BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 20220069-GU

Petition for rate increase
by Florida City Gas.
_____/

VOLUME 1
PAGES 1 - 267

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

PREMIER REPORTING
112 W. 5TH AVENUE
TALLAHASSEE, FLORIDA
(850) 894-0828

APPEARANCES:

CHRISTOPHER T. WRITE and JOEL T. BAKER, ESQUIRES, Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408; BETH KEATING, ESQUIRE, Gunster Law Firm, 215 South Monroe Street, Suite 601, Tallahassee, Florida 32301; appearing on behalf of Florida City Gas (FCG).

RICHARD GENTRY, PUBLIC COUNSEL; CHARLES REHWINKEL, DEPUTY PUBLIC COUNSEL; MARY A. WESSLING, ESQUIRE, OFFICE OF PUBLIC COUNSEL, c/o The Florida Legislature, 111 West Madison Street, Room 812, Tallahassee, Florida 32399-1400, appearing on behalf of the Citizens of the State of Florida (OPC.).

MARCUS DUFFY, CAPT, USAF, HOLLY L. BUCHANAN, MAJOR, USAF, and THOMAS A. JERNIGAN, ESQUIRES AF/JAOE-ULFSC, 139 Barnes Drive, Suite 1, Tyndall Air Force Base, FL 32403, appearing on behalf of Federal Executive Agencies (FEA).

JON C. MOYLE, JR. and KAREN PUTNAL, ESQUIRES, Moyle Law Firm, P.A., 118 North Gadsden Street, Tallahassee, Florida 32312, appearing on behalf of Florida Industrial Power Users Group (FIPUG).

WALTER TRIERWEILER, MATTHEW JONES and ADRIA HARPER, ESQUIRES, FPSC General Counsel's Office, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850,

appearing on behalf of the Florida Public Service Commission (Staff).

KEITH HETRICK, GENERAL COUNSEL; MARY ANNE HELTON, DEPUTY GENERAL COUNSEL, JENNIFER CRAWFORD, ESQUIRE, ESQUIRE, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, Advisor to the Florida Public Service Commission.

I N D E X

EXHIBITS

NUMBER:		ID	ADMITTED
1	Comprehensive Exhibit List	9	10
2-184	As identified in the CEL	9	
133-184	As identified in the CEL		10

P R O C E E D I N G S

CHAIRMAN FAY: All right. Good afternoon, everyone. We will call this hearing to order. December 12th. I have 1:00 p.m.

Mr. Trierweiler, if you could please read the notice.

MR. TRIERWEILER: By order issued November 18th, 2022, this time and place has been set for a hearing in Docket No. 20220069-GU regarding a petition for a rate increase by Florida City Gas. The purpose of the hearing is more fully laid out in the notice.

CHAIRMAN FAY: Okay. Great. Thank you.

Next we will move on to appearances. We will start with Florida City Gas.

MR. WRIGHT: Good afternoon, Chairman and Commissioners. Christopher Wright on behalf of Florida City Gas. I would also like to enter an appearance for Joel Baker and Beth Keating, from the Gunster Yoakley and Stewart law firm.

CHAIRMAN FAY: Okay. Great. Thank you.

Next, Office of Public Counsel.

MS. WESSLING: Good afternoon. This is Ali Wessling with the Office of Public Counsel. I would also like to enter an appearance for Charles

Rehwinkel and Richard Gentry.

Thank you.

CHAIRMAN FAY: Okay. FEA. There you go, you are on now.

CAPTAIN DUFFY: Good afternoon. I am Captain Marcus Duffy from the Department of Air Force representing the Federal Executive Agencies. I would also like to put in an appearance for Major Holly Buchanan.

Thank you.

CHAIRMAN FAY: Okay. Great. Thank you.

FIPUG.

MR. MOYLE: Good afternoon. Jon Moyle with the Moyle Law Firm on behalf of the Florida Industrial Power Users Group, FIPUG. And I would like to enter an appearance for Karen Putnal with our firm as well.

CHAIRMAN FAY: Okay. Great.

Commission staff.

MR. TRIERWEILER: Good afternoon. Walt Trierweiler and Matt Jones for Commission staff.

CHAIRMAN FAY: Okay.

MS. HELTON: And Mary Anne Helton is here as your Advisor. Jennifer Crawford may also be advising you during the course of this proceeding.

I would also like to enter an appearance for your General Counsel, Keith Hetrick.

CHAIRMAN FAY: Okay. Great. Thank you, Mary Anne.

All right. Mr. Trierweiler, next we will move into preliminary matters.

MR. TRIERWEILER: Staff witness Calhoun, OPC witnesses Schultz and Garret, FEA witnesses Walters and Collins and FCG witnesses Nelson and Dubose have been excused, and at the appropriate time their prefiled testimony and exhibits will be entered into the record as though read.

The parties have asked me to note that any relevant errata that has been filed should be taken into account when reviewing their testimony and exhibits.

And there are proposed Type 2 stipulations as stated in the proposed stipulations, exhibit 184 on the comprehensive exhibit list that will be voted on later in the proceeding.

CHAIRMAN FAY: All right. Any preliminary matters from the parties? Nope. Seeing none.

Mr. Trierweiler, let's move into exhibits.

MR. TRIERWEILER: Staff has compiled a comprehensive exhibit list, which includes the

prefiled exhibits attached to the witnesses' testimony labeled Nos. 2 through 132, as well as staff's Exhibit Noes. 133 through 184. The list has been provided to the parties, Commissioners and the court reporter.

Staff requests that the comprehensive exhibit list be marked for identification purposes as Exhibit No. 1, and that the other exhibits be marked for identification as set forth in the comprehensive exhibit list.

CHAIRMAN FAY: Okay. Show those exhibits marked.

(Whereupon, Exhibit Nos. 1-184 were marked for identification.)

MR. TRIERWEILER: At this time, staff asks that the comprehensive exhibit list, marked as Exhibit No. 1 for identification, be entered into the record.

CHAIRMAN FAY: Okay. Showing no objections, Exhibit 1 is entered into the record.

(Whereupon, Exhibit No. 1 was received into evidence.)

MR. TRIERWEILER: The prefiled exhibits will be moved at the conclusion of each witness' cross-examination. Staff notes that the parties

have stipulated to the staff exhibits Nos. 133 through 184 on the CEL. Staff asks that Exhibit Nos. 133 through 184 be moved into the record as set forth in the comprehensive exhibit list.

CHAIRMAN FAY: Okay. Assuming all the parties have had time to review, we have Exhibits 133 through 184, staff exhibits. Seeing no objections, show those entered into the record.

(Whereupon, Exhibit Nos. 133-184 were received into evidence.)

CHAIRMAN FAY: All right. That takes care of exhibits. Commissioners, we will move next to opening statements.

As stated in the prehearing order, each party will be given 10 minutes to make their opening statement. We will go in order of Florida City Gas, OPC, FEA and FIPUG.

So with that, Mr. Wright, you are recognized to presented your opening statement.

MR. WRIGHT: Thank you. Good afternoon again.

First, on behalf of Florida City Gas, I would like to thank you and your staff, as well as the intervenor parties, for their time and effort to work through the procedural and substantive issues to get this case where it is today.

We believe there is a robust record in this proceeding, and that the weight of the evidence will demonstrate that FCG's proposals are just, fair, reasonable, and will provide significant savings and benefits to customers.

The company's last base rate case resulted in a settlement that became effective on June 1, 2018. It is undisputed that FCG has earned below the bottom of the currents authorize ROE range since its last rate case, and that the company projects it will continue to earn below the bottom end of the current ROE without base rate relief.

It also cannot be reasonably disputed that inflation, interest rates, capital costs and overall market risk are substantially higher than the levels experienced since the company's last base rate case. In fact, interest rates and the rate of inflation have increased significantly since FCG filed this case in May of this year.

In an effort to avoid multiple back-to-back rate cases, and the associated rate case expense, FCG elected to propose a four-year rate plan that provides its customers with rate stability, rate certainty, and will unlock tremendous benefits for customers that would not be available under a

single-year rate increase.

The company's proposed four-year rate plan includes the following eight core elements:

First, the company is seeking a single incremental base revenue increase of 18.8 million based on a projected 2023 test year. As explained by witness Fuentes.

Second, the company is requesting a 10.75 -- I am sorry, a 10.75 percent midpoint ROE, and an equity ratio of 59.6, as described by witnesses Campbell and Nelson.

Third, the company proposes to allocate the revenues based on a class cost of service study and applying the Commission's guideline on gradualism, as described by witness Dubose.

Fourth, a critical and essential element of the proposed four-year plan is the adoption of a reserve surplus amortization mechanism, or RSAM, as explained by witness Campbell.

Fifth, the company proposes to continue and expand its Safety Access and Facility Enhancement Program, or SAFE Program, which will allow the company to further improve the safety and reliability of its system, as described by Witness Howard.

Sixth, the company proposes to implement a new limited AMI pilot that will enable FCG to test and evaluate whether it would be appropriate in the future to deploy AMI across its system. That's described further by witness Howard.

Seventh, the company proposes a mechanism to account for future potential tax reform legislation, as explained by witness Campbell.

Finally, the company proposes to continue its existing storm damage reserve approved in its last base rate case, as explained by witnesses Campbell and Howard.

The intervenor testimonies attack all the essential components of the company's proposed four-year rate plan and call for the rejection of the RSAM. The intervenors criticisms of the four-year rate plan are shortsighted, and seek to remove a host of significant customer benefits that are part of the plan.

Approval of the four-year plan would ensure no additional general base rate increases through at least the end of 2026. This means lower bills, higher rate stability, while avoiding repetitive and costly rate proceedings, saving customers approximately two million in rate case expense in

2024.

The four-year rate plan also results in lower depreciation expense and associated revenue requirements, saving customers nearly 10.8 million over the term of the four-year plan.

The evidence in this case will demonstrate that if the Commission declines to approve FCG's proposed four-year rate plan with RSAM, the overall net cumulative increase in cash paid by customers over the period 2023 would be approximately 27 million more than under FCG's proposed rate plan. In essence, the intervenors' opposition to the four-year rate plan with RSAM is a call to increase customers bills far beyond what FCG is requesting in this case. Not exactly the typical intervenor customer position.

The intervenors primarily focus on RSAM, and incorrectly argue that RSAM can only be approved in the context of a settlement and the Commission is without authority and jurisdiction to approve RSAM in a litigated proceeding.

To be clear, the Commission can only exercise the power, authority and jurisdiction that has been statutorily granted by the Legislature. The Commission's statutory jurisdiction and authority

does not change if the case is litigated as opposed to settled.

Indeed, the only difference between a litigated base rate case and a settled rate case is the standard of review. However, the standard of review does not change the Commission's jurisdiction and authority. Rather, it governs the evidentiary standard by which the Commission will review the proposals that are properly within its jurisdiction and authority to decide. A settlement cannot legally grant or change a commission's jurisdiction and authority. Only the Legislature can do that.

To hold that the Commission can rely -- I am sorry, to hold that the Commission can only approve an RSAM in a settlement but not in a litigated proceeding, as suggested by intervenors, would mean that the parties can somehow expand the Commission's legal jurisdiction and authority beyond what is granted in the governing statutes. This position is simply nonsensical, and violates the well-established legal principle that parties cannot contract around the requirements of law.

By signing prior settlement agreements asking for Commission approval of an RSAM type of

mechanism, each of the intervenors in this case have acquiesced that the Commission does, in fact, have jurisdiction and authority to approve an RSAM. As such, the issue to be decided in this case is whether the preponderance of the evidence supports a finding that FCG's proposed RSAM is just, fair and reasonable under the circumstances and facts presented in this case.

The intervenors claim that RSAM should be rejected because it will only -- it will be used to return at this top of the ROE range. This argument is entirely unsupported, irrelevant, and ignores the unrefuted evidence that even with RSAM, FCG would still need to identify savings and productivity improvements just to earn to the midpoint. Moreover, FCG will still need to appropriately manage through the risks and costs associated with higher inflation and interest rates over the term of the four-year plan.

The intervenors also propose various adjustments to FCG's rate base, O&M expense and net operating income. Each of these adjustments and recommendations is fully addressed by FCG's rebuttal testimony and, for the reasons stated therein, should be rejected.

Notably, OPC's recommendations and proposed adjustments, if adopted, would not even bring FCG to the bottom of its current authorized ROE range, let alone the proposed ROE range. Simply stated, the base rate increase recommended by OPC would deny FCG the opportunity to earn a fair reasonable return, and for this reason alone, OPC's recommendations and adjustments should be rejected.

The intervenors' proposed capital structure should also be rejected because it fails to account for how FCG is actually financed. Pursuant to Commission-approved orders, FCG's regulated operations are 100 percent financed through debt and equity from FPL, its parent. The interest rate on any short- or long-term borrowings by FCG from FPL is a pass-through at FPL's average weighted cost for borrowing these funds, which is significantly lower than FCG could obtain on its owns, which benefits customers. For these reasons, as well as those more fully explained by witness Nelson, FCG's proposal to mirror FPL's equity structure, capital structure is reasonable and appropriate.

Finally, intervenors recommended ROE should be rejected. OPC recommends a midpoint of 9.25

percent, and FEA recommends a midpoint of 9.4 percent, which are almost 100 basis points below the midpoint ROE approved in FCG's last base rate case.

The intervenors recommended ROEs ignore and do not properly reflect the undisputed facts that inflation, interest rates, capital costs and overall market risk are substantially higher than the levels experienced since FCG's last rate case. Further, for the many reasons explained by witness Nelson, the intervenors' ROE analyses are flawed, biased and should be rejected.

FCG's recommended midpoint ROE of 10.75 percent is based on the results of multiple widely used market based financial models, which provides a broader and more robust view of investors return requirements. Importantly, FCG's recommended midpoint ROE should be viewed as conservative by this commission given the substantial change in the market capital environment since FCG filed this case in May of this year.

For these reasons, as well as those more fully explained by witness Nelson, FCG's proposed ROE of 10.75 percent represents a fair and reasonable estimate of FCG's cost of equity and should be

approved.

In closing, the weight of the credible evidence in this proceeding will demonstrate that FCG's proposed four-year rate plan provides customers with rate certainty and stability through at least the end of 2026, and will save customers approximately $27 million over the term of the four-year plan. The proposed four-year plan and associated rate increase is fair, just, reasonable and should be approved.

Thank you.

CHAIRMAN FAY: Okay. Thank you.

Next we will move to Office of Public Counsel. You are recognized, Ms. Wessling.

MS. WESSLING: Thank you. And good afternoon again, everyone. My name is Ali Wessling. And I, along with Charles Rehwinkel, represent the Office of Public Counsel in this case.

As you are aware, the Office of Public Counsel was created by the Legislature to represent all customers of investor-owned utilities in the state of Florida. In this case, that means that we represent all 116 residential, commercial and industrial customers of Florida City Gas. The other intervenor parties ably represent specialized

interests within that customer group, and we are proud to work with them for the good of all customers.

Our goal is to ensure that FCG customers are charged fair, just and reasonable rates. However, if the Commission approves FCG's requested rate increase unmodified, customers will be paying approximately four-and-a-half times what a fair, just and reasonable rate would be. FCG's request is enormously excessive, and would be harmful to customers who are already struggling to keep up with inflation.

OPC presents the Commission with expert testimony to aid the Commission in evaluating FCG's requested rate increase, and exposing just how unfair some of the requests would be to customers. Helmuth Schultz's testimony and exhibits identify many of the excesses contained in FCG's requested base rate increase, and he provides his recommendations to the Commission on necessary adjustments needed to both base rate -- or excuse me, rate base and net operating income.

Mr. Schultz also provides testimony regarding the 10 million additional dollars that FCG is seeking for the still incomplete liquified natural

gas facility, and the double recovery of related costs. Mr. Schultz's testimony also addresses FCG's request for an impermissible acquisition adjustment, as well as what is perhaps FCG's most unconscionable request, the creation of the reserve surplus amortization mechanism, or RSAM.

OPC witness David Garrett's testimony analyzes FCG's request regarding cost of capital, as well as depreciation rates, and he also provides recommendations that better balance the company's true needs with their customers' ability to pay.

Throughout FCG's testimony and evidence, a clear theme emerges, that FCG views this case as less of a request and more of a negotiation with the Commission. Personally, I lost count of how many times FCG asserts that unless their four-year plan was approved as filed, it would be forced to file another rate case practically immediately. FCG insists that so many parts of their request are essential to the success of their four-year rate plan, and they heavily imply that if the Commission approves all of these, then FCG will not seek another rate increase for four years.

Assuming for a second that FCG truly means what they say, think about what they are offering.

For a company to promise to not seek a rate case for four years, think about how lucrative a deal that must be for them. FCG is essentially saying that this is such a good deal for them, that they can absorb any potential risk for the next four years by putting the risk all on customers, current and future. And to top it off, they are saying that in a year that's practically been defined by extremely high inflation.

