LNG") Facility, and the reclassification of the $5.990 million of Safety, Access, and Facility Enhancement ("SAFE") program revenues from clause to rates resulting in an incremental base rate revenue requirement of $22.174 million.

The alternative total base revenue increase of $29.0 million based on a projected 2023 Test Year, factoring in the requested RSAM, offset by the $3.828 million revenue requirements for the previously approved Liquefied Natural Gas ("LNG") Facility, and the reclassification of the $5.696 million SAFE program revenues from clause to base rates resulting in an incremental base rate revenue requirement of $19.450 million.

Q. ARE YOU INCORPORATING ANY RECOMMENDATIONS OF OTHER OPC WITNESSES?

A. Yes. David Garrett is making recommendations regarding requested depreciation, capital structure, and ROE, and I am incorporating his findings into my testimony.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR UNDERSTANDING OF THE COMPANY'S REQUEST.

A. The petition for Docket No. 20220069-GU is described by FCG as a proposal for a what is pitched as a four-year rate plan that would run from 2023 through at least the last billing cycle of December 2026, consisting of: (a) an increase in base rates and charges sufficient to generate a total base rate revenue increase of $29.0 million based on a projected 2023 test year, which includes (i) an incremental base rate revenue requirement of $19.4 million, (ii) the revenue requirements for the previously approved LNG Facility, and (iii) the reclassification of the SAFE program revenues from clause to base rates; (b) a 10.75% mid-point return on equity ("ROE") and an equity ratio of 59.6% from investor sources for all regulatory purposes; (c) implementation of a reserve surplus amortization mechanism ("RSAM"), which Florida Power & Light ("FPL") claims is a critical and essential component of FCG's purported four-year rate plan; (d) approval of artificially derived RSAM-facilitating depreciation rates, which are necessary to support the RSAM and reflects their test year incremental revenue requirement as lower by $2.71 million; (e) the continuation of the Storm Damage Reserve provision approved as part of FCG's 2018 Settlement Agreement, as modified to reflect the Commission's new storm rule for gas

utilities; (f) a mechanism that will allow FCG to adjust base rates in the event tax laws change during or after the conclusion of this proceeding; (g) continuation and expansion of the existing SAFE program; and (h) implementation of a new limited advanced metering infrastructure pilot program ("AMI Pilot") that would enable FCG to explore the potential for AMI meters to provide enhanced service to FCG's customers.

However, while not specifically detailed in the petition, the Company stated that if the Commission were to decline the request to adopt FCG's four-year rate plan with a RSAM, the incremental revenue requirement would be based on the true depreciation rates reflected in FCG's 2022 Depreciation Study, which would reflect an FCG's test year incremental revenue requirement of $2.7 million more. Accordingly, FCG provided applicable MFRs both with and without the effects of RSAM.

Q. IS THE OPC SUBMITTING SCHEDULES WITH RECOMMENDATIONS BASED ON BOTH THE WITH AND WITHOUT RSAM?

A. No. Attached as Exhibit HWS - 2 are the recommendations based on a "without RSAM" analysis. As explained later in my testimony, Citizens are recommending that the "with RSAM" approach be denied.

Q. PLEASE SUMMARIZE WHAT THE COMPANY HAS INCLUDED IN ITS REQUEST TO THE FLORIDA PUBLIC SERVICE COMMISSION?

A. The May 31, 2022, petition filed by FCG seeks a net increase of $19,449,853 under the assumption that a RSAM is approved or a net increase of $22,173,778 if the RSAM mechanism is not approved. As explained earlier, the request is intended to be net of both the previously approved LNG Revenue increase in Docket No. 20170179-GU (Order No.

PSC-2018-0190-FOF-GU) and the revenue associated with SAFE investments as of December 31, 2022, currently being recovered through the SAFE recovery clause.

III. ORGANIZATION OF TESTIMONY

Q. HOW WILL YOUR TESTIMONY BE ORGANIZED?

A. In Section IV, I present the overall financial summary for the base rate change, showing the revenue requirement increase (decrease) for the test year ended December 31, 2023, as recommended by OPC. In Section V, I discuss my recommendation regarding FCG's request for a RSAM. In section VI, I discuss my proposed adjustments to rate base. In section VII, I discuss my adjustments to operating income. In Section VIII, I discuss the capital structure. Exhibit HWS - 2 presents the schedules and calculations in support of the test year ended December 31, 2023, revenue requirement. Exhibit HWS - 4 is a compilation of discovery responses referenced in my testimony.

IV. OVERALL FINANCIAL SUMMARY

Q. WHAT IS THE DECEMBER 31, 2023, BASE RATE REVENUE REQUIREMENT DEFICIENCY OR EXCESS FOR FCG?

A. As shown on Exhibit HWS - 2, Schedule C, the OPC's appropriate adjustments in this case result in a revenue increase for FCG for the December 31, 2023, test year of no more than $4,805,981. This is $17,367,795 less than the proposed "without RSAM" base rate revenue increase of $22,173,778 million requested by FCG in its filing.

Q. PLEASE DISCUSS THE EXHIBIT YOU PREPARED IN SUPPORT OF YOUR TESTIMONY AS IT PERTAINS TO THE DECEMBER 31, 2023 TEST YEAR.

A. Exhibit HWS - 2, consists of Schedules A, A-1, B, B-1 through B-5, C, C-1 through C-13, and D.

Q. WHAT IS SHOWN ON SCHEDULE A?

A. Schedule A presents the revenue deficiency for the December 31, 2023 test-year, giving effect to all of the adjustments I am recommending in this testimony, along with the impacts of the recommendations made by OPC witness David Garrett.

Q. WHAT IS SHOWN ON SCHEDULE B?

A. Schedule B presents OPC's adjusted rate base and identifies the adjustments impacting rate base that I am recommending in this case. Schedules B-1 through B-5 provide supporting calculations for these adjustments.

Q. WHAT IS SHOWN ON SCHEDULE C?

A. OPC's adjusted net operating income is shown on Schedule C. The adjustments to net operating income are listed on Schedule C, Page 2 of 2. Schedules C-1 through C-13 provide supporting calculations for these adjustments.

Q. WHAT IS SHOWN ON SCHEDULE D?

A. Schedule D presents OPC's recommended capital structure and overall rate of return as recommended by OPC witness David Garrett.

Q. WOULD YOU PLEASE DISCUSS EACH OF YOUR SPONSORED ADJUSTMENTS TO FCG'S FILING?

A. Yes, I will address each adjustment I am sponsoring below.

V. RESERVE SURPLUS AMORTIZATION MECHANISM

Q. WOULD YOU EXPLAIN THE COMPANY'S REQUEST FOR A RESERVE SURPLUS AMORTIZATION MECHANISM ("RSAM")?

A. The Company is requesting what they call the RSAM as "a critical and essential component of FCG's four-year rate plan." The Company claims -- but does not provide an unqualified commitment -- that with the adoption and use of the RSAM along with the other excessive components of FCG's proposed four-year rate plan ***approved as filed***, FCG would be able to avoid increasing base rates through at least the end of 2026. FCG suggests that by allowing the RSAM, customers would benefit from rate stability and certainty, and from avoiding repetitive and costly rate proceedings, and the Company would be able to continue to focus on providing safe, reliable, and affordable service to customers. Another prominent, but unsupported notion offered by FCG is that without the proposed RSAM, FCG projects (but does not and cannot demonstrate) that it would fall at or below the bottom of its authorized ROE range and would need to file an additional rate case in 2024 to support a base rate increase in 2025. The Company puts forth claims that if the RSAM is adopted, FCG would avoid the need to file a rate case in 2024, avoiding an additional base rate increase in 2025 and saving customers approximately $2 million in estimated additional rate case expense.[1]

Q. HOW WOULD THE RSAM WORK?

A. The proposed RSAM would follow a similar accounting mechanism framework approved only in settlements for a single electric utility (FPL) by the Commission in prior proceedings. The RSAM purportedly would be used by the Company to respond to changes

[1] Direct testimony of Mark Campbell at pp. 26-27.

in its underlying revenues and expenses during the proposed four-year rate plan to maintain, and -- this is telling -- a Commission Adjusted ROE within the 200 basis point ROE range of reasonableness established by the Commission.[2] This maintenance of the Commission Adjusted ROE would be reflected in each earnings surveillance reporting period by way of the Company recording an increase to expense (debits) or decreases to expense (credits) as a means to manipulate earnings so that the overall rolling period ROE equals a pre-established ROE within the authorized range.[3] Historically, for FCG's parent this has meant that the goal would be to earn at the very top of the range or – if granted here – 11.75%.

Q. YOU MENTION THE "RANGE OF REASONABLENESS." CAN YOU EXPLAIN THAT CONCEPT AND HOW IT RELATES TO THE ACHIEVED EARNINGS OF A COMPANY WITH REGARD TO FAIR, JUST AND REASONABLE RATES?

A. Yes. In establishing rates in a proceeding like this, the Commission uses the ROE mid-point as the rate setting point. Recognizing that a company's earnings will naturally fluctuate, regulators all over the country have implemented a mechanism that accommodates this phenomenon so that rate stability is achieved. The concept incorporates the notion that weather, expense increases and decreases (efficiencies), and other impacts will influence earnings. The Florida Commission has for decades established a range of 100 basis points on either side of the rate setting mid-point as this range of reasonableness. Any achieved results within this range using the rates initially established presumptively indicates that those rates are just and reasonable because they are giving the company an

[2] As discussed below, using the FCG ROE and capital structure, 100 basis points on equity would have a revenue requirement impact of $3.5 million, so the full 200 basis point range is worth $7 million. Using the OPC recommended ROE and capital structure the equivalent amounts are $2.5 million and $5 million.
[3] Direct testimony of Mark Campbell at p. 27.

opportunity to earn a fair rate of return while recovering all of their costs. The policy behind this concept is described by the Commission:

> The purpose of establishing a range is to recognize revenue volatility and to encourage management efficiency through earning more by controlling their expenses.[4]

There is no understanding in this concept that a company should be provided the guarantee of earning at the top of the range. Setting rates to provide such opportunity guarantee may well indicate that the actual rate setting point is the top of the range and not the mid-point.

Q. WOULD THE PROPOSED RSAM HAVE ANY LIMITATIONS?

A. Supposedly, but probably not. The Company claims the RSAM cannot be used to increase the earned ROE above the top of the authorized ROE range and similarly, the RSAM must be used, to the extent there is an amount available, to keep the Company's ROE at least at the minimum authorized ROE before the Company can seek an increase in base rates during the alleged four-year rate plan.[5] In simple terms, the Company would be guaranteed to earn within – and if history is any guide – at the top of -- the authorized ROE range.

Q. HOW WOULD THE PROPOSED RSAM SCHEME WORK?

A. The Company proposes that FCG would be able to record debits (increases to expense) or credits (decreases to expense) in any accounting period, at its sole discretion, to achieve the pre-established ROE for that period. When recording the debit or credit, the Company would not be allowed to debit or credit depreciation expense and correspondingly credit or debit the depreciation reserves at any time during the four-year rate plan if it would cause the Reserve Amount to be reduced below $0 or would cause the Reserve Amount to exceed

[4]See, Order No. PSC-94-0337-FOF-EI, Issued March 25, 1994, DOCKET NO. 930987-EI, at p. 11. *In Re:* Investigation into Currently Authorized Return on Equity of Tampa Electric Company.
[5] Direct testimony of Mark Campbell at pp. 27-28.

the maximum amount of RSAM available for use.[6] This is effectively the same as the proposal that FPL made in Docket No. 20210015-EI.

Q. YOU STATED THAT THE PROPOSED RESERVE AMOUNT CANNOT GO BELOW $0 OR EXCEED THE MAXIMUM AVAILABLE. WHAT IS THE PROPOSED RESERVE AMOUNT THE COMPANY HAS IDENTIFIED?

A. The company has stated that under the Company's proposal, a $25 million Reserve Amount would be available for use in the RSAM for the 2023-2026 period. This Reserve Amount would be 48% of a $52 million depreciation surplus developed by artificially creating and applying adjusted depreciation parameters and resulting alternative depreciation rates as proposed by the Company.[7] In essence, the Company proposes to intentionally create a depreciation reserve imbalance solely to manipulate what it is able to report as achieved earnings. It should be noted that by reporting a higher achieved net operating income, all things being equal, the RSAM would provide the opportunity to force future customers to fund current period increased dividend payments to shareholders.

Q. ARE THERE ANY CONCERNS WITH THE COMPANY'S PROPOSAL?

A. Yes. The proposal as put forth by the Company, would depart from accepted accounting and depreciation principles and effectively would create a customer-funded slush fund for the Company to use to manipulate its earnings for the shareholders' benefit. The basic concept in ratemaking is that when the regulator establishes an ROE, it includes a 200-basis point range of reasonableness. This range allows the Company an opportunity to earn a reasonable return while providing safe and reliable service to its customers. It also embodies a Commission policy to give the utility an incentive to generate efficiencies. As

[6] Direct testimony of Mark Campbell at p. 28.
[7] Direct testimony of Mark Campbell at pp. 28-29.

I stated earlier, if the Commission were to allow the RSAM, it would provide a virtual guarantee that the Company would earn an authorized return – likely at or near the top of the range. That guarantee is in addition to the risk premium embedded in the established ROE the Company is allowed. Effectively, the Company would have zero risk of not earning a fair and reasonable return even if it fails to operate in an efficient and cost-effective manner. The RSAM in essence runs afoul of the Commission policy of using the range of reasonableness to incentivize the Company to minimize costs and maximize earnings as part of its day-to-day operations.

In addition, there is a concern that while using depreciation parameters in the development of the $52 million depreciation surplus, the Company is only proposing that $25 million be factored in to reducing the rate request. While I do not support the creation of the RSAM mechanism for this gas company, I would note that the excessive surplus creation may well be a predicate to establishing larger Reserve Amounts over the years as FPL has done. In 2012, the FPL Reserve Amount was $400 million.[8] In 2016 it was increased to $1.25 billion[9] and in 2021 it was increased to $1.450 billion.[10] I am concerned that the foundation for this trend is being proposed in this case, assuming FPL retains ownership of FCG.

In theory, by the establishment of the surplus, the Company would intentionally create an excess in the accumulated depreciation reserve. In normal depreciation accounting and ratemaking recognition, when a surplus imbalance results in such an excess, customers will

[8] See, Order No. PSC-2013-0023-S-EI, issued January 14, 2013, at p. 20, in Docket No. 20120015-EI. *In re:* Petition for increase in rates by Florida Power & Light Company.

[9] See, Order No. PSC-2016-0560-AS-EI, issued December 15, 2016, at pp. 24-25, in Docket Nos. 20160021-EI; 20160061-EI; 20160062-EI; 20160088-EI. *In re:* Petition for rate increase by Florida Power & Light Company; *In re:* Petition for approval of storm hardening plan, by Florida Power & Light Company; *In re*: 2016 depreciation and dismantlement study by Florida Power & Light Company; *In re:* Petition for limited proceeding to modify and continue incentive mechanism, by Florida Power & Light Company.

[10] See, Order No. PSC-2021-0446-S-EI, issued December 2, 2021 at p. 4, in Docket 20210015-EI. *In re:* Petition for rate increase by Florida Power & Light Company.

have contributed more in depreciation expense than was required and over time all of the excess will be returned to customers. By allowing the specialized creation of the RSAM, the Commission would be creating the surplus for the benefit of the shareholders and not the customers. In this case, the proposed selective and discretionary disposal of only a portion of the Reserve Amount only magnifies the fact that the intent of the RSAM is to benefit the Company and not customers.

Q. YOU HAVE EXPRESSED A CONCERN THAT THE COMPANY WOULD USE THE PROPOSED RSAM TO ACHIEVE EARNINGS AT THE TOP OF THE ROE RANGE. WHAT IS YOUR BASIS FOR SAYING THIS?

A. My basis is that FCG is a wholly owned subsidiary of FPL. Since 2010, FPL has utilized variations of an RSAM-like mechanism to generate a nearly unbroken 11-year streak of reporting achieved ROEs at the top of the authorized range. This is documented in testimony filed in Docket No. 20210015-EI. I have included as Exhibit HWS - 3, Exhibits RCS - 4 and RCS - 5 from that testimony that demonstrate this track record.[11] There is no reason to believe that FCG would not utilize an RSAM to replicate its parent's behavior in this regard.

It should also be noted that the revenue requirement value of 100 basis points on equity, based on the ROE and equity ratio filed by the company is approximately $3.5 million. Using the ROE and capital structure recommended by OPC witness Garrett, the impact of 100 basis points would be significantly less at $2.5 million. The requested $25 million RSAM is approximately 7 times the Company's proposed 100 basis point range impact and 10 times the OPC recommended 100 basis point range impact. This indicates that FCG

[11] See Direct Testimony and Exhibits of Ralph Smith, filed on June 21, 2021 in Docket No. 20210015-EI as Document No. 06518-2021.

would have a relatively easy time of dipping into the slush fund to maximize earnings at the top of the range.

Q. WHAT ARE YOU RECOMMENDING TO THE COMMISSION?

A. The request to establish base rates utilizing the proposed RSAM mechanism should be rejected. As stated earlier, the mechanism as proposed is contrary to the basic premise of setting an ROE and establishing rates at the ROE midpoint in ratemaking. If there is a material excess depreciation reserve, then that excess should be set up in a regulatory liability and returned directly to customers over a period of four years consistent with Commission practice. This treatment is justified because customers are the ones who contributed to the establishment of the excess depreciation reserve and are entitled to the return of it. Otherwise, any naturally occurring imbalance (surplus or deficit) should be resolved using the remaining life method as recommended by OPC witness Garrett and FCG witness Allis, in accord with the Commission's long standing policy.

Q. ARE YOU AWARE OF THE RSAM MECHANISM BEING USED FOR A GAS COMPANY IN THE PAST?

A. No. To my knowledge, the Commission has never established an RSAM mechanism for a gas company as a result of a litigated case or approved a settlement with a mechanism that resembles anything like what FCG proposes. I am aware that there was a highly fact-specific negotiated provision in Paragraph 4 of the 2020 Peoples Gas ("PGS") 2020 rate case settlement ("PGS Settlement") that was tied to the unique, negotiated circumstances of that settled case. As I read the PGS Settlement approved in Order No. PSC-2020-0485-FOF-GU, there was a $245 million depreciation imbalance (surplus) resulting from the

Company's filed, proposed depreciation study in that case.[12] Nothing in the prepared testimony or the study indicates that the imbalance was designed to create an earnings manipulation mechanism. In fact, the Company expert stated with regard to the identified surplus:

> Overall, the Study found a surplus of $245.6 million at December 31, 2020 based on the recommended life and net salvage parameters. The depreciation rates are designed to eliminate that surplus over the remaining life of the distribution depreciable assets and the average remaining life for the accounts where the Company is proposing general plant amortization.[13]

My understanding of the policy of the Florida Commission, like most states, is to allow the remaining life method to resolve a surplus or deficit imbalance. Exhibit D attached to the PGS Settlement indicates that the parties negotiated a $3.7 million reduction in depreciation expense associated with modification of filed depreciation parameters. Given the large imbalance that existed before negotiations occurred, it is obvious that there was no effort to increase asset lives or otherwise change parameters for the purpose of creating a surplus.

It is also apparent from the language of the PGS Settlement that during the negotiations, a maximum of $34 million of the depreciation reserve was set aside for a one-way (debit accumulated depreciation; credit depreciation expense) depletion of the reserve. Notably, $12 million of the $34 million was encumbered by a limitation that certain assets are required to be placed into service before any portion of that amount could be amortized to

[12] As it appears that the stipulated rates generated depreciation expense that was $3.7 million lower than that generated by Peoples Gas' proposed depreciation rates, the resulting theoretical reserve credit balance may well have been greater.

[13] Testimony of Dane Watson filed in Docket No. 20200166-GU on June 8, 2020, at p. 21. Document No. 02985-2020.

income. Essentially, only $22 million (8.9% of the original study-based surplus) is unencumbered and available for the unrestricted, one-way amortization. Again, from what I can read and understand from the PGS Settlement and the public docket, there was no attempt to manufacture a reserve imbalance in that case for purposes of creating a mechanism for manipulating earnings. In this case, it is important to note that the depreciation reserve imbalance resulting from the rates proposed by FCG's own witness is a ***deficiency*** of approximately $2 million.

I would further note that, PGS has so far been able to avoid utilizing this accounting treatment for seven quarterly Earnings Surveillance Reports (ESR) -- since the fourth quarter of 2020. Against a maximum allowed ROE of 10.90%, PGS has reported achieved jurisdictional earnings on the ESR of 7.37% (December 2020), 9.13%, 9.99%, 10.36%, 10.61% (December 2021), 10.40%, and 10.07%. As of February 14, 2022, PGS, (through its corporate owner, Emera, Inc., reported in notes to the 2021 audited financial statements that it had not reversed (credited to income) any of the $34 million.[14] While it is not clear if PGS has amortized some or any of the unencumbered depreciation surplus (or the amount that was encumbered) since February 2022, it is clear from the wide variation in the reported achieved earnings that the company has not used it to artificially achieve earnings at the top of the ROE range or a uniform targeted return. In my opinion, this negotiated provision of the PGS Settlement bears no resemblance to the RSAM proposal in this case or the RSAM proposal that has been included in previous FPL settlements (and upon which the Company's proposed RSAM is modeled).

[14] Emera Incorporated Consolidated Financial Statements, December 31, 2021, and 2020, https://www.sedar.com/CheckCode.do;jsessionid=0000ouz_105g_FCR_arl7jUN1sQ:188setvlh.

Q. WHAT WOULD YOU RECOMMEND IF THE COMMISSION DECIDES TO APPROVE A RSAM?

A. I do not recommend any form of the RSAM. If the Commission has the authority to create one for a gas company (and though I am not an attorney, my experience testifying around the country leads me to believe that the Commission may lack such authority under the principles of utility ratemaking, accounting, and depreciation that I am familiar with), any such mechanism should only be allowed to bring the company up to the bottom of (or just inside) the range of reasonableness. If this extremely limited use provided stability and a true stay out, then perhaps customers would benefit. Even so, I believe that the Commission establishing a departure from ordinary depreciation and accounting practices for gas companies is a bad precedent and should be avoided.

VI. RATE BASE

AGL Plant Acquisition Adjustment

Q. WHAT IS INCLUDED IN THE COMPANY'S REQUEST ASSOCIATED WITH A PLANT ACQUISITION ADJUSTMENT?

A. The amount included in rate base is $21,656,835 in utility plant and a credit of $13,475,365 in accumulated amortization for a net rate base amount of $8,181,470. This cost was included in Docket No. 20060657-GU and approved in Order No. PSC-2007-0913-PAA-GU issued in 2007.[15] According to MFR Schedule B-6 the annual amortization expense included in the Company's request is $721,894.

[15] FCG response to OPC Interrogatory No. 2-129.

Q. WHAT IS THE PURPOSE OF INCLUDING THE ACQUISITION ADJUSTMENT IN RATE BASE?

A. The excess of price paid in an acquisition over the book cost of property is essentially goodwill and is included in ratebase and rates in Florida only under extraordinary circumstances if a company is able to continually demonstrate during its ownership of the merged company that customers will derive certain benefits attributable to the acquisition. To accomplish this the Company must meet five factors to be included in rate base. The factors are:

1. Increased quality of service;
2. Lower operating costs;
3. Increased ability to attract capital for improvements;
4. Lower overall cost of capital; and
5. More professional and experienced managerial, financial, technical and operational resources.

The allowance of the acquisition adjustment that FCG proposes to continue to include in rates here, was based on the meeting of those factors when Florida City Gas was acquired by AGL Resources. Inc ("AGLR"). The achievement of those factors is no longer relevant or applicable since the Company has since been acquired by NextEra and FPL.

Q. YOU STATED THAT THE ACQUISITION ADJUSTMENT WAS APPROVED IN DOCKET NO. 20060657-GU. WAS THE CONTINUED RECOVERY APPROVED IN DOCKET NO. 20170179-GU?

A. No. That case was settled between intervenors and the representatives of its owners at the time – the Southern Company. The Commission Staff asked if it was the intention of the parties to address the acquisition adjustment and whether the parties agreed to stipulate their approval. The Company responded by stating that settlement was a "black box"

settlement, the settlement agreement did not specifically disallow or adjust it and no intervenor party submitted testimony or exhibits recommending any adjustment.[16]

Q. DESPITE THE "BLACK BOX" SETTLEMENT, DID THE ACQUISITION ADJUSTMENT CONTINUE TO BE RECOGNIZED IN RATEBASE?

A. Yes. As noted above, the **net** amount of $8,181,470 is included in the test year as is the $721,894 amortization expense. FCG seeks to recover these costs from customers.

Q. SINCE THAT SETTLEMENT IN 2018, HAS THE CHANGE IN OWNERSHIP FROM SOUTHERN COMPANY TO NEXTERA ENERGY/FPL AFFECTED THE BASIS FOR CONTINUED RECOGNITION OF THE ACQUISITION ADJUSTMENT?

A. Yes. A change in ownership like this one, extinguishes the acquisition adjustment that was recorded on the prior owner's books. The Florida Public Service Commission recognizes this and has established a policy for the protection of customers that acquisition adjustments do not survive subsequent purchases of a utility's assets. In Order No. PSC-2000-1165-PAA-WS at 17, the Commission stated:

> Acquisition adjustments do not survive subsequent purchases of the utility's assets. When Sun Communities purchased the utility, the accounting methodology for acquisition adjustments would not allow any further recognition of prior acquisition adjustment amounts. To do this would harm the utility customers by increasing rate base.[17]

[16] Company response to OPC Interrogatory No. 5-159.

[17] See, Order No. PSC-00-1165-PAA-WS, issued June 27, 2000, in Docket No. 990243-WS, at pp. 16-17. *In re*: Application for limited proceeding increase and restructuring of water rates by Sun Communities Finance Limited Partnership in Lake County, and overearnings investigation.

In 2005, citing the *Sun Communities* case, the Commission considered this issue again and ruled that:

> Acquisition Adjustments (AA) and Accumulated Amortization (AAAA). FWSC's general ledger for June 30, 2004, included AA balances of $649,373 and $(339,459) for water and wastewater, respectively. Consistent with prior Commission decisions, ***acquisition adjustments do not survive*** subsequent transfers. Therefore, the remaining balances of AA and AAAA shall be reduced to zero (see Adjustment Nos. 11, 13, 34, and 38 on Schedule 3).[18]

(Footnote omitted; emphasis added).

Q. HOW DOES THIS COMMISSION POLICY AFFECT THE APPLICATION OF THE FIVE FACTOR POLICY YOU DISCUSS ABOVE?

A. It renders that analysis moot since there is no acquisition adjustment to justify. The intangible asset that Southern Company purchased is no longer recognizable for ratemaking purposes and cannot be justified on FCG's books or in customer rates.

Q. DID NEXTERA OR FPL RECORD AN ACQUISITION ADJUSTMENT WHEN FCG WAS PURCHASED FROM SOUTHERN COMPANY, AND IF SO, SHOULD OR CAN ANY ACQUISITION ADJUSTMENT BE RECOGNIZED IN THIS CASE?

A. I am not aware of the details of that transaction. It does not matter in any event what the details of that purchase were because FCG and FPL have failed to introduce any

[18] Order No. PSC-05-1242-PAA-WS, issued December 24, 200, in Docket No. 20040951-WS; Docket No. 040952-WS, at p. 21. *In re*: Joint application for approval of sale of Florida Water Services Corporation's land, facilities, and certificates in Brevard, Highlands, Lake, Orange, Pasco, Polk, Putnam, a portion of Seminole, Volusia, and Washington counties to Aqua Utilities Florida, Inc.; In re: Joint application for approval of sale of Florida Water Services Corporation's land, facilities, and certificates for Chuluota systems in Seminole County to Aqua Utilities Florida, Inc.

evidence in the case on that point. It is too late in the case to amend the Petition to ask for recovery of a return on and of any premium that might have been paid and allocated to FCG. That train has left the station. Any acquisition adjustment-related costs cannot and should not be recovered customers in this case.

Q. WHAT ARE YOU RECOMMENDING WITH RESPECT TO THE COST ASSOCIATED WITH AGLR'S ACQUISTION OF THE COMPANY?

A. Based on Commission policy, I recommend that the net amount included in rate base of $8,181,470 be excluded from rate base and that amortization expense be reduced $721,894. The adjustment is shown on Exhibit HWS - 2, Schedule B-1.

LNG FACILITY

Q. ARE THERE ANY CONCERNS WITH THE REQUEST FOR THE LNG FACILITY INCLUSION IN RATE BASE?

A. Yes, there are concerns. According to Company witness Kurt Howard, the Company proposed in the 2018 rate case that LNG would be brought into the plant by tankers from third-party LNG producers and stored in storage tanks until FCG's distribution system needed supplemental gas. To meet system demands, the LNG would be pumped to a vaporizer and heated to change it from a liquid back into a gas. FCG proposed in the 2018 rate case that this LNG Facility would provide extra capacity to serve customers at the most southern portion of the Company's system during times of high demand and would allow FCG to continue to expand further south with a plan to meet the capacity needs of additional customers during peak demand. The 2018 Settlement authorized two specific step increases to recover the revenue requirements associated with the estimated costs for

the LNG Facility: (i) $2.5 million base rate increase on June 1, 2019, or the in-service date of the LNG Facility, whichever is later; and (ii) $1.3 million base rate increase on December 1, 2019. The 2018 Settlement also included a provision that if the in-service date of the LNG Facility was after December 1, 2019, the Company would be allowed to implement an increase in rates and charges sufficient to recover the remaining revenue requirement of $3.8 million upon the in-service date of the LNG Facility.[19] The proposed capital cost at that time was $58 million. The concerns are that there appears to be some difference in what the Company testimony states about when recovery would begin and a response to discovery. Another concern is that the cost of the project has increased by $10 million. A third concern is that, given the failure to be completed as originally projected, whether it is reasonable in this case to rely for ratemaking that the LNG facility will in fact be in service as projected in the case.

Q. WHAT DO YOU MEAN THERE IS A CONCERN WITH WHEN COST BEGAN TO BE RECOVERD FROM CUSTOMERS?

A. My understanding of Mr. Howard's testimony is that customers would not be paying for this plant until the facility was in service. The response to OPC Interrogatory No. 2-112 stated that current base rates include $29,000,000 in rate base associated with the LNG facility and related land, and $167,150 in operating expenses. The plant is not in-service, so according to testimony there should not be any charges in base rates yet. Additionally, the response to OPC Interrogatory No. 2-115 refers to a project schedule and that chart shows very minimal work completed as of April 2022. If this is true, it is questionable whether there should be any cost associated with the facility included in rates.

[19] Direct testimony of Kurt Howard at pp. 29-30.

Q. IF THE COMPANY HAS COLLECTED FROM CUSTOMERS COSTS FOR THE LNG FACILITY EVEN THOUGH THE FACILITY WAS NOT IN-SERVICE, ARE YOU RECOMMENDING THE COMMISSION FACTOR IT INTO THE COMPANY'S REQUEST?

A. Yes. It would be inconsistent with proper rate making and completely inappropriate for customers to pay for plant not in-service and not yet under actual construction. Any funds collected from customers for this facility should be set aside in a regulatory liability and amortized back to ratepayers over the next five years. As discussed earlier, the response to OPC Interrogatory No. 2-112 stated that "FCG's current base rates reflects $29,000,000 in rate base associated with the LNG facility and related land, and $167,150 in operating expenses." In an attempt to clarify that answer, the Company was asked to provide a net operating income summary of revenue and associated costs that were approved and allowed in base rates. The response to OPC Interrogatory No. 5-172 identified an initial revenue requirement of $2,530,174 based on a $29,000,000 rate base amount and $167,150 in operating expenses. The $29,000,000 is the average of a combination of plant cost and CWIP in 2018. The response also shows an incremental amount of $3,828,493 based on a $56,990,000 rate base amount and $1,714,919 in operating expenses. It is clear how the amounts in the response to OPC Interrogatory No. 2-112 were determined. The question remains, however, as to whether customers' base rates for 2018 include a return of and on the $29,000,000 of rate base and recovery of the $167,150 operating expense. This needs clarification because customers should not have already contributed for plant costs and expenses of the LNG facility if it did not provide any service.

Q. WHAT IS THE CONCERN WITH THE INCREASE IN COSTS?

A. The delay in construction and the in-service date was due to zoning and permitting issues with the initial site for the LNG Facility that was selected while FCG was still under the ownership of Southern Company. The LNG Facility was originally proposed to be located on a property along FCG's Jet Fuel Line in the area between Cutler Ridge and Homestead in Miami-Dade County. After the 2018 Settlement was approved, FCG began to engineer and design the original proposed site for the LNG Facility. Subsequently, the Company ultimately failed to obtain the zoning and permitting approvals necessary to construct the LNG Facility at the original proposed site. With the original site no longer viable, FCG determined the most appropriate strategy would be to sell the original proposed site and secure a new site for the LNG Facility that would still allow the facility to tie into FCG's Jet Fuel Line.