As alarming as that is, consider this too. If the Commission were to accept this negotiation with FCG and approve their rate request unmodified in exchange for FCG's promise not to come in for another rate case for four years, the Commission would essentially be accepting the sleeves off of FCG's vest.

FCG's promise would likely be unenforceable pursuant to the provisions of Chapter 366 and Commission rule, which allow companies to seek rate increases as needed. Stay-out provisions like FCG's proposed four-year plan are a function of settlement agreements and contract law.

The Commission is not contracting with Florida City Gas in this case. The Commission is adjudicating whether Florida City Gas' proposed

rate increases are fair, just and reasonable.

Do not allow Florida City Gas to offer the Commission something that Florida City Gas knows they would not be legally bound by. Do not lose sight of the fact that this case is being litigated and not negotiated.

The reason why Florida City Gas is so confident in their ability to absorb risk for the next four years is because of their requested RSAM. Essentially, this mechanism, if approved, would allow Florida City Gas to guarantee earnings to their shareholders for the next four years at the expense of their future customers. This mechanism, which is designed to effectively make the rate setting point at the top of the range, has no place in a gas company.

Listen closely to the facts and history of the Florida Power & Light mechanism that Florida City Gas is seeking to rely on and copy. You can see that the facts underlying the FCG proposal have nothing to do with the negotiated stipulated FPL mechanism.

You have a many-decades old depreciation policy related to establishing depreciation parameters and expense in contested cases. Florida

Power & Light and Florida City Gas are asking you to violate that policy here. The Florida Power & Light RSAM only exists due to a series of settlements embodying extensive negotiations and concessions under a unique and highly specific set of facts. Absolutely nothing about Florida City Gas' situation finds precedent in the Florida Power & Light negotiated mechanism.

Another area of customer concern in Florida City Gas' requested rate increase is FCG's request for an additional $10 million for their liquified natural gas facility. You will hear in FCG's testimony that FCG lost their original location due to factors, as they say, largely beyond their control. But the truth is that FCG never really had that to begin with.

The evidence will show that Florida City Gas bought that original location betting that Florida City Gas could obtain the necessary zoning exemption, and they began the engineering work before a determination about the zoning exemption had been made, and was ultimately denied. You can't lose something that you never had.

Purchasing that land, and going forward with plans to build that facility at a location before

obtaining the proper zoning exemption was a risk that FCG knowingly took, and FCG should not be rewarded with an additional $10 million because that bet didn't pan out.

You will also hear about the double recovery amounting to an $11 million windfall related to the delayed in-service date. An equitable resolution of this situation is required.

Florida City Gas also asks you to increase the equity ratio from the 48 percent you established in 2018 to an unheard of 59.6 percent. This is beyond excessive and should be disallowed.

OPC will be asking you to follow your mandatory parent debt rule, because Florida City Gas has not rebutted the presumption that requires an offset for the affiliated tax benefit the customers give to shareholders.

You will hear more about the Advanced Metering Infrastructure pilot program, or AMI Program, which, if approved, would purely benefit shareholders at customers' expense.

Will you hear about unjust incentive compensation programs which are not balanced between shareholders and customers' interests. You will hear about the acquisition adjustment sought

by Florida City Gas, which Commission precedent clearing forbids. And will you hear about many other areas of Florida City Gas' rate request, which the Commission simply must not approve as they would result in unfair, unjust and unreasonable rates.

Finally, OPC asks you to remember that FCG bears the burden of proof in this case. Once all the evidence is received and reviewed, OPC is confident that the Commission will not approve Florida City Gas' rate increase without significant modifications, and the Commission will have the information it needs to set fair, just and reasonable rates.

Thank you.

CHAIRMAN FAY: All right. Thank you, Ms. Wessling.

Next FEA.

CAPTAIN DUFFY: Good afternoon, Mr. Chairman and Commissioners. As I previously stated, I am Captain Marcus Duffy, and I represent the Federal Executive Agencies, also known as FEA.

So to start off, FEA has a unique standing in this case, is that we are stewards of the tax dollar. Along with the federal government, our

client are U.S. Army Garrison-Miami, Cape Canaveral Space Force Station and Patrick Space Force Base, and each of these bases have a national defense mission that is unique to FEA.

Now, every base commander has more mission than they have money to accomplish their mission. And each year, Congress allocates a finite budget to each base. That same pot of money that pays for those utilities also pays for what we call mission requirements. Every dollar spent on increased utility costs is a dollar less spent on our flying mission, our space mission, or even our deployment missions.

Now, every dollar counts in this economic climate. We are here in this case to ensure taxpayers' money allocated to the federal government, along with the U.S. Army Garrison-Miami, Cape Canaveral Space Force Station and Patrick Space Force Base does not become burdened by excessive energy costs. Consequently, we want to ensure the rates being paid by the military bases and other federal executive agencies are fair, reasonable and cost-based.

In our experts' testimony you will hear, starting with Mr. Christopher Walters. You will

read about the current market cost of equity and the resulting overall rate of return for Florida City Gas. Specifically, Mr. Walters' testimony will recommend that a common equity ratio of no higher than 50 percent is fair and reasonable compared to Florida City Gas estimate of 59.6 percent.

Mr. Walters also estimates a current fair market return on equity for the company that should fall in the range of 9 to 9.8., with a midpoint of 9.4. A significant departure from the company's excessive request for an ROE of 10.75.

You will also read from our other expert, Mr. Brian Collins. In his testimony, he has that Florida City Gas propose a class cost of service study that does not accurately reflect class cost causation. Florida City Gas class cost of service study improperly allocates the cost of distribution mains to customer classes only on the basis of demand component and not on the basis of both demand and customer components.

His testimony will explain that Florida City Gas uses a nontraditional version of the peak and average method, which does not reflect cost causation, because it carries the costs of other

additional Florida City Gas customers and improperly places it on the shoulders of the military and other large industrial customers for them to bear the burden.

Mr. Collins' testimony further explains that he recommends an alternative class cost of service study that more properly allocates cost to all Florida City Gas customer classes. This is shown in his Exhibit BCC-1.

In addition, Mr. Collins recommends an alternative class revenue allocation based on his class cost of service study. This is also shown in Exhibt BCC-1. His class revenue allocation proposal implements rate mitigation and limits costs no more than 1.5 times the system average increase.

Mr. Collins also shows you in his testimony that Florida City Gas has not justified the significant increase in their requested rate case expense, which is a 63 percent increase from the prior cases.

Lastly, Mr. Collins will explain to you that Florida City Gas proposed reserve surplus amortization mechanism, also known as the RSAM, should not be approved because it will result in

customers improperly paying excessive rates.

Now, at the end of the day, every additional tax dollar spent by the Department of Defense on utilities is a dollar less spent on our mission. That's less money spent on our planes in the sky, less on the space mission, our deployment mission, or even training our servicemen and women, not to mention the local economies that are going to be affected by this that help support the bases. So we ask who will take the hit here? We ask it should not be our services men and women who will lose the training because of these rates.

If the increase -- if the increase requested by the Florida City Gas is adopted as proposed, it will equate to thousands of dollars that are no longer available for operational mission requirements. We feel the adjustment is being recommended by our experts are reasonable, and strike a fair balance for the utilities and its customers.

Thank you.

CHAIRMAN FAY: All right. Thank you, FEA.

Mr. Moyle, you are recognized when you are ready.

MR. MOYLE: Thank you, Mr. Chairman.

I appreciate the chance to share some opening remarks with you, and I am going to start by in detail about one of the issues before you that you just heard counsel for FEA talk about, which relates to cost allocation and rate design. You know, this sometimes is referred to a technical hearing, so I am going to start off with a somewhat admittedly technical issue.

And the basis for rate design is that the people who cause the cost should be paying for the cost. And as you heard, FEA witness Collins has identified with FPL's witness who put forward a cost of service study that the allocation of certain cost is done in a way that we do not believe is fair and equitable. And I think a good way of describing this, before getting into some of the specifics is, is that a lot of large users, like Cape Canaveral, or Patrick Air Force Base, or FIPUG members who receive gas and use it are big facilities where you only need a big pipe to run oftentimes a short distance to connect them up.

And so an example that the FEA witness, Mr. Collins uses is to say, well, you could have one facility that uses a thousand units per month with a very short pipe. But then when you compare and

contrast that to, say, a new residential development, where the residential development is coming in and saying, we want to have every home in our facility served with natural gas, and the residential development is a long way from where it would have to connect, you are going to have a lot more what they call mains. Mains means pipes. But you are going to have a lot more piping in that situation of the residential development than you are with the industrial user or the federal executive entity that we described.

So it's only fair, we would argue, that the costs be allocated in a way that considers those increased costs for the residential development. Where you look at the cost of the pipe and take that into account.

The way that FPL proposed to do it is to only look at a demand component. What they call a volumetric approach, which just looks at, okay, how much -- how much did you use, and doesn't consider these other factors about how much do the cost of those customers represent.

The FEA witness has rolled up his sleeves and has said, I think the proper way to allocate the cost is, is that the large users, the volumetric

folks who are on a demand basis, should get about 40 percent of the cost, and the others should get the remaining amount. And that is contrasted with what FPL has proposed, which is that there are not being any consideration of these customer specific costs, that it just be done on, quote/unquote, a volumetric basis.

So those are some details about it, but it's an important issue for us, because right now, if there is no -- if there is no change that is made, the largest group of users is going to be paying a cost increase of 179 percent. And that's problematic in its magnitude, and also problematic in that it violates the Commission's policy of no customer class paying more than 1.5 percent of the system average increase.

The preferred approach, the one that the witness for the military and the other federal institutions has put forward, something that would still have that group paying for part of the increase, but they would only be paying approximately a 25-percent increase as compared to 179 percent increase. And these figures are found in the exhibits to witness Collins' testimony.

So in sum on this point, large users, FIPUG

members, the military and other federal agencies should pay their fair share, but should not subsidize others for these costs. So we would urge you to accept the recommendations of FEA witness Collins on this important cost of service issue.

I have a few more minutes, so I am going to switch to a couple of the other topics that you have heard mentioned, and I am going to -- I am going to start with the RSAM.

Counsel for FPL, in talking about the RSAM, made a comment that RSAM that there is not that much of a difference between a settlement agreement and the Commission litigating and deciding a case. And I would differ with that in a few ways.

One, when you all are getting a settlement agreement, it comes wrapped to you with a whole bunch of issues that have been the byproduct of intense vigorous negotiations. And there is a provision in there that says, this is part -- part of a deal, and you can't go in and pick and choose and pull things out. It's kind of a take-it-or-leave-it proposition. And you all, consistent with your policy on settlements, have approved those settlements.

The only time an RSAM has ever been approved,

to my knowledge, is in the context of a settlement that's been wrapped with a whole punch of other issues, and that this is the first time you would be looking at this issue as the Commission in trying to make a policy judgment about is this good, bad or indifferent?

The consumers do not believe this is an appropriate device for a whole host of reasons that you will hear, including that it's been referred to in some testimony as an accounting mechanism. But I think the evidence will show that this is not really an accounting mechanism that's used in other jurisdictions, or in other places, but is a mechanism that really enhances the ability of a utility to earn at the top of at its range. And there is a lot of evidence in the record that shows that that is the result.

I will be asking some questions about, well, the one company what has the RSAM, FPL, how have they done? Have they been earning at the top of their range? And I think the answers will be yes. Which is good for FPL and their shareholders, but in terms of a regulatory compact, it's not consistent with how you all regulate. So we would ask you to look closely at the -- at the RSAM

issue, and to not authorize it being put in place.

It brings up the other question about this four-year rate plan. What exactly is that? And I think you will hear some questions about is it really a deal, or is it -- or is it not?

You know, a settlement agreement is contractual. We can rely on it. You can arguably seek to enforce it. I don't think that the same situation exists with the Commission if they were to say, we'll accept your four-year rate plan, whether there wouldn't be the ability to remove yourself from the constraints and the provisions of the rate plan, because, you know, you all are the regulator, not an adverse party.

I would just echo the comments that others have made about some of the requests being overstated and high. The capital structure is proposed to go up significantly. The return on equity is proposed to go up significantly. And I would urge you to look closely at these, understand their impact on the cost to the ratepayers and to moderate the request of the utility in this case.

We look forward to participating in this proceeding with you. And I would just close by also remarking that we appreciate the work of your

Commission staff and the other parties in getting this case ready for trial. Some of the issues, like the issue I described, the technical issue, that is before you on the paper, and is why I spent the time to detail it because it's a really important issue. It's very technical, but we would ask you, when you are taking action and considering that, to pay close attention to that. So we look forward to the next day -- two days or so, and appreciate the chance to make an opening statement.

Thank you.

CHAIRMAN FAY: All right. Great. Thank you, Mr. Moyle.

All right. Commissioners, next we will go into -- let's take up stipulated issues, Mr. Trierweiler.

MR. TRIERWEILER: As reflected in Exhibit 184, the following issues are proposed as Type 2 stipulations in this proceeding. Those issues are 10, 14, 16, 18, 20, 21, 30, 32, 33, 37, 43, 44, 48, 56, 63, 64, 69, 70, 72 and 73.

CHAIRMAN FAY: Okay. All right. So as I understand, the parties have proposed stipulations, which include Type 2 stipulations as stated by you, Mr. Trierweiler. Do any of the parties have any

objections with those list of stipulations?

Okay. Seeing none, then, Commissioners, what we need to do now is to get these stipulations resolved and just legally out of the way, we will go ahead and take them up on a vote. And so Mr. Trierweiler clarified the list on the record, but we would be taking up Issues 10, 14, 16, 18, 20, 21, 30, 32, 33, 37, 43, 44, 48, 56, 63, 64, 69, 70, 72 and 73, as stated in Exhibit 184.

So with that, Commissioners, I will take a motion on those stipulations at this time.

COMMISSIONER LA ROSA: Chairman, motion to approve the proposed stipulations that you just mentioned in that numerical order.

CHAIRMAN FAY: Okay. You don't want to read those back, Commissioner La Rosa.

COMMISSIONER LA ROSA: No, I don't. I don't want to hear it one more time.

CHAIRMAN FAY: All right. We have a motion. Do we have a second?

COMMISSIONER PASSIDOMO: Second.

CHAIRMAN FAY: Okay. We have a motion and a second. We have all unanimous approval of the -- those stipulations as stated in Exhibit 184.

All right. With that, Mr. Trierweiler, we

will submit those into the record. We will move on to witness testimony.

Why don't we go ahead and care of the stipulated witnesses first before we move no the other testimony.

Go ahead, Mr. Trierweiler.

MR. TRIERWEILER: Yes, Chairman.

The prefiled testimony of stipulated witnesses Calhoun, Dubose, Walters, Schultz, Garrett, Collins and Nelson have been excused, and their testimony and their exhibits should be admitted into the record as though read.

CHAIRMAN FAY: Okay. With that, Commissioners, any objections to the prefiled testimony and exhibits for those witnesses?

Nope. Seeing none, we will show that testimony entered as read and the exhibits for those witnesses entered into the record without objection.

(Whereupon, prefiled direct testimony of Jennifer E. Nelson was inserted.)

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220069-GU

FLORIDA CITY GAS

DIRECT TESTIMONY OF JENNIFER E. NELSON

Topics: Cost of Capital

Filed: May 31, 2022

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Jennifer E. Nelson. My business address is 293 Boston Post Road West, Marlborough, Massachusetts, 01752.

Q. By whom are you employed and what is your position?

A. I am employed by Concentric Energy Advisors, Inc. ("Concentric") as an Assistant Vice President.

Q. Please describe your duties and responsibilities in that position.

A. In my role as Assistant Vice President, I am among Concentric's professionals who advise clients and provide expert witness testimony on regulatory and financial matters. As an officer of the firm, I am responsible for ensuring the quality of project deliverables and assist in the development of the firm's consulting staff.

Q. Please describe your educational background and professional experience.

A. I hold a Bachelor of Science degree in Business Economics from Bentley College (now Bentley University) and a Master of Science degree in Resource and Applied Economics from the University of Alaska. I have worked in the energy industry for fourteen years, having served as a consultant and energy/regulatory economist for state government agencies. Since 2013, I have provided consulting services to utility and regulated energy clients on a range of financial and economic issues including rate case support, ratemaking policy, and regulatory strategy issues. Prior to consulting, I was a staff economist at

the Massachusetts Department of Public Utilities, where I worked on regulatory filings related to energy efficiency, renewable power contracts, smart grid and electric grid modernization, and retail choice. I am a member of the Society of Utility and Regulatory Financial Analysts and earned the designation of Certified Rate of Return Analyst upon successful completion of an exam. A summary of my professional and educational background, including a list of my testimony filed before regulatory commissions, is included as Exhibit JEN-1 to my Direct Testimony.

Q. Have you previously testified before the Florida Public Service Commission ("Commission")?

A. No, I have not. However, I have previously filed testimony before regulatory commissions in Arkansas, Kentucky, Maine, New Mexico, New Hampshire, North Carolina, Oklahoma, Texas, Utah, and West Virginia. During my time as a consultant, I have supported the development of expert witness testimony and analyses regarding the Cost of Capital (*i.e.*, Return on Equity ("ROE"), and capital structure) in more than 100 proceedings filed before numerous U.S. state regulatory commissions and the Federal Energy Regulatory Commission ("FERC").

Q. Are you sponsoring or co-sponsoring any exhibits in this case?

A. Yes. I am sponsoring the following exhibits:

- JEN-1: Résumé and Testimony Listing of Jennifer E. Nelson
- JEN-2: Constant Growth DCF Analysis
- JEN-3: Quarterly Growth DCF Analysis

- JEN-4: DCF-based Expected Market Return
- JEN-5: CAPM and Empirical CAPM Analyses
- JEN-6: Bond Yield Plus Risk Premium Analysis
- JEN-7: Small Size Premium Analysis
- JEN-8: Proxy Group Regulatory Risk Comparative Assessment
- JEN-9: Flotation Costs; and
- JEN-10: Capital Structure Analysis

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to present evidence and provide the Commission with a recommendation on behalf of Pivotal Utility Holdings, Inc. d/b/a Florida City Gas ("FCG" or the "Company") regarding the Company's ROE in this proceeding and to assess the reasonableness of its requested capital structure. My analyses and conclusions are supported by the data presented in Exhibit JEN-2 through Exhibit JEN-10, which have been prepared by me or under my direction.

II. OVERVIEW AND SUMMARY

Q. What is your conclusion regarding the appropriate cost of equity and capital structure for FCG over the four-year rate plan?

A. Based on my analyses of three widely used market-based financial models, the Company's specific risk profile, and the current capital market environment, I

conclude that an ROE of 10.75 percent is just and reasonable for FCG for the 2023-2026 rate period.

As to the capital structure, I conclude the Company's requested financial capital structure consisting of 59.60 percent common equity and 40.40 percent long-term debt is consistent with regulatory practice and the capital structures from investor supplied sources that fund the regulated natural gas operations of the proxy group. Therefore, I conclude it is reasonable and should be approved.

Q. Please provide a brief overview of the analyses that led to your ROE determination.

A. To develop my ROE range and estimate, I relied on three widely accepted financial modeling approaches: (1) the constant growth and quarterly growth forms of the Discounted Cash Flow ("DCF") model; (2) the traditional and empirical forms of the Capital Asset Pricing Model ("CAPM"); and (3) the Bond Yield Plus Risk Premium approach. The results of those analytical approaches are summarized in Figure 1 below.

Figure 1: Summary of Results[1]

Constant Growth DCF	**Low**	**Mean**	**High**
30-Day Average	8.05%	9.54%	10.38%
90-Day Average	8.25%	9.76%	10.60%
180-Day Average	8.34%	9.85%	10.69%
Quarterly Growth DCF	**Low**	**Mean**	**High**
30-Day Average	8.14%	9.68%	10.55%
90-Day Average	8.35%	9.91%	10.78%
180-Day Average	8.44%	10.00%	10.87%
CAPM		**Current 30-Year Treasury Yield (2.37%)**	**Projected 30-Year Treasury Yield (3.32%)**
Long-Term Average Market Return and 10-year Beta Coefficients			
Proxy Group Average		10.12%	10.33%
Proxy Group Median		10.21%	10.41%
Bloomberg DCF-based Market Return and Value Line Beta Coefficients			
Proxy Group Average		12.80%	12.94%
Proxy Group Median		12.49%	12.66%
Empirical CAPM		**Current 30-Year Treasury Yield (2.37%)**	**Projected 30-Year Treasury Yield (3.32%)**
Long-Term Average Market Return and 10-year Beta Coefficients			
Proxy Group Average		10.67%	10.83%
Proxy Group Median		10.74%	10.89%
Bloomberg DCF-based Market Return and Value Line Beta Coefficients			
Proxy Group Average		13.26%	13.37%
Proxy Group Median		13.03%	13.15%
Bond Yield Plus Risk Premium			
Current 30-Year Treasury Yield (2.37%)		9.73%	
Projected 30-Year Treasury Yield (3.32%)		9.80%	

[1] *See,* Exhibits JEN-3 to JEN-6. DCF model results are the average of the mean and median proxy group results.

In addition to the methodologies noted above, I considered the Company's significantly smaller size relative to the proxy group, the regulatory environment in which it operates, the costs associated with issuing equity ("flotation costs"), and the current economic and capital market environment.

Q. How did you determine your recommendation from the results summarized above?

A. The cost of equity is an opportunity cost that cannot be precisely quantified. Therefore, it must be estimated through the use of various market-based financial models. Since all financial models are subject to various assumptions and constraints (which may become more or less relevant as market conditions change), each provides a different perspective on investors' return requirements under varying market conditions. The use of a variety of financial models, therefore, enables a more robust and comprehensive assessment of the cost of equity.

In keeping with investor and regulatory practice, my recommendation considers the quantitative results produced by each model and their comparability to returns available to other similarly situated natural gas utilities, as well as each model's consistency with, and reflection of, the current volatile capital market environment. Additionally, I considered the Company's risk profile relative to a proxy group of companies that are comparable, but not necessarily identical in risk to FCG. Based on all those considerations, it is my opinion that an ROE of 10.75 percent is a just and reasonable estimate of FCG's cost of equity.

Q. Please briefly summarize recent changes in the capital market environment.

A. The economic and financial markets have experienced tremendous volatility and uncertainty associated with the COVID-19 global pandemic and the recent conflict in the Ukraine, to which the utility sector has not been immune. Specifically, volatility for both utility stocks and the broader market has increased, indicating higher risk for equity investors. In addition, the Federal Reserve has begun tightening its monetary policies, pushing up interest rates. Further, credit spreads between utility and Treasury bonds have widened, and inflation has surged and currently is at the highest rate we have seen in the last 40 years. These economic and financial market indicators suggest higher costs of capital. I discuss these factors in more detail in Section V.

Q. How is the remainder of your Direct Testimony organized?

A. The remainder of my Direct Testimony is organized as follows:

- Section III – Summarizes the regulatory guidelines relevant to the cost of capital estimation in regulatory proceedings, explains my selection of the proxy group used to develop my analytical results, and describes the analyses on which my ROE determination is based;
- Section IV – Discusses the effects of the Company's significantly smaller size, its regulatory environment and proposed multi-year rate plan, and the costs associated with common stock issuances on the cost of equity;

- Section V – Reviews the current capital market conditions and their impact on the cost of equity;
- Section VI – Provides an assessment of the Company's requested capital structure; and
- Section VII – Summarizes my conclusions and recommendations.

III. COST OF EQUITY ESTIMATION

A. Regulatory Guidelines and Financial Considerations

Q. Before addressing the specific aspects of this proceeding, please explain the cost of capital conceptually.

A. The cost of capital (*i.e.*, the costs of both debt and equity) is the return that investors require to commit capital to a firm. Investors will provide funds to a firm only if the return they *expect* is equal to, or greater than, the return they *require* to accept the risk of investing capital in the firm. Simply, the cost of capital is the expected rate of return prevailing in the capital markets on alternative investments of similar risk.[2] Conceptually, the cost of capital is: (1) forward-looking and reflects an *expected* rate of return; (2) an opportunity cost; (3) determined in the capital markets, and (4) dependent on, and proportional to, the risk of the investment.[3]

[2] Lawrence A. Kolbe, James A. Read, Jr., and George R. Hall, The Cost of Capital – Estimating the Rate of Return for Public Utilities, The MIT Press, Cambridge, MA (1986).

[3] Lawrence A. Kolbe, James A. Read, Jr., and George R. Hall, The Cost of Capital – Estimating the Rate of Return for Public Utilities, The MIT Press, Cambridge, MA (1986).

Because the cost of equity is expectational and premised on the principle of opportunity costs, it is not directly observable. Instead, it must be estimated using market data applied to various financial models that reflect simplified representations of investor behavior and expectations. Further, equity investors have a claim on cash flows only *after* debt holders are paid, and the uncertainty (or risk) associated with those residual cash flows determines the cost of equity. Because equity investors bear the residual risk, they take greater risks and require higher returns than debt investors. In the end, the estimated cost of equity should reflect the return that investors require considering the subject company's specific risk profile and the returns available on comparable investments.

Q. Please summarize the guiding principles used in establishing the cost of capital for a regulated utility.

A. Public utility regulation is rooted in the principle that utilities must be provided an opportunity to earn a fair rate of return sufficient to maintain the confidence of the investment community in the financial integrity of the utility and thus, enable the utility to attract the capital required to provide safe and reliable public utility service for customers at reasonable rates. The U.S. Supreme Court ("Supreme Court") established the guiding principles for establishing a fair return for capital for public utilities in two seminal cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. ("*Bluefield*");[4] and

[4] *See, Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. 262 U.S. 679, 692 (1923).

(2) *Federal Power Comm'n v. Hope Natural Gas Co.* ("*Hope*").[5] In *Bluefield*, the Supreme Court stated:

> A public utility is entitled to such rates as will permit it to earn a return upon the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; 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.[6]

In *Hope*, the Supreme Court reiterated the financial integrity and capital attraction principles of the *Bluefield* case:

> 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.[7]

In summary, the Supreme Court has recognized that the fair rate of return should be: (1) comparable to returns investors expect to earn on other investments of similar risk (the "comparable risk" standard); (2) sufficient to

[5] *See, Federal Power Comm'n v. Hope Natural Gas Co.,* 320 U.S. 591, 603 (1944).

[6] *Bluefield Water Works and Improvement Co. v. Public Service Comm'n.* 262 U.S. 679, 692 (1923).

[7] *Federal Power Comm'n v. Hope Natural Gas Co.,* 320 U.S. 591, 603 (1944).

assure confidence in the company's financial integrity (the "financial integrity" standard); and (3) adequate to maintain and support the company's credit and to attract capital (the "capital attraction" standard). A fair and reasonable return must meet all three of these standards.

Q. Has the Commission also applied the *Hope* and *Bluefield* standards as guidance for setting rates?

A. Yes, it has. For example, in Order No. PSC-09-0283-FOF-EI the Commission stated:

> The statutory principles for determining the appropriate rate of return for a regulated utility are set forth by the U.S. Supreme Court in its Hope and Bluefield decisions. These decisions define the fair and reasonable standards for determining rate of return for regulated enterprises. Specifically, these decisions hold that the authorized return for a public utility should be commensurate with returns on investments in other companies of comparable risk, sufficient to maintain the financial integrity of the company, and sufficient to maintain its ability to attract capital under reasonable terms. While the logic of the legal and economic concepts of a fair rate of return are fairly straight forward, the actual implementation of these concepts is more controversial. Unlike the cost rate on debt that is fixed and known due to its contractual terms, the cost of equity is a forward-looking concept and must be estimated. Financial models have been developed to estimate the investor-required ROE for a company. Market-based approaches such as the Discounted Cash Flow (DCF) model, Capital Asset Pricing Model (CAPM), and ex ante Risk Premium (RP) model are generally recognized as being consistent with the market based standards of a fair return enunciated in the Hope and Bluefield decisions.[8]

Based on those standards, the authorized ROE should provide the Company with the opportunity (which is not a guarantee) to earn a fair and reasonable

[8] *In re: Petition for rate increase by Tampa Electric Company*, Docket 080317-EI, Order No. PSC-09-0283-FOF-EI at 42-43 (F.P.S.C. April 30, 2009).

return and enable efficient access to external capital under a variety of market conditions.

Q. How is the cost of equity estimated in regulatory proceedings?

A. Regulated utilities primarily use long-term capital (*i.e.*, common stock, preferred stock, and long-term debt) to finance their permanent rate base. The rate of return for a regulated utility is calculated as its weighted average cost of capital, in which the costs of the individual sources of capital are weighted by their respective book values. The ROE reflects the cost of raising and retaining equity capital and is estimated using various market-based analytical approaches. However, as noted earlier, although quantitative models are used to estimate the ROE, it cannot be precisely quantified through a strict mathematical exercise. As such, a reasonable and appropriate ROE reflects the financial, economic, and regulatory environment in which the estimate is developed, as well as the subject company's relative risk profile.

Q. What are your conclusions regarding the regulatory principles pertaining to the cost of capital for a public utility?

A. The ratemaking process is based on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the utility must have a reasonable opportunity to recover the return of, and the market-required return on, prudently invested capital. The outcome of the Commission's order in this case, therefore, should provide FCG with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable

terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks.

Further, as explained in more detail in Section V, the regulatory environment is one of the most important factors considered by both debt and equity investors in their assessments of utility risk. In that respect, the financial community carefully monitors the current and expected financial condition of utility companies, which is significantly influenced by the regulatory decisions and environment in which they operate. Because utilities are capital intensive and investors have many investment alternatives (even within a given market sector), the Company's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions. To the extent FCG is provided a reasonable opportunity to earn its market-based cost of equity, neither customers nor shareholders are disadvantaged.

B. Proxy Group Selection

Q. Why is it necessary to select a group of proxy companies to determine the cost of equity for FCG?

A. Because the ROE is a market-based concept estimated through the use of market data applied to various financial models, and FCG is not a standalone, publicly traded entity, it is necessary to establish a group of companies that are both publicly traded and reasonably comparable to the Company in certain

fundamental respects to serve as its "proxy" in the ROE estimation process. Even if the Company were a publicly traded entity, short-term events could bias its market value during a given period. A significant benefit of using a proxy group is that it moderates the effects of anomalous, temporary events associated with any one company.

Q. Please provide a summary profile of FCG.

A. FCG is a 100 percent rate-regulated natural gas distribution utility that is a wholly owned, direct subsidiary of Florida Power & Light ("FPL"), which in turn is a wholly owned subsidiary of NextEra Energy, Inc. ("NextEra"). As of year-end December 2021, FCG provides natural gas distribution services to approximately 116,000 customers in the Miami-Dade, Broward, St. Lucie, Indian River, Brevard, Palm Beach, Hendry, and Martin Counties of Florida. FCG is not independently rated by the credit rating agencies; NextEra and FPL's current long-term issuer credit ratings are as follows:

Figure 2: Current Credit Ratings[9]

	NextEra	FPL
S&P	A- (Outlook: Stable)	A (Outlook: Stable)
Moody's	Baa1 (Outlook: Stable)	A1 (Outlook: Stable)
Fitch	A- (Outlook: Stable)	A (Outlook: Stable)

For the year ended December 2020, the Company reported a Commission-adjusted net operating income of approximately $12.9 million and a Commission-adjusted net utility plant of $313.3 million.[10] For the year ended

[9] Source: S&P Global Market Intelligence.

[10] Florida City Gas Earnings Surveillance Report, December 2020.

December 2021, the Company reported a Commission-adjusted net operating income of approximately $17.1 million and a Commission-adjusted net utility plant of $338.9 million.[11]

Q. What criteria do you apply to select the proxy group used to derive FCG's ROE?

A. I begin with the ten companies that *Value Line* classifies as Natural Gas Utilities and apply the following screening criteria:

- Because certain models used in my analyses assume that earnings and dividends grow over time, I excluded companies that do not consistently pay quarterly cash dividends, or have cut their dividend in the last two years;
- To ensure that the growth rates used in my analyses are not biased by a single analyst, all the companies in my proxy group are consistently covered by at least two utility industry equity analysts;
- All the companies in my proxy group (or their primary regulated natural gas utility subsidiary) have investment grade senior unsecured bond and/or corporate credit ratings from Standard and Poor's ("S&P") and Moody's Investor's Service ("Moody's);
- To incorporate companies that are primarily regulated natural gas distribution utilities, I included companies with at least 60.00 percent of total net operating income from regulated natural gas utility operations, on average, between 2018-2020; and
- I eliminated companies that have significant merger activity or transactions, or have had any recent financial event that could affect its market data or financial condition.

Q. Do you include NextEra in your analyses?

A. No. NextEra is not classified by *Value Line* as a natural gas utility, nor does it meet my screening criterion of having at least 60.00 percent of net operating

[11] Florida City Gas Earnings Surveillance Report, December 2021.

income from regulated natural gas utility operations. Further, it would involve circular logic to include FCG's ultimate parent company in my analyses.