Q. HAS THIS DELAY AND FAILURE TO PERMIT THE ORIGINAL LNG FACILITY SITE IMPACTED THE COSTS THAT CUSTOMERS ARE BEING ASKED TO BEAR?

A. Yes. It is clear that the difficulty associated with the permits and approvals for the original site, along with the loss of the original site as a viable project location, the need to sell the original site, and the need to secure a new project site all materially contributed to the delay in constructing the LNG Facility.[20] This delay ultimately has caused the project cost to increase by $10 million. The delay was due to the Company's planning, or lack thereof. A project of this magnitude requires sufficient planning and due diligence. In my review of many proposed projects over my 45 plus years of analyzing rate requests, I have

[20] Direct testimony of Kurt Howard at pp. 30-31.

observed that the planning ordinarily would include a determination whether zoning and permitting would be approved or require any modifications to the project. This is critical since modifications would impact cost estimates. This is especially important with zoning as it would not be prudent to buy property zoned residential and plan industrial construction on the hope and whim that a zoning change will be allowed.

Q. WHAT ARE YOU RECOMMENDING TO THE COMMISSION?

A. The Commission should disallow the approximately $10 million of additional cost of construction as the added cost is attributable to the Company's failure to plan the project properly and prudently. As shown on Exhibit HWS - 2, Schedule B-2, I recommend a reduction to average plant in service of $7,692,308 and a reduction to accumulated depreciation of $56,253. Depreciation expense is reduced $158,145. The adjustments were determined by prorating the Company amount based on the OPC's recommended amounts.

Q. WHY IS THERE A CONCERN WITH THE PROJECTED IN-SERVICE DATE?

A. This is a major project whose in-service date has already been delayed by more than three years. Given the delays already incurred and that critical construction work is not currently scheduled to occur until September 2022 and is proposed to continue through April 2023, there is a good possibility that unexpected delays could occur. It would not be appropriate for customers to pay once again for plant not yet in-service.

Q. WHAT SHOULD THE COMMISSION DO WITH RESPECT TO THE PROJECTED IN-SERVICE DATE?

A. Since the facility capital cost shifts from CWIP to Plant, and assuming that CWIP is allowed for recovery even though it is not plant in-service, I would recommend that any

added projected depreciation included in rates and associated with the plant that is still not in-service, be reflected as a regulatory liability and deferred until the Company's next rate filing or be reflected as a credit adjustment in one of the annual cost recovery clauses at a WACC that recognizes the cost carried in base rates.

AMI METERS

Q. WHAT IS INCLUDED IN THE COMPANY'S REQUEST FOR THE NEW AMI METERS?

A. FCG's is proposing a four-year experimental AMI Pilot to support the evaluation of system-wide deployment of AMI infrastructure in a future case. According to FCG, the purpose of the AMI Pilot is intended to test and gain information and data on the deployment, use, benefits, and cost savings associated with AMI with two-way communications. FGC is proposing to test and gather data on (i) corrosion resistance and the life of new smart meters and associated assemblies and (ii) the ability of FCG's back-office system to support and utilize the full potential of two-way communication smart meters. The AMI Pilot proposal is for one-year roll-out (i.e., installation) of the meters and a subsequent three-year evaluation period in which the performance of the meters and their correlative benefits will be assessed.[21]

Q. HOW MANY CUSTOMERS ARE ASSOCIATED WITH THE PILOT PROJECT THAT WILL BE INCLUDED IN THE REQUEST AND AT WHAT COST?

A. FCG has stated that the AMI Pilot would replace 5,000 meters in Brevard County and that the 5,000 meters represents less than 5% of the customer meters on FCG's system. The

[21] Direct testimony of Kurt Howard at pp. 37-38.

AMI Pilot cost consists of $3.4 million of total capital expenditures over four years for an entirely new meter assembly equipped with AMI and the cost of installation and estimated annual O&M expense of $20,000 for the four-year administration of the pilot, which includes a licensing fee paid to Itron and compensation to FPL for use of its network[22].

Q. ARE THERE CONCERNS WITH THE COMPANY'S REQUEST?

A. Yes, there are concerns. First, the cost is essentially a risk that should be borne by shareholders since it is not known whether there will be a benefit. The Company has stated that this proposed system is new to the gas industry and there is not much known about it. Second, even though there is suggested benefit, that benefit has not been reflected in the filing. This proposal is effectively an experimental venture and as such, the costs should be borne by shareholders. Customers should not be made guinea pigs for an experiment that does not reflect any current or future value to those whose rates will increase in 2023. Additionally, with respect to the concern (that I have expressed below) the company has not denied that a possibility exists of a sale of the Company in the future. This experiment should not be allowed to increase rates.

Q. ARE YOU RECOMMENDING AN ADJUSTMENT FOR THE AMOUNTS REQUESTED?

A. Yes. The capital costs should be reduced an estimated $837,500, depreciation expense should be reduced $46,913 and O&M expense should be reduced $20,000. The O&M expense adjustment includes the reduction of $3,104 identified by FCG in the August 16, 2022, Notice of Identified Adjustments and the remaining $16,896. The adjustment by the

[22] Direct testimony of Kurt Howard at pp. 40-41.

Company and the remaining amount included in the test year were confirmed in the response to OPC Interrogatory No. 5-160.

Q. WOULD YOU EXPLAIN HOW YOU ESTIMATED THE CAPITAL COST REDUCTION OF $837,500?

A. Yes. The response to FEA Interrogatory No. 2-10, Attachment 2 identified three cost components associated with the AMI project going into service in 2023. The sum total was $3,350,000. I have assumed that the additions were reflected during the year and estimated the average cost included in rate base to be $837,500 or 25% of the total. My adjustment to plant, accumulated depreciation and depreciation expense are reflected on Exhibit HWS - 2, Schedule B-3

CAPITAL ADDITIONS

Q. WHAT DID YOU DETERMINE FROM YOUR REVIEW OF THE COMPANY'S REQUEST FOR CAPITAL ADDITIONS?

A. The Company has included in their request a very optimistic amount of plant additions. As shown on Exhibit HWS - 2, Schedule B-4, Page 1 of 2, actual total capital expenditures ranged from a low of $31,620,466 to a high of $40,917,727 in the years 2019 to 2021. The projected capital expenditures for 2022 and 2023 are $89,413,630 and $55,622,614, respectively. The difference from year to year is attributable in part to the LNG facility so for a more apples to apples comparison purposes I have excluded the LNG costs. As shown on lines 9 and 10 of Schedule B-4, Page 1 of 2 the projected 2022 and 2023 capital expenditures excluding LNG plant is $20,014,315 and $21,542,902, respectively, over the actual $30,951,611 three-year average of capital expenditures excluding LNG plant. An

approximate 67% increase over the actual average is a concern. Adding to the concern is that the actual capital expenditures, excluding the LNG plant, have declined each year since 2019.

Q. EXHIBIT HWS - 2, SCHEDULE B-4, PAGE 1 OF 2 HAS ANOTHER ANALYSIS OF PLANT ADDITIONS. WHAT DOES THAT REVEAL?

A. Plant additions net of retirements varied significantly from year to year. The Company was asked why the significant variance between 2020 and 2021 occurred. The response to OPC Interrogatory No. 4-151 explained that the 2020 high was due to $12.2 million for a major improvement for a new large industrial customer and a $10 million systems investment made in 2020. This further suggests that the significant costs associated with capital addition increases reflected in 2022 and 2023 may well be overly optimistic.

Q. DID YOU MAKE ANY COMPARISON OF THE PROJECTED AND ACTUAL 2022 CAPITAL EXPENDITURES TO DATE?

A. The Company was requested in OPC Interrogatory No. 5-164 to provide a comparable summary to the plant balances for 2022 through June 2022 as shown on MFR Schedule G-1, Page 9. On Exhibit HWS - 2, Schedule B-4, Page 2 of 2, I have made a comparison of the MFR Schedule G-1, Page 9 amounts to the comparable actual amounts provided in the response to OPC Interrogatory No. 5-164 for January to June of 2022. The monthly difference suggests the Company projections are overstated by an average of $36,954,004. This is significant.

Q. COULD IT BE THAT THE DIFFERENCE IS DUE TO THE SAFE PROJECT COSTS NOT BEING REFLECTED IN ACTUALS THROUGH JUNE OF 2022?

A. SAFE project costs are included in the Company filing. This is evidenced by the fact that the MFR Schedule G-1, Page 9 results flow through to the MFR Schedule G-1, Page 10 amounts for 2023. The average is then reflected on MFR Schedule G-1, Page 7, which is carried over to MFR Schedule G-1, Page 1. On MFR Schedule G-1, Page 1, FCG adjusts plant by first excluding SAFE plant cost included in the averaging and then adds the SAFE costs back into the average on the presumption the commission will approve the transfer to base rates. OPC Interrogatory No. 5-164 requested a comparable summary and to be comparable, the SAFE dollars should have been included in the response. The Company failed to provide the information as requested.

Q. WOULD THAT EXPLAIN THE DIFFERENCE BETWEEN THE FILING AND THE ACTUAL AS PROVIDED?

A. It may explain some of the difference but because the information was not provided as requested it is difficult to determine what differences exist. The Commission should determine the basis for this nearly $37 million discrepancy, and if it is not fully explained by the shifting of SAFE dollars, a downward adjustment to the forecasted rate base maybe required.

Q. WHAT ARE YOU RECOMENDING WITH RESPECT TO THE PROJECTED REQUEST FOR 2022 AND 2023?

A. The amounts projected for 2022 and 2023 should be reduced. Because the information as provided does not allow for a complete analysis, I am only recommending an adjustment for the 2022 plant additions. As shown on Exhibit HWS - 2, Schedule B-4, Page 1, the

actual three-year average of plant additions is $30,261,012 and the estimated 2022 plant additions are $39,899,000. On Page 2 of Schedule B-4, I calculated my adjustment by reducing the 2022 additions by $9,637,988 to the actual three-year average of $30,261,012. Using an estimated composite depreciation rate of 3.19%, I am recommending a reduction in depreciation expense of $307,256. Since the first depreciation accrual would be made in 2022, the $460,884 reduction to accumulated depreciation reflects a year and half of depreciation.

CASH WORKING CAPITAL

Q. WHAT DID YOU DETERMINE FROM YOUR REVIEW OF THE COMPANY'S REQUEST FOR CASH WORKING CAPITAL?

A. The Company has an inflated request based on historical balances. The Company's test year request is $17,453,848 which is $3,734,027 higher than the actual 2021 cash working capital requirement of $13,719,821.

Q. ARE THERE SPECIFIC COMPONENTS THAT ARE IMPACTING THE COMPANY'S REQUEST?

A. Yes. On lines 1-25 of Exhibit HWS - 2, Schedule B-5, I summarized the 2021, 2022 and 2023 amounts as reflected on the Company's filing. In comparing the different components, some of the test year amounts were notably different. To determine whether the amounts were reasonable, I summarized the years 2019-2021, on lines 26-37, to get a historic perspective as to what actual balances were. Some components were clearly different. For example, the three-year average of Cash was $2,312,949 which is less than half of the $5,000,000 in the Company's request. Next is test year Accounts Receivable

of $15,503,936, which is over $5.5 million higher than any year 2019-2021 and $6,225,528 higher than the three-year average of $9,278,408. Similarly, the test year Gas Storage is approximately 50% higher than any year 2019-2021 and double the three-year average. Finally, test year Miscellaneous Deferred Debits is twice as high as the highest year 2019-2021 and approximately three times the 2019-2021 three-year average. Other differences existed but these were the ones that stood out.

Q. ARE YOU RECOMMENDING AN ADJUSTMENT?

A. Yes, I am. As shown on Exhibit HWS - 2, Schedule B-5, I have calculated a reduction of $7,850,000. For each of the components discussed, I am recommending reduction that will result in a debit balance that is greater than the actual three-year average. Additionally, I reduced the test year Accounts Payable by $800,000 so that the credit is less than the actual three-year average. Each adjustment is conservative.

VII. NET OPERATING INCOME

REVENUE

Q. HAVE YOU REFLECTED AN ADJUSTMENT TO REVENUE?

A. Yes. On August 16, 2022, the Company filed a Notice of Identified Adjustments that indicated an increase in revenue of $155,495 was required. I have reflected this adjustment on Exhibit HWS - 2, Schedule C, Page 2 of 2.

PAYROLL

Q. HAVE YOU REVIEWED THE PAYROLL COST INCLUDED IN THE COMPANY'S BASE RATE REQUEST?

A. Yes, I have. The Company's request includes $10,598,909 charged to expense and $2,050,287 charged to capital projects. The amounts do not include any costs charged to recovery clauses. The request assumes an employee complement of 187 full time equivalents (FTEs). The history of payroll expensed and capitalized excluding recovery clause payroll along with the changes in the employee complement is detailed on Exhibit HWS - 2, Schedule C-1.

Q. ARE THERE ANY CONCERNS WITH THE COMPANY'S REQUEST?

A. There are. The request assumes an employee complement of 187 FTEs throughout the 2023 test year without any consideration of a vacancy factor. This was confirmed in the response to OPC Interrogatory No. 1-74. The response to OPC Interrogatory No. 1-75 indicates that since December 31, 2021, the Company filled 12 positions as of June 30, 2022. Adding the 12 positions to the December 31, 2021, year-end count of 163, the employee count should be 175. The June 30, 2022, employee count was 173. Clearly, as employees are added, others leave, meaning vacancies occur. The response to OPC Interrogatory No. 5-169 verified my observation indicating that in the six months, January through June 2022, 16 vacancies occurred and the Company added and/or replaced 26 positions for the net gain of 10 positions. Adding to the concern is the fact that the projected complement for 2021 was 175 FTEs and the year-end complement and average complement were 163 FTEs and 159 FTEs, respectively. The fact that vacancies occur, and projected additions do not always occur cannot be ignored when setting rates.

Q. ARE THERE OTHER CONCERNS WITH THE COMPANY'S REQUEST TO ADD POSITIONS?

A. Yes. The Company testimony does not detail any specifics as to what positions are required and why they are required. When asked about where the Company justified the addition of employees in Company testimony the response to OPC Interrogatory No. 5-172 referred to page 6 of FCG witness Howard. However, FCG witness Howard's testimony at Page 6 says the request is reasonable and appropriate, but it does not mention adding employees. This is not justification.

Furthermore, in response to OPC Interrogatory No. 1-77 the Company stated that it did not have a payroll budget for 2019 and it provided budgeted payroll, excluding recovery clause costs, of $10,897,810 for 2020 and $13,126,569 for 2021. While the actual for 2020 was within $100,000 of budget, the 2021 budget was $1,893,794 over the actual of $11,232,775. This is a clear indication that an optimistic estimate of what cost will be incurred and how many employees will be on hand during the test year is not reasonable.

Q. WHY WAS THE 2021 ACTUAL BELOW BUDGET?

A. The response to OPC Interrogatory No. 4-149 stated that actual payroll costs were lower than budgeted because the Company was unable to fill the positions within the budgeted timeline.

Q. WHAT DO YOU RECOMMEND FOR PAYROLL EXPENSE IN THE 2023 TEST YEAR?

A. Using the most known and measurable employee count of 173 FTEs, the payroll expense request of $10,598,909 should be reduced by $793,501 to $9,805,408. My adjustment is reflected on Exhibit HWS - 2, Schedule C-1. The adjustment simply multiplies the known vacancies as of June 30, 2022, times the average payroll expense per employee, excluding incentive compensation.

INCENTIVE COMPENSATION

Q. HAVE YOU ANALYZED FCG'S REQUEST FOR INCENTIVE COMPENSATION FOR THE TEST YEAR 2023?

A. Yes, I have. The Company, in response to OPC Interrogatory No. 1-61, indicated that the 2023 test year incentive compensation includes $287,655 of Short-Term capitalized costs, $1,321,611 of Short-Term expensed costs and $163,461 of Long-Term expense. In response to OPC Interrogatory No. 1-55 the Company stated that "FCG did not remove any incentive compensation costs from the 2023 test year."

Q. IS THERE A CONCERN WITH THE COMPANY'S INCLUSION OF ALL THE INCENTIVE COMPENSATION PLAN COSTS IN THE TEST YEAR?

A. Yes. The Commission in the past has excluded a portion of the projected incentive compensation expense. In fact, in Docket No. 20210015-EI, FPL, the Company's affiliate, excluded portions of executive and non-executive incentive compensation that FPL stated

were excluded by the 2010 FPL rate case order, Order No. PSC-2010-0153-FOF-EI.[23] That decision first excluded executive and non-executive incentive compensation associated with an above target ratio and adjusted it to the target ratio. Then the decision excluded 100% of what was defined as target executive compensation and 50% of what was identified as target non-executive compensation. FCG's incentive compensation costs are based on the same plans for which FPL excluded costs from recovery in Docket No. 20210015-EI.

Q. ARE THERE OTHER EXAMPLES WHERE THE COMMISSION EXCLUDED INCENTIVE COMPENSATION?

A. Yes. In the Progress Energy Florida ("PEF") rate case, Docket No. 20090079-EI, the Commission, disallowed all of the Company's requested incentive compensation stating that we believe that "PEF should pay the entire cost of incentive compensation, as its customers do not receive a significant benefit from it."[24] It is especially noteworthy that the decision concluded that a "significant benefit" was not received as opposed to a finding of some benefit.

Q. WOULD YOU IDENTIFY ANY ISSUES YOU HAVE WITH THE INCENTIVE COMPENSATION PLANS OR THE ASSUMPTION THAT COSTS ARE APPROPRIATE?

A. The first issue is that after the amount of incentive compensation have declined each year from $1,315,053 in 2019 to $1,160,454 in 2021, the Company projects $1,772,728 in 2023.

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[23] See, Order No. PSC-2010-0153-EI, issued March 17, 2010, at pp.149-150, in Docket No. 080677-EI, *In re*: Petition for increase in rates by Florida Power & Light Company.

[24] See, Order No. PSC-2010-0131-FOF-EI, issued March 5, 2010, at p. 115, in Docket No. 20090079-EI, *In re*: Petition for increase in rates by Progress Energy Florida, Inc.

That equates to a 52.8% increase for which there is no justification offered. Second, the total projected for 2023 is not known at this time because the performance and results of operations are not known yet and the goals are not even set for 2023. Third, according to the response to OPC Interrogatory 1-54 since the acquisition in 2018 almost every eligible employee receives some form of incentive compensation payment. This suggests that there is not really an incentive to perform above the day-to-day operational requirements. Below is a table that shows the number of eligible employees, the number receiving payment and the percentage that received the payment.

Year	Eligible	Received	Percentage
2018	128	123	96.1%
2019	150	139	92.7%
2020	160	153	95.6%
2021	162	138	85.2%

Q. IS THERE ANY INDICATION THAT SOME ADDED PERFORMANCE IS REQUIRED BY EMPLOYEES SINCE SOME EMPLOYEES APPARENTLY DID NOT RECEIVE INCENTIVE COMPENSATION?

A. No. Even though the table indicated that some employees did not receive incentive compensation, the results varied from what I have observed in my 40 plus years of analyzing bonus and incentive compensation costs. The Company was asked to explain why the number not receiving incentive in 2021 was higher than other years. The response to OPC Interrogatory No. 4-147 detailed the results in more detail. It turns out that for each of the years, the number not receiving incentive compensation was primarily due to the employees being either late hires and being inactive or on leave of absence. The bottom line is that in 2018, no one was excluded from the incentive payment because of poor performance. For each of the years 2019 through 2021 only one employee was denied

incentive compensation as a result of poor performance. Essentially it is a given that the payment will be made, indicating that this is really nothing more than supplemental pay.

Q. HAS THE COMPANY JUSTIFIED THE INCLUSION OF ALL INCENTIVE COMPENSATION IN THE CURRENT FILING?

A. The Company made an attempt, but they did not justify it. The Company was asked whether there were any studies or analysis that show whether there is any benefit to ratepayers. The response to OPC Interrogatory No. 1-55 was as follows:

> FCG provides a competitive compensation package designed to attract, retain, and motivate workers with necessary skills. The Company performs annual benchmarking to ensure that salaries and performance-based incentive compensation are market-competitive. Because such benchmarking demonstrates that incentive compensation is a necessary component of a competitive pay package for salaried workers in utility and general industry (and that Company salaries alone, without a performance-based incentive compensation program, would be a below-market compensation package), and because the Company's ability to attract and retain workers directly benefits customers, the Company's annual benchmarking study therefore shows that its performance-based incentive compensation plan provides benefit to customers.

Q. WHY DOESN'T THIS EXPLANATION JUSTIFY THE INCLUSION IN RATES?

A. The response uses the same canned argument that every utility uses in attempting to justify incentive compensation. The problem is that while other utility companies offer incentive compensation, that fact alone does not justify or even result in it being included in rates. In fact, in numerous cases regulators limit or exclude incentive compensation when rates are approved. Earlier I identified examples in Florida where this was the case. The Company was asked in OPC POD No. 1-20 to provide any studies the Company has in its possession that reflect a comparison of the Company's incentive compensation plan to those which have been allowed to be included in rates in other jurisdictions. The response stated "FCG has no responsive documents." This swing and miss is especially relevant and critical since utilities will argue that compensation is reasonable based on comparisons to other utility companies. However, as is shown in this example, when rates are actually being established, like other utilities, FCG is suddenly unable to demonstrate that the inclusion of incentive compensation is comparable to what is allowed or not allowed in other jurisdictions. This lack of proof and justification falls short of meeting FCG's burden of proof.

Another issue is the achievement of goals has not been that good over the past three years. The response to OPC Interrogatory No. 1-56 provided a comparison of results and without detailing the confidential portion of the responses, the results were as follows:

Year	Better	Worse	Other
2019	6	8	0
2020	4	8	2 N/A
2021	4	9	1 Plan

As the results show the Company's actual performance was below the goal for the majority of the indicators. Also noteworthy is that goals related to financial performance accounted for 50% of performance. Financial goals provide benefits to shareholders.

Q. ARE THERE ANY CONCERNS WITH THE INCENTIVE COMPENSATION PLANS THEMSELVES?

A. Yes. The OPC's POD No. 1-19 requested the Company to provide a copy of all the incentive compensation plans, bonus programs or other incentive award programs in effect. The response to OPC POD No. 1-19 provided three attachments. The first was a long-term plan and the third was an amendment to the long-term plan. The second attachment was pages 8 and 9 of 25 of the "Florida Power & Light Company Compensation Manual – Leader." The response to OPC Interrogatory No. 1-61 identified costs for a Short Term plan and a Long Term plan yet there no Short Term Plan provided in the response to OPC POD No. 1-19. In Attachment 2 to OPC POD No. 1-19 (a two-page document) there is a one paragraph discussion on page 1 of performance rewards that can be awarded as merit adjustments or incentive compensation. On the second page of the attachment there is a full-page explanation of Performance Incentive Compensation. In that discussion it states three times that the plan is discretionary. This is not what is customarily considered a Short Term Incentive Plan, and it falls well short of meeting the Company's burden of proof on this issue.

Q. ARE YOU RECOMMENDING AN ADJUSTMENT FOR INCENTIVE COMPENSATION BASED ON THE INFORMATION CURRENTLY AVAILABLE?

A. Yes. Conservatively, and consistent with Order No. PSC-2010-0153-FOF-EI, I am recommending that $163,461 of the long term plan costs be excluded and that $922,865 of short term plan costs be excluded. The adjustment is reflected on Exhibit HWS - 2, Schedule C-2.

Q. HOW DID YOU DETERMINE YOUR ADJUSTMENT?

A. Following Order No. PSC-2010-0153-FOF-EI, I excluded 100% of the long term costs. The short term plan cost was adjusted first by assuming the 2021 expense amount of $797,492 is the Target amount reducing the cost by $524,119. Then, following the order, I reduced the short term Target amount of $797,492 by 50% or $398,746. This adjustment is conservative since, in light of the Company's failure to provide justification for including any incentive cost, all the cost could be excluded.

EMPLOYEE BENEFIT EXPENSE

Q. ARE YOU RECOMMENDING AN ADJUSTMENT TO EMPLOYEE BENEFITS?

A. Yes. As shown on Exhibit HWS - 2, Schedule C-3, I am recommending a reduction of $49,533 to employee benefit expense. The adjustment is a basic flowthrough of my recommended payroll adjustment based on an actual employee complement. The adjustment is calculated using the average benefit expense per employee, multiplied by the employee complement adjustment.

STORM RESERVE

Q. THE COMPANY IS REQUESTING TO CONTINUE THE ANNUAL ACCRUAL OF $57,500 TO ACHIEVE A STORM RESERVE CAP OF $800,000. DO YOU HAVE AN ISSUE WITH THIS REQUEST?

A. Yes. As of March 31, 2021, the reserve for storms is $162,290. Since the acquisition of the Company, customers have contributed $210,833 to the reserve while $58,127 was charged against the reserve for 2 storms over a period of 46 months.

Q. IN ACCORDANCE WITH RULE 25-7.0143(1)(1), FLORIDA ADMINISTRATIVE CODE, THE COMPANY HAS A SELF INSURANCE RESERVE STUDY TO SUPPORT ITS REQUEST. HAVE YOU REVIEWED THIS STUDY?

A. I have. The study indicates there is an expected annual cost of $190,000 and there a 1% chance that damages of $2,500,000 could occur. The annual estimated cost is based on simulated hurricanes. While the study observes that some years will have no costs and some years will have small costs, it concludes that a few years will have a large cost. Since the Company was acquired by FPL, the largest cost was $48,626 in 2020. Absent any historical evidence that there will be more storms impacting the Company and higher costs incurred, the storm reserve is currently sufficient to for the next 10 plus years.

Q. HOW DID YOU DETERMINE THAT THE RESERVE IS SUFFICIENT FOR THE NEXT TEN PLUS YEARS?

A. In 46 months since the reserve was established, the Company has had two storms charged to the reserve at a cost of $58,127. That $58,127 averages to $1,264 a month or an annual cost of $15,164. A reserve balance of $162,290 as of March 31, 2022, means that the reserve could be charged $15,164 a year for a period of 10.7 years before it was fully

utilized. This is based on actual data; it is not a guesstimate. This analysis does not take into consideration that the reserve has increased another $14,375 from April 2022 through June 2022 and that there were no charges against the reserve during this period. I do agree that some years will have no costs, some years may have some low costs and in rare instances a major charge may occur. This is evidenced by the historical data to date and at this time the major cost is $48,626.

Q. WHAT ADJUSTMENT ARE YOU RECOMMENDING?

A. On Exhibit HWS - 2, Schedule C-4 I recommend that the annual accrual of $57,500 be discontinued beginning January 1, 2023. Unless some storm occurs that would result in a rare charge against the reserve, the reserve balance will be $205,415 as of December 31, 2022.

INJURIES AND DAMAGES

Q. IS THERE A CONCERN WITH THE AMOUNT OF THE INJURIES AND DAMAGES EXPENSE ACCRUAL INCLUDED IN THE COMPANY'S REQUEST?

A. Yes. Based on MFR Schedule E-6, Page 4 of 5, the amount included in expense is $515,304. The response to OPC Interrogatory No. 1-63 indicates that the expense in 2019 was $111,135, in 2020 the expense was $243,888 and in 2021 the expense was $552,519. According to MFR Schedule E-6, Page 4 of 5, the expense in Account 925, prior to the takeover by FPL, was $268,227 in 2017 and for the combined year 2018 it was $186,853. The increases under FPL's brief ownership is concerning.

Q. PLEASE EXPLAIN WHAT THE ACCOUNT REPRESENTS AND WHY THIS IS CONCERNING.

A. Account 925 includes the cost of insurance or reserve accruals to protect the service company against injuries and damages claims of employees or others, losses of such character not covered by insurance, and expenses incurred in settlement of injuries and damages claims. Safe and reliable service is a priority for a utility company. The fact of this cost more than doubling from 2019 to 2020 and then again from 2020 to 2021 (after being relatively level for three years) must be a concern to the Company and the Commission.

Q. DO YOU HAVE ANY INDICATION WHAT COULD BE CONTRIBUTING TO THIS INCREASE?

A. The Company's response to OPC Interrogatory No. 1-56 identifies various performance indicators of the Company incentive compensation plan. Without getting into the specific confidential numbers, the response indicates that the actual result for Safety: Number of OSHA Recordables (per 200,000 Hours) in 2019 was better than the goal, in 2020 the actual was worse than the goal and in 2021 the actual was worse than the goal. From an employees' perspective, safety performance is in need of improvement.

Q. ARE YOU RECOMMENDING AN ADJUSTMENT TO THIS EXPENSE?

A. Yes. As shown on Exhibit HWS - 2, Schedule C-5, I am recommending a reduction of $212,790 leaving an allowed expense of $302,514 that is based on the actual three-year average of costs as recorded from 2019-2021. This amount exceeds the overall five-year average total expense of $271,787, suggesting my recommended adjustment is conservative.

DIRECTORS & OFFICERS LIABILITY ISURANCE

Q. IS THE COMPANY REQUESTING RECOVERY OF DIRECTORS & OFFICERS LIABILITY INSURANCE?

A. Yes. The response to OPC Interrogatory No. 1-65 identifies Directors & Officers Liability Insurance ("D&O") expense of $9,431. The history of this cost is summarized on Exhibit HWS - 2, Schedule C-6.

Q. WHAT IS THE PURPOSE OF D&O INSURANCE?

A. D&O insurance is designed to protect directors and officers from decisions they make that are determined to be bad decisions or decisions of a questionable nature. In my experience the only claims made necessitating this coverage are made by shareholders.

Q. WHAT ADJUSTMENT ARE YOU RECOMMENDING TO D&O INSURANCE EXPENSE?

A. I am recommending that the entire cost of $9,431 be excluded from rates since this cost provides no benefit to customers.

Q. ARE YOU AWARE OF THIS BEING ADDRESSED IN PREVIOUS RATE CASES IN FLORIDA?

A. Yes. I addressed this issue in Docket No. 20090079-EI. In that case, the Commission allowed PEF to place one half the cost of DOL insurance in test year expenses while noting that other jurisdictions have made an adjustment for DOL insurance and that the Commission has disallowed DOL insurance in wastewater cases.[25]

[25] See, Order No. PSC-2010-0131-FOF-EI, issued March 5, 2010, at p. 99, in Docket No. 20090079-EI, *In re*: Petition for increase in rates by Progress Energy Florida, Inc.

Q. IF THE COMMISSION DISALLOWED HALF THE COST IN THE PEF DOCKET, WHY ARE YOU RECOMMENDING A TOTAL DISALLOWANCE IN THIS CASE?

A. I am recommending to the Commission that there be a complete disallowance or at the very least an equal sharing because the cost associated with DOL insurance benefits shareholders first and foremost. As explained earlier the benefit of DOL insurance is the protection shareholders receive from directors' and officers' imprudent decision making. The benefit of this insurance clearly inures primarily to shareholders; some of whom generally are the parties initiating any suit against the directors and officers.

RATE CASE EXPENSE

Q. WHAT HAS THE COMPANY INCLUDED IN EXPENSE FOR THIS RATE CASE?

A. According to the response to OPC POD No. 1-1, the worksheet for MFR G2-2 with support revised, includes $555,279 of costs for Regulatory Commission expense of which $497,779 is the amortization of this proceeding rate case costs.

Q. ARE THERE CONCERNS WITH THE AMOUNT REQUESTED?

A. Yes. According to MFR Schedule C-13, the test year costs of $1,991,116 are 62.97% higher than the Docket No. 20170179-GU costs of $1,221,766. The detail on the cost is of major concern. For example, the $157,862 cost for the test year depreciation study is more than twice the prior case. This may be just generally excessive, or it could be because FCG asked the witness to manipulate the results to create new parameters to facilitate the RSAM. As discussed in detail, the creation of the hypothetical reserve is not appropriate so any cost associated with that exercise would also be inappropriate. Additionally, the Company

is using FPL assistance assumedly to impact certain costs and to facilitate reduced legal fees and temporary services. The decrease in these costs from the last case is $725,000. When an escalation factor in the form of the compound multiplier from MFR Schedule C-37 is applied, the replaced cost would be $876,018 ($725,000 x 1.2083). The actual replacement cost provided by FPL is $1,564,981. As shown on Exhibit HWS - 2, Schedule C-8, this amount of subset of costs exceeds my calculation of the $1,476,260 Benchmark rate case expenses applicable to the entire Docket No. 20170179-GU. Clearly the requested costs are excessive.

Q. THE SCHEDULE C-13 INDICATES THAT THE DEPRECIATION STUDY SCOPE HAS INCREASED. WOULD THAT JUSTIFY THE INCREASE IN COSTS?

A. No. While I have seen the costs vary from jurisdiction to jurisdiction and depending on the consultant, the cost requested is considered high and, as discussed earlier, it may be higher because of the added work to create a fictious depreciation surplus reserve.

Q. ARE THERE ANY OTHER FACTORS THE COMMISSION SHOULD TAKE INTO CONSIDERATION WHEN CONSIDERING THE EXCESSIVE INCREASE IN REQUESTED RATECASE EXPENSE AMOUNTS?

A. Yes. I am aware that Florida law expressly authorizes the Company to seek rate relief using the Proposed Agency Action (PAA) method.[26] It is my understanding that this streamlined ratemaking approach is available to all gas utilities in Florida and is designed to minimize regulatory cost impacts on customers. I am also aware that using the PAA process may have placed the exotic requests of the 59.6% equity ratio, the RSAM proposal (including

[26] See, section 366.06(4), Florida Statutes.

the effort to artificially convert a depreciation reserve deficiency into a surplus to pad earnings), and the extinguishment of the embedded acquisition adjustment (which FCG ignored in its filing) at risk, as the Commission staff would have had to sign off on any PAA recommendation that they would have filed on measures that had never applied to a gas utility in Florida. In my view, this decision to ignore a streamlined regulatory approach designed by the Legislature to benefit customers in order to try to enhance the shareholders through an inflated equity ratio and a mechanism to increase achieve increased profits should further support the allocation of a significant portion of rate case expense to the shareholders.

Q. WHAT ARE YOU RECOMMENDING?

A. I am recommending the cost of the case be reduced by $571,139 by reducing the depreciation study costs $50,000 and the $1,564,981 of FPL costs by $521,139 or by one third.

Q. ARE THERE ANY OTHER INDICATORS THAT THE FPL COSTS ARE EXCESSIVE?

A. Yes. The actual costs increased from January through May and began to decrease in June. The total to-date is $610,555 through June and that is assuming the costs charged are appropriate.

Q. HOW DOES YOUR RECOMMENDATION IMPACT THE COMPANY'S REQUEST?

A. As shown on Exhibit HWS - 2, Schedule C-8 the impact on rate base is calculated to be a reduction to working capital of $499,746 for the deferred rate case cost and a reduction of $142,785 to rate case expense included in the cost of service.

AFFILIATE EXPENSE

Q. ARE THERE CONCERNS WITH AFFILATE COSTS?

A. Yes. The Company was requested in OPC POD No. 2-28 to provide a comparison of the cost included in the 2018 settlement and the projected 2023 affiliate costs included in the Company's request. The response was "FCG has no responsive documents." This is not an appropriate response with the relationship between FPL and FCG. The cost charged by an affiliate should be sufficiently detailed so the reasonableness of those costs can be evaluated.

Q. WHAT AMOUNT HAVE YOU IDENTIFIED AS AN EXPENSE FOR AFFILIATE CHARGES?

A. In response to OPC POD No. 1-1, Company witness Fuentes' workpaper file included two excel spread sheets. First, a document entitled "Affiliate Spend WV3" indicated that the 2023 affiliate charges were $1,257,227. On Exhibit HWS - 2, Schedule C-9, I summarized the costs by primary costs. The costs are primarily payroll and payroll-related expense. The second document was "2023 CSC Charges from FPL to FCG by BU." This document indicated charges totaling $1,724,997. It is not clear, but relying on the documents referencing affiliate costs, the test year affiliate cost could be $2,982,224.

Q. DO YOU HAVE AN ISSUE WITH THE COSTS INCLUDED AS AFFILIATE CHARGES?

A. Yes. The "Affiliate Spend WV3" cost includes $405,440 of costs that have been excluded in whole or in part in past FPL and other cases. The inclusion of these costs under a different description should not be a means of recovering costs normally disallowed. It is not clear whether the costs in "2023 CSC Charges from FPL to FCG by BU" include any

of the types of costs normally disallowed or not otherwise recovered. However, the significant amount of executive costs could include excess compensations that would be excluded. There is also the response to OPC Interrogatory No. 4-153 indicates that FPL's Corporate Service charges include $29,576 of SERP costs. SERP costs are considered excessive compensation and should be excluded from customer rates.

Q. WHAT ADJUSTMENT ARE YOU RECOMMENDING TO AFFILATE CHARGES?

A. As shown on Exhibit HWS - 2, Schedule C-9 the $405,440 for excess type compensation is recommended to be excluded. In addition, the $29,576 of SERP costs should be excluded. Pending an explanation by the Company of the "2023 CSC Charges from FPL to FCG by BU" document, I reserve the right to recommend an adjustment to those costs.

PAYROLL TAX EXPENSE

Q. WILL YOUR RECOMMENDED ADJUSTMENT TO PAYROLL IMPACT PAYROLL TAX EXPENSE?

A. Yes. On Exhibit HWS - 2, Schedule C-10, I have calculated a reduction of $122,767 to payroll tax expense. The adjustment is a simple flowthrough of my recommended payroll adjustment and incentive compensation adjustment. I determined the effective payroll tax expense rate of 6.53% by dividing the test year payroll tax expense of $789,177 by $12,083,981, which is the total of payroll and incentive compensation costs expensed in the test year. I then applied the effective rate to the total recommended adjustment of $1,879,827 associated with payroll and incentive compensation.

DEPRECIATION EXPENSE

Q. ARE THERE OTHER ADJUSTMENTS TO DEPRECIATION EXPENSE BEYOND THE PLANT ADJUSTMENTS DISCUSSED EARLIER?

A. Yes. Based on the testimony and analysis of OPC witness David Garrett, I have recalculated the depreciation expense for Distribution Plant by applying the depreciation rates he has recommended. As shown on Exhibit HWS - 2, Schedule C-11, I determined a reduction of $1,543,130 is required along with an adjustment of $771,565 (reduction) to accumulated depreciation.

INCOME TAXES

Q. WHAT ADJUSTMENT ARE YOU RECOMMENDING TO INCOME TAX EXPENSE?

A. On Exhibit HWS - 2, Schedule C-12 I have increased income tax expense $1,367,890 associated with the $5,397,081 increase in operating income. Additionally I am recommending a reduction of $395,109 to reflect the impact of Rule 25-14.004, F.A.C., Effect of Parent Debt on Federal Corporate Income Tax.

Q. PLEASE EXPLAIN WHY THE ADJUSTMENT IS APPROPRIATE.

A. The recommended changes to revenue and expenses increased operating income before taxes. The recommendations increased income and with that increase, income taxes will increase. This portion of the adjustment is standard adjustment in a rate filing. Additionally, Rule 25-14.004 requires the Company to reflect the income tax expense deduction associated with the parent's debt that is presumed to be invested in the equity of the subsidiary where the parent-subsidiary relationship exists, and the parties join in the

filing of a consolidated return. I will note that this adjustment is estimated because sufficient information on FPL was not readily available, and the Company failed to reflect the calculation on MFR Schedule C-26.

Q. DO YOU AGREE THAT FCG AND FPL HAVE REBUTTED THE PRESUMPTION THAT THE DEBT OF THE PARENT (FPL) IS INVESTED IN THE EQUITY OF FCG?

A. No. Buried in a note in the MFRs, FCG suggests that it has rebutted the presumption by making an unsupported claim in MFR C-26 that "Florida City Gas' dividends to parent have exceeded equity contributions from parent." However, this does not meet the test of the rule which states in subsection (3) that :

> It shall be a rebuttable presumption that a parent's ***investment*** in any subsidiary or in its own operations shall be considered to have been made in the same ratios as exist in the parent's overall capital structure.

(Emphasis added.)

The company's bare claim fails this test. The original investment in Florida City Gas upon closing the transaction after the purchase by NextEra does not represent an "equity contribution." Post-merger transactions between the parent and subsidiary for the period between closing and the test year, do not eliminate the fact that the initial investment of FPL in FCG contains a portion of the debt that is embedded in FPL's capital structure.

INTEREST SYNCHRONIZATION

Q. PLEASE EXPLAIN THE INTEREST SYNCHRONIZATION ADJUSTMENT.

A. Because rate base changes occur the amount of estimated interest for tax purposes changes. That change along with changes in the interest rate for financing rate base impacts income

taxes. As shown on Exhibit HWS - 2, Schedule C-13 my recommended reduction rate base results were offset by OPC witness David Garrett's changes to the capital structure increasing the interest deduction. The result is a reduction to income tax expense of $462,316.

OTHER CONCERNS

Q. ARE THERE 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 exist along this line after considering the filing, discovery, and other information I have reviewed.

Q. PLEASE ELABORATE.

A. In reviewing the filing and the annual reports filed by the company, it became apparent that the company has exhibited very little integration into the FPL/NextEra centralized services organization. I am aware that payroll is provided out of the FPL organization, but there does not appear to be much in the way of allocated or direct charged services identified in the filing or shown in the affiliated transactions reported on the annual report filed with the Commission since the company was acquired by FPL in 2018.

In OPC POD No. 2-37, the Company was asked to provide any documents for 2022-2026 planning that identify any Planning for Merger Cost/Savings associated with the Company as it relates to FPL. Their response was that there were no plans to merge FCG and FPL. I am aware that since it was acquired by Tampa Electric Company over a decade ago,

Peoples Gas has been merged into and organized as a division of the electric utility. So, it is a reasonable question to ask. It is curious to me why FCG can answer this question without hesitation. Perhaps the reason the company is so sure is because it has recently been publicly reported to the Commission Staff and the OPC that Tampa Electric intends to spin off PGS (which is by far the largest gas utility in the state with large operations adjacent to the Company in southeast Florida) from a division of Tampa Electric into a separate subsidiary to facilitate growth – including acquisitions.

The company was also asked in OPC Interrogatory Nos. 3-138 and 3-139 about merger discussions. The company flatly refused to answer the questions, deeming them irrelevant. This is a further curiosity to me since they deemed the question about merging with FPL to be relevant. Were there to be no such discussions ongoing, a simple "no" would have been sufficient and the OPC and Commission could rely on it. I understand the OPC intends to pursue a motion to compel a substantive response to this discovery. In the likely event that this discovery dispute is not resolved before the deadline for filing testimony, I reserve 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 their employee compliment from a year end amount of 130 in 2018 to 173 as of June 30, 2022, with a projection of 187 included in the filing. This would be a 44% increase in headcount (187-130/130) in four years. Putting aside the issue of vacancies that I have raised elsewhere; this type of cost is especially susceptible to modification in merger synergies. I have a serious concern about whether the payroll related costs associated with this massive increase in employment is

realistic or 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 CONCLUDE YOUR DIRECT TESTIMONY?

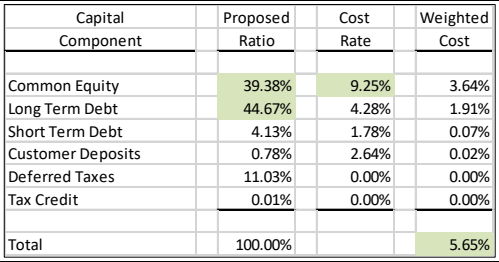
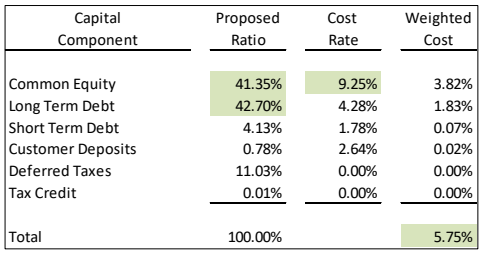
A. Yes, it does. However, I would like to state, that just because I did not offer a comment or adjustment on any aspect of the Company's case not mentioned above, it cannot be assumed that I am in agreement with such portions of the filing.

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

ERRATA SHEET

WITNESS: David J. Garrett

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

Page	Line	Original	Revision
3	16		
3	18	rate of return of 5.65%	rate of return of 5.75%
80	1	long-term 51.3%	long term 53.1%
80	3	return of 5.65%	return of 5.75%
83	7-8	lives are not underestimated for these reasons concept.”	lives are not underestimated.”
83	13	Piedmont’s depreciation	FCG’s depreciation
83	16	calculate Piedmont’s adjusted	calculate FCG’s adjusted
86	3	ANALYZED PIEDMONT’S	ANALYZED FCG’S
89	19	WITNESS WATSON’S	WITNESS ALLIS’
89	20	many of Piedmont’s accounts	many of FCG’s accounts
90	1	Piedmont is the applicant	FCG is the applicant
90	4	extent Piedmont employees	extent FCG employees
90	7	of Piedmont’s proposed	of FCG’s proposed

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Florida City Gas.	DOCKET NO. 20220069-GU
_____	FILED: August 26, 2022

DIRECT TESTIMONY

OF

DAVID J. GARRETT

ON BEHALF OF THE FLORIDA OFFICE OF PUBLIC COUNSEL

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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 City Gas ("FCG" or the "Company"). I address the cost of capital and fair rate of return for FCG in response to the direct testimony of Company witness Jennifer Nelson. I also address the appropriate proposed capital structure for FCG. I also address the Company's proposed depreciation rates in response to the direct testimony of Company witness Ned Allis, 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 10.75% as excessive and unsupported. An objective cost of equity analysis shows that FCG's cost of equity is about 8.0%, 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 FCG an authorized ROE of 9.25%. Although 9.25% is still clearly above FCG's market-based cost of equity estimate of 8.0%, it represents a gradual yet meaningful move towards market-based cost of equity.

- I recommend the Commission reject FCG's proposed capital structure consisting of 40.4% long-term debt and 59.6% common equity from investor-supplied sources. This equates to a debt-equity ratio of only 0.68. The Company's proposed capital structure is entirely inconsistent with the capital structures of the proxy group used to estimate FCG's cost of equity. The average debt ratio of the proxy group is 53.1%, which equates to a debt-equity ratio of 1.13. The Company's proposed capital structure has the effect of increasing capital costs far 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 are summarized 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	39.38%	9.25%	3.64%
Long Term Debt	44.67%	4.28%	1.91%
Short Term Debt	4.13%	1.78%	0.07%
Customer Deposits	0.78%	2.64%	0.02%
Deferred Taxes	11.03%	0.00%	0.00%
Tax Credit	0.01%	0.00%	0.00%
Total	100.00%		5.65%

Adopting my proposed adjustments would result in an overall weighted average authorized rate of return of 5.65%. 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 Helmuth W. Schultz.

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. FCG's estimated cost of equity is about 8.0%, 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 FCG 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 8.0%) 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.

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. I employed a well-established depreciation system and used actuarial techniques to analyze the Company's depreciable assets statistically and develop reasonable depreciation rates in this case. I applied my estimates of average service life and salvage to the same balances utilized in the depreciation study. My proposed adjustments would reduce the Company's proposed annual depreciation accrual by $1.6 million.[8]

Q. PLEASE SUMMARIZE THE PRIMARY FACTORS DRIVING YOUR PROPOSED ADJUSTMENTS.

A: I propose adjustments to the depreciation rates of several of the Company's mass property accounts. These adjustments include longer average service life estimates than those Mr.

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

[8] Exhibit DJG-18. The accrual amounts presented in Exhibit DJG-18 and my other exhibits and figures are based on plant balances utilized in the depreciation study; they do not necessarily represent depreciation expense.

Allis proposed. The following table compares my proposed service lives, depreciation rates, and accrual amounts with those Mr. Allis proposed for the accounts at issue.

Figure 2:
Depreciation Parameter Comparison

Account No.	Description	Company Position Iowa Curve Type	Company Position Iowa Curve AL	Company Position Depr Rate	Company Position Annual Accrual	Public Counsel Position Iowa Curve Type	Public Counsel Position Iowa Curve AL	Public Counsel Position Depr Rate	Public Counsel Position Annual Accrual
376.10	MAINS - STEEL	R4	65	2.66%	3,973,578	R3	70	2.40%	3,533,252
376.20	MAINS - PLASTIC	R4	65	2.42%	4,662,977	R3	70	2.20%	4,241,835
378.00	M&R STATION EQUIPMENT - GENERAL	S3	35	2.94%	79,760	S3	45	2.20%	60,315
379.00	M&R STATION EQUIPMENT - CITY GATE	S3	35	3.03%	594,062	S3	45	2.20%	430,929
380.10	SERVICES - STEEL	R2.5	50	4.92%	766,100	R2.5	55	4.10%	641,366
380.20	SERVICES - PLASTIC	R2.5	50	3.32%	3,449,035	R2.5	55	3.00%	3,074,090
383.00	HOUSE REGULATORS	R2.5	40	2.60%	196,454	R2	47	2.10%	158,853

For each of these accounts, I propose a longer average service life than does Mr. Allis, which results in adjustments reducing the Company's proposed depreciation rates. My testimony will discuss these adjustments in more detail later.[9]

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

A: Average service lives that are too short result in depreciation rates that overestimate the Company's actual depreciation expense. 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 lives of the utility's assets. Overestimating depreciation rates (i.e., underestimating service lives), encourages economic inefficiency. Unlike competitive firms, natural market forces do not always incentivize regulated utility

[9] *See* Exhibit DJG-4.

companies 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 replace the asset unnecessarily in order to increase rate base, which results in economic waste. Thus, from a public policy perspective, it is preferable for regulators to ensure that utilities do not depreciate assets before the end of their economic, useful lives.

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.[10] The Court found that "the amount of risk in the business is a most important factor" in determining the appropriate allowed rate of return.[11] 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.[12]

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

[11] *Id.* at 48.

[12] *Bluefield* at 692–93.

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

> 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.[13]

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.[14] 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:

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

[14] 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.[15]

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 FCG, it will result in an inappropriate transfer of wealth from ratepayers to shareholders.[16]

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

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[15] 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).

[16] 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?

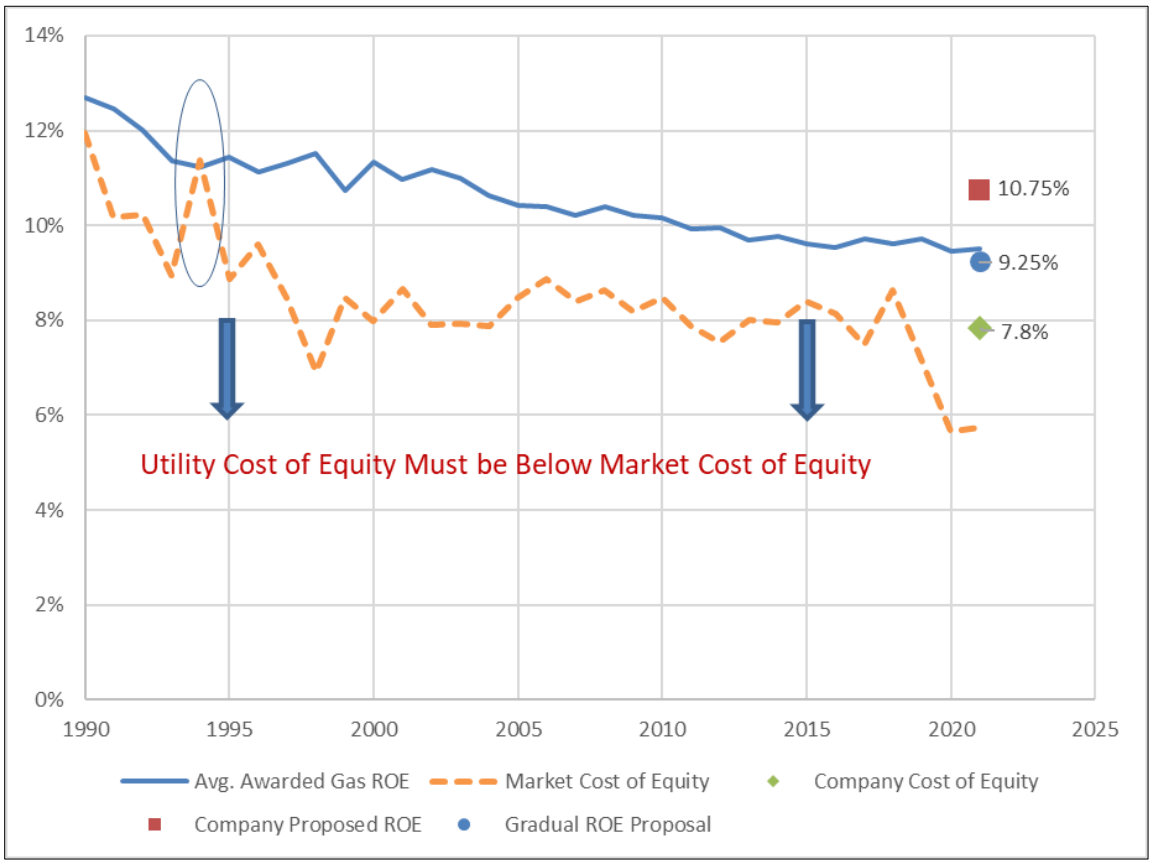
A. Yes. As shown in the figure below, awarded returns for electric and gas utilities have been above the average required market return since 1990.[17] Because utility stocks are consistently far less risky than the average stock in the marketplace, the cost of equity for utility companies is less than the market cost of equity.

To illustrate this fact, the graph in the figure below shows two trend lines. The top line is the average annual awarded returns since 1990 for U.S. regulated 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.[18] 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.

[17] Exhibit DJG-13.

[18] 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.[19] 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.[20]

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:

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

[20] *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.[21]

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,"[22] and reconciling this issue in an equitable manner.

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

[22] 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 FCG'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 Ms. Nelson. 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.[23] By using the same proxy group, we can remove a relatively insignificant variable from the equation and focus on the primary factors driving FCG's cost of equity estimate.

[23] 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."[24] 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

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

varying degrees. Examples of market risk include interest rate risk, inflation risk, and the risk of major socio-economic events. When there are changes in these risk factors, they affect all firms in the market to some extent.[25]

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.[26] 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

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

[26] *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).

firm. Rational investors, however, are risk-averse and seek to eliminate risk they can 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.[27]

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.[28] 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.

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

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

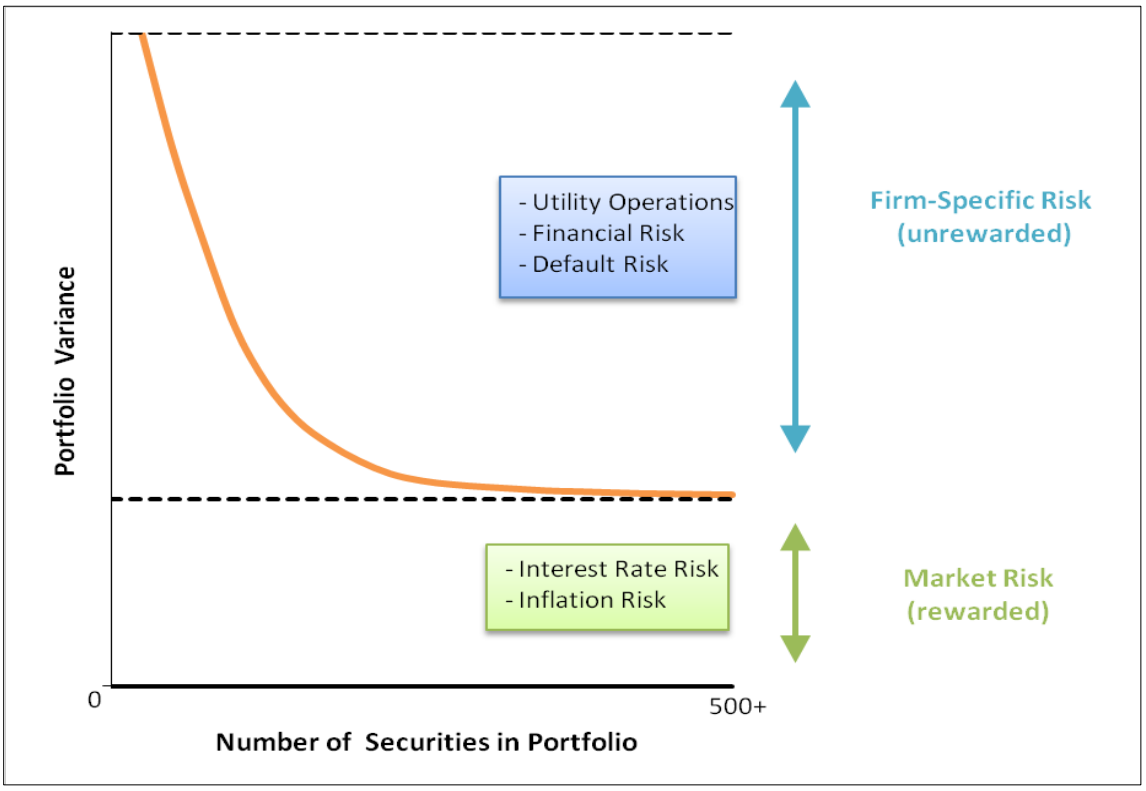
Thus, the risks associated with an individual firm's operations are not rewarded by the market. In fact, firm-specific risk is also called "unrewarded" risk for this reason. Market risk, on the other hand, cannot be eliminated through diversification. Because market risk cannot be eliminated through 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).[29]

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

[29] *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."[30] 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.[31]

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."[32] Thus, cyclical firms are

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[30] *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).

[31] 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.

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

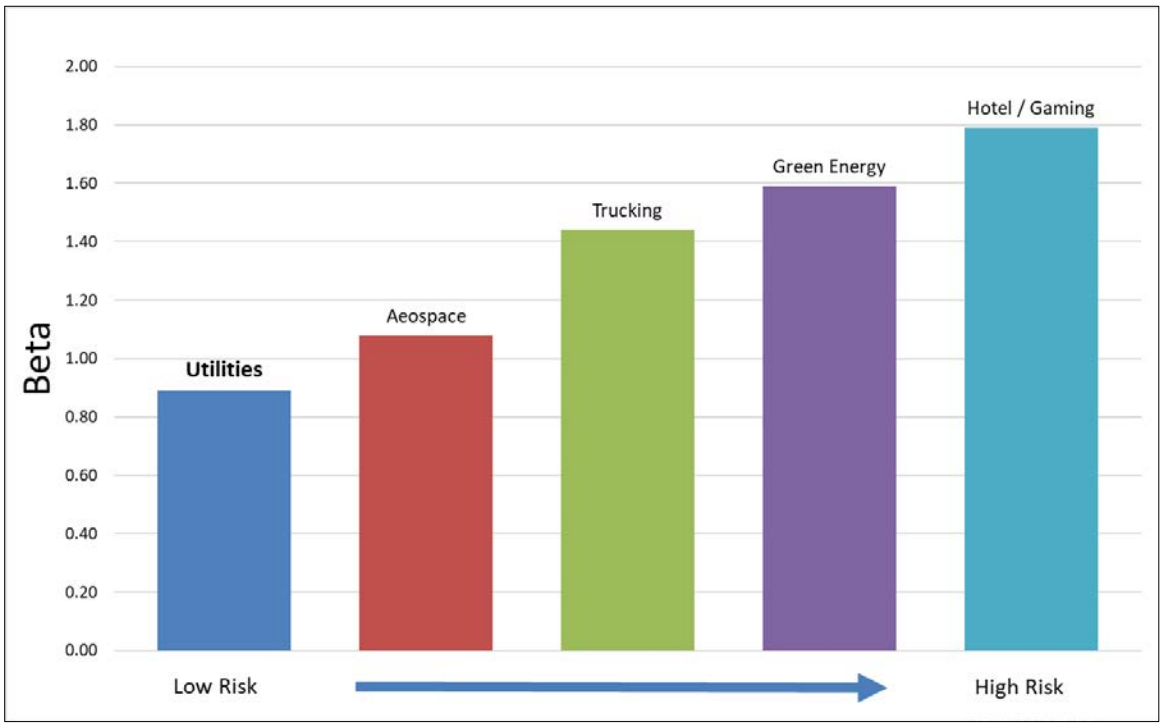
exposed to a greater level of market risk. Securities with betas less than one, on the other hand, are known as "defensive stocks." Companies in defensive industries, such as public utility companies, "will have low betas and performance that is comparatively unaffected by overall market conditions."[33] In fact, financial textbooks often use utility companies as prime examples of low-risk, defensive firms.[34] 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.[35]

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

[34] *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).

[35] *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.

Figure 5:
Beta by Industry



The fact that utilities are defensive firms that are exposed to 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 FCG'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 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.[36] 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.[37] 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

[36] Exhibit DJG-3.

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

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 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.[38]

[38] 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.

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.[39]

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 Ms. Nelson, there is not a statistically significant difference between them because utility stock 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 Ms. Nelson'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

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

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. Historical Growth

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.[40]

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.

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

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.[41]

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 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

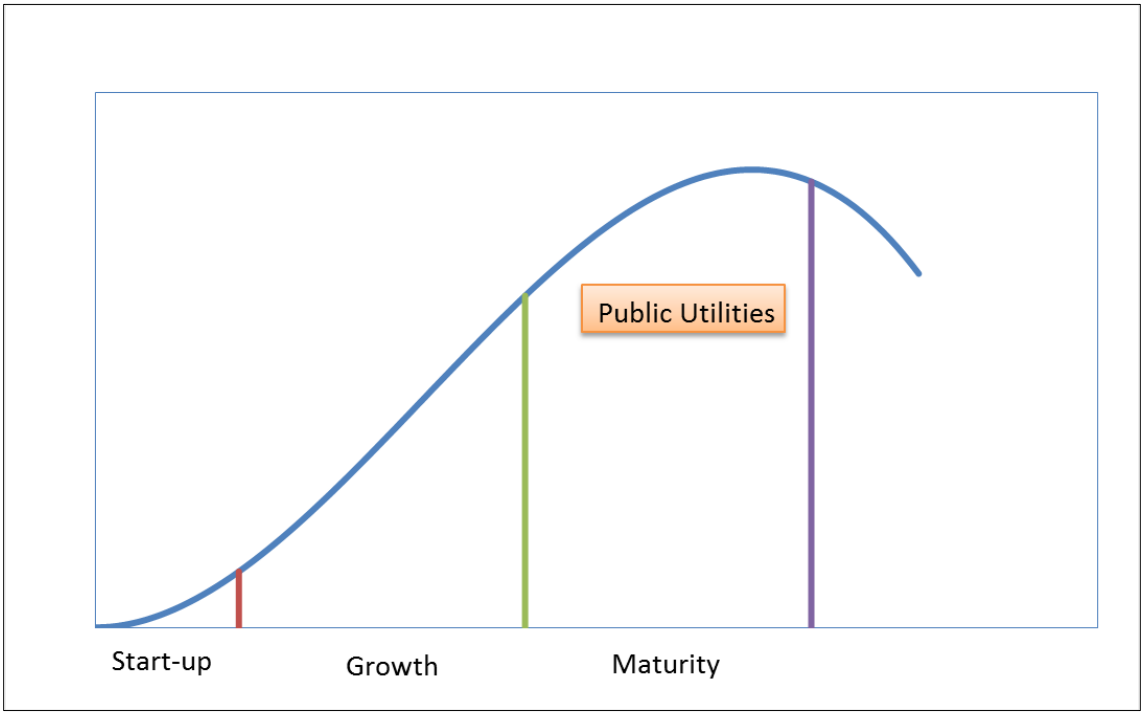
Q. DESCRIBE WHAT IS MEANT BY SUSTAINABLE GROWTH.

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

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

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.[42] 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."[43]

In fact, it is reasonable to assume that a regulated utility would grow at a rate that is <u>less</u> 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

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

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

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%.[44]

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.[45] 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 FCG.

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

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

3. Qualitative Growth: The Problem with Analysts' Growth Rates

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 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 FCG'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.