Q. Which companies meet your screening criteria?

A. The criteria discussed above results in a proxy group of the following six companies:

Figure 3: Proxy Group Screening Results

Company	Ticker
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
NiSource, Inc.	NI
Northwest Natural Holding Company	NWN
ONE Gas, Inc.	OGS
Spire Inc.	SR

The screening criteria results in a group of natural gas utilities that are comparable (but not identical) to the financial and operational characteristics of FCG. The screening criterion requiring an investment grade credit rating ensures that the proxy companies, like FCG, are in sound financial condition. Additionally, the criterion screening on the percent of net operating income from regulated natural gas operations distinguishes between natural gas utilities that are subject to regulation and those with substantial unregulated operations and exposed to higher risks. In my opinion, these screens collectively reflect key risk factors that investors consider in making investments in natural gas utilities.

However, as shown in Figure 4 below, FCG is significantly smaller than the proxy group in terms of sales volume, number of customers, net operating income, and net utility plant.

Figure 4: Proxy Group Statistics (2020)[12]

	Moody's LT Issuer Rating	Natural Gas Customers	Natural Gas Sales Volume (Mcf)	Gas Operating Income ($000)	Net Utility Plant ($000)
ATO	A1	3,231,422	559,162,677	$691,515	13,148,163
NJR	A1[13]	559,542	84,977,860	$148,290	2,710,872
NI	Baa2	3,198,215	861,193,110	$542,256	15,776,664
NWN	Baa1[14]	768,905	108,040,414	$101,444	2,326,911
OGS	A3	2,223,777	364,662,140	$239,692	4,864,892
SR	Baa2	1,720,363	306,927,400	$238,530	4,974,370
Median	**A3/Baa1**	**1,972,070**	**335,794,770**	**$239,111**	**$4,919,631**
FCG	NR	115,296	12,804,032	$12,886	$313,303

Q. Please explain why the other two major gas utilities in Florida – Peoples Gas System ("Peoples") and Florida Public Utilities Company ("FPUC") – are not included in your proxy group.

A. There are several reasons these companies are not included in my proxy group. Most notably, neither Peoples nor FPUC is publicly traded, and therefore neither have market data that can be applied in the financial models used to estimate the ROE. As such, cost of equity estimates cannot be developed for

[12] Sources: Moody's Investors Service; Florida City Gas Earnings Surveillance Report, December 2020; American Gas Association, Annual Report of Volumes, Revenues, and Customers by Company (2020); S&P Capital IQ; Spire Inc SEC Form 10-K for the year ended September 30, 2020. Customer count and sales volume includes transportation customers and volumes.

[13] New Jersey Resources Corp. is not rated by Moody's; rating is for primary regulated subsidiary New Jersey Natural Gas Company.

[14] Northwest Natural Holding Company is not rated by Moody's; rating is for primary regulated subsidiary Northwest Natural Gas Company.

Peoples or FPUC directly. Moreover, both companies' publicly traded parent company do not meet the screening criteria described earlier. Peoples' publicly traded parent, Emera Inc., is a Canadian corporation that is not classified by *Value Line* as a natural gas utility company, as the majority of Emera Inc.'s primary regulated utility subsidiaries are electric utilities. FPUC's publicly traded parent Chesapeake Utilities is classified by *Value Line* as a natural gas utility; however, its proportion of regulated natural gas utility operating income does not meet my 60 percent threshold.

Q. Does a proxy group of six companies provide a reasonable basis to compare and consider the Company's business and regulatory risks?

A. Yes. The analyses performed in estimating the ROE are more likely to be representative of the subject utility's cost of equity to the extent that the selected proxy companies are fundamentally comparable to the subject utility. Because all analysts use some form of screening process to arrive at a proxy group, by definition, the proxy group is not randomly drawn from a larger population, nor does a larger proxy group necessarily improve the representative nature of the proxy group. In my opinion, including companies whose fundamental comparability may be tenuous at best, simply for the purpose of expanding the number of observations, does not improve the reliability of the results or the conclusions drawn from them.

Developing an appropriate proxy group requires balancing the competing objectives of ensuring that the proxy companies are comparable in risk to the

subject company, while at the same time ensuring a sufficient number of companies in the proxy group. As such, no proxy group will be identical in risk to FCG. Therefore, because the proxy group is not identical in risk to the Company, a relative risk assessment between FCG and the proxy group must be performed to arrive at an appropriate ROE for FCG. Nonetheless, it is my opinion that my proxy group is reasonably comparable to FCG to use as a basis for the ROE estimation process.

C. Cost of Equity Models

Q. What analytical approaches do you use to determine the Company's ROE?

A. As discussed earlier, I rely on the constant growth and quarterly growth forms of the DCF model, the traditional and empirical forms of the CAPM, and the Bond Yield Plus Risk Premium approach. I rely on these models for two reasons. First, the purpose of an ROE analysis is to estimate the return that investors require; therefore, it is important to use models on which investors rely. The models I apply are commonly used by the financial community,[15] as well as in regulatory proceedings. Second, the models focus on different aspects of return requirements, and provide different insights to investors' views of risk and return. Consequently, many finance textbooks recommend using multiple approaches to estimate the cost of equity.[16] As explained earlier,

[15] *See, for example,* Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed., 1994, at 341.

[16] *See, for example,* Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed., 1994, at 341, and Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed., 2000, at 214.

using multiple methods provides a broader and, therefore, more reliable perspective on investors' return requirements.

1. Constant Growth Discounted Cash Flow Model

Q. Please describe the Constant Growth DCF approach.

A. The Constant Growth DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its simplest form, the Constant Growth DCF model expresses the cost of equity as the discount rate that sets the current price equal to expected cash flows:

$$P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_\infty}{(1+k)^\infty} \qquad [1]$$

Where P represents the current stock price, $D_1 \ldots D_\infty$ represent expected future dividends, and k is the discount rate, or required ROE. Equation [1] is a standard present value calculation that can be simplified and rearranged into the familiar form:

$$k = \frac{D_0\ (1+g)}{P} + g \qquad [2]$$

Equation [2] is referred to as the "Constant Growth DCF" model, in which the first term is the expected dividend yield, and the second term is the expected long-term annual growth rate in perpetuity.

Q. What assumptions underlie the Constant Growth DCF model?

A. The Constant Growth DCF model assumes: (1) a constant average annual growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant Price/Earnings multiple; and (4) a discount rate greater than the expected growth rate. The model also assumes that the current cost of equity remains constant in perpetuity.

Q. What market data do you use as inputs of your Constant Growth DCF analysis?

A. I calculate the Constant Growth DCF result for each of the proxy companies using the following inputs:

- The average daily closing prices for the 30-, 90-, and 180-trading days ended March 31, 2022, for the term P_0;
- The current quarterly dividend as of March 31, 2022 multiplied by 4, for the term D_0; and
- Long-term earnings per share ("EPS") growth rate projections as of March 31, 2022 reported by Zacks, Yahoo! Finance, and *Value Line*.

Q. Why do you use three averaging periods to calculate an average stock price?

A. I do so to ensure that the model's results are not skewed by anomalous events that may affect stock prices on any given trading day. At the same time, the averaging period should be reasonably reflective of expected capital market conditions. Using 30-, 90-, and 180-trading day averaging periods balances those concerns.

Q. How do you calculate the expected dividend yield over the coming year?

A. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, I calculate the expected dividend yield by applying one-half of the long-term growth rate to the current dividend yield. That adjustment ensures that the

expected dividend yield is, on average, representative of the coming 12-month period.

Q. Why do you rely on projected EPS growth as the appropriate measure of long-term growth in the Constant Growth DCF model?

A. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [2] above) assumes a single expected growth rate in perpetuity. Accordingly, one must assume a fixed payout ratio, and the same constant growth rate in EPS, dividends per share, and book value per share to reduce the long-term growth rate to a single measure. As such, dividend growth can only be sustained by earnings growth in the long-term. As noted by Brigham and Houston "[g]rowth in dividends occurs primarily as a result of growth in *earnings per share* (EPS)."[17]

Further, academic studies have clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of growth are superior to other measures of growth in predicting stock prices.[18] To that point, the research of Drs. Vander Weide and Carleton demonstrates that earnings growth projections have a statistically significant

[17] Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management (Concise Fourth Edition, Thomson South-Western), at 317 (emphasis added).

[18] *See, e.g.*, Andreas C. Christofi, Petros C. Christofi, Marcus Lori and Donald M. Moliver, *Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate*, Journal of Investing (Spring 1999); Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management at 21 (Summer 1992); and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988); Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

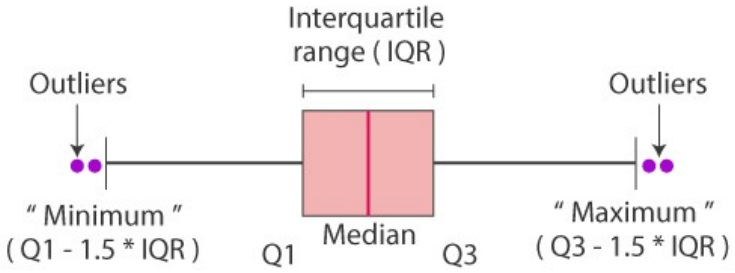
relationship to stock valuation levels, while dividend growth rates do not.[19] Those findings suggest that investors form their investment decisions based on expectations of growth in earnings, not dividends. In addition, the only forward-looking growth rates that are available on a consensus basis are analysts' EPS growth rates. The fact that earnings growth projections are the only widely available estimates of growth further supports the position that earnings growth is the most meaningful measure of growth among the investment community. Consequently, earnings growth, not dividend growth is the appropriate measure of long-term growth in the DCF model.

Q. Do you review the earnings growth rates included in your analysis for outliers?

A. Yes, I use the interquartile range ("IQR") test to test for earnings growth rate outliers. In statistics, the IQR is a measure of statistical dispersion and is defined as the difference between the top of the 3rd quartile and the bottom of the first quartile of the data sample. Values that are more than 1.5x below the bottom of the IQR and 1.5x above the top of the IQR are considered outliers, as illustrated in Figure 5 below.

[19] *See* Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

Figure 5: Interquartile Range Box Plot Outlier Test



The median of all the projected EPS growth rates from Zacks, Yahoo! Finance, and *Value Line* is 6.00 percent. The top of the third quartile is the EPS growth rate of 7.30 percent, and the bottom of the first quartile is the EPS growth rate of 5.00 percent. The IQR, therefore, is 2.30 percent (*i.e.,* 7.30 percent minus 5.00 percent). The low outlier threshold is 1.55 percent, and the high outlier threshold is 10.75 percent.[20] Because all the EPS growth rates fall within 1.55 percent and 10.75 percent, I do not remove any growth rates as outliers.

Q. What are the results of your Constant Growth DCF analysis?

A. For each proxy company, I calculate the low, mean, and high DCF result. For the mean result, I combine the average of the three EPS growth rate estimates listed above with the subject company's expected dividend yield for each proxy company. I calculate the high DCF result by combining the maximum EPS growth rate estimate with the subject company's expected dividend yield. I use the same approach to calculate the low DCF result, using instead the minimum EPS growth rate estimate for each proxy company. I then calculate the mean and median low, mean, and high DCF results for the proxy group. In

[20] 1.55% = 5.00% - (1.5*2.30%); 10.75% = 7.30% + (1.5*2.30%)

developing my ROE recommendation, I rely on the average of the mean and median proxy group Constant Growth DCF results (*see* Figure 6, below, and Exhibit JEN-2). By relying on the average of the mean and median proxy group results, I consider the individual DCF results of each proxy company without giving undue weight to the highest or lowest estimates.

Figure 6: Constant Growth DCF Results[21]

	Low	Mean	High
30-Day Average	8.05%	9.54%	10.38%
90-Day Average	8.25%	9.76%	10.60%
180-Day Average	8.34%	9.85%	10.69%

2. Quarterly Growth DCF Model

Q. Please describe the Quarterly Growth DCF model.

A. As noted earlier, the Constant Growth DCF model is based on several limiting assumptions, one of which is that dividends are paid annually. However, most dividend-paying companies, including utilities, pay dividends on a quarterly (as opposed to an annual) basis. Although the dividend yield adjustment discussed earlier is meant to address that assumption (by increasing the observed dividend yield by one-half of the expected growth rate), it does not fully account for the quarterly receipt and reinvestment of dividends. As a consequence, the Constant Growth DCF model likely understates the Cost of Equity. The Quarterly Growth DCF model specifically incorporates the quarterly payment

[21] Exhibit JEN-2. Average of the mean and median proxy group results.

of dividends, and the associated quarterly compounding of those dividends as they are reinvested at the required ROE. As noted by Dr. Roger Morin:

> Clearly, given that dividends are paid quarterly and that the observed stock price reflects the quarterly nature of dividend payments, the market-required return must recognize quarterly compounding, for the investor receives dividend checks and reinvests the proceeds on a quarterly schedule ... The annual DCF model inherently understates the investors' true return because it assumes all cash flows received by investors are paid annually.[22]

Q. How is the dividend yield portion of the Quarterly DCF model calculated?

A. To more accurately reflect the timing and compounding of quarterly dividends, the model replaces the "*D*" component of the Constant Growth DCF model with the following equation:

$$D = d_1 (1+k)^{0.75} + d_2 (1+k)^{0.50} + d_3 (1+k)^{0.25} + d_4 (1+k)^{0} \quad [3]$$

Where:

d_1, d_2, d_3, d_4 = expected quarterly dividends over the coming year; and

k = the required Return on Equity.

Because the required ROE (k) is a variable in the dividend calculation, the Quarterly Growth DCF model is solved iteratively.

To calculate the expected dividends over the coming year for the proxy companies (*i.e.*, d_1, d_2, d_3, and d_4), I obtained the last four paid quarterly dividends for each company and multiplied them by one plus the growth rate (*i.e.,* $1 + g$). For the P_0 component of the dividend yield, I used the same average

[22] Roger A. Morin, Ph.D., New Regulatory Finance, Public Utility Reports, Inc., at 344 (2006).

stock prices applied in the Constant Growth DCF analysis (*i.e.*, 30-, 90-, and 180-trading day averages ended March 31, 2022) for each proxy company.

Q. What are the results of your Quarterly Growth DCF analysis?

A. My Quarterly Growth DCF results are summarized in Figure 7, below (*see also* Exhibit JEN-3). As with my Constant Growth DCF results, I rely on the average of the mean and median proxy group results.

Figure 7: Quarterly Growth DCF Results[23]

	Low	Mean	High
30-Day Average	8.14%	9.68%	10.55%
90-Day Average	8.35%	9.91%	10.78%
180-Day Average	8.44%	10.00%	10.87%

3. Capital Asset Pricing Model and Empirical Capital Asset Pricing Model

Q. Please describe the general form of the CAPM.

A. The CAPM is a risk premium method that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security. As shown in Equation [4], the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

$$K_e = r_f + \beta(r_m - r_f) \qquad [4]$$

Where:

K_e = the required market ROE for a security;

[23] Exhibit JEN-3. Average of the mean and median proxy group results.

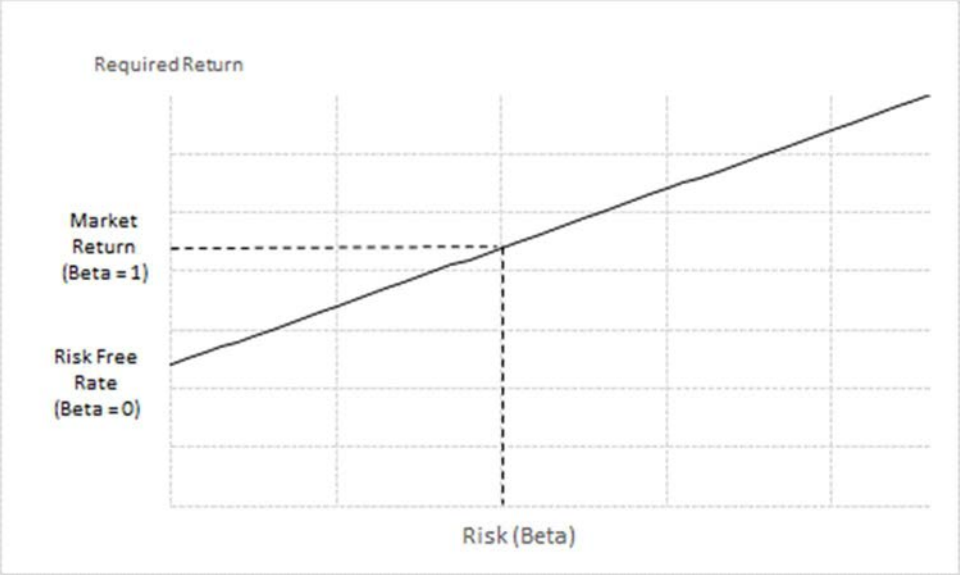
β = the Beta coefficient of that security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

Equation [4] describes the Security Market Line ("SML"), or the CAPM risk-return relationship, depicted in Figure 8 below. The intercept is the risk-free rate (r_f) that has a Beta coefficient of zero, and the slope is the expected market risk premium ($r_m - r_f$). As shown in Figure 8, the slope of the line is upward sloping, illustrating the principle that investments of higher risk require a higher return. By definition, r_m, the return on the market, has a Beta coefficient of 1.00.

Figure 8: Security Market Line



The CAPM assumes that all non-market or unsystematic risk, can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic risk. Therefore, the CAPM

assumes that investors require compensation only for systematic, or market, risk. Non-diversifiable (or systematic) risk is measured by the Beta coefficient, which is defined as:

$$\beta_j = \frac{\sigma_j}{\sigma_m} \times \rho_{j,m} \quad [5]$$

Where σ_j is the standard deviation of returns for company "j," σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta coefficient, therefore, represents both relative volatility (*i.e.*, the standard deviation) of returns, and the correlation in returns between the subject company and the overall market. Intuitively, higher Beta coefficients indicate that the subject company's returns have been relatively volatile and have moved in tandem with the overall market.

Q. What risk-free rates do you assume in your CAPM analysis?

A. I applied two estimates of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (*i.e.*, 2.37 percent)[24] and (2) a projected 30-year Treasury yield (*i.e.*, 3.32 percent).[25]

Q. Why do you rely on the 30-year Treasury yield in the CAPM analysis?

A. In determining the security most relevant to the application of the CAPM, the term (or maturity) of the risk-free security should best match the life of the

[24] Source: Bloomberg Professional Service.

[25] The average of: (1) the average projected 30-year Treasury yield for the six quarters ended Q3 2023 and (2) the long-term projected 30-year Treasury yield for the years 2023-2027 and 2028-2032 reported by *Blue Chip Financial Forecasts. See, Blue Chip Financial Forecasts* Vol. 41, No. 4, April 1, 2022, at 2 and *Blue Chip Financial Forecasts,* Vol. 40, No. 12, December 1, 2021, at 14.

underlying investment.[26] Natural gas utilities are typically long-duration investments and, as such, the 30-year Treasury yield is more suitable for the purpose of calculating the cost of equity.

Q. What Beta coefficients do you use in your CAPM model?

A. I consider two estimates of the Beta coefficient for each proxy company. The first estimate is the current Beta coefficient reported by *Value Line* as of March 31, 2022. *Value Line* calculates the Beta coefficient using weekly returns over a five-year period. The proxy group mean and median Beta coefficients from *Value Line* are 0.85 and 0.83, respectively. *Value Line* adjusts the raw Beta coefficients to reflect the tendency of the Beta coefficient to regress toward the market mean of 1.00.

The second estimate is the adjusted Beta coefficient calculated using weekly return data from Bloomberg over the ten years ended March 31, 2022, rather than the five-year period used by *Value Line*. The proxy group mean and median ten-year Beta coefficients from Bloomberg are 0.78 and 0.79, respectively. As with the *Value Line* Beta coefficients, the raw Bloomberg Beta coefficients are adjusted to reflect the tendency of the Beta coefficient to regress toward the market mean of 1.00.

[26] Source: Morningstar, 2013 Ibbotson Stocks, Bonds, Bills, and Inflation Valuation Yearbook, at 44.

Q. Are the current *Value Line* Beta coefficients a reasonable reflection of the proxy companies' Beta coefficients in the future during the time rates will be in effect?

A. Yes, I believe so. As explained in Section V below, Beta coefficients for the proxy group and utilities generally have increased since February 2020, indicating higher volatility (and therefore risk) for utility company stocks. However, because *Value Line* uses five years of weekly return data in calculating its Beta coefficients, the market's current reflection of utility stocks' higher risk captures a trend that began five years ago and will remain in the data for at least the next three to five years during the time rates will be in effect. Moreover, *Value Line's* current Beta coefficients are not substantially different from the ten-year Beta coefficients from Bloomberg. Nonetheless, to the extent *Value Line's* current Beta coefficients are considered to be inconsistent with expectations for utility Beta coefficients going forward, the ten-year Beta coefficients provide a longer-term perspective of Beta coefficients for the proxy group.

Q. What estimates of the expected market return do you use to calculate the market risk premium?

A. I apply two estimates of the expected market return. The first calculates the market capitalization-weighted ROE of the S&P 500 Index by applying the Constant Growth DCF model described earlier to each of the companies in the S&P 500 Index. The second considers the long-term, historical arithmetic

average market return of 12.33 percent between 1926 and 2021 reported by Duff & Phelps.[27]

Q. Please more fully explain your forward-looking DCF approach to estimating the market return.

A. As shown in Exhibit JEN-4, I apply the Constant Growth DCF model to each of the S&P 500 Index companies using data from both Bloomberg and *Value Line* to calculate the market capitalization-weighted ROE for the S&P 500 Index. I calculate the expected dividend yield using the same one-half growth rate assumption described earlier and combine that value with *Value Line's* projected earnings growth rate for each of the S&P 500 companies for which *Value Line* provides consensus earnings growth rates. I perform the same analysis using Bloomberg's consensus earnings growth rate projection for each of the S&P 500 companies. The expected market return from *Value Line* and Bloomberg are 16.14 percent and 14.64 percent, respectively. To be conservative, I rely on Bloomberg's market return estimate of 14.64 percent in my CAPM analysis.

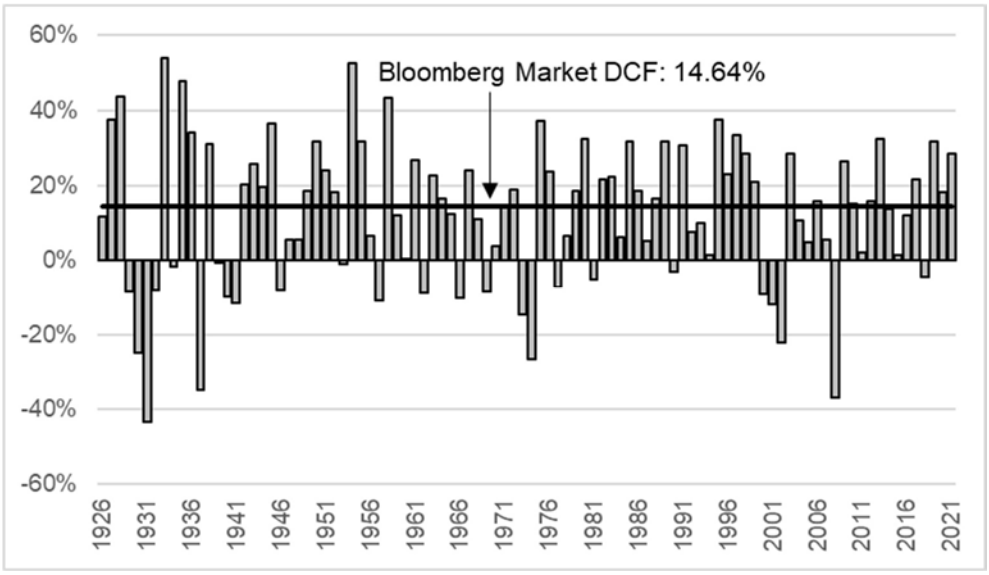
Q. Is the Bloomberg-based market DCF-based estimate of 14.64 percent consistent with actual observed returns on the market?

A. Yes, it is. As shown in Figure 9 below, an expected market required return of 14.64 percent or higher occurred in 48 of the last 96 years (*i.e.,* 50 percent of the time). Additionally, since 2009, the market return has averaged 16.55 percent, and equaled or exceeded 14.64 percent in eight of the last 13 years and

[27] Duff & Phelps, 2022 SBBI Yearbook, at Appendix A-1.

ten of the last 20 years. In other words, an annual market return of 14.64 percent, or higher, has occurred frequently.

Figure 9: Annual Market Return (1926 – 2021)



Q. Why do you also consider the long-term arithmetic average historical return on the market of 12.33 percent as an alternate estimate of the expected market return?

A. My objective is to develop a reasonable estimate of the expected market return during the time rates will be in effect to apply in the CAPM. Because the Cost of Equity is forward looking, any estimate – whether based on historical or projected data – assumes the estimate reflects investors' expectations into the future. Although the 14.64 percent expected market return is highly consistent with historically observed market returns (as shown in Figure 9 above), it is above the long-term arithmetic annual average market return. Therefore, it may be reasonable to expect that over time, the market return will revert to its long-run historical arithmetic average. From that perspective, the application of the

long-run historical arithmetic average market return as an alternate estimate of the expected market return is prospective in nature.

Q. With the risk-free rates and market required return estimates described above, how do you calculate the market risk premium?

A. I consider two estimates of the risk-free rate and two estimates of the expected market return. Combined, those variables produce four estimates of the expected market risk premium, shown below in Figure 10.

Figure 10: Market Risk Premium Estimates

	Current Risk-Free Rate (2.37%)	Projected Risk-Free Rate (3.32%)
Bloomberg DCF-based Expected Market Return (14.64%)	12.27%	11.32%
Long-Term Historical Average Market Return (12.33%)	9.96%	9.01%

Q. What are the results of your CAPM analysis?

A. To present a spectrum of CAPM estimates from the variables described above, Exhibit JEN-5 calculates CAPM estimates under two approaches. The first approach applies the most conservative estimates of each variable; specifically, Bloomberg 10-year Beta coefficients and the long-term arithmetic average historical market return, resulting in a low-end range of CAPM estimates. The second approach applies the current *Value Line* Beta coefficients and the DCF-based expected market return from Bloomberg, which provides a high-end range of CAPM estimates. As shown in Figure 11 below, the proxy group

average and median CAPM results suggest an ROE range of 10.12 percent to 12.94 percent (*see* Exhibit JEN-5).

Figure 11: Summary of CAPM Results[28]

	Current 30-Year Treasury Yield (2.37%)	Projected 30-Year Treasury Yield (3.32%)
Long-Term Historical Average Market Return and Bloomberg 10-year Beta Coefficient		
Proxy Group Average	10.12%	10.33%
Proxy Group Median	10.21%	10.41%
Bloomberg DCF-Based Expected Market Return and Value Line 5-year Beta Coefficient		
Proxy Group Average	12.80%	12.94%
Proxy Group Median	12.49%	12.66%

Q. Do you consider another form of the CAPM?

A. Yes, I also consider the Empirical CAPM ("ECAPM") approach, which calculates the product of the adjusted Beta coefficient and the Market Risk Premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the Market Risk Premium, without any effect from the Beta coefficient.[29] The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as expressed in Equation [6] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [6]$$

Where:

k_e = the required market ROE;

[28] Exhibit JEN-5.

[29] *See, e.g.*, Roger A. Morin, Ph.D., New Regulatory Finance, at 189-190 (2006).

β = the adjusted Beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

Q. What is the benefit of the ECAPM approach?

A. The ECAPM addresses the tendency of the CAPM to underestimate the cost of equity for companies with low Beta coefficients, such as regulated utilities. As discussed below, the ECAPM recognizes academic research that indicates that the risk-return relationship is flatter than that estimated by the CAPM, and that the CAPM under-estimates the alpha, or the constant return term.[30]

Numerous tests of the CAPM have measured the extent to which security returns and Beta coefficients are related as predicted by the CAPM. The ECAPM method reflects the finding that the actual SML described by the CAPM formula is not as steeply sloped as the predicted SML.[31] Fama and French state that "[t]he returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low."[32] Similarly, Morin states:

> With few exceptions, the empirical studies agree that . . . low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. . . .
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:

[30] *Ibid*., at 191.

[31] *Ibid., at 175.*

[32] Eugene F. Fama & Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004, at 33.

$$K = R_F + x\,(R_M - R_F) + (1-x)\beta(R_M - R_F)$$

where x is a fraction to be determined empirically. The value of x that best explains the observed relationship Return = 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:

$$K = R_F + 0.25(R_M - R_F) + 0.75\,\beta(R_M - R_F)$$ [33]

Q. Does the application of adjusted Beta coefficients in the ECAPM address the empirical issues with the CAPM?

A. No, it does not. Beta coefficients are adjusted because of their general regression tendency to converge toward 1.00 over time, *i.e.*, over successive calculations. As also noted earlier, numerous studies have determined that at any given point in time, the SML described by the CAPM formula is not as steeply sloped as the predicted SML. To that point, Morin explains:

> Some have argued that the use of the ECAPM is inconsistent with the use of adjusted betas, such as those supplied by Value Line and Bloomberg. This is because the reason for using the ECAPM is to allow for the tendency of betas to regress toward the mean value of 1.00 over time, and, since Value Line betas are already adjusted for such trend, an ECAPM analysis results in double-counting. This argument is erroneous. Fundamentally, the ECAPM is not an adjustment, increase or decrease, in beta. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. The ECAPM and the use of adjusted betas comprised two separate features of asset pricing. Even if a company's beta is estimated accurately, the CAPM still understates the return for low-beta stocks. Even if the ECAPM is used, the return for low-beta securities is understated if the betas are understated. Referring back to Figure 6-1, the ECAPM is a return (vertical

[33] Roger A. Morin, Ph.D., New Regulatory Finance, at 175, 190 (2006).

axis) adjustment and not a beta (horizontal axis) adjustment. Both adjustments are necessary. [34]

Therefore, it is appropriate to rely on adjusted Beta coefficients in both the CAPM and ECAPM.

Q. What are the results of your ECAPM analyses?

A. I apply the same market returns, Beta coefficients, and risk-free rates described earlier to the ECAPM formula shown in Equation [6] above. The results of my ECAPM analyses are shown in Exhibit JEN-5 and summarized in Figure 12 below.

Figure 12: Summary of ECAPM Results[35]

	Current 30-Year Treasury Yield (2.37%)	**Projected 30-Year Treasury Yield (3.32%)**
Long-Term Historical Average Market Return and Bloomberg 10-year Beta Coefficient		
Proxy Group Average	10.67%	10.83%
Proxy Group Median	10.74%	10.89%
Bloomberg DCF-Based Expected Market Return and Value Line 5-year Beta Coefficient		
Proxy Group Average	13.26%	13.37%
Proxy Group Median	13.03%	13.15%

4. Bond Yield Plus Risk Premium Approach

Q. Please describe the Bond Yield Plus Risk Premium approach.

A. The Bond Yield Plus Risk Premium approach is based on the basic financial principle of risk and return, which states that equity investors require a premium

[34] *Ibid.*, at 191.

[35] Exhibit JEN-5.

over the return required as a bondholder to account for the incremental residual risk associated with equity ownership. Risk premium approaches, therefore, estimate the cost of equity as the sum of an equity risk premium and the yield on a particular class of bonds.

Q. Please explain how you perform your Bond Yield Plus Risk Premium analysis.

A. I first define the equity risk premium as the difference between the authorized ROE and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yield. I gather the authorized ROE for 1,226 natural gas utility rate proceedings between January 1, 1980, and March 31, 2022. To reflect the prevailing level of bond yields during the pendency of the proceedings, I calculate the average 30-year Treasury yield over the average period between the filing of the rate case and the date of the final order (approximately 187 days).

Because the data covers several economic cycles, the analysis is helpful in assessing the change in the equity risk premium over time. Prior research, for example, has shown that the equity risk premium is inversely related to the level of bond yields.[36] That analysis is particularly relevant given the relatively low, but increasing, level of current Treasury yields.

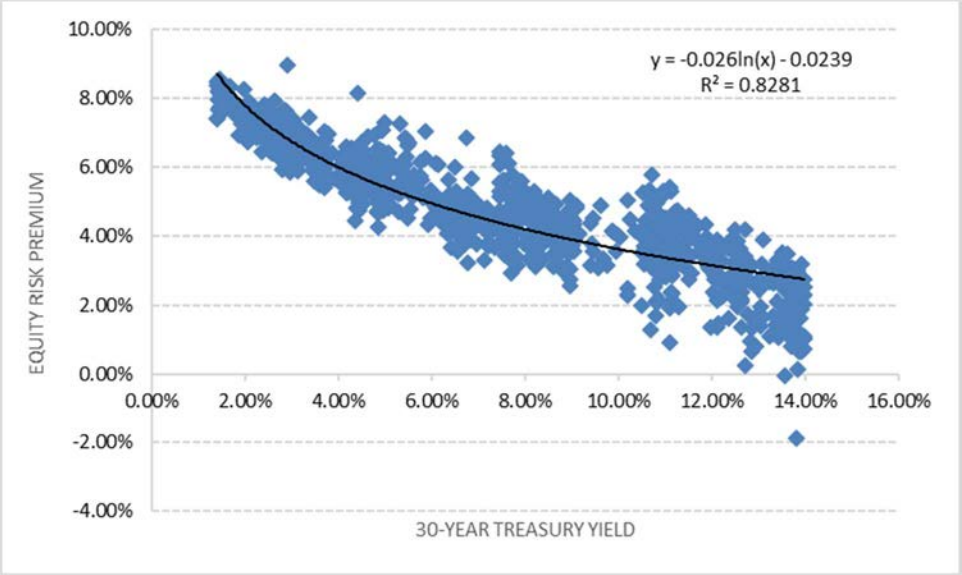
[36] *See*, *for example*, Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, (Summer 1992), at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, (Spring 1985), at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, (Autumn 1995), at 89-95.