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

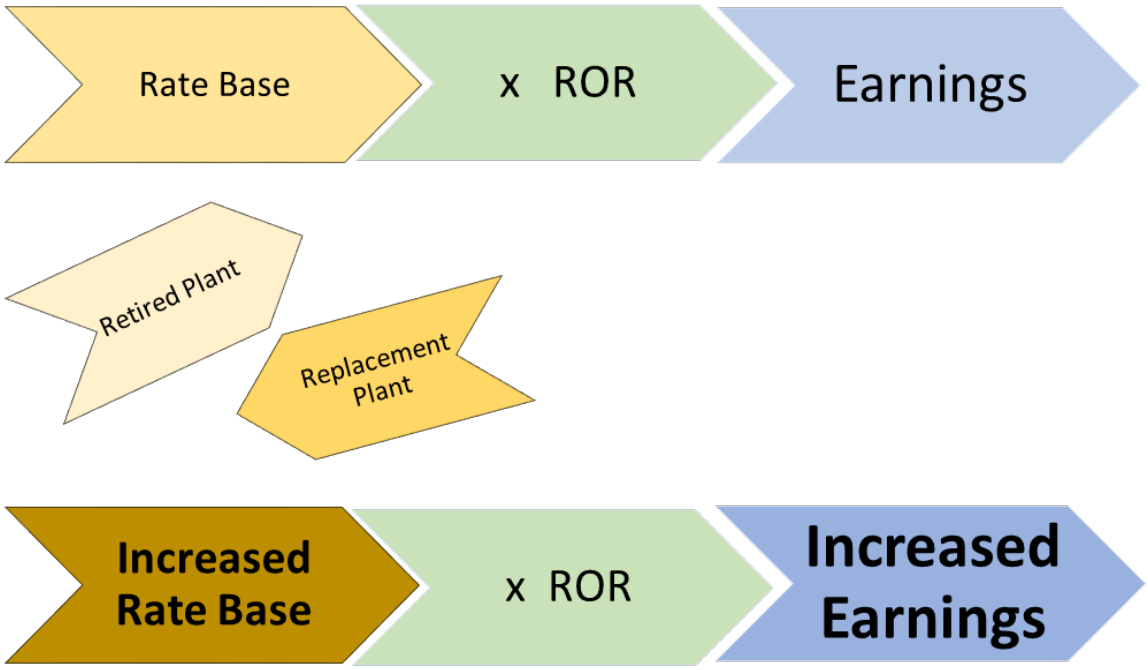
factors are: (1) rate base and (2) the awarded ROE. I will discuss each factor further below. It is important to keep in mind that the ultimate objective of this analysis is to provide a foundation upon which to base the fair rate of return for the utility. Thus, we should strive to ensure that each 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 base 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. 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



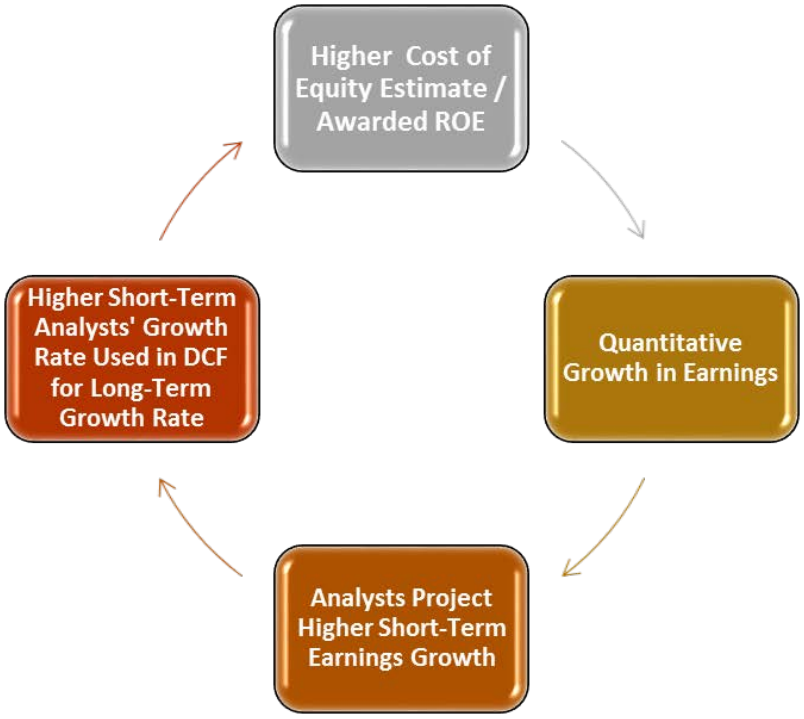
Of course, utilities might sometimes add "new plant" to meet a modest growth in ratepayer demand. However, as the foregoing discussion demonstrates, it would be more appropriate

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 FCG, 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.[46]

Figure 9:
Sustainable Growth Rate Determinants[47]

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 FCG'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 7.1% for FCG.[48]

[46] Exhibit DJG-5.

[47] Exhibit DJG-5.

[48] 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 8.0% for information purposes only as I do not recommend this result should be considered at all.[49]

C. Response to Ms. Nelson's DCF Model

Q. MS. NELSON'S DCF MODEL YIELDED A NOTABLY HIGHER RESULT. DID YOU FIND ANY PROBLEMS WITH HER ANALYSIS?

A. Yes. Ms. Nelson's DCF Model produced cost of equity result as high as 11.2%.[50] The results of Ms. Nelson's DCF Model are overstated primarily because of her use of non-sustainable and unreasonably high growth rates.

[49] Exhibit DJG-6.

[50] Exhibit JEN-2.

Q. DESCRIBE THE PROBLEMS WITH MS. NELSON'S ASSUMED SUSTAINABLE GROWTH INPUT.

A. Ms. Nelson assumes long-term growth rates as high as 10.5% in her DCF Model.[51] This is more than two times the projected annual long-term nominal U.S. GDP growth. This means Ms. Nelson'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, Ms. Nelson relies on short-term, quantitative growth estimates published by analysts to support her assumptions. A short-term period, such as the 3-5 year period often assumed in analysts' growth rate projections, 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, Ms. Nelson assumes a sustainable growth rate estimate of 10.5% for NiSource Inc. (among other estimates), as reported by Value Line Investment Survey.[52] 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 Ms. Nelson, not the commercial analyst, who is suggesting to the Commission that NiSource's earnings will increase by 10.5% (more than twice the level of projected U.S. GDP growth) each year, every year, in perpetuity. Again, Ms. Nelson is extrapolating the analyst's conclusions well beyond what the analyst actually projects. Furthermore, this

[51] *Id*.

[52] Exhibit JEN-2.

assumption is simply not realistic, and it contradicts fundamental concepts of sustainable growth. Many of Ms. Nelson's other short-term growth rate estimates also exceed projected U.S. GDP growth.

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.[53] The CAPM estimates this expected return. The various assumptions, theories, and equations involved in the CAPM are discussed further in 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,[54] and that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."[55] The CAPM is a useful model because it directly considers the amount of risk inherent in a business.

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:

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

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

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

Equation 2:
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%.[56]

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%.

[56] 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.[57]

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."[58] 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.

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

[58] 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.[59] 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.[60] 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.[61] From their extensive analysis, the authors make the

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[59] *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).

[60] *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).

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

following conclusion regarding the prospective ERP: "[t]he result is a forward-looking, 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."[62] 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%.[63]

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."[64]

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.

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

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

[64] *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).

2. Expert Surveys

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 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%.[65]

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.[66] 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

[65] 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.

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

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 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.[67]

Equation 3:
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_{1-5}	=	*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

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

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.

Equation 4:
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 9.0%. I subtracted the risk-free rate to arrive at the implied equity risk premium of 5.8%.[68] 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 5.6%.[69]

[68] Exhibit DJG-9.

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

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).[70] The results are presented in the following figure:

Figure 10:
Equity Risk Premium Results

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

The average ERP from these sources is 5.6%.

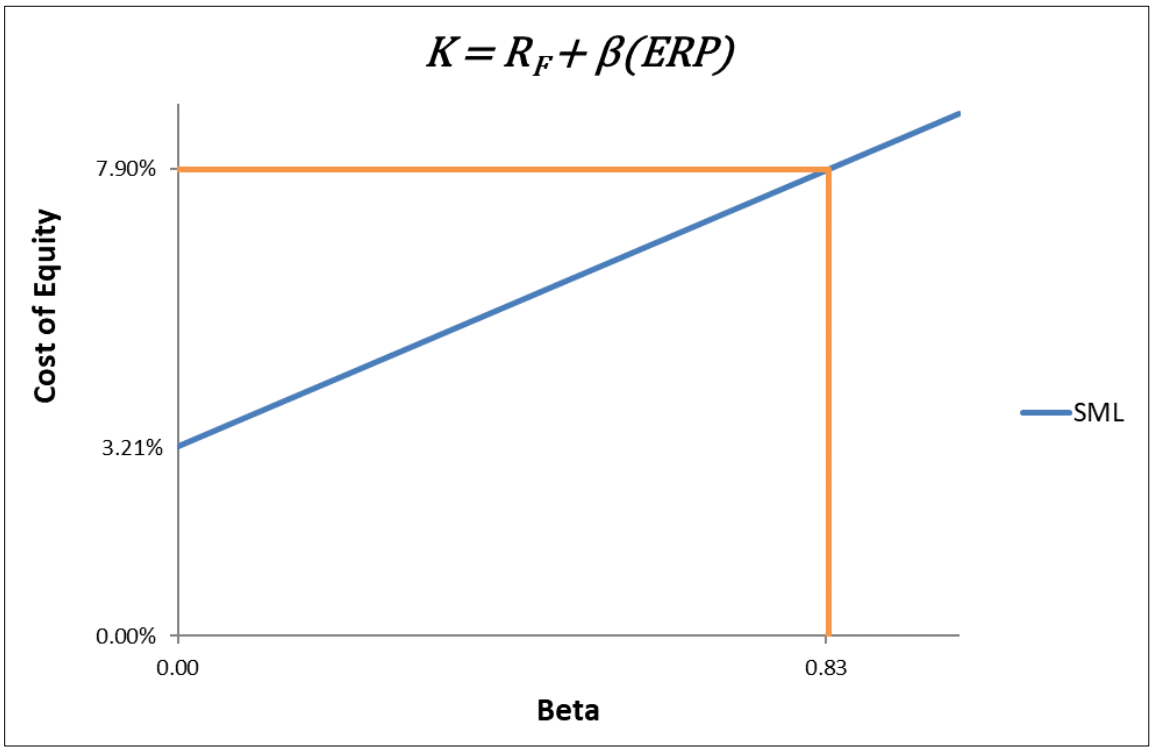
Q. PLEASE EXPLAIN THE FINAL RESULTS OF YOUR CAPM ANALYSIS.

A. Using the inputs for the risk-free rate, beta coefficient, and ERP discussed above, I estimate that FCG's CAPM cost of equity is 7.9%.[71] 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.

[70] Exhibit DJG-10.

[71] 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 FCG is 7.9%.

D. Response to Ms. Nelson's CAPM Analysis

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

A. Yes, I did. Ms. Nelson estimates a CAPM cost of equity as high as 12.9%.[72] The results of Ms. Nelson's CAPM are unreasonably high primarily due to her overestimation of the ERP. In addition, Ms. Nelson conducts an empirical CAPM analysis, which is based on a questionable premise and also suffers from the same unrealistic ERP input.

1. Equity Risk Premium

Q. DID MS. NELSON RELY ON A REASONABLE MEASURE FOR THE ERP?

A. No, she did not. Ms. Nelson used an input of as high as 12.27% for the ERP, which is not realistic.[73] 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%.

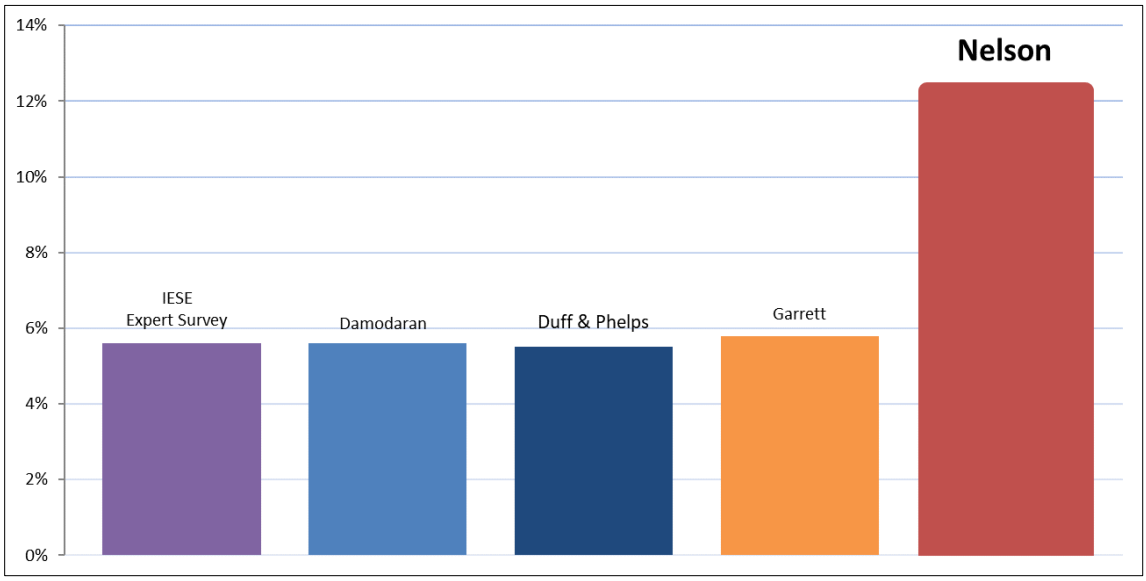
[72] Direct Testimony of Jennifer E. Nelson, p. 37, Figure 11.

[73] *Id*. at p. 36, Figure 10.

Q. PLEASE DISCUSS AND ILLUSTRATE HOW MS. NELSON'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 recently estimated an ERP of 5.5%. Dr. Damodaran, a leading expert on the ERP, recently estimated an average ERP of only 5.6%.[74] The chart in the following figure illustrates that Ms. Nelson's ERP estimate is far out of line with other reasonable, objective estimates for the ERP.[75]

Figure 12:
Equity Risk Premium Comparison



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

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

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

2. Empirical CAPM

Q. DESCRIBE MS. NELSON'S EMPIRICAL CAPM ANALYSIS.

A. Ms. Nelson offers another version of the CAPM that she calls the "empirical CAPM" ("ECAPM").[76] The premise of Ms. Nelson's ECAPM is that the real CAPM underestimates the return required from low-beta securities, such as those of the proxy group.[77]

Q. DO YOU AGREE WITH MS. NELSON'S ECAPM RESULTS?

A. No. The premise of Ms. Nelson's E-CAPM is that the real CAPM underestimates the return required from low-beta securities, such as those of the proxy group. There are several problems with this concept, however. First, the betas that both Ms. Nelson and I used in the real CAPM already account for the theory that low-beta stocks might tend to be underestimated. In other words, the raw betas for each of the utility stocks in the proxy groups have already been adjusted by Value Line to be higher. Second, there is empirical evidence suggesting that the type of beta-adjustment method used by Value Line actually overstates betas from consistently low-beta industries like utilities. According to this research, it is better to employ an adjustment method that adjusts raw betas toward an industry average, rather than the market average, which ultimately would result in betas that are lower than those published in Value Line.[78] Finally, Ms. Nelson's ECAPM still suffers from the same overestimated risk-free rate and ERP inputs discussed above. Thus,

[76] Direct Testimony of Jennifer E. Nelson, p. 37.

[77] *Id*.

[78] *See* Appendix B for further discussion on these theories.

regardless of the differing theories regarding the mean reversion tendencies of low-beta securities, Ms. Nelson's ECAPM should be disregarded for its ERP input alone.

3. <u>Risk Premium Analysis</u>

Q. DESCRIBE MS. NELSON'S OTHER RISK PREMIUM ANALYSIS.

A. I am addressing Ms. Nelson's other risk premium analyses in this section because the CAPM itself is a risk premium model. Many utility ROE witnesses, including Ms. Nelson in this case, conduct what they call a "historical risk premium analysis," "bond yield plus risk premium analysis" or "allowed return premium analysis." In short, this analysis simply compares the difference between awarded ROEs in the past with bond yields.

Q. DO YOU AGREE WITH THE RESULTS OF MS. NELSON'S RISK PREMIUM ANALYSIS?

A. No. Not only do I disagree with the results of Ms. Nelson's risk premium analysis, but I also disagree with the entire premise of the analysis. Ms. Nelson's risk premium model considers ROEs allowed by regulatory commissions for electric utilities dating back more than 40 years[79] – which contradicts Ms. Nelson's acknowledgement that cost of equity estimation is a "forward-looking" process.[80] This decision is especially problematic considering the fact that capital costs and awarded ROEs were much higher several decades ago than they are currently. As discussed earlier in this testimony, it is clear that awarded ROEs are consistently higher than market-based cost of equity, and they have been for many years. Thus, these types of risk premium "models" seem to be clever devices used

[79] Exhibit JEN-6.

[80] Direct Testimony of Jennifer E. Nelson, p. 10, line 18.

to perpetuate the discrepancy between awarded ROEs and market-based cost of equity. In other words, since awarded ROEs are consistently higher than market-based cost, a model that simply compares the discrepancy between awarded ROEs and any market-based factor (such as bond yields) will simply ensure that discrepancy continues.

Furthermore, the risk premium analysis offered by Ms. Nelson is completely unnecessary when we already have a real risk premium model to use: the CAPM. The CAPM itself is a "risk premium" model; it takes the bare minimum return any investor would require for buying a stock (the risk-free rate), then adds a *premium* to compensate the investor for the extra risk he or she assumes by buying a stock rather than a riskless U.S. Treasury security. The CAPM has been utilized by companies around the world for decades for the same purpose we are using it in this case – to estimate cost of equity.

In stark contrast to the Nobel-prize-winning CAPM, the risk premium models relied upon by utility witnesses are not market-based, and therefore have no value in helping us estimate the market-based cost of equity. Unlike the CAPM, which is found in almost every comprehensive financial textbook, the risk premium models used by utility witnesses are almost exclusively found in the texts and testimonies of such witnesses. Specifically, these risk premium models attempt to create an inappropriate link between market-based factors, such as interest rates, with awarded returns on equity. Inevitably, this type of model is used to justify a cost of equity that is much higher than one that would be dictated by market forces.

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 her testimony, Ms. Nelson suggests that the Company's size should have an increasing effect on the awarded ROE. Ms. Nelson also suggests that flotation costs should have an increasing effect on FCG's awarded ROE.

A. Size Premium

Q. DESCRIBE MS. NELSON'S SIZE PREMIUM ADJUSTMENT TO HER CAPM.

A. Ms. Nelson suggests that the Company's size should have an increasing effect on the awarded ROE, although she does not propose a specific premium for the small size effect.[81]

Q. DO YOU AGREE WITH MS. NELSON'S POSITION REGARDING THE SMALL SIZE EFFECT?

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."[82] According to Ibbotson, Banz's size effect study was "[o]ne of the most remarkable discoveries of modern finance."[83] 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

[81] Direct Testimony of Jennifer E. Nelson, p. 48, lines 18-23.

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

[83] 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook 99 (Morningstar 2015).

effect and spurred the launch of significant new small cap investment funds. However, this "honeymoon period lasted for approximately two years. . . ." [84] 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.[85]

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 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:

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

[85] *Id*. at 133.

> 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.[86]

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.[87]

For all of these reasons, the Commission should reject the notion that the Company's size should automatically have an increasing effect on its cost of equity as estimated through the CAPM and DCF Model.

B. Flotation Costs

Q. PLEASE SUMMARIZE MS. NELSON'S POSITION REGARDING FLOTATION COSTS.

A. Ms. Nelson suggests that flotation costs should have an increasing effect on the Company's awarded ROE; however, as with the small size effect discussed above, Ms. Nelson does not propose a specific premium for flotation costs.[88]

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[86] 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook 112 (Morningstar 2015).

[87] 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).

[88] Direct Testimony of Jenifer E. Nelson, p. 58, lines 10-13.

Q. DO YOU AGREE WITH MS. NELSON'S POSITION REGARDING FLOTATION COSTS?

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. Ms. Nelson'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.[89] Furthermore, FCG 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-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

[89] *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).

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.[90] 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 FCG' 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.

3. <u>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.</u>

For the reasons discussed above, flotation costs should be disallowed from a technical standpoint; they should also be disallowed from a practical standpoint. FCG is asking this Commission to award it a cost of equity that is nearly 300 basis points above its market-

[90] *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.

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.[91]

Figure 13:
Cost of Equity Summary

Cost of Equity Model	Result
DCF (Sustainable Growth)	7.1%
DCF (Analyst Growth)	8.0%
Capital Asset Pricing Model	7.9%
Hamada (at proposed debt ratio)	9.0%
Average	**8.0%**
Highest	**9.0%**

The average cost of equity resulting from these various models is 8.0%.

[91] Exhibit DJG-12.

XI. CAPITAL STRUCTURE

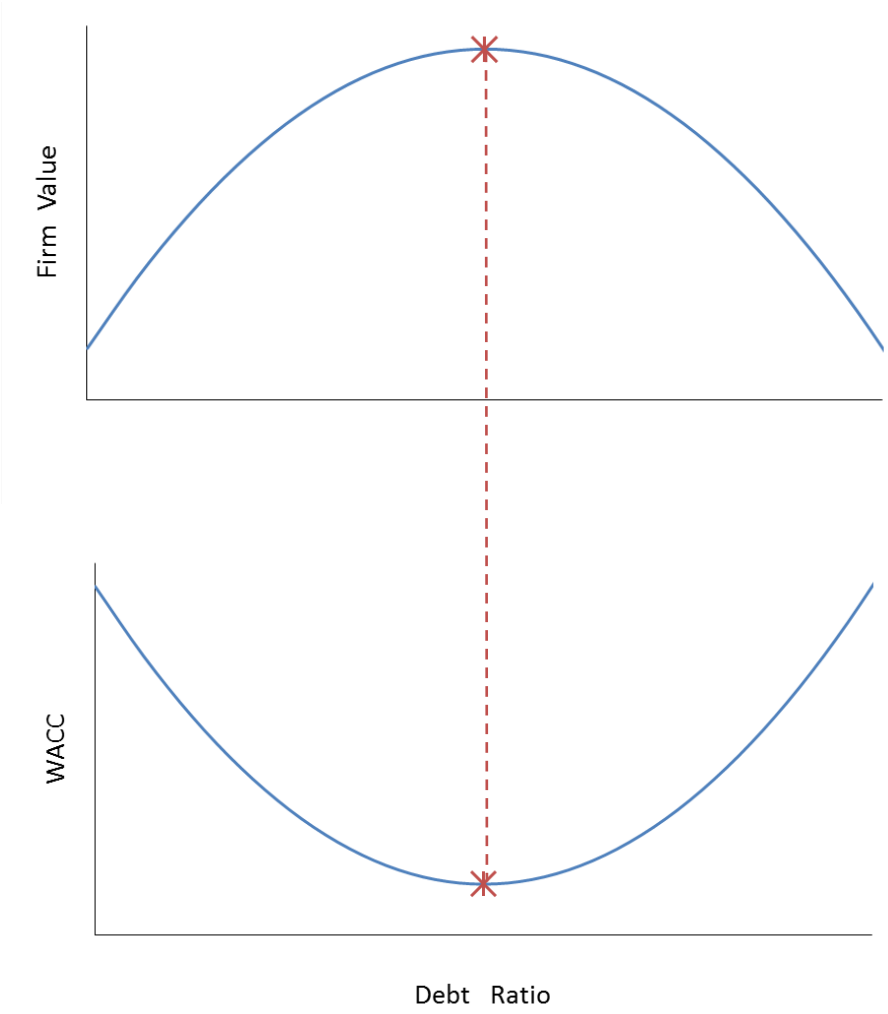
Q. DESCRIBE IN GENERAL THE CONCEPT OF A COMPANY'S CAPITAL STRUCTURE.

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.

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 14:
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.[92]

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 5:
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 increasing 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.

[92] *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.[93]

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 FCG.

[93] 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 FCG 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 FCG'S PROPOSED CAPITAL STRUCTURE IN THIS CASE.

A. FCG proposed capital structure consists of 40.4% long-term debt and 59.6% common equity from investor-supplied sources, which equates to a debt-equity ratio of only 0.68. 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 FCG's proposed capital structure.

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

A. Again, Ms. Nelson 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 53.1, which equates

to a debt-equity ratio of 1.13. This is a significantly higher debt-equity ratio than the one proposed by the Company.[94]

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.[95] The following figure shows a sample of these industries, with debt ratios of at least 56%.

[94] Exhibit DJG-14.

[95] Exhibit DJG-15.

Figure 15:
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 FCG's proposed debt ratio.

Q. HAVE YOU CONSIDERED THE IMPACT THAT YOUR CAPITAL STRUCTURE RECOMMENDATION COULD HAVE ON THE COMPANY'S INDICATED COST OF EQUITY?

A. Yes. I assessed the impact of my capital structure proposal on the Company's cost of equity estimate by using the Hamada formula.

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 removed, which is accomplished through the Hamada formula. The Hamada formula for unlevering beta is stated as follows:[96]

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

Equation 6:
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. PLEASE SUMMARIZE THE RESULTS OF THE HAMADA FORMULA BASED ON YOUR PROPOSED CAPITAL STRUCTURE FOR THE COMPANY.

A. Based on investor-supplied sources of financing, the Company's proposed debt ratio is 40.4%, and my proposed debt ratio is 53.1%. The increased amount of leverage proposed in my ratemaking capital structure has an increasing effect on the Company's indicated cost of equity. The results of my Hamada model are presented in the following figure.

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

Unlevering Beta		
Proposed Debt Ratio	40.4%	[1]
Proposed Equity Ratio	59.6%	[2]
Debt / Equity Ratio	68%	[3]
Tax Rate	21%	[4]
Equity Risk Premium	5.6%	[5]
Risk-free Rate	3.2%	[6]
Proxy Group Beta	0.83	[7]
Unlevered Beta	0.54	[8]

[9]	[10]	[11]	[12]
Relevered Betas and Cost of Equity Estimates			
Debt Ratio	D/E Ratio	Levered Beta	Cost of Equity
0.0%	0%	0.543	6.26%
20.0%	25%	0.650	6.87%
30.0%	43%	0.726	7.30%
40.4%	68%	0.833	7.90%
53.1%	113%	1.028	8.99%
55.0%	122%	1.067	9.21%
60.0%	150%	1.186	9.88%

According to the results of the Hamada model, if the Commission were to adopt my capital structure recommendation, the Company's indicated cost of equity (under the CAPM) would increase from 7.9% to 9.0%. However, a cost of equity of 9.0% is still less than my awarded return recommendation of 9.25%.

Q. DO YOU AGREE WITH THE COMPANY POSITION THAT A 59.6% EQUITY RATIO SHOULD BE USED FOR FCG BECAUSE THAT IS THE EQUITY RATIO OF FPL AND THUS THE SOURCE OF ITS FINANCING?

A. No. There is no merit to this assertion. I am not aware that the Florida Commission utilizes such a predicate for establishing the equity ratio of a gas subsidiary of an electric company or a subsidiary in general. Regulators generally establish capital structures for utilities based on the operational and market risk factors that apply to the individual utility.

I would also note that in the FPL 2021 rate case, FPL witness and Vice-President of Finance, Robert Barrett, urged the Commission to allow it to retain the 59.6% equity ratio:

> I recommend the Commission approve the continuation of FPL's regulatory capital structure that includes a 59.6 percent equity ratio based on investor sources (48.04 percent based on all sources in the 2022 Test Year). FPL has maintained its equity ratio generally around the 59-60 percent level for more than two decades, and this has been an important underpinning of the overall financial strength that has served customers well.
>
> ***
>
> As mentioned previously, investors expect FPL's capital structure to be relatively stable over time and to reflect the unique risk profile and underlying financial policies of the company. FPL has maintained the current equity ratio for more than twenty years, and it is foundational to FPL's current credit rating, financial strength and flexibility to raise capital when needed and to provide customers with long-term benefits.[97]

No such history of using 59.6% applies to FCG. The current equity ratio is 48%.[98] It has only maintained this equity ratio since 2018, when it was a subsidiary of the Southern

[97] Prefiled Direct Testimony of Robert E. Barrett, Florida Power & Light Vice president of Finance, at pp 45-46. March 12, 2021, Docket No. 20210015-EI.

[98] Direct Testimony of Mark Campbell, p. 30, line 11.

Company. Before that negotiated capital structure, the equity ratio for the company was established in 2004 at 43.35%[99]. In 2001 the FCG equity ratio was established at 43.38%.[100] This means that for the past twenty years, FCG has maintained an equity ratio of less than 44%. I would also note that Gulf Power Co., which was also a Southern Company subsidiary had an equity ratio of 52.5% established in 2017.[101] As subsidiaries of the same ultimate parent, these electric (Gulf) and gas (FCG) affiliates maintained different equity ratios, in part because they faced unique risk profiles.

I would also note that Peoples Gas Company, until recently a division of Tampa Electric Company, has never had its equity ratio established with respect to the equity ratio or financial attributes of Tampa Electric Co. Based on a review of orders since 2009, it appears that the equity ratios of the two companies are similar but not identical and were never established with reference to the capitalization of either company.

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

A. The analysis strongly indicates that FCG's proposed long-term debt ratio of 40.4% 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

[99] Order No. 2004-0128, Issued February 9, 2004 in Docket No. 20030569-GU, at 23.

[100] Order No. 2001-0316, Issued February 5, 2001 in Docket No. 20000768-GU, at 15-16.

[101] Order No. PSC-2017-0178-S-EI at 13. (Issued May 16, 2017 in Docket No. 20160170)

of long-term 51.3% debt, which is in between the Company's proposed debt ratio that adopts a debt-equity ratio of 1.13. Along with my proposed return on equity of 9.25%, this equates to an overall awarded rate of return of 5.65%.[102]

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."[103] 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.[104] 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.[105]

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[102] Exhibit DJG-17.

[103] *Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 167 (1934).

[104] *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).

[105] *Id*. at 169.

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.

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.[106] 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.[107] The definition of "depreciation accounting" published by the American Institute of Certified Public Accountants ("AICPA") properly reflects the cost allocation concept:

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

[107] 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.[108]

Thus, the concept of depreciation as "the allocation of cost has proven to be the most useful and most widely used concept."[109]

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

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

[109] 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 concept."[110]

XIII. ANALYTIC METHODS

Q. DISCUSS YOUR APPROACH TO ANALYZING THE COMPANY'S DEPRECIABLE ASSETS IN THIS CASE.

A. I obtained and reviewed the same historical property data that was used to conduct Piedmont's depreciation study, including plant retirement and net salvage data. I analyzed the data and calculated my proposed rates under a depreciation system designed to conform to the legal and technical standards discussed above. I then applied my proposed service life and net salvage parameters in order to calculate Piedmont's adjusted depreciation rates. My adjustments to service life and net salvage are discussed further in the sections below.

[110] Wolf *supra* n. 6, at 73.

Q. DISCUSS THE DEFINITION AND GENERAL PURPOSE OF A DEPRECIATION SYSTEM, AS WELL AS THE SPECIFIC DEPRECIATION SYSTEM YOU EMPLOYED FOR THIS PROJECT.

A. The legal standards set forth above do not mandate a specific procedure for conducting depreciation analysis. These standards, however, direct that analysts use a system for estimating depreciation rates that will result in the "systematic and rational" allocation of capital recovery for the utility. Over the years, analysts have developed "depreciation systems" designed to analyze grouped property in accordance with this standard. A depreciation system may be defined by several primary parameters: 1) a method of allocation; 2) a procedure for applying the method of allocation; 3) a technique of applying the depreciation rate; and 4) a model for analyzing the characteristics of vintage property groups.[111] In this case, I used the straight-line method, the average life procedure, the remaining life technique, and the broad group model; this system would be denoted as an "SL-AL-RL-BG" system. This depreciation system conforms to the legal standards set forth above and is commonly used by depreciation analysts in regulatory proceedings. I provide a more detailed discussion of depreciation system parameters, theories, and equations in Appendix C.

[111] *See* Wolf *supra* n. 6, at 70, 140.

XIV. SERVICE LIFE ANALYSIS

Q. DESCRIBE THE METHODOLOGY USED TO ESTIMATE THE SERVICE LIVES OF GROUPED DEPRECIABLE ASSETS.

A. The process used to study the industrial property retirement is rooted in the actuarial process used to study human mortality. Just as actuarial analysts study historical human mortality data to predict how long a group of people will live, depreciation analysts study historical plant data 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.[112] 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 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.[113] 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."[114] A more detailed explanation of

[112] 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).

[113] *See* Appendix E for a more detailed discussion of the actuarial analysis used to determine the average lives of grouped industrial property.

[114] *See* Appendix D for a more detailed discussion of the Iowa curves.

how the Iowa curves are used in the actuarial analysis of depreciable property is set forth in Appendix D.

Q. DESCRIBE HOW YOU STATISTICALLY ANALYZED PIEDMONT'S HISTORICAL RETIREMENT DATA IN ORDER TO DETERMINE THE MOST REASONABLE IOWA CURVE TO APPLY TO EACH ACCOUNT.

A. I used the aged property data provided by the Company to create an OLT for each account. The data points on the OLT can be plotted to form a curve (the "OLT 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 required. 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 to get an objective, mathematical assessment of how well the

curve fits. As part of my analysis, I may repeat this process several times for any given account to ensure that the most reasonable Iowa curve is selected.

Q. IN THIS PARTICULAR CASE, WERE ANY OF THE MATHEMATICAL RESULTS AFFECTED BY THE OLT "TAIL" TRUNCATION YOU DESCRIBED?

A. No. For each of the accounts to which I propose service life adjustments in this case, the Iowa curves I propose result in a better mathematical fit to the OLT curve regardless of whether the entire OLT curve or the truncated OLT curve is analyzed.

Q. DO YOU ALWAYS SELECT THE MATHEMATICAL BEST-FITTING CURVE?

A. Not necessarily. Mathematical fitting is an important part of the curve-fitting process because it promotes objective, unbiased results. While mathematical curve-fitting is important, however, it may not always yield the optimum result. For example, if there is insufficient historical data in a particular account and the OLT curve derived from that data is relatively short and flat, the mathematically "best" curve may be one with a very long average life. However, when there is sufficient data available, mathematical curve fitting can be used as part of an objective service life analysis.

Q. SHOULD EVERY PORTION OF THE OLT CURVE BE GIVEN EQUAL WEIGHT?

A. Not necessarily. Many analysts have observed that the points comprising the "tail end" of the OLT curve may often have less analytical value than other portions of the curve. In fact, "[p]oints at the end of the curve are often based on fewer exposures and may be given less weight than points based on larger samples. The weight placed on those points will

depend on the size of the exposures."[115] In accordance with this standard, an analyst may decide to truncate the tail end of the OLT curve at a certain percent of initial exposures, such as one percent. Using this approach puts greater emphasis on the most valuable portions of the curve. For my analysis in this case, I not only considered the entirety of the OLT curve, but also conducted further analyses that involved fitting Iowa curves to the most significant part of the OLT curve for certain accounts. In other words, to verify the accuracy of my curve selection, I narrowed the focus of my additional calculation to consider approximately the top 99% of the "exposures" (i.e., dollars exposed to retirement) and to eliminate the tail end of the curve representing the bottom 1% of exposures for some accounts, if necessary. I will illustrate an example of this approach in the discussion below.

Q. GENERALLY, DESCRIBE THE DIFFERENCES BETWEEN THE COMPANY'S SERVICE LIFE PROPOSALS AND YOUR SERVICE LIFE PROPOSALS.

A. For each of the accounts to which I propose adjustments, the Company's proposed average service life, as estimated through an Iowa curve, is too short to provide the most reasonable mortality characteristics of the account. Generally, for the accounts in which I propose a longer service life, that proposal is based on the objective approach of choosing an Iowa curve that provides a better mathematical fit to the observed historical retirement pattern derived from the Company's plant data.

[115] Wolf *supra* n. 6, at 46.

Q. DO YOU ALSO USE PROFESSIONAL JUDGMENT IN SELECTING THE BEST IOWA CURVE AS PART OF YOUR SERVICE LIFE ANALYSIS?

A. Yes. The amount of judgment I use relative to the empirical data depends primarily on the sufficiency and quality of the statistical data provided by the Company. That is, to the extent the historical data provided by the Company is sufficient to develop adequate OLT curves upon which conventional Iowa curve fitting techniques may be employed, it is preferable to focus primarily on the empirical analysis and evidence inherent in the curve fitting process rather than on subjective elements such as judgment. Another factor that should be taken into account when determining how much judgment should be used in the process of curve fitting are the legal and ratemaking standards discussed above. It is important to keep in mind that the Company bears the burden to make a convincing showing that its proposed rates are not excessive. Thus, if the Company fails to provide adequate historical data for a particular account such that it is not ideal for empirical Iowa curve fitting, it does not mean that the Company's position should be accepted merely based on the subjective elements of "judgment" used by its witnesses to justify its proposed depreciation rate for that account. Judgment is a process; it does not take the place of evidence.

Q. DO YOU HAVE ANY OTHER GENERAL CRITICISMS OF THE BASES OF COMPANY WITNESS WATSON'S SERVICE LIFE ESTIMATES?

A. Yes. In discussing his service life estimates for many of Piedmont's accounts, Company Mr. Allis has apparently relied heavily upon the expectations of Company personnel with

regard to how long the assets will be in service.[116] Piedmont is the applicant in this case, and it has hired an independent expert in Mr. Allis to develop service life estimates based on specialized, statistical analysis of the Company's historical retirement data for an issue that heavily affects the Company's cash flow. To the extent Piedmont employees have simply told the Company's independent depreciation expert how long they think the Company's assets will survive, I believe that is problematic and calls into question the objectivity and accuracy of Piedmont's proposed depreciation rates. It also highlights the importance of putting more emphasis on the historical, factual data used to derive the retirement rates in each of the accounts discussed below, rather than factors that may be influenced by biases (even if unintentionally).

A. Accounts 376.10 and 376.20 – Mains

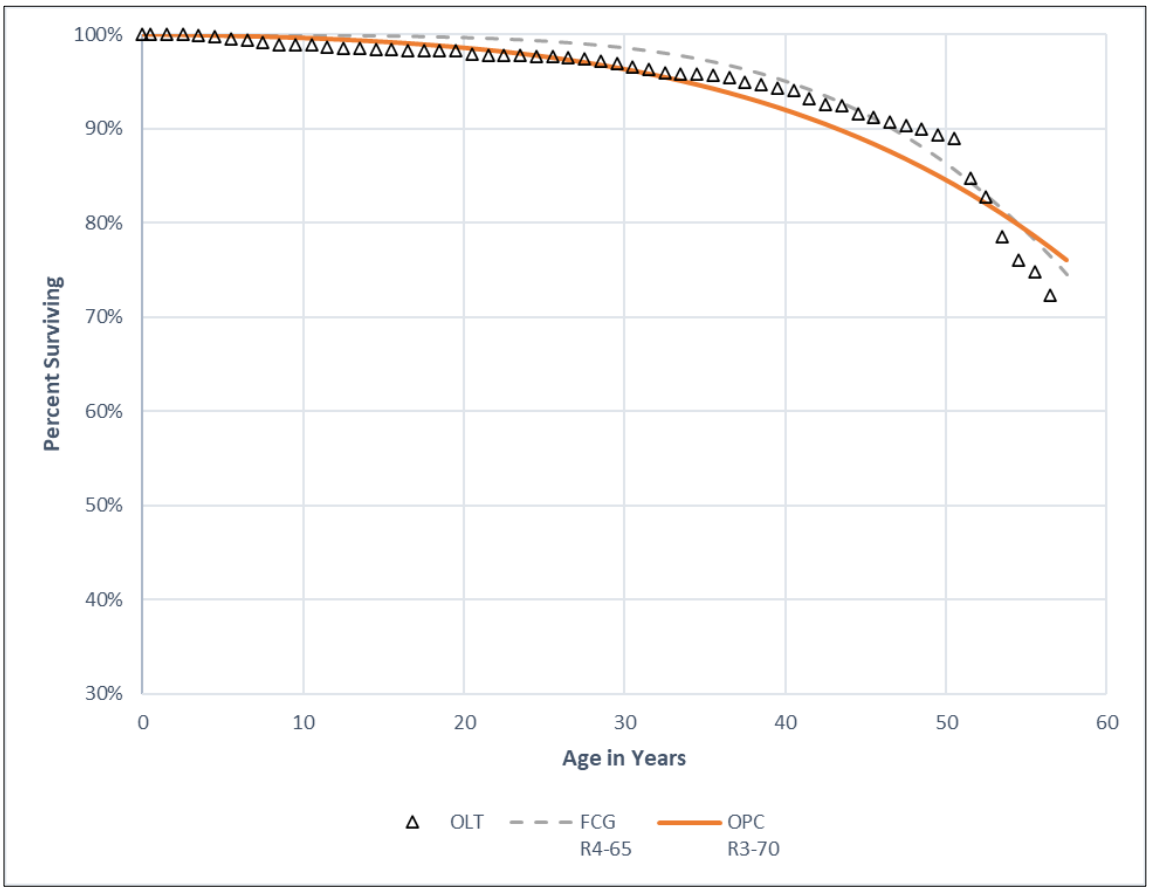
Q. DESCRIBE YOUR SERVICE LIFE ESTIMATE FOR THIS ACCOUNT AND COMPARE IT WITH THE COMPANY'S ESTIMATE.

A. The OLT curve derived from the Company's data for this account is presented in the graph below. The graph also shows the Iowa curves the Company and I selected to represent the average remaining life of the assets in this account. For this account, the Company selected the R4-65 Iowa curve, and I selected the R3-70 Iowa curve, which represent average lives of 65 years and 70 years, respectively. Both of these Iowa curves are shown in the graph below along with the OLT curve.[117]

[116] *See generally* Petition to Request Approval and Authorization to Implement New Depreciation Rates. Docket No. 2019-191-G, pp. 22 – 70.

[117] *See also* Exhibit DJG-22.

Figure 17:
Accounts 376.10 and 376.20 – Mains



As shown in the graph, both selected Iowa curves provide relatively close fits to the observed data from a visual perspective. Although there is a visual "drop off" towards the tail end of this OLT curve, based on the 1% truncation benchmark discussed above, these tail-end data points are nonetheless statistically relevant. Regardless, The more significant data points (in quantity and quality) in the upper and middle portions of the OLT curve indicate a flatter trajectory than what is otherwise displayed in the higher-modal R4 curve shape selected by Mr. Allis. Going forward, I would not be surprise to see a flatter trajectory than what is indicated by the R4 dispersion.

Q. WHAT IS YOUR RECOMMENDATION FOR THIS ACCOUNT?

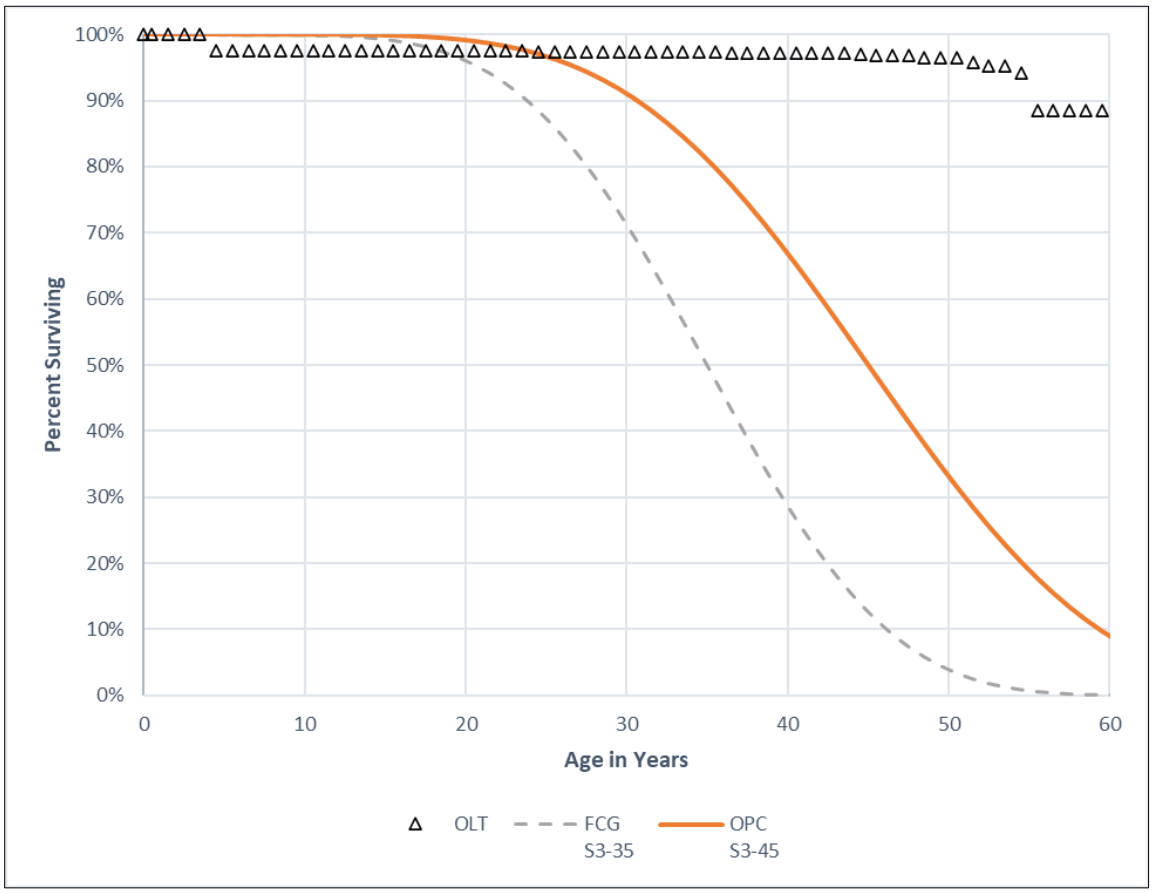
A. I would propose the R3-70 Iowa curve be applied to this account for purposes of calculating the remaining life and depreciation rate. In a pending proceeding before the Commission, Florida Public Utilities proposed a 75-year service life for its plastic mains account, and a 65-year service life for its steel mains account, which equates to an average of 70 years. In this case, FCG has consolidated its plastic and steel mains for purposes of life analysis. The R4-65 curve proposed by the Company is not necessarily unreasonable given the historical data. However, the Commission could consider adopting a 70-year service life for this account as another reasonable approach.

B. <u>Accounts 378.00 and 379.00 – Measuring and Regulating Station Equipment</u>

Q. DESCRIBE YOUR SERVICE LIFE ESTIMATE FOR THIS ACCOUNT AND COMPARE IT WITH THE COMPANY'S ESTIMATE.

A. For these accounts, Mr. Allis selected the S3-35 curve, and I selected the S3-45 curve. Both of these Iowa curves are illustrated in the graph below along with the OLT curve.

Figure 18:
Accounts 378.00 and 379.00 – Measuring and Regulating Station Equipment



As shown in the graph, there has not been enough retirement activity in this account to derive an accurate indication of the retirement pattern that might be observed going forward. Nonetheless, the data show that asset reaching 60 years old have a survival rate of nearly 90%. Both of the selected Iowa curves are essentially suggesting that the retirement rate going forward in this account will be greater than the retirement rate experienced thus far. However, I believe a 35-year service life is simply too short given the actual evidence presented for this account, and it results in an unreasonably high depreciation rate.

Q. DOES YOUR SELECTED IOWA CURVE PROVIDE A BETTER MATHEMATICAL FIT TO THE RELEVANT PORTION OF THE OLT CURVE?

A. Yes. While it is clear from a mere visual inspection that the Iowa curve I selected for this account provides a better fit to the observed data, we can confirm this result mathematically. Visual curve-fitting techniques can help an analyst identify the most statistically relevant portions of the OLT curve for this account, but mathematical curve-fitting techniques can help determine which of the two Iowa curves provides the better fit (especially in cases where it is not obvious from a visual standpoint which curve provides the better fit). Mathematical curve-fitting essentially involves measuring the "distance" between the OLT curve and the selected Iowa curve. The best fitting curve from a mathematical standpoint is the one that minimizes the distance between the OLT curve and the Iowa curve, thus providing the closest fit. The distance between the curves is calculated using the "sum-of-squared differences" ("SSD") technique. In this account, the total SSD, or distance between the Company's curve and the OLT curve, is 18.5589, while the total SSD between the S3-45 curve I selected and the OLT curve is 8.5355, which means it is a closer fit.[118]

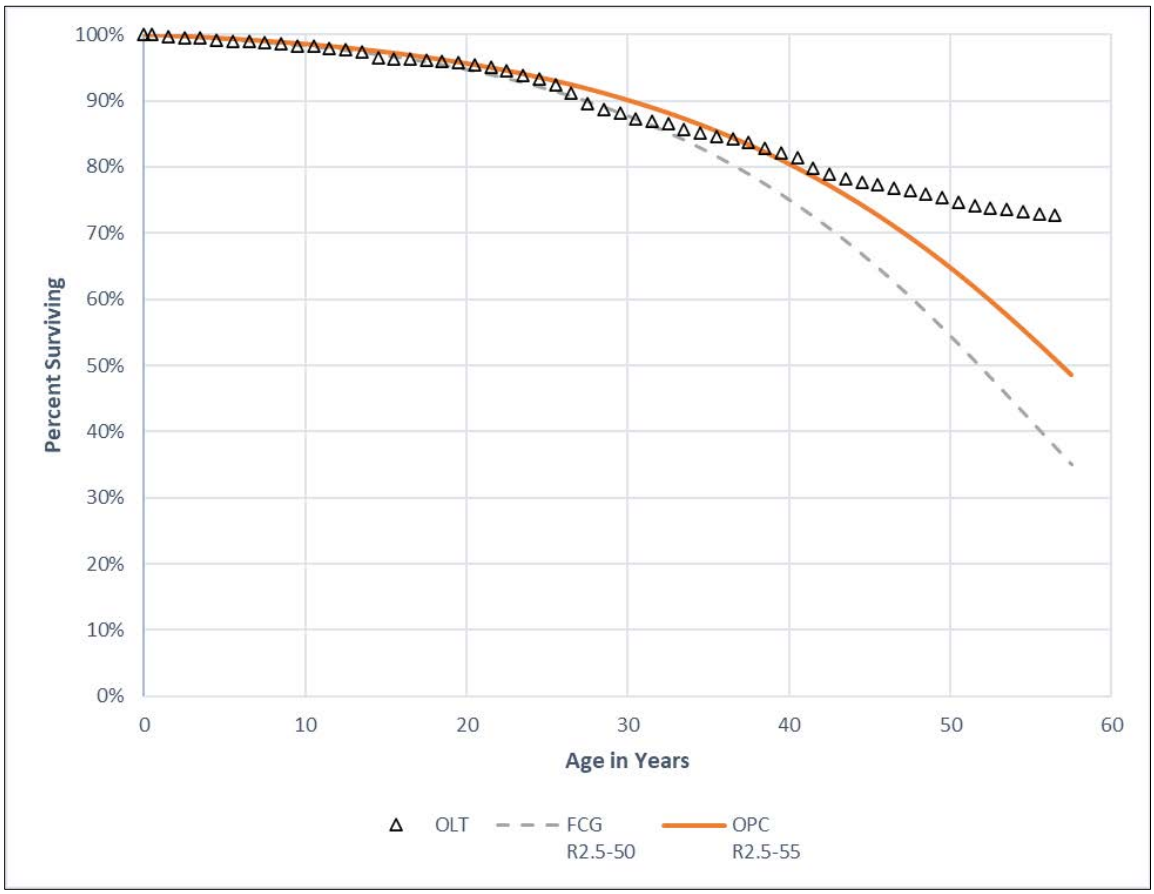
C. <u>Accounts 380.10 and 380.20 – Services</u>

Q. DESCRIBE YOUR SERVICE LIFE ESTIMATE FOR THIS ACCOUNT AND COMPARE IT WITH THE COMPANY'S ESTIMATE.

A. Mr. Allis selected the R2.5-50 curve for this account, and I selected the R2.5-55 curve. Both of these Iowa curves are illustrated in the graph below along with the OLT curve.

[118] Exhibit DJG-23.

Figure 19:
Accounts 380.10 and 380.20 – Services



As shown in this graph, the R2.5-50 curve ignores a significant and relevant portion of the historical retirement data for these accounts, as displayed in the OLT curve. The R2.5-55 curve I selected provides a better fit to the observed data and results in a more reasonable and accurate depreciation rate for these accounts.

Q. DOES YOUR SELECTED IOWA CURVE PROVIDE A BETTER MATHEMATICAL FIT TO THE RELEVANT PORTION OF THE OLT CURVE?

A. Yes. The total SSD for the Company's curve is 0.7540, and the SSD for the R2.5-55 curve I selected is 0.2217, which means it results in the better mathematical fit.[119]

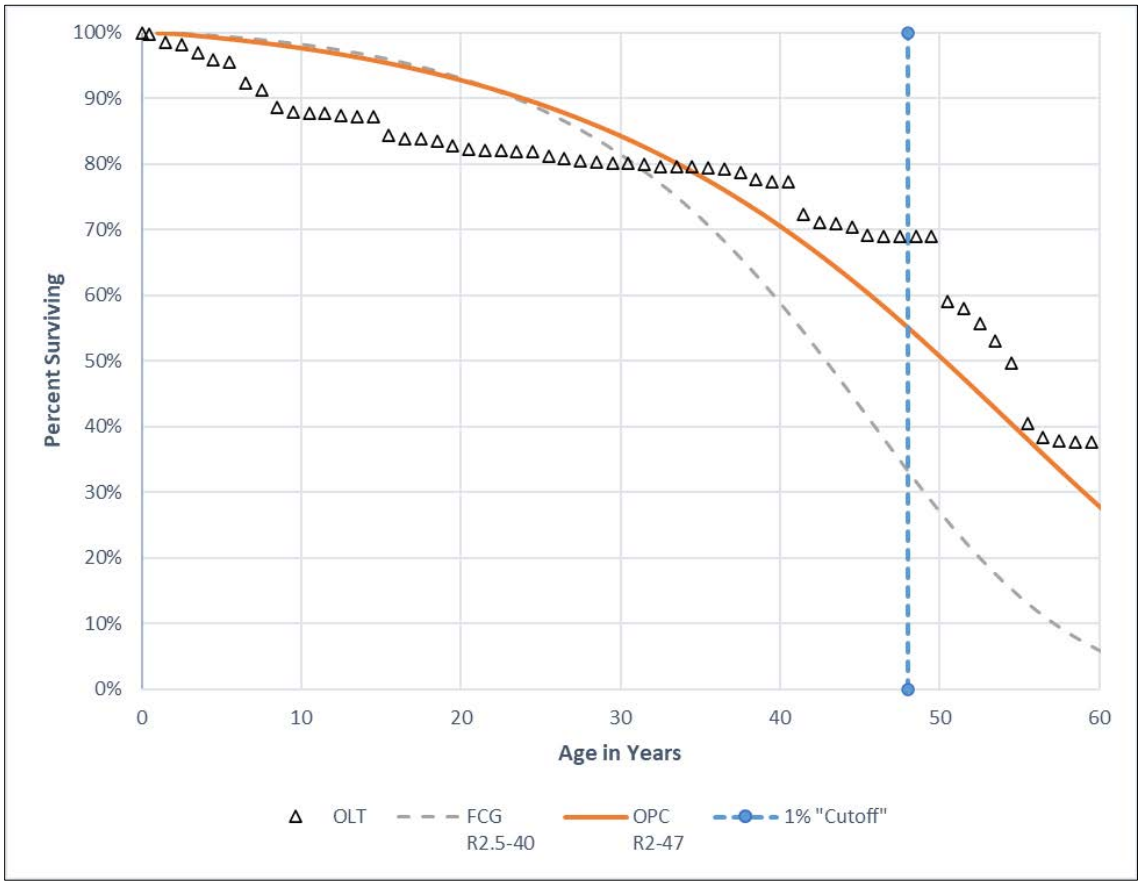
D. Account 383 – House Regulators

Q. DESCRIBE YOUR SERVICE LIFE ESTIMATE FOR THIS ACCOUNT AND COMPARE IT WITH THE COMPANY'S ESTIMATE.

A. Mr. Allis selected the R2.5-40 curve for this account, and I selected the R2-47 curve. Both of these Iowa curves are illustrated in the graph below along with the OLT curve.

[119] Exhibit DJG-24.

Figure 20:
Account 383 – House Regulators



The dispersion pattern displayed in the OLT curve for this account is relatively atypical, nonetheless, there is an adequate amount of retirement history to rely on the historical data as an indication of remaining life. The vertical dotted line represents the truncation benchmark discussed above. The data points occurring to the right of the vertical line are statistically irrelevant based on this benchmark. Both Iowa curves correctly ignore the irrelevant tail-end of the OLT curve. However, the R2.5-40 curve selected by Mr. Allis ignores relevant data points occurring between the 30-45 year age intervals. The OLT curve thus far is displaying a flatter trajectory than is otherwise indicated in the R2.5 curve

shape selected by Mr. Allis. At this time, it would be more reasonable to utilize an R2 curve shape with a longer average service life, such as the R2-47 curve I selected.

Q. DOES YOUR SELECTED IOWA CURVE PROVIDE A BETTER MATHEMATICAL FIT TO THE RELEVANT PORTION OF THE OLT CURVE?

A. Yes. The total SSD for the Company's curve is 2.7569, and the SSD for the R2-47 curve I selected is 0.5052, which means it results in the better mathematical fit.[120]

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.

[120] Exhibit DJG-25.

(Whereupon, prefiled direct testimony of Christopher C. Walters was inserted.)

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR RATE INCREASE BY FLORIDA CITY GAS	))))	**DOCKET NO. 20220069-GU**

Direct Testimony and Exhibits of

Christopher C. Walters

On behalf of

Federal Executive Agencies

August 26, 2022

BRUBAKER & ASSOCIATES, INC.

Project 11309

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR RATE INCREASE BY FLORIDA CITY GAS	))))	**DOCKET NO. 20220069-GU**

Table of Contents for the Direct Testimony of Christopher C. Walters

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR RATE INCREASE BY FLORIDA CITY GAS	))))	**DOCKET NO. 20220069-GU**

Direct Testimony of Christopher C. Walters

I. INTRODUCTION

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Christopher C. Walters. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q WHAT IS YOUR OCCUPATION?

A I am a consultant in the field of public utility regulation and an Associate with the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This information is included in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of the Federal Executive Agencies ("FEA"). FEA purchases substantial amounts of natural gas delivery from Florida City Gas ("FCG" or "Company").

Q WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A My testimony will address the current market cost of equity, and resulting overall rate of return for FCG. I will also respond to Company witness Ms. Jennifer Nelson's recommended Return on Equity ("ROE") of 10.75%.

My silence with regard to any position taken by FCG in its application or direct testimony in this proceeding does not indicate my endorsement of that position.

II. SUMMARY

Q PLEASE SUMMARIZE YOUR TESTIMONY.

A In Section III of my testimony, I review and analyze the regulated utility industry's access to capital, credit rating trends and outlooks, as well as the overall trend in the authorized ROE for utilities throughout the country. I conclude that the trend in authorized ROEs for utilities has declined over the last several years and has remained below 10.0% more recently. I also review the impact that the Federal Reserve's (the "Fed") monetary policy actions have had on the cost of capital.

In Section IV of my testimony, I outline how a fair ROE should be established, provide an overview of the market's perception of the Company's investment risk, comment on the Company's proposed capital structure, and present the analyses I relied on to estimate an appropriate ROE for FCG. I conclude that a common equity ratio of no higher than 50.0% is fair, reasonable, and more consistent with the capital structures of the proxy group used to estimate the Company's cost of equity. Based on the results of several cost of equity estimation methods, I estimate the current fair market ROE for the Company to fall within the range of 9.00% to 9.80%, with a midpoint of 9.40%.

In Section V of my testimony, I respond to the Company's witness Ms. Nelson's estimate of the current market cost of equity for FCG. Ms. Nelson recommends the Company be authorized a ROE of 10.75% at the Company's proposed common equity ratio of 59.6%.

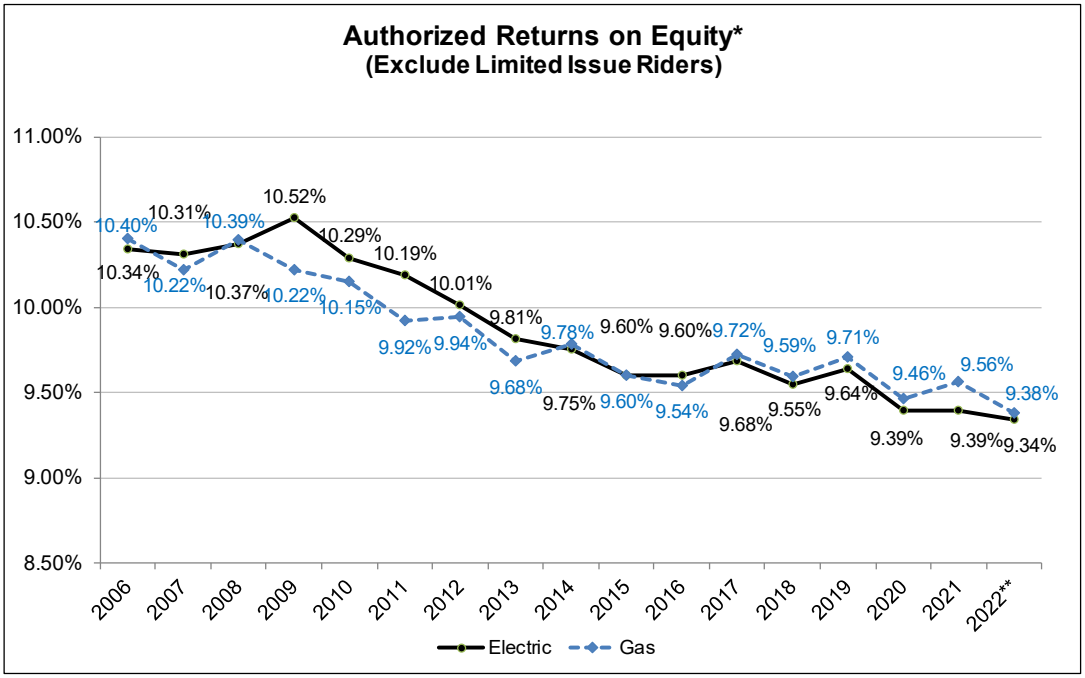
III. ACCESS TO CAPITAL AND ECONOMIC ENVIRONMENT

A. *Regulated Utility Industry Authorized ROEs, Access to Capital, and Credit Strength*

Q PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN AUTHORIZED ROEs FOR ELECTRIC AND GAS UTILITIES, UTILITIES' CREDIT STANDING, AND UTILITIES' ACCESS TO CAPITAL TO FUND INFRASTRUCTURE INVESTMENT.

A Authorized ROEs for both electric and gas utilities have declined over the last 10 years, as illustrated in Figure CCW-1, and have been below 10.0% for about the last nine years.

FIGURE CCW-1



Source and Notes:
[1] *S&P Global Market Intelligence*, RRA Regulatory Focus, Major Rate Case Decisions -- January - March 2022, May 2, 2022 at page 5.
* Electric Returns exclude Limited Issue Riders.
* RRA excludes the 2017 Alaska ENSTAR decision from its calculations.
**Data represents January - March.

Q PLEASE DESCRIBE THE DISTRIBUTION OF AUTHORIZED ROEs FOR THE LAST FEW YEARS.

A The distribution of authorized returns, annually, since 2016 is summarized in Table CCW-1.

TABLE CCW-1

Distribution of Authorized ROEs
(Natural Gas Utilities)

		Natural Gas[1]			
Line	Year	Average	Median	Share of Decisions ≤ 9.5%	Share of Decisions ≤ 9.7%
	(1)	(2)	(3)		
1	2016	9.52%	9.50%	52%	74%
2	2017	9.71%	9.60%	43%	74%
3	2018	9.73%	9.80%	53%	72%
4	2019	9.70%	10.23%	23%	57%
5	2020	9.42%	9.40%	68%	87%
6	2021	9.53%	9.52%	50%	74%
7	2022	9.33%	9.25%	78%	100%

Source and Notes:
[1] S&P Global Market Intelligence, downloaded 7/21/2022.
- Excludes limited issue rider cases.
Data through 7/8/2022.

The distribution shows that over the last few years, the majority of authorized ROEs since 2016 have been below 9.7%, with many of those being below 9.5%.

Q HOW HAS THE AUTHORIZED COMMON EQUITY RATIO FLUCTUATED OVER THE SAME TIME PERIOD FOR UTILITIES?

A In general, the utility industry's common equity ratio has not really deviated too much from the range of 50.0% to 52.0%. As shown in Table CCW-2, I have provided the authorized common equity ratios for utilities around the country, excluding the reported common equity ratios for Arkansas, Florida, Michigan, and Indiana. For my overall market analysis, I have excluded the reported authorized common equity ratios for

these states because these jurisdictions include sources of capital outside of investor-supplied capital such as accumulated deferred income taxes. As such, the reported common equity ratios in these states would result in a downward bias in the reported permanent common equity ratios authorized for ratemaking purposes within my trend analysis.

TABLE CCW-2

Trends in State Authorized Common Equity Ratios
(Natural Gas Utilities)

Line	Year	Natural Gas[1] Average	Natural Gas[1] Median
	(1)	(2)	(3)
1	2010	49.25%	49.90%
2	2011	52.49%	52.45%
3	2012	51.13%	51.47%
4	2013	51.16%	50.43%
5	2014	51.90%	51.99%
6	2015	49.79%	50.33%
7	2016	51.85%	51.35%
8	2017	51.13%	51.76%
9	2018	52.58%	53.08%
10	2019	52.72%	52.22%
11	2020	52.34%	52.00%
12	2021	51.63%	52.00%
13	2022	50.21%	50.00%
14	Average	51.40%	51.46%
15	Median	51.63%	51.76%

Source and Notes:
[1] S&P Global Market Intelligence; data through 7/8/22.
- Excludes Arkansas, Florida, Indiana, and Michigan, because they include non-investor capital.

Q HAVE REGULATED UTILITY COMPANIES BEEN ABLE TO MAINTAIN RELATIVELY STRONG CREDIT RATINGS DURING PERIODS OF DECLINING AUTHORIZED ROEs?