Q. How do you analyze the relationship between interest rates and the Equity Risk Premium?

A. I estimate the relationship between bond yields and the equity risk premium by applying a regression analysis, in which the observed equity risk premium described above is the dependent variable, and the 30-year Treasury yield is the independent variable. To account for the variability in bond yields and authorized ROEs over several decades, I used the semi-log regression, in which the equity risk premium is expressed as a function of the natural log of the 30-year Treasury yield:

$$RP = \alpha + \beta \left(LN \left(T_{30} \right) \right) \quad [7]$$

Figure 13: Equity Risk Premium[37]



As Figure 13 illustrates, the equity risk premium increases as interest rates fall. The finding that the equity risk premium and interest rates are inversely related is supported by published research. For example, Morin notes that:

[37] Exhibit JEN-6.

"[p]ublished studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin (2005), McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates – rising when rates fell and declining when interest rates rose."[38] Based on the regression coefficients in Figure 13, the implied ROE is between 9.73 percent and 9.80 percent (*see* Figure 14 and Exhibit JEN-6).

Figure 14: Summary of Bond Yield Plus Risk Premium Results[39]

	Return on Equity
Current 30-Year Treasury (2.37%)	9.73%
Projected 30-Year Treasury (3.32%)	9.80%

IV. BUSINESS RISKS AND OTHER CONSIDERATIONS

Q. Do you consider additional factors in developing your ROE recommendation for FCG?

A. Yes, I do. As noted earlier, because the proxy group is not identical in risk to FCG, an assessment of the differences in risk between FCG and the proxy group must be undertaken in order to develop an appropriate estimate of the Company's cost of equity. Therefore, I consider FCG's significantly smaller size, the regulatory environment in which it operates, its proposed multi-year

[38] Roger A: Morin, Ph.D., New Regulatory Finance, Public Utilities Reports, Inc., at 128 (2006) [clarification added].

[39] Exhibit JEN-6.

rate plan, and the effect of flotation costs in determining where the Company's cost of equity falls within the range of analytical results.

A. Small Size

Q. Please explain the risk associated with small size.

A. Both the financial and academic communities have long accepted the proposition that the cost of equity for small firms is subject to a "size effect."[40] Although empirical evidence of the size effect often is from studies of industries beyond regulated utilities, utility analysts also have noted the risks associated with small market capitalizations. Specifically, an analyst from Ibbotson Associates noted:

> For small utilities, investors face additional obstacles, such as a smaller customer base, limited financial resources, and a lack of diversification across customers, energy sources, and geography. These obstacles imply a higher investor return.[41]

Small size, therefore, leads to two categories of increased risk for investors: (1) liquidity risk (*i.e.*, the risk of not being able to sell one's shares in a timely manner due to the relatively thin market for the securities); and (2) fundamental business risks.

[40] Mario Levis, *The record on small companies: A review of the evidence*, Journal of Asset Management, March 2002, at 368-397, for a review of literature relating to the size effect.

[41] Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.

Q. How does the comparatively small size of FCG affect its business risks relative to the proxy group of companies?

A. In general, smaller utility companies are less able to withstand adverse events that affect their revenues and expenses. Capital expenditures for system maintenance and replacements put proportionately greater pressure on customer costs, potentially leading to customer attrition or demand reduction. These risks affect the return required by investors for smaller companies.

Q. Is there support in the financial community for the use of a small size premium?

A. Yes. There have been several studies that demonstrate the existence of the size premium. One of the earliest works in this area found that over a period of 40 years "the common stock of small firms had, on average, higher risk-adjusted returns than the common stock of large firms."[42] The author, who referred to that finding as the "size effect," suggested that the CAPM was mis-specified, in that on average, smaller firms had significantly larger risk-adjusted returns than larger firms. The author also concluded that the size effect was "most pronounced for the smallest firms in the sample."[43] Since then, additional empirical research has focused on explaining the size effect as a function of lower trading volume and other factors, but the proposition that Beta coefficients fail to reflect the risks of smaller firms persists.[44]

[42] R. W. Banz, *The Relationship Between Return and Market Value of Common Stocks*, Journal of Financial Economics, 9, 1981.

[43] *Ibid.*

[44] *See, e.g.,* Mario Levis, *The record on small companies: A review of the evidence*, Journal of Asset Management, March, 2002.

In 1994, Fama and French focused on the issue of whether the CAPM adequately explained security returns and proposed a "three factor" model for expected security returns. Those factors include: (1) the covariance with the market, (2) size, and (3) financial risk as determined by the book-to-market ratio. As explained by Morningstar, Fama and French "found that the returns on stocks are better explained as a function of size and book-to-market value in addition to the single market factor of the CAPM, with the company's size capturing the size effect and its book-to-market ratio capturing the financial distress of a firm."[45]

Q. Is it appropriate to consider the risk associated with FCG's small size even though its ultimate parent is NextEra?

A. Yes, it is. The widely accepted "standalone" principle in the regulatory and financial communities treats each utility subsidiary as its own company. Importantly, the cost of capital depends on the use of that capital, not on its source. In other words, the cost of equity is a function of the risk of the equity investment, not on the source of equity funding (the parent company).

The opportunity cost concept applies regardless of the source of the funding. Parent entities have capital constraints as do other investors and must look at the attractiveness of the expected risk-adjusted return of each investment alternative in their capital budgeting process. When funding is provided by a parent entity, the return still must be sufficient to provide an incentive to

[45] Morningstar, Ibbotson SBBI 2013 Valuation Yearbook, at 109.

allocate equity capital to the subsidiary or business unit rather than other internal or external investment opportunities. That is, the regulated subsidiary must compete for capital with all the parent company's affiliates, as well as with other, similarly situated utility companies. In that respect, investors value corporate entities on a sum-of-the-parts basis and expect each division within the parent company to provide an appropriate risk-adjusted return. Therefore, it is important that the authorized ROE reflect the risks and prospects of FCG's operations and support its financial integrity from a stand-alone perspective.

Q. How does FCG compare in size to the proxy companies?

A. As shown earlier in Figure 4 in Section III above, FCG is substantially smaller than the proxy group on average in terms of number of natural gas customers, sales volume, operating income, and net utility plant. Because FCG is not a separately traded entity, an estimated stand-alone market capitalization for FCG must be calculated. The implied market capitalization of FCG is calculated by multiplying the median market-to-book ratio for the proxy group of 1.88 to the Company's implied total common equity of $291.44 million.[46] The implied market capitalization based on that calculation is approximately $548.53 million. As another perspective of the relative size difference, the proxy group median market capitalization is approximately $4.36 billion, which is approximately 7.94 times FCG's implied market capitalization.

[46] Equity value of FCG is estimated from the proposed test year rate base of approximately $489 million shown in MFR G1-1 (RSAM) and requested investor-supplied equity ratio. *See* Exhibit JEN-7.

Q. How did you estimate the size premium for FCG?

A. In its *Cost of Capital Navigator*, Duff & Phelps presents its calculation of the size premium for deciles of market capitalizations relative to the S&P 500 Index. An additional estimate of the size premium associated with FCG, therefore, is the difference in the Duff & Phelps size risk premiums for the proxy group median market capitalization relative to the implied market capitalization for FCG.

As shown on Exhibit JEN-7, based on recent market data, the median market capitalization of the proxy group was approximately $4.36 billion, which corresponds to the fifth decile of Duff & Phelps's market capitalization data. Based on the Duff & Phelps analysis, the fifth decile has a size premium of 0.89 percent (or 89 basis points). The implied market capitalization for FCG is approximately $548.53 million, which falls within the 9th decile and corresponds to a size premium of 2.10 percent (or 210 basis points). The difference between those size premiums is 121 basis points (2.10 percent – 0.89 percent).

Q. Have you considered the significantly smaller size of FCG in your ROE recommendation?

A. Yes. While I have quantified the small size effect, rather than proposing a specific premium, I have considered FCG's significantly smaller size to determine where FCG's ROE appropriately falls within the range of analytical results.

B. Regulatory Environment

Q. Do you have any preliminary thoughts on the importance of the regulatory environment and access to capital for natural gas utilities such as FCG?

A. Yes, I do. As noted earlier, as a capital-intensive enterprise, the allowed ROE should enable FCG to finance capital expenditures and working capital requirements at reasonable rates and to maintain its financial integrity in a variety of economic and capital market conditions. As discussed throughout my Direct Testimony, a return that is adequate to attract capital at reasonable terms enables the utility to provide safe, reliable service while maintaining its financial soundness to the benefit of customers.

Natural gas utilities are one of the most capital-intensive sectors. On average, natural gas utilities generate less than half as much revenue per dollar of assets as the non-utility U.S. companies covered by *Value Line*.[47] To fund the significant capital expenditures needed to maintain, expand, and modernize existing infrastructure, natural gas utilities require sufficient internally generated cash flow and ongoing access to investor supplied capital. Because natural gas utilities' ratio of cash outflow for plant to net cash flow from operations tends to be above 1.0 (that is, cash spent on plant exceeds net cash flow received from operations), it is critical that regulation provide predictable,

[47] Source: *Value Line,* accessed March 15, 2022.

adequate, and achievable allowed returns that support the financial integrity of the utility.

Q. How does the regulatory environment influence utilities' efficient access to capital?

A. As noted earlier, the regulatory environment is one of the most important factors investors consider when assessing a utility's risk, as it is a significant driver of a utility's earnings and cash flow.[48] Investors and rating agencies understand that a constructive regulatory environment is critical to support utilities' credit and financial integrity, especially during adverse market conditions. Moody's considers a utility's regulatory environment to be so important that 50 percent of the factors that weigh in its ratings determinations are related to the nature of regulation.[49] Among the factors considered by Moody's in assessing the regulatory framework are the predictability and consistency of regulatory actions:

> As the revenues set by the regulator are a primary component of a utility's cash flow, the utility's ability to obtain predictable and supportive treatment within its regulatory framework is one of the most significant factors in assessing a utility's credit quality.
>
> ***
>
> In situations where the regulatory framework is less supportive, or is more contentious, a utility's credit quality can deteriorate rapidly.[50]

[48] *See, e.g*., Moody's Investor Service, Rating Methodology, Regulated Electric and Gas Utilities, at 4 (June 23, 2017).

[49] *See* Moody's Investors Service, Rating Methodology, *Regulated Gas and Electric Utilities* at 4 (June 23, 2017).

[50] Moody's Investors Service, *Regulatory Frameworks – Ratings and Credit Quality for Investor-Owned Utilities* at 2 (June 18, 2010).

Similarly, as S&P notes, "[o]ne significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions where a utility operates."[51] S&P explains that "[w]hen we evaluate U.S utility regulatory environments, we consider financial stability to be of substantial importance. Cash takes precedence in credit analysis. A regulatory jurisdiction that recognizes the significance of cash flow in its decision-making is one that will appeal to creditors."[52]

Consequently, a utility that operates in a less predictable and more challenging regulatory environment is likely to be viewed as a riskier investment, and may result in lower credit ratings, constrained access to capital (particularly in adverse market environments), and higher costs of both debt and equity, all else being equal. From that perspective, customers benefit from a constructive regulatory environment.

Q. Please summarize your review of the Company's regulatory environment and risk relative to the proxy group.

A. The regulatory environment significantly affects both the access to and the cost of capital. Regulatory decisions regarding the authorized ROE and capital structure have direct consequences for the subject utility's internal cash flow generation, and therefore the financial metrics reviewed by ratings agencies in their ratings assessments. Because credit ratings are intended to reflect the

[51] S&P Global Ratings, RatingsDirect, Assessing U.S. Investor-Owned Utility Regulatory Environments at 2 (August 10, 2016).

[52] *Ibid*. at 6.

ability to meet financial obligations as they come due, the ability to generate the cash flows required to meet those obligations (and to provide an additional amount for unexpected events) is of critical importance to both debt and equity investors.[53]

To assess the regulatory environment, I reviewed the key cost recovery mechanisms and ratemaking components of the Company and each of the proxy group operating companies and the jurisdictions in which they operate, including test year, rate base methodology, revenue stabilization mechanisms, and other key cost recovery mechanisms and rate structures (*see* Exhibit JEN-8).

As shown in Exhibit JEN-8:

- 100 percent have a mechanism to recover the cost of gas commodity purchases, like FCG;
- 96 percent have capital and infrastructure replacement cost recovery mechanisms, like FCG;

[53] It is important to note that while credit ratings are important to equity investors, credit ratings are developed from the perspective of debt investors. As noted earlier, equity investors bear residual risk; therefore, the risks that debt holders are concerned with as reflected in credit rating assessments are not equivalent to the risks borne by equity investors.

- Unlike FCG, 88 percent have some form of a revenue stabilization mechanism such as a full or partial decoupling mechanism, or annual rate review mechanism;[54]
- Like the Company, 63 percent are able to recover costs associated with energy efficiency and conservation programs;
- 54 percent use a partially or fully forecast test year like FCG and 46 percent use an average rate base methodology; and
- Only one other proxy company has a multi-year rate plan.[55]

Q. Is FCG proposing any new mechanisms in this proceeding?

A. Yes, I understand the Company is proposing a Reserve Surplus Amortization Mechanism ("RSAM") similar to that approved by the Commission for FPL. As explained by FCG witness Campbell, the RSAM would permit FCG to use a non-cash accounting mechanism to maintain its Commission-adjusted ROE within the ROE range approved in this proceeding, without adjusting rates to customers. This would enable FCG to avoid a rate case if the earned ROE is above or below the approved ROE band. FCG witness Campbell estimates that the proposed RSAM would allow the Company to avoid a rate case through at least the end of 2026.

[54] Annual rate review mechanisms are also referred to as formula rate plans in which the annual earned ROE is compared to a target authorized ROE and rates are adjusted if they fall outside an earnings deadband around the target ROE.

[55] Northwest Natural Gas Company was authorized a two-step rate increase over two years in its 2021 Washington rate case, which did not include a rate case "stay out" provision for the term of the two-year rate plan.

Q. Is the proposed RSAM equivalent to other revenue stabilization mechanisms used by the proxy group natural gas operating companies such as revenue decoupling or annual rate review mechanism?

A. No. While one objective of revenue decoupling and annual rate review mechanisms is to stabilize revenues and customer bills, the difference between the proposed RSAM and other revenue stabilization mechanisms is that the RSAM affects only non-cash earnings and rates to customers are not adjusted up or down, as is the case with revenue decoupling and annual rate review mechanisms. Further, while the RSAM may stabilize the Company's non-cash earnings, it does not affect FCG's cash flows – and therefore its credit metrics – as rates are not adjusted. As discussed below, however, the combination of the Company's current and proposed mechanisms, on balance, render the Company similar in risk to the proxy group.

Q. Do FCG's rate mechanisms reduce its risk?

A. No, they do not. It is important to remember that the assessment of risk is necessarily a comparative exercise. As noted above and shown in Exhibit JEN-8, most of the proxy companies have similar cost recovery mechanisms available to them in the jurisdictions in which they operate. While the specific details of the mechanics of the cost recovery mechanisms may differ from utility to utility and jurisdiction to jurisdiction, their objective is the same: to improve the timeliness of cost recovery and mitigate (but not necessarily eliminate) earnings erosion associated with regulatory lag. Further, 88 percent of the proxy group operating companies have a full or partial decoupling

mechanism, whereas FCG does not. However, because the proposed RSAM would stabilize the Company's non-cash earnings, I conclude the Company's regulatory risk, on balance, is similar to the proxy group.

Q. Are there risks associated with FCG's proposed four-year rate plan?

A. Yes, there are. While FCG's multi-year rate plan benefits customers and the Company by providing customers rate stability and certainty during the term of the four-year rate plan, there are also certain risks associated with the proposed four-year rate plan. In particular, the increasing inflationary and interest rate environment discussed in Section V introduces greater risk to the Company during the rate period. Because the proposed multi-year rate plan limits FCG's ability to request a change in rates due if costs rise, the risks of higher operating and capital costs are borne by shareholders. Further, if any of the inputs to the ROE methods (*e.g.*, growth rates, dividend yields, Beta coefficients, risk premia, or long-term Treasury yields) increase during the rate period, the cost of equity for FCG will increase without a corresponding increase in the authorized ROE. Given the increasing inflationary and interest rate environment, it is reasonable to assume a higher probability of increasing external cost pressures during the rate period.