A Yes. As shown below in Table CCW-3, the credit rating of the industry has improved since 2009. In 2009, approximately 88% of the industry was rated BBB or higher. Currently, 100% of the industry has a rating of BBB or higher.

TABLE CCW-3

S&P Ratings by Category
Natural Gas Utility Subsidiaries
(Year End)

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A or higher	50%	50%	50%	50%	38%	33%	33%	44%	56%	33%	38%	38%	13%	13%
A-	0%	0%	0%	0%	38%	33%	33%	22%	11%	11%	38%	38%	38%	38%
BBB+	25%	25%	38%	38%	13%	22%	33%	33%	33%	44%	13%	13%	25%	25%
BBB	13%	13%	0%	0%	0%	0%	0%	0%	0%	11%	13%	13%	25%	25%
BBB-	13%	13%	13%	13%	13%	11%	0%	0%	0%	0%	0%	0%	0%	0%
Below BBB-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: S&P CAPITAL IQ and Market Intelligence, downloaded 7/8/22.
Note: Subsidiary ratings used.

Q HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO SUPPORT CAPITAL EXPENDITURE PROGRAMS?

A Yes. In its April 11, 2022 Utility Capital Expenditures Update report, *RRA Financial Focus*, a division of S&P Global Market Intelligence, made several relevant comments about utility investments generally:

- Projected 2022 capital expenditures for the 47 energy utilities included in the Regulatory Research Associates representative sample of the publicly traded U.S.-based utility universe currently exceeds $154.2 billion, well above the $131.8 billion of actual investment spent in 2021 by the same companies. Much of the increased outlays are driven by federal support for infrastructure investment that was approved by Congress and signed into law late in 2021.

- Investment across these 47 energy utilities may rise 15% or more by the close of 2022.

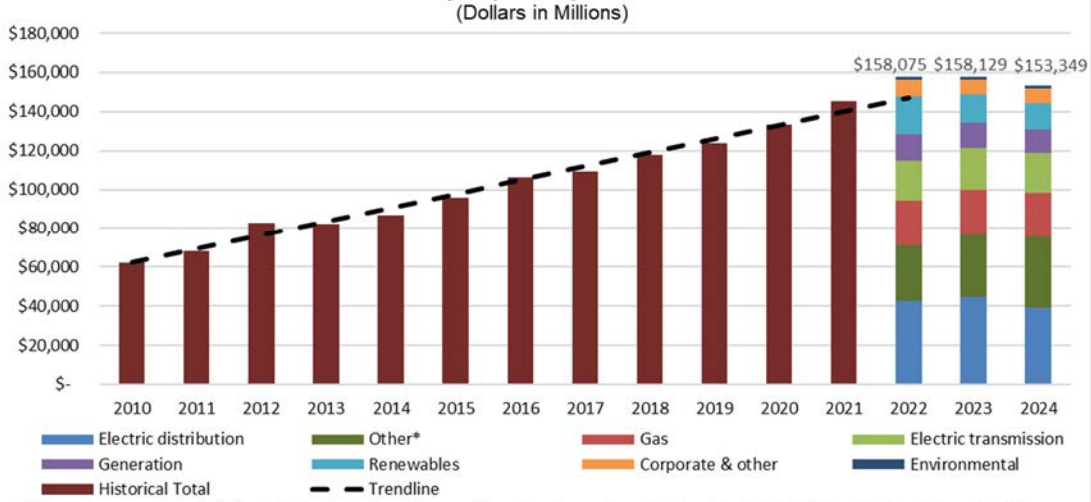
- 2021 energy utility capital expenditures marked a record high, about 1.3% above the $130.1 billion invested in 2020. Investment in 2021 might have been even higher without the multiple supply chain issues associated with the ongoing coronavirus pandemic.

- 2022 aggregated capex indicates approximately $154.2 billion earmarked for energy infrastructure investments. The aggregated forecast for 2023 capex points to over $154.0 billion of spending. While the 2024 estimate of $149.3 billion of investment appears to signal the potential for a slight decline in capital expenditures compared with 2022 and 2023, it is anticipated that annual investments will ultimately be successively higher in each following year, considering that companies' plans for future projects will continue to gel around new federal legislation that supports infrastructure investment. It is notable that in nine out of the last 10 years, annual investments exceeded the prior year.[1]

As shown in Figure CCW-2 below, capital expenditures for electric and natural gas utilities have increased considerably over the period 2010 through 2021, and the forecasted capital expenditures remain elevated through 2022 and 2023, albeit falling somewhat in 2024.

FIGURE CCW-2

Utility Capital Expenditures
(Dollars in Millions)



*Other category consists of utilities that do not report capital expenditures by category: Avangrid, Hawaiian Electric, PG&E and Portland General Electric.
Source: *S&P Global Market Intelligence, RRA Financial Focus*, Utility Capital Expenditures Update, April 11, 2022, Tables 1 and 3.

[1] *S&P Global Market Intelligence, RRA Financial Focus*: "Utility Capital Expenditures Update," April 11, 2022, at 5 (footnotes omitted).

As outlined in Figure CCW-2 above, and in the comments made by *RRA S&P Global Market Intelligence*, capital investments for the utility industry continue to stay at elevated levels, and these capital expenditures are expected to fuel utilities' profit growth into the foreseeable future. This is clear evidence that the capital investments are enhancing shareholder value, and are attracting both equity and debt capital to the utility industry in a manner that allows for these elevated capital investments. While capital markets embrace these profit-driven capital investments, regulatory commissions also must be careful to maintain reasonable prices and tariff terms and conditions to protect customers' need for reliable utility service but at competitive and affordable tariff prices.

Q IS THERE EVIDENCE OF ROBUST VALUATIONS OF REGULATED UTILITY EQUITY SECURITIES?

A Yes. Robust valuations are an indication that utilities can sell securities at high prices, which is a strong indication that they can access equity capital under reasonable terms and conditions, and at relatively low cost. As shown on Exhibit CCW-1, the historical valuation of utilities followed by *The Value Line Investment Survey* ("*Value Line*"), based on a price-to-earnings ("P/E") ratio, price-to-cash flow ("P/CF") ratio, and market price-to-book value ("M/B") ratio, indicates utility security valuations today are very strong and robust relative to the last several years. These strong valuations of utility stocks indicate that utilities have access to equity capital under reasonable terms and at lower costs.

Q HOW IS THIS OBSERVABLE MARKET DATA USED IN FORMING YOUR RECOMMENDED ROE AND OVERALL RATE OF RETURN?

A Generally, authorized ROEs, credit standing, and access to capital have been quite robust for utilities over the last several years, even throughout the duration of the global pandemic. It is critical that the Florida Public Service Commission ("Commission") ensure that utility rates are increased no more than necessary to provide fair compensation and maintain financial integrity.

B. Fed Monetary Policy

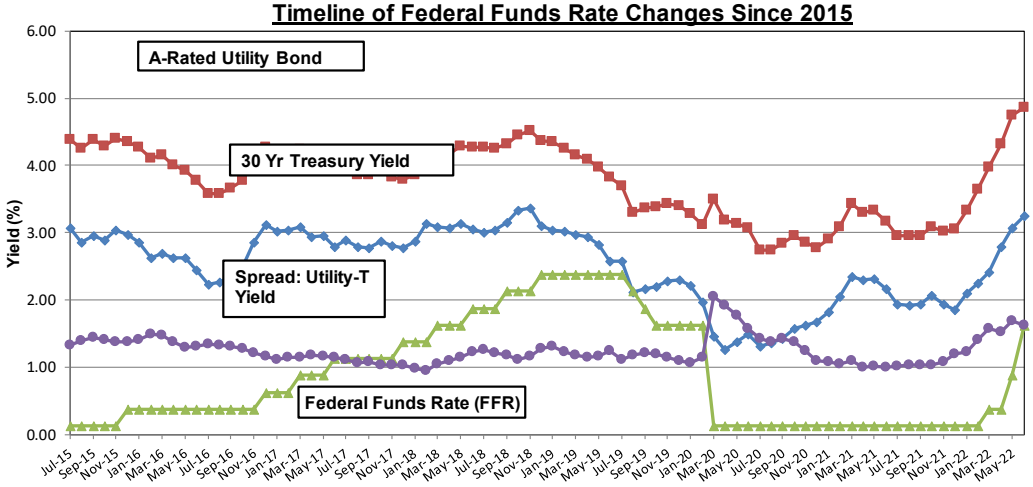
Q ARE THE FEDERAL OPEN MARKET COMMITTEE'S ACTIONS KNOWN TO THE MARKET PARTICIPANTS, AND IS IT REASONABLE TO BELIEVE THEY ARE REFLECTED IN THE MARKET'S VALUATION OF BOTH DEBT AND EQUITY SECURITIES?

A Yes. The Fed has been quite public about its efforts to support the economy to achieve maximum employment, and to manage long-term inflation to around a 2% level. The Fed has implemented procedures to support the economy's efforts to achieve these policy objectives. Specifically, the Fed has recently lowered the Federal Overnight Rate for securities, and has engaged once again in a Quantitative Easing program where the Fed is buying, on a monthly basis, Treasury and mortgage-backed securities in order to moderate the demand in the marketplaces and support the economy. Currently, the Federal Reserve is unwinding its Quantitative Easing program and taking actions towards monetary policy normalization. Such monetary policy actions include raising the target federal funds rate and allowing maturing bonds to roll off its balance sheet. All of these actions are known by market participants because the Fed is quite transparent in its monetary policies.

An assessment of the market's reaction to the Fed's actions on the Federal Funds Rate is shown below in Figure CCW-3.

FIGURE CCW-3

Timeline of Federal Funds Rate Changes Since 2015



Fed FFR Actions:

1	December 2015	0.25	→	0.50	10	August 2019	2.00	→	2.25
2	December 2016	0.50	→	0.75	11	September 2019	1.75	→	2.00
3	March 2017	0.75	→	1.00	12	October 2019	1.50	→	1.75
4	June 2017	1.00	→	1.25	13	March 2020	1.00	→	1.25
5	December 2017	1.25	→	1.50	14	March 2020	0.00	→	0.25
6	March 2018	1.50	→	1.75	15	March 2022	0.25	→	0.50
7	June 2018	1.75	→	2.00	16	May 2022	0.75	→	1.00
8	September 2018	2.00	→	2.25	17	June 2022	1.50	→	1.75
9	December 2018	2.25	→	2.50					

Sources:
Federal Reserve Bank of New York, https://apps.newyorkfed.org/markets/autorates/fed-funds-search-page
Board of Governors of the Federal Reserve System, https://www.federalreserve.gov/datadownload/
Moody's Credit Trends, https://credittrends.moodys.com/

As shown in Figure CCW-3 above, bond yields have increased over the last several months, bringing them in-line with yields during the various points in time during the 2015-2018 period.

Q HAS THE FED MADE RECENT COMMENTS CONCERNING MONETARY POLICY AND THE POTENTIAL IMPACT ON INTEREST RATES?

A Yes. In its March Statement, the Federal Open Market Committee ("FOMC") increased the target range for the federal funds rate by 0.25%. The FOMC stated as follows in the March Statement:

> The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With appropriate firming in the stance of monetary policy, the Committee expects inflation to return to its 2 percent objective and the labor market to remain strong. In support of these goals, the Committee decided to raise the target range for the federal funds rate to 1/4 to 1/2 percent and anticipates that ongoing increases in the target range will be appropriate. In addition, the Committee expects to begin reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities at a coming meeting.[2]

In a recent speech from Fed Chair Powell, he stated the following:

> We raised our policy interest rate for the first time since the start of the pandemic and said that we anticipate that ongoing rate increases will be appropriate to reach our objectives. We also said that we expect to begin reducing the size of our balance sheet at a coming meeting. In my press conference, I noted that action could come as soon as our next meeting in May, though that is not a decision that we have made. These actions, along with the adjustments we have made since last fall, represent a substantial firming in the stance of policy with the intention of restoring price stability.[3]

In the same speech, Fed Chair Powell also stated that:

> As the magnitude and persistence of the increase in inflation became increasingly clear over the second half of last year, and as the job market recovery accelerated beyond expectations, the FOMC pivoted to progressively less accommodative monetary policy. In June, the median FOMC participant projected that the federal funds rate would remain at its effective lower bound through the end of 2022, and as the news came in, the projected policy paths shifted higher (figure 5). The median projection that accompanied last week's 25 basis point rate increase shows the federal funds rate at 1.9 percent by the end of this year and rising above its estimated longer-run normal value in 2023. The latest FOMC statement also indicates that the Committee expects

[2] *Federal Reserve issues FOMC statement*, March 16, 2022, https://www.federalreserve.gov/newsevents/pressreleases/monetary20220316a.htm.

[3] *Restoring Price Stability*, March 21, 2022, Chair Pro Tempore Jerome H. Powell, https://www.federalreserve.gov/newsevents/speech/powell20220321a.htm.

> to begin reducing the size of our balance sheet at a coming meeting. I believe that these policy actions and those to come will help bring inflation down near 2 percent over the next 3 years.[4]

Q HAS THE FOMC MADE ANY ADDITIONAL MONETARY POLICY MOVES?

A Yes. In its May Statement, the FOMC increased the target federal funds rate an additional 50 basis points. Similarly, in its June statement, the FOMC increased the target rate an additional 75 basis points. The FOMC stated the following:

> The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. In support of these goals, the Committee decided to raise the target range for the federal funds rate to 1-1/2 to 1-3/4 percent and anticipates that ongoing increases in the target range will be appropriate. In addition, the Committee will continue reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities, as described in the Plans for Reducing the Size of the Federal Reserve's Balance Sheet that were issued in May. The Committee is strongly committed to returning inflation to its 2 percent objective.[5]

Q WHAT DO INDEPENDENT ECONOMISTS' OUTLOOKS FOR FUTURE INTEREST RATES INDICATE?

A Independent economists expect current capital costs to increase at mixed rates over the near term, while maintaining levels that are still low by historical standards. For example, independent projections show that the consensus is the federal funds rate will increase at a rate much faster than that of long-term interest rates as measured by the 30-year Treasury bond. Inflation, as measured through the GDP price index, is expected to cool off in the near to intermediate term.

The consensus projections for the next several quarters are provided in Table CCW-4 below.

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[4] *Id*.

[5] *Federal Reserve issues FOMC statement*, June 15, 2022, https://www.federalreserve.gov/newsevents/pressreleases/monetary20220615a.htm.

TABLE CCW-4

Blue Chip Financial Forecasts
Projected Federal Funds Rate, 30-Year Treasury Bond Yields, and GDP Price Index

Publication Date	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023	4Q 2023
Federal Funds Rate										
Oct-21	0.1	0.1	0.1	0.1	0.1	0.2	0.3			
Nov-21	0.1	0.1	0.1	0.1	0.1	0.3	0.4			
Dec-21	**0.1**	0.1	0.1	0.1	0.3	0.4	0.6			
Jan-22		0.1	0.1	0.3	0.5	0.7	0.9	1.1		
Feb-22		0.1	0.2	0.5	0.8	1.0	1.3	1.5		
Mar-22		**0.1**	0.2	0.6	1.0	1.3	1.6	1.8		
Apr-22			0.1	0.8	1.4	1.8	2.2	2.4	2.6	
May-22			0.1	1.0	1.7	2.2	2.6	2.9	3.0	
Jun-22			**0.1**	1.0	1.9	2.4	2.8	3.0	3.1	
Jul-22				0.7	2.4	3.1	3.5	3.5	3.5	3.4
T-Bond, 30 yr.										
Oct-21	1.9	2.2	2.3	2.4	2.5	2.6	2.7			
Nov-21	1.9	2.2	2.3	2.4	2.5	2.6	2.7			
Dec-21	**1.9**	2.1	2.2	2.3	2.5	2.6	2.7			
Jan-22		2.0	2.1	2.2	2.4	2.5	2.7	2.8		
Feb-22		2.0	2.2	2.3	2.5	2.6	2.7	2.8		
Mar-22		**2.0**	2.2	2.5	2.6	2.7	2.9	3.0		
Apr-22			2.3	2.6	2.8	3.0	3.2	3.3	3.3	
May-22			2.3	2.9	3.1	3.2	3.4	3.5	3.5	
Jun-22			**2.3**	3.0	3.3	3.4	3.5	3.6	3.6	
Jul-22				3.0	3.5	3.6	3.7	3.8	3.8	3.8
GDP Price Index										
Oct-21	4.2	2.9	2.5	2.5	2.5	2.5	2.4			
Nov-21	5.7	3.4	2.7	2.6	2.5	2.4	2.3			
Dec-21	**5.9**	4.6	3.4	2.8	2.7	2.5	2.5			
Jan-22		4.6	3.7	3.1	2.8	2.6	2.5	2.5		
Feb-22		6.9	4.3	3.4	3.0	2.8	2.6	2.5		
Mar-22		**7.1**	4.8	3.8	3.1	2.8	2.6	2.5		
Apr-22			4.8	5.1	3.7	3.0	2.8	2.6	2.6	
May-22			8.0	5.6	4.0	3.4	3.0	2.8	2.6	
Jun-22			**8.1**	5.9	4.6	3.5	3.1	2.8	2.7	
Jul-22				5.9	5.2	3.9	3.4	2.8	2.7	2.6

Source and Note:
Blue Chip Financial Forecasts, January 2021 through July 2022.
Actual Yields in Bold.

Further, the outlook for long-term interest rates in the intermediate to longer term is also impacted by the current Fed actions and the expectation that eventually the Fed's monetary actions will return to more normal levels. Long-term interest rate projections are illustrated in Table CCW-5 below.

TABLE CCW-5

30-Year Treasury Bond Yield Actual Vs. Projection

Description	Actual	2-Year Projected*	5- to 10-Year Projected
2016			
Q1	2.72%	3.67%	
Q2	2.64%	3.50%	4.3% - 4.6%
Q3	2.28%	3.20%	
Q4	2.82%	3.20%	4.2% - 4.5%
2017			
Q1	3.04%	3.70%	
Q2	2.91%	3.73%	4.3% - 4.5%
Q3	2.82%	3.66%	
Q4	2.82%	3.60%	4.1% - 4.3%
2018			
Q1	3.02%	3.63%	
Q2	3.09%	3.80%	4.2% - 4.4%
Q3	3.07%	3.73%	
Q4	3.27%	3.67%	3.9% - 4.2%
2019			
Q1	3.01%	3.50%	
Q2	2.78%	3.17%	3.6% - 3.8%
Q3	2.30%	2.70%	
Q4	2.30%	2.50%	3.2% - 3.7%
2020			
Q1	1.88%	2.57%	
Q2	1.38%	1.90%	3.0% - 3.8%
Q3	1.36%	1.87%	
Q4	1.62%	1.97%	2.8% - 3.6%
2021			
Q1	2.07%	2.23%	
Q2	2.26%	2.77%	3.5% - 3.9%
Q3	1.93%	2.63%	
Q4	1.95%	2.70%	3.4% - 3.8%
2022			
Q1	2.25%	2.87%	

Source and Note:
Blue Chip Financial Forecasts, January 2016 through April 2022.
*Average of all 3 reports in Quarter.

As outlined in Table CCW-5 above, the outlook for increases in interest rates has jumped more recently relative to 2020 and part of 2021, but is still relatively modest compared to time periods prior to the beginning of the worldwide pandemic. Indeed,

relatively low capital market costs are expected to prevail at least in the near-term and out over the next five to ten years. While there is potential for some upward movement in the cost of capital, that upward movement is uncertain. In fact, as shown on Figure CCW-3 above, increases in the Federal Funds Rate do not necessarily translate into increases in longer term yields.

Q PLEASE COMMENT ON RUSSIA'S INVASION OF UKRAINE AND ITS IMPACT ON THE MARKET.

A In late February 2022, Russia invaded Ukraine. The response from the United States and several other countries around the world has included several rounds of economic sanctions on Russia. There is no denying the fact that the ongoing conflict in Ukraine and the economic sanctions levied on Russia have sparked a fair amount of volatility and uncertainty in capital markets around the world.

While the actual impact to the markets and global economy as a result of the current conflict remains to be seen, we can look at research on the markets during previous wars and armed combat situations to get an idea of what can be expected.

For example, a monograph published by the CFA Institute Research Foundation concluded as follows:

> Both wars and terrorist attacks tend to have only a transitory impact on financial markets, but clear exceptions test that tendency. The macroeconomic impact of wars tends to be significantly bigger in small economies and developing countries that cannot digest the negative effects of war as easily as large, open economies—such as that of the United States—can.[6]

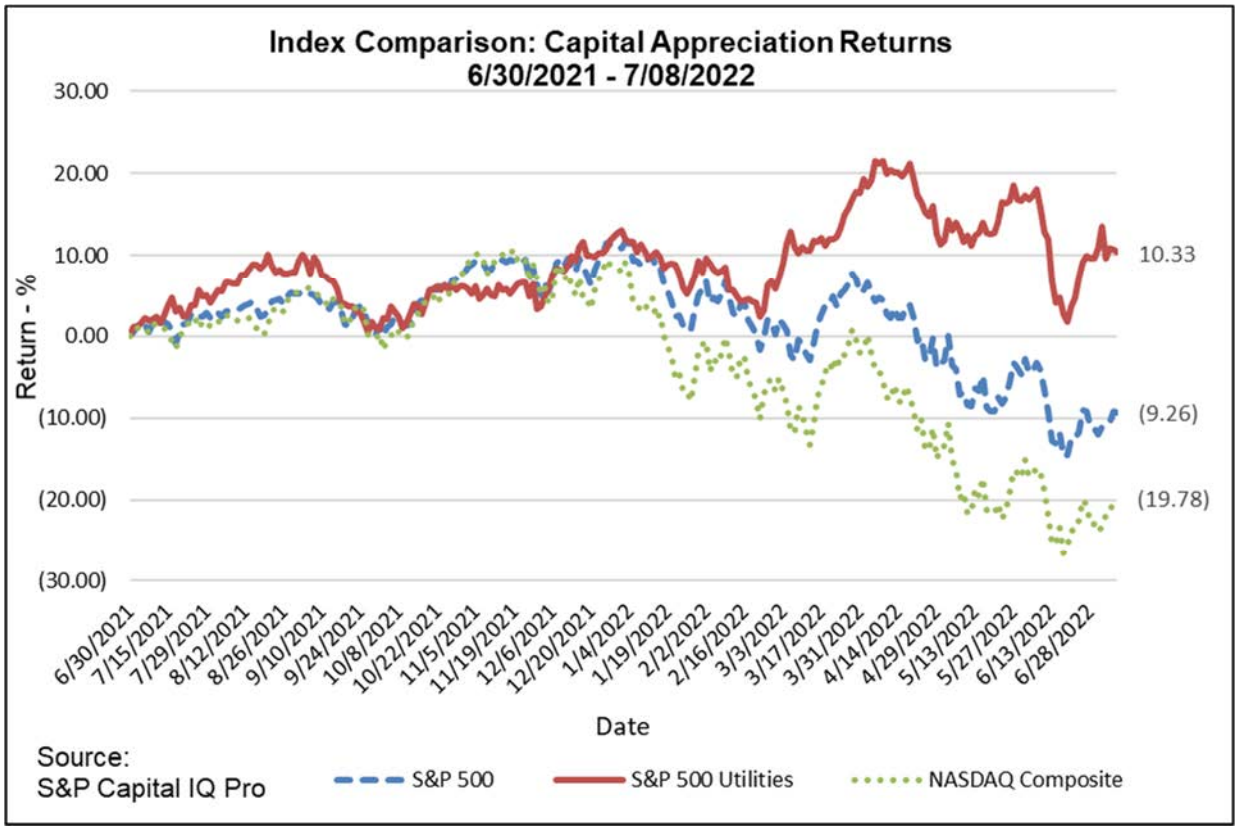
[6]Klement CFA, Joachim, CFA Institute Research Foundation, 2021, "Geo-Economics: The interplay of geopolitics, economics, and investments" at 46 (emphasis added).

While it is undeniable that a level of uncertainty exists as a result of the conflict in Ukraine, historical evidence indicates that the impact on financial markets is generally transitory.

Q IN LIGHT OF HIGHER LEVELS OF INFLATION, EXPECTATIONS OF HIGHER INTEREST RATES, AND THE WAR IN UKRAINE, HOW HAS THE MARKET PERCEIVED UTILITIES AS INVESTMENT OPTIONS?

A Since the end of the second quarter 2021, utilities in general, as measured by the S&P 500 Utilities index, have significantly outperformed the market as measured by the S&P 500, as well as the Nasdaq Composite. This is presented below in Figure CCW-4. This is indicative that utility valuations remain robust, even during a period of elevated inflation, rising interest rates, and uncertainty as a result of geopolitical events around the world.

FIGURE CCW-4



IV. RETURN ON EQUITY

Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON EQUITY."

A A utility's cost of common equity is the expected return that investors require on an investment in the utility. Investors expect to earn their required return from receiving dividends and through stock price appreciation.

Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED UTILITY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works

& Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944). In these decisions, the Supreme Court found that just compensation depends on many circumstances and must be determined by fair and enlightened judgments based on relevant facts. The Court also found that a utility is entitled to such rates as would permit it to earn a return on a property devoted to the convenience of the public that is generally consistent with the same returns available in other investments of corresponding risk. The Court continued that the utility has "no constitutional rights to profits" such as those "realized or anticipated in highly profitable enterprises or speculative ventures,"[7] and defined the ratepayer/investor balance as follows:

> 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.[8]

As such, a fair rate of return is based on the expectation that the utility costs reflect efficient and economical management, and the return will support its credit standing and access to capital, but the return will not be in excess of this level. From these standards, rates to customers will be just and reasonable, and compensation to the utility will be fair and support financial integrity and credit standing, under economic management of the utility.

Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE FCG'S COST OF COMMON EQUITY.

A I have used several models based on financial theory to estimate FCG's cost of common equity. These models are: (1) a constant growth Discounted Cash Flow

[7] *Bluefield,* 262 U.S. at 692-93.
[8] *Id*. at 693 (emphasis added).

("DCF") model using consensus analysts' growth rate projections; (2) a constant growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM").

A. FCG's Investment Risk

Q PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF FCG'S INVESTMENT RISK.

A The market's assessment of FCG's investment risk is described by credit rating analysts' reports. However, FCG is not an independently rated entity and therefore does not have any reports detailing its overall risk from a ratings analysts. For this reason, I will review the overall risk of its parent, Florida Power and Light ("FPL"), for comparative purposes. FPL's current credit ratings from S&P and Moody's are A and A1, respectively.[9] FPL currently has a "Stable" outlook from both ratings agencies.

Specifically, in its most recent report covering FPL, S&P states:

> **Business Risk: Excellent**
>
> Supporting FPL's business risk profile are: its largely residential customer base, which accounts for about 58% of its operating revenue; its effective management of regulatory risk; and its above-average economic and customer growth, demonstrated by Florida outperforming the national GDP growth rate in the past seven consecutive years and, consequently, strong energy demand. At the same time, Florida's economy continues to recover from the impacts of the ongoing COVID-19 pandemic, demonstrated by improvements in the unemployment rate and consumer confidence.
>
> The FPSC regulates FPL. We view the regulatory environment in Florida as constructive and supportive of credit quality. FPL benefits from forecast test years, above-average authorized returns on equity (ROEs), multiyear rate settlements, and various regulatory mechanisms that enable the company to reduce its regulatory lag and reduce cash flow volatility. Further supporting our assessment of the company's business risk profile is the company's ability to consistently recover storm-related costs, financially protecting the company from hurricanes that are

[9] S&P Capital IQ.

common in its service territory and significantly reducing a key risk for the company. As such, our assessment of FPL's business risk is at the higher half of the range compared with peers.

The company is further enhancing its renewable energy footprint. It continues to execute on its 30-by-30 plan and we expect solar generation will account for about 20% of FPL's generating portfolio when this program is complete. In July 2021, FPL announced that all SolarTogether program megawatts (MW) were subscribed. This comes just over one year after FPSC approved this community solar program. The SolarTogether program is currently supported by 20 new solar projects across the state and recently additional solar projects were approved in connection with the program's second phase. We expect, along with a green hydrogen project under development, ongoing solar plus battery storage development efforts to begin service later this year, and the exit from its remain coal generation, the company will continue to reduce its GHG emissions and environmental risks more quickly than peers.

Financial Risk: Intermediate
We assess FPL's stand-alone financial measures using our medial volatility financial benchmarks to reflect its lower-risk regulated electric utility operations and its effective management of regulatory risk. Our base case scenario assumes that the company will maintain its regulatory capital structure, reflecting an equity ratio of about 60%, a robust capital spending program, and timely recovery of costs through the use of constructive regulatory mechanisms. Overall, we expect the company's stand-alone FFO to debt to reflect 30%-33%, over the next three years, which is consistent with the middle of the range for the company's financial risk profile category.[10]

B. FCG's Proposed Capital Structure

Q WHAT IS FCG'S PROPOSED CAPITAL STRUCTURE?

A FCG's proposed capital structure is sponsored by Company witness Mr. Mark Campbell[11] and is summarized in Table CCW-6 below:

[10] *S&P RatingsDirect®:* Full Analysis: Florida Power & Light Co.*",* January 25, 2022.
[11] Exhibit G-3, page 2.

TABLE CCW-6

Investor-Supplied Capital Structure

Description	Weight
Long-Term Debt	35.72%
Short-Term Debt	4.68%
Common Equity	59.60%
Total	100.00%

Q DO YOU HAVE ANY COMMENTS ON FCG'S ASSUMED CAPITAL STRUCTURE FOR THE PROJECT?

A Yes. As I will discuss later, FCG's proposed equity ratio significantly exceeds the equity ratio for the proxy group used to estimate the cost of equity for FCG. As shown on in Exhibit CCW-2, the proxy group has an average common equity ratio of 38.6% (including short-term debt) and 44.6% (excluding short-term debt). Notably, the proxy group I use is identical to that of FCG witness Ms. Nelson.

Q ARE YOU AWARE OF OTHER REGULATORY COMMISSIONS RECOGNIZING THE NEED TO ALIGN THE COST OF EQUITY WITH THE CAPITAL STRUCTURE?

A Yes. In a recent Order, the Arkansas Public Service Commission imputed the capital structure of Southwestern Electric Power Company ("SWEPCO") to be more in-line with the comparable companies used to estimate the cost of equity.[12] The adjustment was to recognize that there must be *congruence* between the cost of equity and the capital structure. Specifically, the Order States as follows:

> Consistent with our ruling in Order No. 10 of Docket No. 06-101-U, the Commission holds that there should be congruence between the

[12]APSC Docket No. 21-170-U, Doc. No. 323, May 23, 2022, Order No. 14.

> estimated cost of equity and the [debt-to-equity "DTE")] ratio, whereby a lower DTE ratio decreases financial risk and decreases the cost of equity. The evidence of record supports imputing the average capital structure of companies with comparable risk to SWEPCO for the purposes of determining SWEPCO's overall cost of capital.[13]

As I described above, the proxy group has an average common equity ratio of 38.6% (including short-term debt) and 44.6% (excluding short-term debt) as calculated by S&P Global Market Intelligence and Value Line, respectively. The Company's assumed equity ratio of 59.60% (including short-term debt) 62.53% (excluding short-term debt) is nearly eight percentage points higher than that of the proxy group's comparable equity ratio. Clearly, FCG's requested equity ratio exceeds the equity ratios of the proxy group used to assess the Company's cost of equity. I recommend that the Commission authorize a common equity ratio of no higher than 50.0%.

C. Development of Proxy Group

Q PLEASE BRIEFLY DESCRIBE WHY A PROXY GROUP IS NEEDED IN ESTIMATING THE COST OF EQUITY.

A There are a few reasons why a proxy group is needed to estimate the cost of equity. As an initial matter, to be consistent with the *Hope* and *Bluefield* standards, as described above, the allowed return should be commensurate with returns on investments in other firms of comparable risk. A proxy group of similarly situated companies of comparable risk is needed to meet this criteria.

Even if FCG were a publicly traded company whose securities could be used to estimate its cost of equity, there exists the potential for certain errors and biases making the reliance on a single estimate undesirable and potentially less accurate. A proxy

[13] *Id*. at 25.

group of comparable risk companies adds reliability to the estimates by mitigating the potential for bias that may be introduced by measurement errors of model inputs.

Q PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP THAT COULD BE USED TO ESTIMATE FCG'S CURRENT MARKET COST OF EQUITY.

A I relied on the same proxy group developed by FCG witness Ms. Nelson.

Q HOW DOES THE INVESTMENT RISK OF FCG COMPARE TO THAT OF THE PROXY GROUP?

A As shown on my Exhibit CCW-2, the proxy group has average credit ratings of A- and A3 from S&P and Moody's, respectively. The proxy group's average rating of A- from S&P is one notch lower than FPL's A rating from S&P. The proxy group's average rating of A3 from Moody's is two notches lower than FPL's rating of A1.