Q. What are your conclusions regarding the regulatory environment and need to maintain access to capital?

A. The regulatory environment is one of the most important issues considered by both debt and equity investors in assessing the risks and prospects of utility companies. The operating companies within the proxy group have similar cost

recovery and ratemaking mechanisms as FCG, although the Company's multi-year rate plan introduces some incremental risk. Because utilities are capital intensive enterprises, it is essential that the ROE and capital structure authorized in this proceeding enable FCG to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its system, maintain sufficient levels of liquidity to fund unexpected events, and sustain confidence in Florida's regulatory environment among credit rating agencies and investors.

C. Flotation Costs

Q. What are flotation costs?

A. Flotation costs are the costs associated with issuing equity, including out-of-pocket costs for preparing, filing, underwriting, and other costs of issuing equity. These costs reduce the net proceeds a company receives from an equity issuance. As explained below, failing to allow for the recovery of flotation costs inhibits a utility's ability to fully earn its authorized ROE, diminishing its ability to efficiently attract capital.

Q. Why is it important to recognize flotation costs in the authorized ROE?

A. To attract and retain investors, a regulated utility must have a reasonable opportunity to earn a return that is competitive to returns available to other investments of similar risk and compensatory to investors. To the extent a company is denied the opportunity to recover equity issuance costs, actual

returns will fall short of expected (or required) returns, diminishing its ability to attract capital on reasonable terms.

Q. Are flotation costs part of the utility's invested costs or expenses?

A. Flotation costs are invested (*i.e.*, capital) costs of the utility and are reflected on the balance sheet under "paid in capital." They are not expenses; therefore, they are not included on the income statement. Although much of a utility's flotation costs are incurred prior to the test year, they remain part of the cost structure long after they are incurred, even if no new issuances are planned in the near future. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diminishing the utility's ability to attract capital on reasonable terms.

Q. Do the DCF and Risk Premium-based models account for the effect of flotation costs?

A. No. The models used to estimate the investor-required return assume no transaction costs (*i.e.*, "friction"); therefore, the costs are not reflected in stock prices or the risk premium. Consequently, an adjustment must be made to the quantitative model results to reflect equity issuance costs.

Q. Has the Commission allowed recovery of flotation costs in prior rate cases?

A. Yes, it has. In its order for FPUC in Docket No. 070304-EI, the Commission noted, "[w]e have traditionally recognized a reasonable adjustment for flotation costs in the determination of the required return on equity."[56]

Q. How do you calculate the effect of flotation costs on the cost of equity?

A. As shown in Exhibit JEN-9, I calculate the weighted average issuance costs for the two most recent equity issuances for each proxy company. I then modify the DCF calculation to adjust the dividend yield to reimburse investors for direct equity issuance costs. As Exhibit JEN-9 shows, a reasonable estimate of flotation costs is approximately nine basis points. As with my analysis of the premium associated with the Company's significantly smaller size, I have not made an explicit adjustment for flotation costs; rather I have considered them in determining my recommended ROE for FCG.

V. CAPITAL MARKET ENVIRONMENT

Q. Do economic conditions influence the required Cost of Capital and required return on common equity?

A. Yes. The required cost of capital, including the ROE, is a function of prevailing and expected economic and capital market conditions. All analytical models used to estimate the investor-required ROE are influenced by current and

[56] *In re: Petition for rate increase by Florida Public Utilities Company*, Docket No. 070304-EI, Order No. PSC-08-0327-FOF-EI, at 37 (F.P.S.C. May 19, 2008).

expected capital market conditions. Because the models are based on simplifying assumptions that may not hold true under specific market circumstances, it is important to assess the reasonableness of any financial model's results in the context of current and expected market data.

As discussed below, there have been dramatic shifts in the capital markets brought about by the global COVID-19 pandemic that disrupted the economic and financial markets beginning in early 2020. In particular, volatility for both utility stocks and the broader market increased, indicating higher risk for equity investors. In addition, the Federal Reserve recently began tightening its monetary policies, pushing up interest rates. Further, credit spreads between utility and Treasury bonds have widened, and inflation is at the highest levels in the last 40 years. All these factors indicate higher capital costs going forward.

Q. Please summarize the changes in capital market conditions since early 2020.

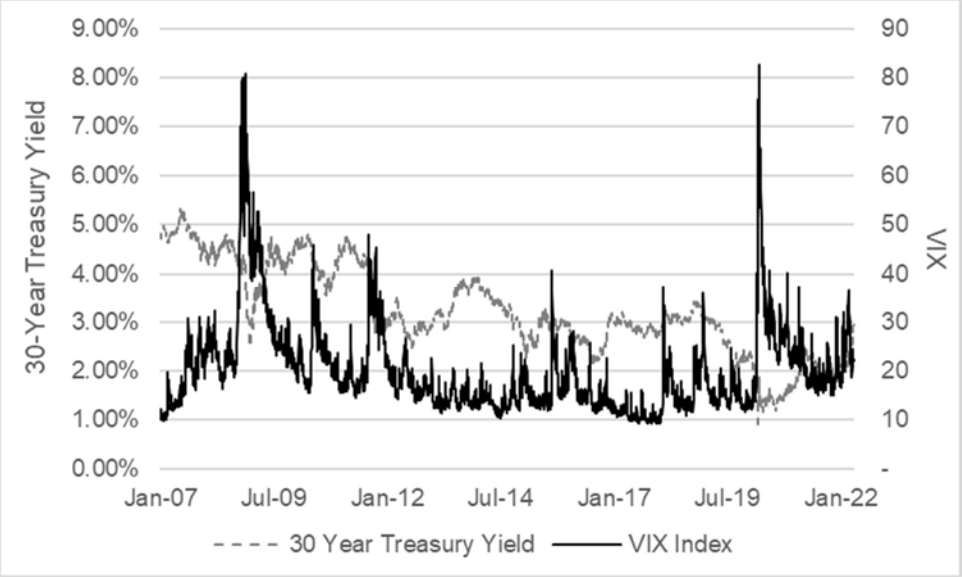
A. The speed and severity of the increase in market risk and the loss in equity market value after the onset of the COVID-19 pandemic cut across all market sectors, including utilities. From February 25 to March 23, 2020, the Standard & Poor's ("S&P") 500 Index lost 28.50 percent in value and the utility sector lost approximately 34.00 percent of its value.[57] At the same time, the Chicago Board Options Exchange ("CBOE") Volatility Index ("VIX"), a measure of

[57] Source: Yahoo! Finance. Utility sector measured by the XLU and Dow Jones Utility Average.

expected market volatility, nearly tripled (from 27.85 on February 25, 2020 to 82.69 on March 16, 2020).[58]

Treasury bond yields also declined rapidly as investors sought the relative safety of government bonds associated with higher market volatility and the Federal Reserve reduced the Federal Funds rate to a target range of 0 percent to 0.25 percent. As shown in Figure 15 below, significant and abrupt increases in volatility tend to be associated with declines in Treasury yields.

Figure 15: 30-Year Treasury Yields vs. VIX[59]



That relationship makes intuitive sense; as investors see increasing risk, their objectives may shift to capital preservation (that is, avoiding a capital loss). A means of doing so is to allocate capital to the relative safety of Treasury

[58] Source: Yahoo! Finance.

[59] Source: Yahoo! Finance.

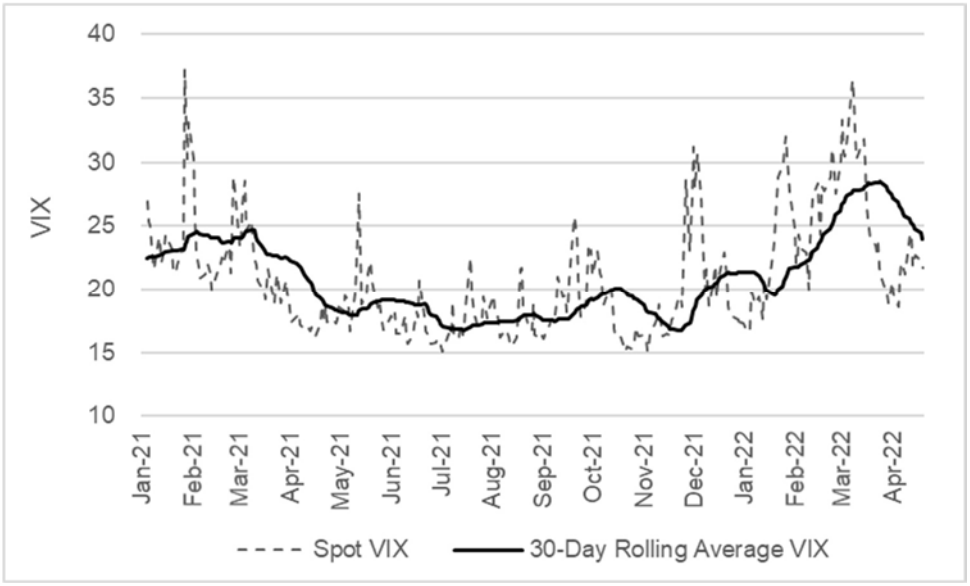
securities, in a "flight to safety." Because Treasury yields are inversely related to Treasury bond prices, as investors bid up the prices of bonds, they bid down the yields. In those instances, the decline in yields does not reflect a reduction in required returns, it reflects an increase in risk aversion and, therefore, an increase in required equity returns as investors require higher returns to compensate them for bearing additional market risk.

Although federal government and central bank actions to support the U.S. economy stabilized the capital markets somewhat, volatility (and, therefore, risk) remains elevated for the market and, in particular, for the utility sector.

Q. Has market volatility remained elevated relative to historical levels in recent months?

A. Yes. A visible and widely reported measure of expected market volatility is the VIX. Because volatility is a measure of risk, increases in the VIX, or in its volatility, are a broad indicator of expected increases in market risk. As Figure 16 below shows, market volatility has been increasing since last November, spurred by inflation worries and the recent conflict in Ukraine.

Figure 16: VIX Index (2021-2022)[60]



A further measure of market uncertainty is the volatility of the VIX itself. That is, we can look to the expected volatility of volatility, as measured by Chicago Board Options Exchange VVIX Index ("VVIX"), which is a traded index of the expected volatility of the VIX. The long-term average VVIX between 2007 and 2022 is approximately 93.43. As Figure 17 below shows, the average VVIX in 2020, 2021, and so far in 2022 has been significantly higher than in previous years, as well as its long-term average.

[60] Source: Yahoo! Finance; data through April 18, 2022.

Figure 17: Annual Average VVIX (2007-2022)[61]

Calendar Year	Average VVIX
2007 - 2019	89.21
2020	118.36
2021	115.32
2022	122.21

Q. Is market volatility expected to remain elevated in the near term?

A. Yes. CBOE's "Term Structure of Volatility" observes market's expectation of future market volatility through use of the S&P 500 Index's implied volatility term structure.[62] As shown in Figure 18 below, the implied volatility is expected to remain approximately 37 percent above long-term historical volatility[63] on average until at least February 2023.

[61] Source: Yahoo! Finance, data through April 18, 2022.

[62] Source: www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data.

[63] The long-term average VIX is 19.53, which, is similar to the long-term standard deviation of annual return on the S&P 500 Index.

Figure 18: CBOE Term Structure of Volatility[64]

Date	Projected VIX
May 2022	22.24
June 2022	24.23
July 2022	25.42
August 2022	26.75
September 2022	27.37
October 2022	27.90
November 2022	28.38
December 2022	28.63
January 2023	28.41
February 2023	28.59

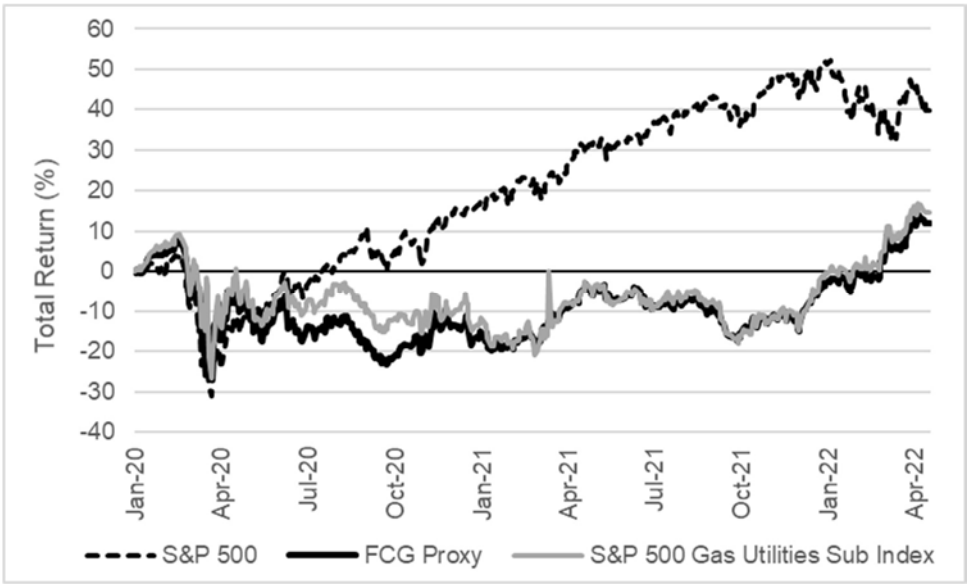
In short, although volatility declined somewhat from its March 2020 highs as the federal government and central bank implemented fiscal and monetary policies to stabilize the U.S. economy, market volatility remains – and is expected to remain – above historical levels.

Q. Have natural gas utility stocks recovered to levels experienced before the onset of the COVID-19 pandemic?

A. Total returns for natural gas utility stocks (as measured by the Proxy Group and the S&P 500 Gas Utilities Sub Index) were negative throughout 2020 and 2021 and did not reach positive territory until February 2022 (see Figure 19 below). Additionally, total returns for natural gas utility stocks significantly underperformed the S&P 500 over the last two years.

[64] Source: http://www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data, as of April 18, 2022.

Figure 19:
Total Return of the S&P 500 Index and Natural Gas Utilities[65]



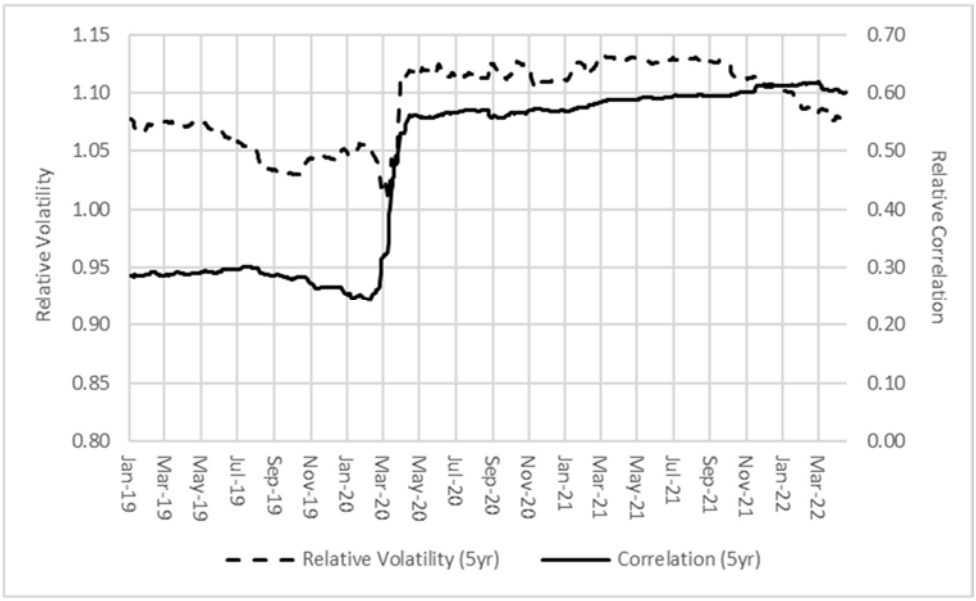
Q. Are there additional measures that indicate the cost of equity has increased for utilities?

A. Yes. As explained in Section III, the Beta coefficient is a measure of a company's risk relative to the overall market. The Beta coefficient is a function of two parameters: (1) relative volatility (the standard deviation of the subject company's returns relative to the standard deviation of the market return); and (2) the correlation between the subject company's returns and the market return.[66] Under the CAPM, higher Beta coefficients indicate an increase in the cost of equity, all else equal. As Figure 20 below demonstrates, both the relative correlation and relative volatility between the utility sector (as measured by the S&P 500 Utilities Index) and the overall market (as measured by the S&P 500 Index) increased substantially since February 2020. Notably, relative volatility

[65] Source: S&P Capital IQ; proxy group calculated as an Index, January 2, 2020 – April 18, 2022.
[66] *See*, Equation [5].

(left axis) has been 1.0 or higher since at least January 2019, indicating the utility sector's higher volatility relative to the S&P 500 Index.