As shown on the same exhibit, the proxy group has an average common equity ratio of 38.6% (including short-term debt) and 44.6% (excluding short-term debt) as calculated by S&P Global Market Intelligence and Value Line, respectively. FCG's requested common equity ratio of 59.60% (including short-term debt) or 62.53% (excluding short-term debt) significantly exceeds the proxy group's equity ratios as described above.

Given the stark differences in common equity ratios between the Company and the proxy group, my ROE recommendation will be consistent with my recommended common equity ratio.

D. DCF Model

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price equals the sum of the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots . \frac{D_\infty}{(1+K)^\infty} \qquad \text{(Equation 1)}$$

P_0 = Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, known as "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D_1 = Dividend in first year
P_0 = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown in Equation 2 above, the DCF model requires a current stock price, the expected dividend, and the expected growth rate in dividends.

Q WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices of the utilities in the proxy group over a 13-week period ending on July 8, 2022. An average stock price is

less susceptible to market price variations than a price at a single point in time. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not reflect the stock's long-term value.

Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I used the most recently paid quarterly dividend as reported in *Value Line*.[14] This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above. In other words, I calculate D_1 by multiplying the annualized dividend (D_0) by (1+G).

Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A There are several methods that can be used to estimate the expected growth in dividends. However, regardless of the method, for purposes of determining the market-required return on common equity, one must attempt to estimate investors' expectations about what the dividend, or earnings growth rate will be and not what an individual investor or analyst may use to make individual investment decisions.

As predictors of future returns, securities analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data.[15] That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence investors' decisions, which are captured in observable stock prices, than growth rates derived only from historical data.

[14]The Value Line Investment Survey.

[15]*See*, e.g., David Gordon, Myron Gordon, and Lawrence Gould, Choice Among Methods of Estimating Share Yield, The Journal of Portfolio Management, Spring 1989.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional securities analysts' earnings growth estimates as a proxy for investors' dividend growth rate expectations. I used the average of analysts' growth rate estimates from three sources: Zacks, MI, and Yahoo! Finance. All such projections were available on July 8, 2022, and all were reported online.

Each growth rate projection is based on a survey of independent securities analysts. There is no clear evidence whether a particular analyst is most influential on general market investors. Therefore, a single analyst's projection does not predict investor outlooks as reliably as does a consensus of market analysts' projections. The consensus of estimates is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, of analysts' forecasts is a good proxy for investor expectations.

The growth rates I used in my DCF analysis are shown in Exhibit CCW-3. The average growth rate for my proxy group is 5.95% and a median growth rate of 5.81%.

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A As shown in Exhibit CCW-4, page 1, the average and median constant growth DCF returns for my proxy group for the 13-week analysis are 9.31% and 9.14%, respectively.

Q DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?

A Yes. The constant growth DCF analysis for my proxy group is based on a group average long-term growth rate of 5.95%. The three- to five-year growth rates are nearly

40% higher than the projected long-term projected Gross Domestic Product ("GDP") growth rate of 4.35%, described below. This is not a sustainable level of growth.

Q HOW DID YOU IDENTIFY THE LONG-TERM PROJECTED GDP GROWTH RATE?

A Although there may be short-term peaks, the long-term sustainable growth rate for a utility stock cannot exceed the growth rate of the economy in which it sells its goods and services. The long-term maximum sustainable growth rate for a utility investment is, accordingly, best proxied by the projected long-term GDP growth rate as that reflects the projected long-term growth rate of the economy as a whole. *Blue Chip Economic Indicators* projects that over the next 5 and 10 years, the U.S. nominal GDP will grow at an annual rate of approximately 4.35%.[16] As such, the average nominal growth rate over the next 10 years is around 4.35%, which I believe is a reasonable proxy of long-term growth.

Later in this testimony, I discuss academic and investment practitioner support for using the projected long-term GDP growth outlook as a maximum long-term growth rate projection. Using the long-term GDP growth rate as a conservative projection for the maximum growth rate is logical, and is generally consistent with academic and economic practitioner accepted practices.

[16]Blue Chip Financial Forecasts, June 1, 2022 at page 14.

E. Sustainable Growth DCF

Q PLEASE DESCRIBE WHAT THE SUSTAINABLE GROWTH DCF METHOD IS AND HOW YOU ESTIMATED A SUSTAINABLE GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A A sustainable growth rate, also known as the internal growth rate, is based on the percentage of the utility's earnings that is retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

The internal growth methodology is tied to the percentage of earnings retained in the Company and not paid out as dividends. The earnings retention ratio is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings.

The payout ratios of the proxy group are shown in my Exhibit CCW-5. These dividend payout ratios and earnings retention ratios then can be used to develop a long-term growth rate driven by earnings retention.

The data used to estimate the long-term sustainable growth rate is based on the Company's current market-to-book ratio and on *Value Line*'s three- to five-year projections of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Exhibit CCW-6, the average and median sustainable growth rates for the proxy group using this internal growth rate model are 5.67% and 5.53%, respectively.

Q WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE GROWTH RATES?

A A DCF estimate based on these sustainable growth rates is developed in Exhibit CCW-7. As shown there, and using the same formula in Equation 2 above, a sustainable growth DCF analysis produces proxy group average and median DCF results for the 13-week period of 9.02% and 9.20%, respectively.

F. Multi-Stage Growth DCF Model

Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. As previously indicated, the DCF is designed to reflect a present value of an infinite string of future cash flow. That said, however, my first constant growth DCF is based on the analyst growth rate projections, so it is a reasonable reflection of rational investment expectations over the next three to five years. The limitation on this constant growth DCF model is that it cannot reflect a rational expectation that a period of high or low short-term growth can be followed by a change in growth to a rate that is more reflective of long-term sustainable growth. In order to account for the outlook of changing growth expectations, I performed a multi-stage DCF analysis.

Q WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?

A Analyst-projected growth rates over the next three to five years will change as utility earnings growth outlooks change. Utility companies go through cycles in making investments in their systems. When utility companies are making large investments, their rate base grows rapidly, which in turn accelerates earnings growth. Once a major construction cycle is completed or levels off, growth in the utility rate base slows and its earnings growth slows from an abnormally high three- to five-year rate to a lower, sustainable growth rate.

As major construction cycles extend over longer periods of time, even with an accelerated construction program, the growth rate of the utility will slow simply because rate base growth will slow, and the utility has limited human and capital resources available to expand its construction program. Therefore, the three- to five-year growth rate projection should be used as a long-term sustainable growth rate, but not without making a reasonable informed judgment to determine whether it considers the current market environment, the industry, and whether the three- to five-year growth outlook is sustainable.

Q PLEASE DESCRIBE YOUR MULTI-STAGE DCF MODEL.

A The multi-stage DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage DCF model reflects three growth periods: (1) a short-term growth period consisting of the first five years; (2) a transition period, consisting of the next five years (6 through 10); and (3) a long-term growth period starting in year 11 and extending into perpetuity.

For the short-term growth period, I relied on the consensus of analysts' growth projections described above in relationship to my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor reflecting the difference between the analysts' growth rates and the long-term sustainable growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable long-term growth rate.

Q WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the economy in which they sell services. Utilities' earnings and dividend growth is created by increased utility investment in its rate base. Examples of what can drive such investment are service area economic growth, system reliability upgrades, or state and federal green energy initiatives.

The U.S. Department of Energy, Energy Information Administration ("EIA") has observed that utility sales growth tracks U.S. GDP growth, albeit at a lower level, as shown in Exhibit CCW-8. Utility sales growth has lagged behind GDP growth for more than a decade. As a result, nominal GDP growth is a reasonable upper limit for utility sales growth, rate base growth, and earnings growth in the long-run. Therefore, the U.S. GDP nominal growth rate is a conservative proxy for the highest sustainable long-term growth rate of a utility.

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

A Yes. This concept is supported in published analyst literature and academic work. Specifically, in a textbook titled "Fundamentals of Financial Management," published by Eugene Brigham and Joel F. Houston, the authors state as follows:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation).[17]

[17] *Fundamentals of Financial Management*, Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298 (emphasis added).

The use of the economic growth rate is also supported by investment practitioners as outlined as follows:

> **Estimating Growth Rates**
>
> One of the advantages of a three-stage discounted cash flow model is that it fits with life cycle theories in regards to company growth. In these theories, companies are assumed to have a life cycle with varying growth characteristics. Typically, the potential for extraordinary growth in the near term eases over time and eventually growth slows to a more stable level.
>
> * * *
>
> Another approach to estimating long-term growth rates is to focus on estimating the overall economic growth rate. Again, this is the approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain the economic growth rate, a forecast is made of the growth rate's component parts. Expected growth can be broken into two main parts: expected inflation and expected real growth. By analyzing these components separately, it is easier to see the factors that drive growth.[18]

Q HOW DID YOU DETERMINE A LONG-TERM GROWTH RATE THAT REFLECTS THE CURRENT CONSENSUS OF INDEPENDENT MARKET PARTICIPANTS?

A I relied on the consensus of long-term GDP growth projections as projected by independent economists. *Blue Chip Financial Forecasts* publishes the consensus for GDP growth projections twice a year. These projections reflect current outlooks for GDP and are likely to be influential on investors' expectations of future growth outlooks. The consensus of projected GDP growth is about 4.35% over the next 10 years.[19]

[18]Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook at 51 and 52.
[19]Blue Chip Financial Forecasts, June 1, 2022 at page 14.

Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP GROWTH?

A Yes, and these alternative sources corroborate the consensus analysts' projections I relied on. Several projections are shown in Table CCW-7 below.

TABLE CCW-7

GDP Forecasts

Source	Projected Period	Real GDP	Inflation	Nominal GDP
Blue Chip Financial Forecasts [1]	5-10 Yrs	2.1%	2.3%	4.3%
EIA - Annual Energy Outlook[2]	29 Yrs	2.2%	2.3%	4.5%
Congressional Budget Office[3]	30 Yrs	1.7%	2.0%	3.7%
Moody's Analytics[4]	31 Yrs	2.1%	2.1%	4.2%
Social Security Administration[5]	74 Yrs			4.1%
Economist Intelligence Unit[6]	29 Yrs	1.7%	2.2%	3.9%

Sources:
[1]Blue Chip Financial Forecasts, June 1, 2022 at 14.
[2]U.S. EnergyInformation Administration (EIA), Annual Energy Outlook 2022, March 3, 2022.
[3]Congressional Budget Office, Long-Term Budget Outlook, March 2021.
[4]Moody's Analytics Forecast, downloaded June 29, 2022.
[5]Social Security Administration, "2021 OASDI Trustees Report," Table VI.G4, August 31, 2021.
[6]S&P MI, Economist Intelligence Unit, downloaded on March 9, 2022.

As shown in the table above, the real GDP and the inflation fall in the range of 1.70% to 2.20% and 2.0% to 2.3%, respectively. This results in a nominal GDP in the range of 3.7% to 4.5%. Therefore, the nominal GDP growth projections made by these independent sources support my use of 4.35% as a reasonable estimate of market participants' expectations for long-term GDP growth. The real GDP and nominal GDP growth projections made by these independent sources support my use of 4.35% as a reasonable estimate of market participants' expectations for long-term GDP growth.

Q WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE DCF ANALYSIS?

A I relied on the same 13-week average stock prices and the most recent quarterly dividend payment data discussed above. For the first stage, I used the consensus of analysts' growth rate projections discussed above in my constant growth DCF model. The first stage covers the first five years, consistent with the time horizon of the securities analysts' growth rate projections. The second stage, or transition stage, begins in year 6 and extends through year 10. The second stage growth transitions the growth rate from the first stage to the third stage using a straight linear trend. For the third stage, or long-term sustainable growth stage, starting in year 11, I used a 4.35% long-term sustainable growth rate based on the consensus of economists' long-term projected nominal GDP growth rate.

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE DCF MODEL?

A As shown in Exhibit CCW-9, the average and median DCF ROEs for my proxy group using the 13-week average stock price are 7.99% and 8.19%, respectively.

Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

A The DCF results are summarized in Table CCW-8 below. It is my opinion a reasonable ROE based on the DCF results summarized in Table CCW-8 is 9.0%.

TABLE CCW-8

Summary of DCF Results

Description	Proxy Group Average	Proxy Group Median
Constant Growth DCF Model (Analysts' Growth)	9.31%	9.14%
Constant Growth DCF Model (Sustainable Growth)	9.02%	9.20%
Multi-Stage DCF Model	7.99%	8.19%

G. Risk Premium Model

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher return to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends or guarantee returns on common equity investments. Therefore, common equity securities are considered to be riskier than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I quantify the difference between regulatory commission-authorized returns on common equity and contemporary U.S. Treasury bonds. The difference between the authorized return on common equity and the Treasury bond yield is the risk premium. I estimated the risk premium on an annual basis for each year since January 1986. The authorized ROEs were based on regulatory commission-authorized returns for

utility companies. Authorized returns are typically based on expert witnesses' estimates of the investor-required return at the time of the proceeding.

The second equity risk premium estimate is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields by Moody's. I selected the period 1986 through 2021 because public utility stocks consistently traded at a premium to book value during that period. This is illustrated in Exhibit CCW-10, which shows the market-to-book ratio since 1986 for the utility industry was consistently above a multiple of 1.0x. Over this period, an analyst can infer that authorized ROEs were sufficient to support market prices that at least exceeded book value. This is an indication that commission-authorized returns on common equity supported a utility's ability to issue additional common stock without diluting existing shares. It further demonstrates that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Exhibit CCW-11, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.66%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity for a risk premium methodology.

I assessed the five-year and ten-year rolling average risk premiums over the study period to gauge the variability over time of risk premiums. These rolling average risk premiums mitigate the impact of anomalous market conditions and skewed risk premiums over an entire business cycle. As shown on my Exhibit CCW-11, the

five-year rolling average risk premium over Treasury bonds ranged from 4.17% to 7.23%, while the ten-year rolling average risk premium ranged from 4.30% to 6.93%.

As shown on my Exhibit CCW-12, the average indicated equity risk premium over contemporary "A" rated Moody's utility bond yields was 4.30%. The five-year and ten-year rolling average risk premiums ranged from 2.80% to 5.97% and 3.11% to 5.75%, respectively.

Q DO YOU BELIEVE THAT THE TIME PERIOD USED TO DERIVE THESE EQUITY RISK PREMIUM ESTIMATES IS APPROPRIATE TO FORM ACCURATE CONCLUSIONS ABOUT CONTEMPORARY MARKET CONDITIONS?

A Yes. Contemporary market conditions can change dramatically during the period that rates determined in this proceeding will be in effect. A relatively long period of time where stock valuations reflect premiums to book value indicates that the authorized ROEs and the corresponding equity risk premiums were supportive of investors' return expectations and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

Alternatively, some have recommended that use of "actual achieved investment return data" in a risk premium study should be based on long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. Short-term, abnormal actual returns would be smoothed over time and the achieved actual investment returns over long time periods would approximate investors'

expected returns. Therefore, it is reasonable to assume that averages of annual achieved returns over long time periods will generally converge on the investors' expected returns.

Q PLEASE EXPLAIN OTHER MARKET EVIDENCE YOU RELIED ON IN DETERMINING AN APPROPRIATE EQUITY RISK PREMIUM.

A The equity risk premium should reflect the market's perception of risk in the utility industry today. I have gauged investor perceptions in utility risk today in Exhibit CCW-13, where I show the yield spread between utility bonds and Treasury bonds over the last 43 years. As shown in this schedule, the average utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utility bonds for this historical period are 1.48% and 1.91%, respectively.

A current 13-week average "A" rated utility bond yield of 4.74% when compared to the current Treasury bond yield of 3.11%, as shown in Exhibit CCW-14, page 1, implies a yield spread of 1.63%. This current utility bond yield spread is slightly higher than the 43-year average spread for "A" rated utility bonds of 1.48%. The 13-week average yield on "Baa" rated utility bonds is 5.09%. This indicates a current spread for the "Baa" rated utility bond yield of 1.98%, which is also slightly higher than the 43-year average of 1.91%. This supports an above average risk premium.

Q WHAT IS YOUR RECOMMENDED RETURN FOR THE COMPANY BASED ON YOUR RISK PREMIUM STUDY?

A Considering the current economic environment, current levels of interest rates as well as interest rate projections, a move toward a more normalized equity risk premium is warranted.

A risk premium between the 50th and 75th percentile (i.e. the third quartile) of the rolling-5-year average risk premiums would be appropriate in the current market. The third quartile would be for the observations that are equal to or above the 50th percentile observation, and equal to or below the 75th percentile. This produces an equity risk premium in the range of 5.68% to 6.44%. I believe a risk premium in the range of 5.68% to 6.44% is appropriate given the current economic environment and interest rate projection of 3.80%. Adding these risk premiums to the projected Treasury yield of 3.80% produces an ROE in the range of 9.48% to 10.24%.

Applying a similar methodology as described above, the third quartile produces an equity risk premium in the range of 4.24% to 5.33%. The A-rated utility bond yield has averaged 4.74% over the 13-week period ending July 8, 2022 while the Baa-rated utility bond yield has averaged 5.09% over the same period. Adding these risk premiums to the 13-week A-rated utility bond yield of 4.74% produces an estimated cost of equity in the range of 9.27% to 10.07%. Adding these risk premiums to the 13-week Baa-rated utility bond yield of 5.09% produces an estimated cost of equity in the range of 9.62% to 10.42%.

The results of my risk premium analyses are summarized in Table CCW-9. Based on these results, I conclude that a reasonable ROE based on my risk premium analyses is 9.8%.

TABLE CCW-9

Summary of Risk Premium Results

Description	ROE Estimate
Projected Treasury Yield	9.48% - 10.24%
A-Rated Utility Bond	9.27% - 10.07%
Baa-Rated Utility Bond	9.62% - 10.42%

H. Capital Asset Pricing Model ("CAPM")

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta - Measure of the risk for stock

The stock-specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, stock-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix, and production limitations).

The risks that cannot be eliminated when held in a diversified portfolio are non-diversifiable risks. Non-diversifiable risks are related to the market in general and referred to as systematic risks. Risks that can be eliminated by diversification are non-systematic risks. In a broad sense, systematic risks are market risks and non-systematic risks are business risks. The CAPM theory suggests the market will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk investors will be compensated for are systematic, or non-diversifiable, risks. The beta is a measure of the systematic, or non-diversifiable risks.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 3.80%.[20] The current 30-year Treasury bond yield is 3.11%, as shown in Exhibit CCW-14 at page 1. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield of 3.80% for my CAPM analysis.

Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States government, so long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common

[20]Blue Chip Financial Forecast, July 1, 2022.

stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

Treasury bond yields, however, do include risk premiums related to future inflation and liquidity. In this regard, a Treasury bond yield is not entirely risk-free. Risk premiums related to unanticipated inflation and interest rates reflect systematic market risks. Consequently, for a company with a beta less than 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown in Exhibit CCW-15, the current proxy group average and median *Value Line* beta estimates are 0.83 and 0.80, respectively. In my experience, these beta estimates are abnormally high and are unlikely to be sustained over the long-term. As such, I have also reviewed the historical average of the proxy group's *Value Line* betas. The historical average *Value Line* beta since 2014 is 0.74 and has ranged from 0.58 to 0.87. Prior to the recent pandemic, the high end of this range was 0.78.

In addition to *Value Line*, I have also included adjusted beta estimates as provided by Market Intelligence's Beta Generator model. This model relied on a 5-year period on a weekly basis ending July 8, 2022. The average and median Market Intelligence beta is 0.58 and 0.59, respectively. Market Intelligence betas as calculated using its beta generator model are adjusted using the Vasicek method and calculated using the S&P 500 as the proxy for the investable market. This is in stark contrast with

the *Value Line* beta estimates that are adjusted using a constant weighting of 67%/35% to the raw beta/market beta and use the New York Stock Exchange as the proxy for the investable market. Because I rely on the S&P 500 to estimate the expected return on the investable market, it makes sense to rely on beta estimates that are calculated using the S&P 500 as the benchmark for the market. Further, as S&P explains:

> The Vasicek Method is a superior alternative to the Bloomberg Beta adjustment. The Bloomberg adjustment is not appropriate for a vast number of situations, as it assigns constant weighting regardless of the standard error in the raw beta estimation (Bloomberg Beta = 1/3*market beta + 2/3*Raw Beta). Given the statistical fact that a larger sample size yields a smaller error, the Vasicek method more appropriately adjusts the raw beta via weights determined by the variance of the individual security versus the variance of a larger sample of comparable companies. The weights are designed to bring the raw beta closer to whichever beta estimation has the smallest error. This is a feature the Bloomberg beta cannot replicate.[21]

Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATES?

A My market risk premium estimates are derived using two general approaches: a risk premium approach and a DCF approach. I also consider the normalized market risk premium of 5.50% with the normalized risk-free rate of 3.50% as published by Kroll, formerly known as Duff & Phelps.

Q PLEASE DESCRIBE YOUR MARKET RISK PREMIUM ESTIMATE DERIVED USING THE RISK PREMIUM METHODOLOGY.

A The forward-looking risk premium-based estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the

[21]S&P Market Intelligence, Beta Generator Model. Notably, while S&P makes reference to the Bloomberg method of applying 2/3 and 1/3 weights to the raw beta and market beta, respectively, the comparison still applies to *Value Line's* methodology of applying 67% and 35% weights. Both methods are forms of the Blume adjustment. While the weights are slightly different between the Bloomberg and *Value Line* methods, they are similar and apply a constant weight without any regard to accuracy. As such, the criticisms of the betas offered by S&P apply to both Bloomberg betas and *Value Line* betas.

risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

The Kroll *2022 SBBI Yearbook* estimates the historical arithmetic average real market return over the period 1926 to 2021 to be 9.20%.[22] A current consensus for projected inflation, as measured by the Consumer Price Index ("CPI"), is 2.50%.[23] Using these estimates, the expected market return is 11.93%.[24] The market risk premium then is the difference between the 11.93% expected market return and the projected risk-free rate of 3.80%, or 8.13%.

Q PLEASE DESCRIBE YOUR MARKET RISK PREMIUM ESTIMATES DERIVED USING THE DCF METHODOLOGY.

A I employed two versions of the constant growth DCF model to develop estimates of the market risk premium. I first employed the Federal Energy Regulatory Commission's ("FERC") method of estimating the expected return on the market that was established in its Opinion No. 569-A. FERC's method for estimating the expected return on the market is to perform a constant growth DCF analysis on each of the dividend paying companies of the S&P 500 index. The growth rate component is based on the average of the growth projections excluding companies with growth rates that were negative or greater than 20%.[25] The weighted average growth rate for the remaining companies is 10.40%. After reflecting the FERC prescribed method of adjusting the dividend yield by (1+ 0.5g), the weighted average expected dividend yield is 1.89%. Thus, the

[22]Kroll, 2022 SBBI Yearbook at 146.
[23]Blue Chip Financial Forecast, July 1, 2022.
[24][(1 +9.20%) ∗ (1 + 2.50%) - 1] ∗ 100.
[25]Opinion No. 569-A, at p. 210.

DCF-derived expected return on the market is the sum of those two components, or 12.29%. The market risk premium then is the expected market return of 12.29% less the projected risk-free rate of 3.80%, or 8.50%.

My second DCF-based market risk premium estimate was derived by performing the same DCF analysis described above, except I used all companies in the S&P 500 index rather than just the dividend paying companies. The weighted average growth rate for these companies is 11.00%. After reflecting the FERC prescribed method of adjusting the dividend yield by (1+ 0.5g), the weighted average expected dividend yield is 1.48%. Thus, the DCF-derived expected return on the market is the sum of those two components, or 12.48%. The market risk premium then is the expected market return of 12.48% less the projected risk-free rate of 3.80%, or 8.70%.

The average expected market return based on the DCF model is 12.39% and the average market risk premium based on the two DCF estimates is 8.60%.

Q HOW DO YOUR EXPECTED MARKET RETURNS COMPARE TO CURRENT EXPECTATIONS OF FINANCIAL INSTITUTIONS?

A As shown in Table CCW-10, my average expected market return of 11.11%[26] exceeds long-term market expectations of several financial institutions.

[26] 11.11% = (9.00% + 12.39% + 11.93%) / 3.

TABLE CCW-10

Long-Term Expected Return on the Market

Source	Term	Expected Return Large Cap Equities
BlackRock Capital Management[1]	30 Years	7.40%
JP Morgan Chase[2]	10 - 15 Years	4.10%
Vanguard[3]	10 Years	2.3% - 4.3%
Research Affiliates[4]	10 Years	1.9% - 5.2%

Sources:
[1]BlackRock Investment Institute, February 2022 report.
[2]JP Morgan Chase, Long-Term Capital Market Assumptions, 2022 Report.
[3]Vanguard economic and market outlook for 2022: Striking a better balance.
[4]Research Affiliates, Asset Allocation Interactive.

When compared to the expected market returns of financial institutions above, my average expected market return of 11.11% is more than two times higher than all but one projection. For these reasons, my expected market returns, and the associated market risk premiums, should be considered reasonable, if not high-end estimates.

Q HOW DO YOUR ESTIMATED MARKET RISK PREMIUMS COMPARE TO THAT ESTIMATED BY KROLL?

A The Kroll analysis indicates a market risk premium falls somewhere in the range of 5.50% to 7.46%. My market risk premium estimates are in the range of 5.50% to 8.60%.

Q HOW DOES KROLL MEASURE A MARKET RISK PREMIUM?

A Kroll's range is based on several methodologies. First, Kroll estimated a market risk premium of 7.46% based on the difference between the total market return on common stocks (S&P 500) less the income return on 20-year Treasury bond investments over the 1926-2021 period.[27]

Second, Kroll used the Ibbotson & Chen supply-side model which produced a market risk premium estimate of 6.22%.[28] Kroll explains that the historical market risk premium based on the S&P 500 was influenced by an abnormal expansion of P/E ratios relative to earnings and dividend growth. In order to control for the volatility of extraordinary events and their impacts on P/E ratios, Kroll takes into consideration the three-year average P/E ratio as the current P/E ratio. Therefore, Kroll adjusted this market risk premium estimate to normalize the growth in the P/E ratio to be more in line with the growth in dividends and earnings.

Finally, Kroll develops its own recommended equity, or market risk premium, by employing an analysis that takes into consideration a wide range of economic information, multiple risk premium estimation methodologies, and the current state of the economy by observing measures such as the level of stock indices and corporate spreads as indicators of perceived risk. Based on this methodology, and utilizing a "normalized" risk-free rate of 3.50%, Kroll concludes that the current expected, or forward-looking, market risk premium is 5.50%, implying an expected return on the market of 9.00%.[29]

[27]Kroll, 2022 SBBI Yearbook at 199.
[28]*Id.* at 207.
[29]Kroll, *Kroll Increases U.S. Normalized Risk-Free Rate from 3.0% to 3.5%, but Spot 20-Year U.S. Treasury Yield Preferred When Higher*, June 16, 2022.

It should be noted that Kroll's market risk premiums are measured over a 20-year Treasury bond. Because I am relying on a projected 30-year Treasury bond yield, the results of my CAPM analysis should be considered conservative estimates for the cost of equity.

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Exhibit CCW-16, I have provided the results of nine different applications of the CAPM. The first three results presented are based on the proxy group's current average *Value Line* beta of 0.83. The results of the CAPM based on these inputs range from 8.08% to 10.97%.

The next set of three results presented are based on the proxy group's historical *Value Line* beta of 0.74. The results of the CAPM based on these inputs range from 7.56% to 10.15%.

The last set of three results presented are based on the proxy group's current S&P Global Market Intelligence beta of 0.58. The results of the CAPM based on these inputs range from 6.71% to 8.82%. My CAPM results are summarized in Table CCW-11.

TABLE CCW-11

CAPM Results Summary

Description	Current VL Beta	Historical VL Beta	Current MI Beta
D&P Normalized Method	8.08%	7.56%	6.71%
Risk Premium Method	10.55%	9.78%	8.53%
FERC DCF	10.97%	10.15%	8.82%

Q WHAT IS YOUR RECOMMENDED RETURN FOR THE COMPANY BASED ON YOUR CAPM?

A The average of my CAPM results is approximately 9.02%, while the median is 8.82%. Based on the results summarized above, I recommend a CAPM return estimate of 9.4%.

I. Return on Equity Summary

Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR THE COMPANY?

A The results of my analyses are summarized in Table CCW-12.

TABLE CCW-12

Return on Common Equity Summary

Description	Results
DCF	9.0%
Risk Premium	9.8%
CAPM	9.4%

Based on my analyses described above, I estimate the Company's current market cost of equity to be in the reasonable range of 9.00% to 9.80%. I recommend the Commission authorize FCG an ROE of 9.40% and a common equity ratio of no higher than 50.00%.

V. RESPONSE TO MS. NELSON

Q WHAT RETURN ON COMMON EQUITY IS FCG PROPOSING FOR THIS PROCEEDING?

A Ms. Nelson concludes that an ROE of 10.75% is reasonable. Her recommendation reflects her assessment of the current capital market conditions and FCG's business risks relative to the companies included in her proxy group. Further, her recommendation, she considered the Company's higher risk profile associated with its significantly smaller size, the regulatory environment in which FCG operates, the incremental risk associated with its proposed multi-year rate plan, as well as the costs of issuing stock.[30]

[30] Nelson Direct Testimony at 77-78.

Finally, she concludes that the Company's requested capital structure including 59.60% common equity and 40.40% long-term debt is consistent with the investor-supplied capital portions for her proxy companies.[31]

Q ARE MS. NELSON'S ROE ESTIMATES REASONABLE?

A No. Ms. Nelson's estimated ROE is overstated and should be rejected. Ms. Nelson's analyses produce excessive results for various reasons, including the following:

1. Her constant growth DCF results are based on unsustainably high growth rates;
2. Her application of the quarterly DCF overstates a fair ROE;
3. Her CAPM is based on inflated market risk premiums;
4. Her Empirical CAPM ("ECAPM") is based on a flawed methodology;
5. Her consideration of additional business risks is inappropriate; and
6. Her conclusion that the Company's requested capital structure is reasonable is inappropriate.

Q PLEASE COMPARE YOUR RECOMMENDED ROE WITH MS. NELSON'S ROE ESTIMATES.

A Ms. Nelson's ROE estimates are summarized in Table 8 below. In the "Adjusted" Column 2, I show the results with prudent and sound adjustments to correct the flaws referenced above. With such adjustments to Ms. Nelson's proxy group's DCF, CAPM, ECAPM and Risk Premium return estimates, Ms. Nelson's studies show that my 9.40% recommended ROE for FCG is more reasonable and consistent with the current capital market environment.

[31] *Id.*

TABLE CCW-13

Nelson's Adjusted Return on Equity Estimates

Description	Mean[1] (1)	Adjusted (2)
Constant Growth DCF (Mean ROE)		
30-Day Average	9.54%	8.77%
90-Day Average	9.76%	8.88%
180-Day Average	9.85%	8.93%
Quarterly Growth DCF (Mean ROE)		
30-Day Average	9.68%	8.77%
90-Day Average	9.91%	8.88%
180-Day Average	10.00%	8.93%
CAPM		
Current 30-Yr Treasury (2.37%)	10.12% / 12.80%	9.17% / 9.80%
Projected 30-Yr Treasury (3.32%)	10.33% / 12.94%	9.38% / 9.94%
ECAPM		
Current 30-Yr Treasury (2.37%)	10.67% / 13.26%	Reject
Projected 30-Yr Treasury (3.32%)	10.83% / 13.37%	Reject
Risk Premium		
Current 30-Yr Treasury (2.37%)	9.73%	9.73%
Projected 30-Yr Treasury (3.32%)	9.80%	9.80%
Recommended ROE	10.75%	9.40%

Sources: [1]Nelson Direct Testimony at 7 and Exhibit JEN-2 thought JEN-6.

As shown in Table CCW-13 above, corrections and improvements to the accuracy of Ms. Nelson's ROE estimates support an ROE for FCG of no higher than 9.40% in the current market.

While my adjustments are presented in Adjusted Column 2 of Table CCW-13 above, a description of the bases for my adjustments to Ms. Nelson's ROE estimates is presented below.

A. Nelson's Constant Growth DCF Models

Q PLEASE DESCRIBE MS. NELSON'S CONSTANT GROWTH DCF RETURN ESTIMATES.

A Ms. Nelson's constant growth DCF returns are developed on her Exhibit JEN-2. Ms. Nelson's constant growth DCF models are based on consensus growth rates published by *Yahoo! Finance* and *Zacks* and individual growth rate projections made by *Value Line*.

She relied on dividend yield calculations based on average stock prices over three different time periods: 30-day, 90-day, and 180-day ending March 31, 2022 – all reflecting a half year of dividend growth adjustments.

Q DO YOU HAVE ANY ISSUES WITH MS. NELSON'S CONSTANT GROWTH DCF RESULTS?

A Yes. As discussed in regard to my own DCF study, the current consensus analysts' growth rates are higher than the long-term sustainable growth rate of 4.35%. Ms. Nelson's constant growth DCF model is based on an average proxy group growth rate of 6.07%, which is significantly above the long-term growth rate for the U.S. economy. As such, her constant growth DCF results potentially overstate the cost of equity for FCG.

Q DO YOU HAVE ANY CONCERNS WITH MS. NELSON'S QUARTERLY DCF RETURN ESTIMATES?

A Yes. Ms. Nelson included quarterly compounding in her DCF return estimates to replicate reinvestment of quarterly dividends over a year, but that can overstate a fair ROE for setting rates. This occurs because the return available to investors from

reinvesting dividends is not a cost to the utility. Therefore, it should not be reflected as a cost of capital in setting utility rates. By including the quarterly compounding adjustment in the authorized returns used to set rates, investors are provided an opportunity to earn that quarterly compounding return twice: first, by setting rates to increase the allowed ROE to include a dividend reinvestment return despite the absence of actual reinvestment of the dividend in the utility; and second, investors are able to earn the reinvestment dividend return again when they receive dividends from the utilities and actually reinvest in alternative investments.

As such, including the quarterly compounding return in the DCF return estimates overstates a fair ROE for setting rates because it overstates the utility's cost of capital. Removing the quarterly compounding from Ms. Nelson's DCF return estimates causes that model to yield the same results as her constant growth DCF model, which again should be considered as a high-end DCF return for FCG.

Q IS THERE A WAY TO CORRECT MS. NELSON'S CONSTANT GROWTH DCF RESULTS TO REFLECT A REASONABLE GROWTH RATE EXPECTATION?

A Yes. In Column 2 in Table CCW-13 above, I present the midpoint of DCF results from Ms. Nelson's constant growth DCF analysis along with the results of my multi-stage DCF model to reflect a reasonable long-term sustainable growth rate as discussed in regard to my own studies. After giving consideration to the results of a multi-stage DCF analysis, Ms. Nelson's DCF mean adjusted results generally support an ROE no higher than of 9.0%.

B. Nelson's CAPM Studies

Q PLEASE DESCRIBE MS. NELSON'S CAPM ANALYSIS.

A Ms. Nelson's CAPM analyses consider current and projected Treasury bond yields, 10-year and 5-year beta estimates from Bloomberg and Value Line, respectively, and market risk premiums based on the long-term historical market return and projected market returns. Her mean traditional CAPM results fall in the range of 10.12% to 12.94%. Her mean empirical CAPM results fall in the range of 10.67% to 13.37%.

Q PLEASE DESCRIBE MS. NELSON'S MARKET RISK PREMIUMS.

A Ms. Nelson derived her ex-ante market risk premiums by developing a DCF analysis for the market (S&P 500) less her current and projected risk-free rates of 2.37% and 3.32%. Her DCF-derived expected market return is 14.64%. As such, her market risk premium estimates are 12.27%, and 11.32% based on the DCF market return of 14.64% from Bloomberg less the current and projected 30-year Treasury bond yields of 2.37%, and 3.32%, respectively.[32]

Ms. Nelson also develops an ex-post market risk premium based on the historical market return of 12.33% less her current and projected risk-free rates. This produces market risk premiums of 9.96% and 9.01%.[33]

Q WHAT ISSUES DO YOU HAVE WITH MS. NELSON'S DCF-DERIVED MARKET RISK PREMIUM ESTIMATES?

A Ms. Nelson's DCF-derived market risk premium is based on a market return of approximately 14.64%.[34] Her expected market return of 14.64% is based on a market-

[32] Exhibit JEN-5.
[33] *Id.*
[34] Exhibit JEN-4, page 1.

weighted average dividend yield of 1.45% and a market-weighted average growth rate of 13.19%. As discussed above with respect to my own DCF model, the DCF model requires a long-term sustainable growth rate. In fact, as shown on her Exhibit JEN-4, Ms. Nelson's DCF-based expected return on the market includes individual growth rates as high as 307.15% (United Airlines Holdings Inc.). Including United Airlines, Ms. Nelson's DCF for the market includes 70 growth rates that exceed 20%, of which four are greater than 135%.

To put a growth rate of 307.15% into perspective, it would take a little more than five years for United Airline's reported market capitalization of approximately $15.0 billion to exceed the most recently reported GDP of the United States of $24.85 trillion. In that same year, United Airline's market capitalization would outgrow the U.S. economy, assuming the economy grew at 4.35% year over year. Explained another way, assuming the long-term growth rate of 4.35%, U.S. GDP would reach a nominal level of $32.1 trillion in 2028. Assuming a growth rate of 307.15% for United Airlines as Ms. Nelson has done, its market capitalization will reach $68.3 trillion by the end of the second quarter in 2028, exceeding the U.S. GDP by $36.2 trillion at that time. I present this graphically below in Figure CCW-5. This is simply an impossible outcome, rendering Ms. Nelson's assumptions unreasonable and economically and financially unfeasible.

FIGURE CCW-5

From another perspective, 305 of the growth rates relied on by Ms. Nelson are 8.7% or higher, which is 2 times the projected growth of the U.S. economy. As pointed out in my example above, it simply is not reasonable to believe individual companies, and as a result the overall market, can sustain growth rates as high as Ms. Nelson has assumed. In fact, in the CFA curriculum textbooks, the CFA Institute notes as follows with regard to earnings growth rates for the companies within the composite indices (i.e., S&P 500):

> Earnings growth for the overall national economy can differ from the growth of earnings per share in a country's equity market composites. This is due to the presence of new businesses that are not yet included in the equity indices and are typically growing at a faster rate than the mature companies that make up the composites. **Thus, the earnings growth rate of companies making up the composites should be lower than the earnings growth rate for the overall economy.**[35]

[35]CFA Program Curriculum, 2014 Level II Vol.1, "Ethical and Professional Standards, Quantitative Methods, and Economics", Paul Kutasovic, Reading 15 – Economic Growth and the Investment Decision, p. 609, footnote 5 (emphasis added).

As a result of these unreasonably high long-term market growth rate estimates, Ms. Nelson's market DCF returns used within her CAPM analysis are inflated and not reliable. Consequently, Ms. Nelson's market risk premiums should be given minimal weight in estimating FCG's CAPM-based ROE.

Q CAN MS. NELSON'S CAPM ANALYSIS BE REVISED TO REFLECT A MORE REASONABLE EXPECTED MARKET RETURN AND RESULTING MARKET RISK PREMIUM?

A Yes. As described above, based on several methodologies my average expected market return is 11.11%. Revising her CAPM analyses with my more recent average expected market return of 11.11% produces mean CAPM results of 9.17% to 9.38% based on her 10-year Bloomberg betas, and 9.80% 9.94% using her *Value Line* betas.

C. Nelson's ECAPM Studies

Q PLEASE DESCRIBE MS. NELSON'S ECAPM ANALYSIS.

A Ms. Nelson relies on empirical tests of the traditional CAPM model to modify it in such a way to attempt to *correct* the original CAPM for some deficiencies inherent in the original model. Empirical tests show that the expected return line, or security market line, predicted by the CAPM is not as steep as the model would have us believe. In other words, the traditional CAPM understates the expected return for securities with betas less than 1, and overstates the expected return for securities with betas greater than 1. In order to correct for this empirical finding, Ms. Nelson modifies the traditional CAPM model as follows:

$R_i = R_f + 0.75 \times B_i \times (R_m - R_f) + 0.25 \times B_m \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_m = Beta of the market
B_i = Beta - Measure of the risk for stock

Q WHAT ISSUES DO YOU TAKE WITH MS. NELSON'S ECAPM ANALYSIS?

A The biggest issue I have with Ms. Nelson's ECAPM analysis is her use of an adjusted beta as published by *Value Line*. The impact of Ms. Nelson's ECAPM adjustments increases her adjusted beta estimate of 0.85 to 0.90.[36] The weighting adjustments applied in the ECAPM are mathematically the same as adjusting beta since the inputs are all multiplicative as shown in the formula above.

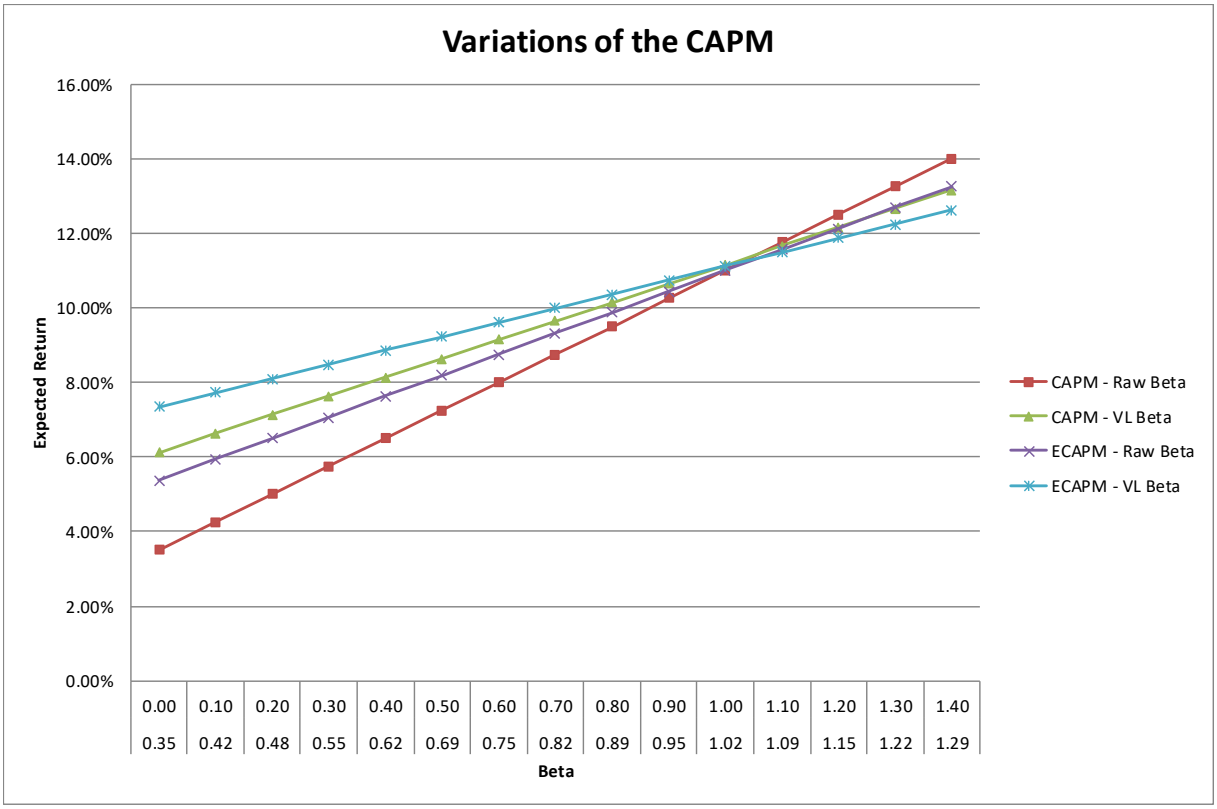
Further, Ms. Nelson's reliance on an adjusted *Value Line* beta in her ECAPM study is inconsistent with the academic research that I am aware of supporting the development of the ECAPM.[37] The end result of using adjusted betas in the ECAPM is essentially an expected return line that has been flattened by two adjustments. In other words, the vertical intercept has been raised twice and the security market line has been flattened twice: once through the adjustments *Value Line* made to the raw beta, and again by weighting the risk-adjusted market risk premium as Ms. Nelson has done. In addition to the many adjustments employed by Ms. Nelson, she further increases the intercept and flattens the security market line by using projected long-term Treasury yields that are at odds with current market expectations and inconsistent with the Federal Reserve's projections and monetary policy.

[36] 75% x 0.85 + 25% x 1 = 0.89.

[37] *See* Black, Fischer, "Beta and Return," *The Journal of Portfolio Management,* Fall 1993, 8-18; and Black, Fischer, Michael C. Jensen and Myron Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," 1972.

The ECAPM with adjusted betas has the effect of increasing CAPM return estimates for companies with betas less than 1, and decreasing the CAPM return estimates for companies with betas greater than 1. I have modeled the expected return line resulting from the application of the various forms of the CAPM/ECAPM below in Figure CCW-6.

FIGURE CCW-6



Along the horizontal axis in Figure 6 above, I have provided the raw unadjusted beta (top row) and the corresponding adjusted *Value Line* beta (bottom row). As shown in Figure 6 above, the CAPM using a *Value Line* beta compared to the CAPM using an unadjusted beta shows that the *Value Line* beta raises the intercept point and flattens the slope of the security market line. As shown in the figure above, the two variations with the most similar slope are the CAPM with the *Value Line* beta, and the ECAPM with a raw beta. This evidence shows that the ECAPM adjustment has a very similar

impact on the expected return line as a *Value Line* beta. Another observation that can be made from the figure above is the magnifying effect that the ECAPM using a *Value Line* beta has on raising the vertical intercept and flattening the slope relative to all other variations. There is simply no legitimate basis to use an adjusted beta within an ECAPM because it unjustifiably alters the security market line and materially inflates a CAPM return for a company with a beta less than 1.

Q IN YOUR EXPERIENCE, IS MS. NELSON'S PROPOSED USE OF AN ADJUSTED BETA IN AN ECAPM STUDY WIDELY ACCEPTED IN THE REGULATORY ARENA?

A No. In my experience, regulatory commissions generally disregard the use of the ECAPM, particularly when an adjusted beta is used in the model. For example,

> The Commission cannot recall a proceeding in which it relied upon the ECAPM in establishing the cost of common equity for a utility. In the instant proceeding, the record supports a finding that use of adjusted betas in the ECAPM is inappropriate. As Staff witness Ms. Freetly explained, by using adjusted betas she already effectively transformed her Traditional CAPM into an ECAPM. Therefore, including an additional beta adjustment in the ECAPM model would result in inflated estimates of the samples' cost of common equity.[38]

D. Nelson's Bond Yield Plus ("BYP") Risk Premium

Q PLEASE DESCRIBE MS. NELSON'S BYP RISK PREMIUM METHODOLOGY.

A As shown on her Exhibit JEN-6, Ms. Nelson constructs a risk premium ROE estimate based on the premise that equity risk premiums are inversely related to interest rates. She estimates the equity risk premium over the period January 1980 through March 2022. She then applies a regression formula to the current, projected 30-year Treasury bond yields of 2.37% and 3.32%, respectively, to produce equity risk premiums of

[38]Illinois-American Water Company, ICC Order Docket No. 11-0767, 109 (July 31, 2012).

7.35% and 6.48%, respectively. She calculates a risk premium ROE estimate of 9.73% to 9.80%.[39]

Q DO YOU HAVE ANY INITIAL COMMENTS REGARDING HER RISK PREMIUM RESULTS?

A Yes. While Ms. Nelson does not provide a recommended range of reasonableness based on the results of her analyses, she does offer 10.75% as her recommended ROE. Ms. Nelson's risk premium analysis produces results in the range of 9.73% to 9.80%. Given her recommended ROE of 10.75% is between 95 and 102 basis points higher than the result of her risk premium, she does not seem to give much weight to the risk premium results based on her current and near-term interest rate levels.

Q DO YOU HAVE ANY COMMENTS ON MS. NELSON'S BYPRP ANALYSIS?

A I generally disagree with the application of a regression analysis to estimate the cost of equity in the risk premium model. However, Ms. Nelson's results are generally consistent with mine at this time. While I disagree with her methodology, the results are consistent with my risk premium method, therefore, I do not take issue with them at this time.

E. Ms. Nelson's Consideration of Additional Risks

Q DID MS. NELSON CONSIDER ADDITIONAL BUSINESS RISKS TO JUSTIFY HER ROE?

A It appears so. Ms. Nelson believes that FCG is exposed to additional risks that should be accounted for: (1) FCG's regulatory environment and its capital expenditure plan;

[39] Exhibit JEN-6.

and (2) FCG's small size relative to the proxy group companies.[40] Ms. Nelson believes that these additional risks should be considered in determining FCG's ROE. I disagree.

Q PLEASE EXPLAIN.

A The major business risks identified by Ms. Nelson are already considered in the assigning of a credit rating by the various credit rating agencies.

The average S&P credit rating for my proxy group of A-, as shown on my Exhibit CCW-2, is one notch lower than FCG's parent FPL's rating of A. The relative risks discussed by Ms. Nelson are already incorporated in the credit ratings of the proxy group companies. Indeed, S&P and other credit rating agencies go to great lengths and detail in assessing a utility's business risk and financial risk in order to evaluate total investment risk. The use of my proxy group fully captures the investment risk of FCG.

In addition, financial theory generally, and the CAPM specifically, is predicated on the idea that investors should only be compensated for taking on market risk, i.e., beta, whereas specific business risk can and will be diversified away. Ms. Nelson's attempt to compensate investors for specific business risks is contrary to financial theory, and violates the underpinnings of the CAPM, a model which Ms. Nelson relies on heavily to support her recommendation. For these reasons, Ms. Nelson's concerns and additional factors should be disregarded.

I cannot see how, based on any evidence presented in this case through the Company's testimony or my own, it can be determined the Company is of higher risk than the proxy group. To the contrary, Ms. Nelson and I have both presented evidence to support the assertion that FCG is of similar, if not lower, risk relative to the proxy

[40] Nelson Direct Testimony at 43-44.

group. Therefore, any conclusion drawn by the Company's witnesses suggesting that FCG is of higher risk relative to the proxy group used to estimate its cost of equity capital should be explicitly rejected.

F. Size Adjustment

Q PLEASE DESCRIBE MS. NELSON'S SIZE ADJUSTMENT.

A Ms. Nelson establishes a hypothetical market capitalization of $548.53 million for FCG based on the Company's proposed rate base and equity ratio of 59.60%, multiplied by her proxy group's average market-to-book ratio of 1.88. She observes that FCG's hypothetical market capitalization is in the 9th decile of ranges identified by Duff & Phelps' Cost of Capital Navigator, which equates to a size premium of 2.10%. Similarly, on Exhibit JEN-7 of her direct testimony she notes that the capitalization of the companies included in her proxy group falls in the 5th decile, which warrants a size adjustment of 89 basis points. She calculates the difference in size premiums between the proxy group and FCG's hypothetical market capitalization is 121 basis points.[41]

Ms. Nelson does not propose a specific size adjustment but she considers it in determining the appropriate return for FCG.[42]

Q DO YOU FIND MS. NELSON'S SIZE ADJUSTMENT REASONABLE?

A No. There are several problems with this size adjustment. Ms. Nelson applied a size adjustment without even considering the a corporate structure which supports FCG. FCG is a wholly-owned subsidiary of FPL, which is a wholly-owned subsidiary of NextEra Energy. NextEra Energy has a market capitalization of approximately $174.7

[41] Nelson Direct Testimony at 48.
[42] *Id*.

billion, or nearly 5x the high-end of the 2nd decile. Similarly, FPL's reported equity in its 10-K for year-end 2021 was $33.6 billion. In other words, FPL's book value equity, not adjusted for the proxy group's market-to-book ratio of 1.88x, is at the high-end of the 2nd decile. After adjusting FPL's equity balance by the proxy group's market-to-book ratio of 1.88x, FPL's hypothetical market capitalization is $63.2 billion, easily placing it in the top decile. An ROE adder is not justified in the way performed by Ms. Nelson, because she has not accurately measured the corporate structure which owns FCG. Importantly, as discussed above, the size-specific risk is already incorporated in the Company's credit rating and should be rejected.

G. Capital Market Conditions

Q DID MS. NELSON ALSO OFFER AN ASSESSMENT OF CURRENT MARKET CONDITIONS IN SUPPORT OF HER RECOMMENDED ROE RANGE?

A Yes. Ms. Nelson observes the market volatility levels as measured by the Chicago Board of Exchange ("CBOE"), Volatility Index ("VIX') and the VVIX index which measures the expected volatility of the VIX.[43] Specifically, Ms. Nelson also states that the VIX has increased relative to historical standards and it is expected to remain elevated.[44]

[43] *Id*. at 59-61
[44] *Id*. 62-63

Q IS THE VIX INDEX ADEQUATE TO SUPPORT THE NOTION THAT THE MARKET PERCEPTION OF THE INVESTMENT RISK OF FCG OR UTILITIES GENERALLY IS INCREASING?

A No. First, the VIX is a broader-based market index of stock price volatility, and not that of subgroups within the market generally, and certainly not applicable to the utility subsector. The VIX index may indicate greater risk in the overall market but that does not indicate a similar change in investment risk for lower-risk regulated utility companies. Second, the VIX is a measure of 30-day expected volatility, which is a relatively short-term estimate and it does not represent the volatility level effective during the period rates determined in this regulatory proceeding.

Q DO YOU BELIEVE THAT MS. NELSON'S USE OF THESE MARKET SENTIMENTS SUPPORTS HER FINDINGS THAT FCG'S MARKET COST OF EQUITY IS CURRENTLY 10.75%?

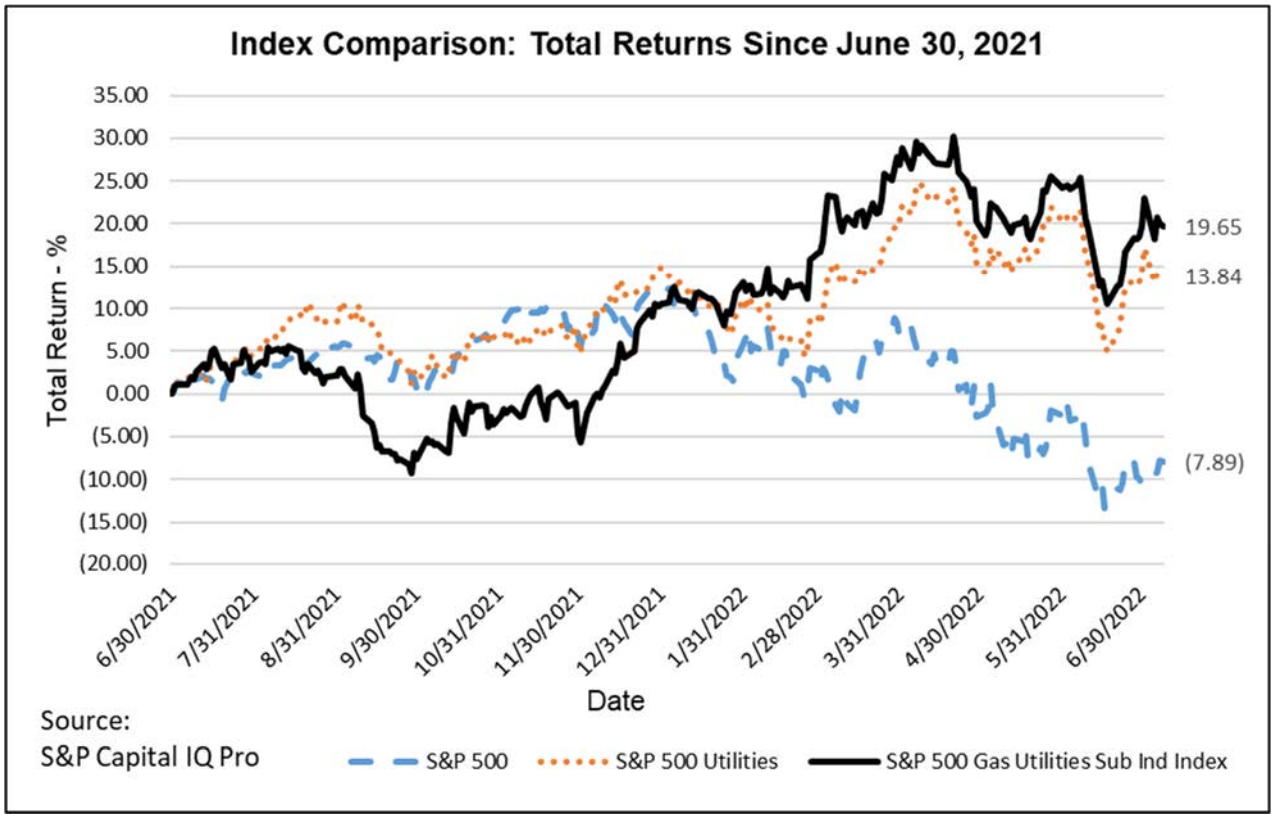
A No. In many instances, Ms. Nelson's analysis simply ignores market sentiments favorable toward utility companies and instead lumps utility investments in with general corporate investments. A fair analysis of utility securities shows the market generally regards utility securities as low-risk investment instruments and supports the finding that utilities' cost of capital is very low in today's marketplace.

Q WHAT IS THE MARKET SENTIMENT FOR UTILITY INVESTMENTS?

A As shown in Figure CCW-4 above, since June 30, 2021 utility equities have significantly outperformed the broader market, despite rising inflation, rising interest rates, and geopolitical events around the world.

Further, measuring the total returns of the indices Ms. Nelson relied on in her Figure 19, it is clear that gas utilities are outperforming utilities in general. The outperformance is even more drastic when compared to the broader market. This is illustrated in Figure CCW-7 below. As shown on this graph, the S&P 500 Gas Utilities index has outperformed the S&P 500 by 27.54 percentage points.

FIGURE CCW-7



H. FCG's Proposed Capital Structure

Q DID MS. NELSON ALSO OFFER AN ASSESSMENT ON THE REASONABLENESS OF FCG'S PROPOSED CAPITAL STRUCTURE?

A Yes. At page 78, Ms. Nelson concludes that "a financial capital structure including 59.60 percent common equity and 40.40 percent long-term debt is consistent with the proportions of investor-supplied capital that fund the proxy companies' regulated

natural gas operations."[45] She then recommends, "the capital structure is reasonable and should be approved."[46]

Q DO YOU AGREE WITH MS. NELSON'S ASSESSMENT?

A No. As an initial matter, her conclusion mischaracterizes the Company's proposed capital structure. The Company's proposed equity ratio when considering common equity and long-term debt as Ms. Nelson describes here, is 62.53% (excluding short-term debt). The 59.60% common equity ratio is based on total debt.

In addition, in a recent CenterPoint Energy gas rate case (Docket G-008/GR 15-424), the Minnesota Public Utilities Commission authorized a stated capital structure of 50.0% common equity, compared to CenterPoint's requested 53.43% common equity ratio. In its Order dated June 3, 2016, adopting a 50.0% common equity ratio, the Minnesota Public Utilities Commission stated that:

> The Company argued that simply being within the range of the equity ratios in the proxy groups was adequate evidence of reasonableness, but the Commission does not agree. Proxy-group averages have much higher probative value than proxy-group ranges; the purpose of a proxy group is to provide a representative average or composite to stand in for the company being studied. [47]

As I explain in detail above, the proxy group's average equity ratio 38.6% (including short-term debt) and 44.6% (excluding short-term debt) is significantly lower than that being requested by the Company. Ms. Nelson's consideration of the range of operating company equity ratios to inform her conclusion that FCG's requested equity ratio of 59.60%/62.53% is inappropriate and should be rejected.

[45] *Id.* at 77.
[46] *Id.* at 78.
[47] *In the Matter of the Application of CenterPoint Energy Resources Corp. for Authority to Increase Natural Gas Rates in Minnesota*, Docket G-008/GR 15-424, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER at 35 (June 3, 2016). Footnotes omitted.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Qualifications of Christopher C. Walters

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Christopher C. Walters. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q PLEASE STATE YOUR OCCUPATION.

A I am an Associate with the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants in the field of public utility regulation.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EMPLOYMENT EXPERIENCE.

A I received a Bachelor of Science Degree in Business Economics and Finance from Southern Illinois University Edwardsville. I have also received a Master of Business Administration Degree from Lindenwood University.

As an Associate at BAI, I perform detailed technical analyses and research to support regulatory projects including expert testimony covering various regulatory issues. Since my career at BAI began in 2011, I have held the positions of Analyst, Associate Consultant, Consultant, Senior Consultant, and Associate. Throughout my tenure, I have been involved with several regulated projects for electric, natural gas and water and wastewater utilities, as well as competitive procurement of electric power and gas supply. My regulatory project work includes estimating the cost of equity capital, capital structure evaluations, assessing financial integrity, merger and acquisition related issues, risk management related issues, depreciation rate studies, and other revenue requirement issues.

BAI was formed in April 1995. BAI and its predecessor firm have participated in more than 700 regulatory proceedings in 40 states and Canada.

BAI provides consulting services in the economic, technical, accounting, and financial aspects of public utility rates and in the acquisition of utility and energy services through RFPs and negotiations, in both regulated and unregulated markets. Our clients include large industrial and institutional customers, some utilities and, on occasion, state regulatory agencies. We also prepare special studies and reports, forecasts, surveys and siting studies, and present seminars on utility-related issues.

In general, we are engaged in energy and regulatory consulting, economic analysis and contract negotiation. In addition to our main office in St. Louis, the firm also has branch offices in Corpus Christi, Texas; Detroit, Michigan; Louisville, Kentucky and Phoenix, Arizona.

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A Yes. I have sponsored testimony before state regulatory commissions including: Arizona, Arkansas, Delaware, Florida, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Nevada, New Mexico, Ohio, Oklahoma, Utah, and Wyoming. In addition, I have also sponsored testimony before the City Council of New Orleans and an affidavit before the FERC.

Q PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.

A I earned the Chartered Financial Analyst (“CFA”) designation from the CFA Institute. The CFA charter was awarded after successfully completing three examinations which covered the subject areas of financial accounting and reporting analysis, corporate

finance, economics, fixed income and equity valuation, derivatives, alternative investments, risk management, and professional and ethical conduct. I am a member of the CFA Institute and the CFA Society of St. Louis.

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

IN RE: PETITION FOR RATE INCREASE BY FLORIDA CITY GAS	)	**DOCKET NO. 20220069-GU**

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Christopher C. Walters

Christopher C. Walters, being first duly sworn, on his oath states:

1. My name is Christopher C. Walters. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Federal Executive Agencies in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and exhibits which were prepared in written form for introduction into evidence in the Florida Public Service Commission Docket No. 20220069-GU.

3. I hereby swear and affirm that the testimony and exhibits are true and correct and that they show the matters and things that they purport to show.

C. Walters

Christopher C. Walters

Subscribed and sworn to before me this 26th day of August, 2022.

SALLY D. WILHELMS
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: Aug. 5, 2024
Commission # 20078050

Sally D Wilhelms

Notary Public

ERRATA SHEET

WITNESS: Christopher C. Walters

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

<table>
<tr><th>Page</th><th>Line</th><th>Original</th><th>Revision</th></tr>
<tr><td>43</td><td>23</td><td>beta is 0.58 and 0.59, respectively.</td><td>beta is 0.70 and 0.70, respectively.</td></tr>
<tr><td>49</td><td>14-16</td><td>The last set of three results presented are based on the proxy group's current S&P Global Market Intelligence beta of 0.58. The results of the CAPM based on these inputs range from 6.71% to 8.82%.</td><td>The last set of three results presented are based on the proxy group's current S&P Global Market Intelligence beta of 0.70. The results of the CAPM based on these inputs range from 7.34% to 9.80%.</td></tr>
<tr><td>50</td><td>1</td><td>TABLE CCW-11
CAPM Results Summary
<table><tr><th>Description</th><th>Current VL Beta</th><th>Historical VL Beta</th><th>Current MI Beta</th></tr><tr><td>D&P Normalized Method</td><td>8.08%</td><td>7.56%</td><td>6.71%</td></tr><tr><td>Risk Premium Method</td><td>10.55%</td><td>9.78%</td><td>8.53%</td></tr><tr><td>FERC DCF</td><td>10.97%</td><td>10.15%</td><td>8.82%</td></tr></table></td><td>TABLE CCW-11
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<tr><td>50</td><td>5</td><td>The average of my CAPM results is approximately 9.02%, while the median is 8.82%.</td><td>The average of my CAPM results is approximately 9.30%, while the median is 9.78%.</td></tr>
<tr><td></td><td></td><td colspan="2">In addition to the above table, please see the attached Errata Exhibit CCW-15, page 1 and Errata Exhibit CCW-16, page 1 which reflect the revisions described above.</td></tr>
</table>

(Transcript continues in sequence in Volume 3.)

CERTIFICATE OF REPORTER

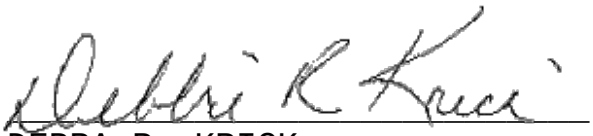
STATE OF FLORIDA)
COUNTY OF LEON)

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 3rd day of January, 2023.



DEBRA R. KRICK
NOTARY PUBLIC
COMMISSION #HH31926
EXPIRES AUGUST 13, 2024