Figure 20: Components of Proxy Group Beta Coefficients[67]



This increase in correlation between returns for utilities and those for the S&P 500 is not surprising. As Morningstar explained, during volatile markets there often is little distinction in returns across assets or portfolios. That is, "correlations go to 1."[68] When that happens, utility stocks lose their defensive quality. The increase in correlation and relative volatility combine to produce increased (adjusted) Beta coefficients. As shown in Figure 21 below, the average *Value Line* and Bloomberg 10-year Beta coefficients for the proxy group increased by approximately 1.5x and 1.1x, respectively, between February 2020 and March 2022.

[67] Source: S&P Global Market Intelligence. Weekly returns calculated over 60 months consistent with *Value Line's* methodology.

[68] Morningstar, *Correlations Going to 1: Amid Market Collapse, U.S. Stock Fund Factors Show Little Differentiation*, March 6, 2020.

Figure 21:
Proxy Group Average *Value Line* and Bloomberg Beta Coefficients[69]

	February 2020	March 2022
***Value Line* Average (5-yr)**	0.58	0.85
Bloomberg Average (10-yr)	0.71	0.78

Q. Does your recommendation also consider the current interest rate environment?

A. Yes, it does. As explained earlier, the historically low levels of interest rates observed in 2020 and 2021 were driven in part by investors seeking the relative safety of bonds during volatile markets, combined with extraordinary market support as the Federal Reserve intentionally kept interest rates low and injected $4.6 trillion dollars into the market through asset purchases.[70]

However, as the U.S. economy improved in 2021, and inflation and expectations for tighter monetary policy increased, prevailing interest rates moved higher.[71] As shown in Figure 22 below, the 30-year Treasury bond yield has increased nearly 100 basis points since the Federal Reserve signaled on November 3, 2021, that it would begin tightening monetary policy by tapering its asset purchases.

[69] Sources: *Value Line* and Bloomberg Professional Service as of February 28, 2020 and March 31, 2022.

[70] Source: Federal Reserve Schedule H.1.4 Securities Held Outright between March 2020 and March 2022.

[71] *See, e.g., Blue Chip Financial Forecasts*, Vol. 41, No. 3, March 1, 2022, at 1.

Figure 22: 30-Year Treasury Bond Spot Yield[72]

Because the cost of equity is forward-looking, the salient issue is whether investors see the likelihood of increased interest rates during the period in which the rates set in this proceeding will be in effect. With respect to long-term interest rates, the 50 economists surveyed by *Blue Chip Financial Forecasts* ("*Blue Chip*") expect the 30-year Treasury yield to increase from the current 30-day average of 2.37 percent[73] to 3.40 percent on average over the five-year period 2023-2027.[74]

Q. How have investors' views of the relative riskiness of utility bonds compared to Treasury bonds changed recently?

A. The difference in corporate bond yields and Treasury bond yields is an indication of investors' views of the relative risk of each security. As credit

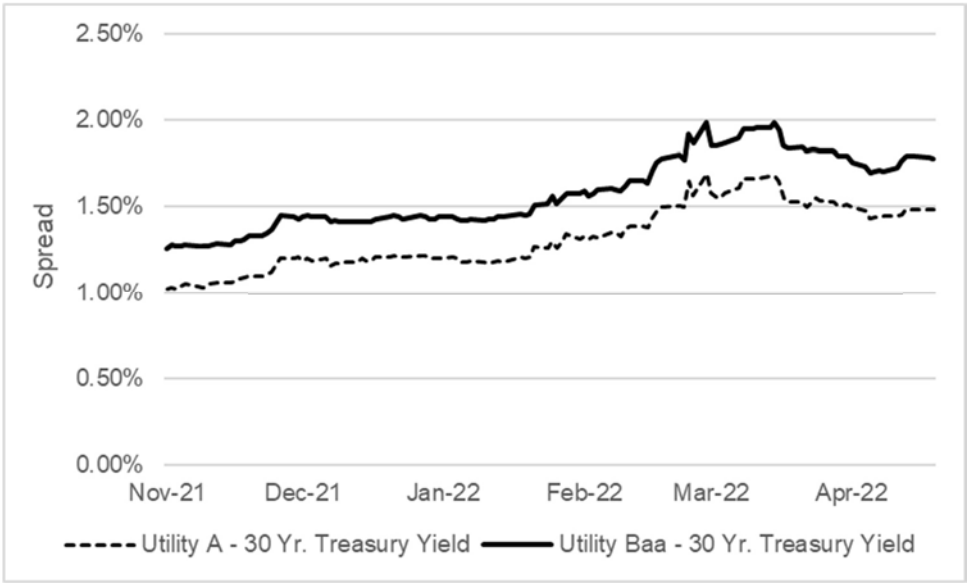
[72] Source: Yahoo! Finance, data as of April 18, 2022.

[73] Source: Bloomberg Professional Service; Exhibit JEN-5.

[74] *See, Blue Chip Financial Forecasts*, Vol. 39 No. 12, December 1, 2021, at 14.

spreads widen, it indicates investors are requiring a higher premium for riskier corporate bonds relative to risk-free securities such as Treasury bonds. As shown in Figure 23, credit spreads between utility bond yields and the 30-year Treasury bond yield have widened since the Federal Reserve's November 2021 meeting when it announced it would begin tapering its asset purchases.

Figure 23: Spread in Utility Bond Yields and the 30-Year Treasury Yield[75]



Q. How have inflation rates changed over the last year?

A. Several government measures of inflation indicate that inflation has increased significantly over the last twelve months. In fact, current inflation rates are *at their highest levels in 40 years*.

[75] Source: Bloomberg Professional Service; data as of April 18, 2022.

Figure 24: Year-over-Year Inflation Rates[76]

	March 2022
Consumer Price Index	8.6%
Producer Price Index	11.5%
Personal Consumption Expenditures Price Index	6.6%

Q. How does higher inflation affect utilities' cost of capital?

A. Higher inflation has several implications for utilities and their cost of capital. First, interest rates and debt costs are sensitive to inflation, as inflation erodes the purchasing power of the future interest payments an investor expects to receive over the duration of the bond. Bonds with longer durations (such as 30-year securities) are more sensitive to inflation risk than shorter duration bonds. As a result, if investors expect increased levels of inflation, they will require higher yields to compensate for the increased risk of inflation which means interest rates and debt costs will increase.

Second, inflation drives up a utility's operating expenses. As expenses rise above levels that are included in the revenue requirement being recovered by rates, the utility's financial profile can be adversely affected, putting pressure on credit metrics.

[76] Sources: U.S. Bureau of Labor Statistics; Federal Reserve Bank of St. Louis, FRED Database.

Q. Are there reasons to believe that high inflation may not be transitory as previously thought?

A. Yes. While supply and demand disruptions brought about by the COVID-19 pandemic and the recovery of the U.S. economy have contributed to inflation, there is evidence to support the position that high inflation may prove to be less transitory in nature than previously thought. For example, shelter makes up the largest share of the CPI (approximately 32.9 percent),[77] and is less subject to short-term disruptions than other components of the CPI. Moreover, there are few substitutes for shelter, and consumers have few options to reduce shelter prices in the short-term.

Q. Please summarize recent changes in monetary policy actions by the Federal Reserve.

A. As noted earlier, to support the economy and financial markets after the onset of the COVID-19 pandemic, the Federal Reserve reduced the target Federal Funds rate to 0 to 0.25 percent and increased its purchases of securities, ultimately injecting nearly $5 trillion of capital into the market. After its November 2021 meeting, the Federal Open Market Committee ("FOMC") announced it would begin tapering its asset purchases. Citing the highly uncertain implications of the Ukraine conflict for the U.S. economy, the FOMC raised the target Federal Funds rate by 25 basis points at its March 2022 meeting, terminated its asset purchases, and announced it expects to begin

[77] Source: U.S. Bureau of Labor Statistics https://www.bls.gov/cpi/tables/relative-importance/2021.htm

reducing its holdings of Treasury securities in the near future[78] According to market data from the CME Group, investors are expecting the FOMC to raise the Federal Funds target rate by 300 basis points over the next year.[79] The implication of higher Federal Funds rates and reductions in the Federal Reserve's security holdings is higher interest rates.

Q. What conclusions do you draw from your review of the current capital market environment and its implications on the Company's cost of equity?

A. In short, over the last two years, the economic and financial market environment has operated under heightened market uncertainty. The recent conflict in Ukraine has added to the uncertainty and volatility in the market. Observable market information makes clear that utility investors now face greater risks, and therefore, require higher returns. While short-term interest rates currently remain low by historical comparison, investors are increasingly faced with inflationary pressures, and the Federal Reserve is unwinding its pandemic response measures. Long-term interest rates have increased substantially since the historic lows of 2020 and are expected to continue to increase. All these factors indicate an increase in the cost of equity.

[78] Federal Reserve press release, March 16, 2022.

[79] CME Group "FedWatch Tool, accessed May 23, 2022. https://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html

VI. CAPITAL STRUCTURE

Q. What is the Company's requested capital structure?

A. As described by FCG witness Campbell, the Company requests a 2023 test year financial capital structure consisting of 59.60 percent common equity and 40.40 percent debt, which is equal to the capital structure of FCG's direct parent.

In Florida, Accumulated Deferred Income Taxes are included in the regulatory capital structure at zero percent cost. Florida also includes customer deposits in the regulatory capital structure. However, I consider only investor-supplied sources of capital in my assessment of the reasonableness of the Company's requested capital structure.

Q. How does the capital structure affect the cost of capital?

A. A company's total risk consists of business risk and financial risk. Business risk includes operating, market, regulatory, and competitive uncertainties, while financial risk is the incremental risk to investors associated with additional leverage, or levels of debt. Therefore, the capital structure indicates a company's financial risk, which represents the risk that a company may not have adequate cash flows to meet its financial obligations and is a function of the percentage of debt (or financial leverage) in its capital structure. As the percentage of debt in the capital structure increases, so do the fixed obligations for the repayment of that debt. Consequently, as the degree of financial leverage increases, the risk of financial distress (*i.e.*, financial risk) also

increases.[80] In essence, even if two firms face the same business risks, a company with meaningfully higher levels of debt in its capital structure is riskier, which increases its costs of both debt and equity.

Q. Why is it appropriate to use the approved capital structure of FCG's parent company for ratemaking purposes?

A. FCG does not issue its own debt or equity. Since 2019, FCG has obtained all of its short-term and long-term capital from its direct parent FPL.[81] As explained in the order approving FPL's FCG's 2021 securities application for calendar year 2022, the sources of capital FCG obtains from FPL include: (1) surplus funds in the FPL treasury; and (2) proceeds from FPL's borrowings under its credit facilities, FPL's debt securities, or FPL's commercial paper issuances.[82] The interest rate on the FCG's debt borrowings from FPL reflects FPL's weighted average borrowing costs.

[80] *See,* Roger A. Morin, Ph.D., New Regulatory Finance, Public Utility Reports, Inc., 2006, at 45-46.

[81] *See In re: Application for authority to issue debt securities during calendar year 2019, pursuant to Section 366.04, F.S., and Chapter 25-8, F.A.C., by Florida City Gas*, Docket No. 20180166-GU, Order No. PSC-2018-0550-FOF-GU (F.P.S.C. Nov. 19, 2018); *In re: Application for authority to issue and sell securities during calendar years 2020 and 2021, pursuant to Section 366.04, F.S., and Chapter 25-8, F.A.C., by Florida Power & Light Company and Florida City Gas*, Docket No. 20190157-EI, Order No. PSC-2019-0472-FOF-EI (F.P.S.C. Nov. 6, 2019); *In re: Application for authority to issue and sell securities during calendar years 2020 and 2021, pursuant to Section 366.04, F.S., and Chapter 25-8, F.A.C., by Florida Power & Light Company and Florida City Gas*, Docket No. 20200188-EI, Order No. PSC-2020-0401-FOF-EI (F.P.S.C. Oct. 26, 2020); and *In re: Application for authority to issue and sell securities during calendar years 2022 and 2023, pursuant to Section 366.04, F.S., and Chapter 25-8, F.A.C., by Florida Power & Light Company and Florida City Gas*, Docket No. 20210127-EI, Order PSC-2021-0409-FOF-EI (F.P.S.C. Nov. 1, 2021).

[82] *In re: Application for authority to issue and sell securities during calendar years 2022 and 2023, pursuant to Section 366.04, F.S., and Chapter 25-8, F.A.C., by Florida Power & Light Company and Florida City Gas*, Docket No. 20210127-EI, Order PSC-2021-0409-FOF-EI at 8 (F.P.S.C. Nov. 1, 2021).

FCG similarly used the capital structure of its parent company in its last rate case in Docket No. 20170179-GU,[83] and the Commission has previously approved the use of a parent company's capital structure where the regulated utility operates as division and/or does not issue debt.[84] Additionally, other regulatory commissions consider whether a company issues its own debt in the capital structure determination. For example, the FERC's policy is to use the operating company's actual capital structure if: (1) it issues its own debt without guarantees; (2) it has its own bond rating; and (3) it has a capital structure within the range of capital structures approved by the FERC.[85] FCG does not issue its own debt, nor does it have its own bond rating.

Finally, as discussed below, the proposed capital structure is within the range of the actual investor-supplied permanent capital ratios that fund the regulated natural gas operations of the proxy group.

Q. Please summarize your analysis of the proxy companies' capital structures.

A. In general, it is important to assess the capital structure relative to industry practice and investor requirements. Although an individual utility's financing requirements are unique, utilities adhere to common financing practices and

[83] *See In re: Petition for rate increase by Florida City Gas*, Docket No. 20170179-GU, FCG Direct Testimony of Michael J. Morley at 17-18 (F.P.S.C. Oct. 23, 2017).
[84] *See, e.g., In re: Petition for increase in rates by Florida Division of Chesapeake Utilities Corporation*, Docket No. 090125-GU, Order No. PSC-10-0029-PAA-GU, (F.P.S.C. Jan. 14, 2010); *In re: Request for Rate Increase by Florida Division of Chesapeake Utilities Corporation*, Docket No. 000108-GU, Order No. PSC-00-2263-FOF-GU (F.P.S.C. Nov. 28, 2000); *In Re: Application for Rate Increase in Lee County by Harbor Utilities Company, Inc.*, Docket No. 921261-WS, Order No. PSC-93-1450-FOF-WS (F.P.S.C. Oct. 5, 1993); *In Re: Application for a Rate Increase in Pinellas County by MID-COUNTY SERVICES, INC.*, Docket No. 921293-SU, Order No. PSC-93-1713-FOF-SU (F.P.S.C. Nov. 30, 1993).
[85] 154 FERC ¶ 61,004, Docket No. ER15-945-001, at Para. 35 (January 6, 2016).

principles due to the similar nature of the assets being financed. As such, the capital structure should be reasonably consistent with industry practice and support the subject utility's financial integrity, thereby enabling access to capital at competitive rates under a variety of economic and financial market conditions.

To assess whether FCG's requested financial capital structure is consistent with industry practice, I calculated the average capital structure (including short-term debt) for each of the proxy group operating companies from 2018 to 2020 (*see* Exhibit JEN-10). The mean and median three-year average equity ratio of the proxy group is 54.78 percent and 55.85 percent, respectively, within a range of 43.54 percent to 61.78 percent.[86] The Company's requested equity ratio of 59.60 percent is within the proxy group range and is, therefore, consistent with industry practice.

Q. What is the basis for using average capital components rather than a point-in-time measurement?

A. Measuring the capital components at a particular point in time may skew the capital structure by the specific circumstances of a particular period. For example, a company may issue debt to fund an acquisition or to ensure liquidity during constrained capital market environments, which may not reflect the company's long-term capital structure objectives. Therefore, it is appropriate to normalize the capital components over a period of time.

[86] Source: S&P Capital IQ.

Q. What is your conclusion regarding the Company's requested capital structure?

A. The requested common equity ratio of 59.60 percent is consistent with the proportion of equity (on an investor-supplied basis) that funds the regulated natural gas operations of the proxy group companies. Further, the use of its direct parent's capital structure is consistent with regulatory precedent regarding utilities that do not issue debt or have their own credit rating. As such, I conclude that a financial capital structure including 59.60 percent common equity and 40.40 percent debt is reasonable and should be approved.

VII. CONCLUSION

Q. What is your conclusion regarding the appropriate ROE and capital structure for FCG?

A. As discussed throughout my testimony, it is important to consider a variety of quantitative and qualitative information in reviewing analytical results and arriving at a reasonable and appropriate ROE determination. In determining my ROE recommendation, I considered (1) the results from three commonly used analytical approaches; (2) the Company's higher risk profile associated with its significantly smaller size; (3) the regulatory environment in which it operates, including the incremental risk associated with its proposed multi-year rate plan, (4) the costs associated with issuing stock; and (5) the current volatile

and uncertain economic and capital market environment. Based on those factors, I conclude that 10.75 percent is a just and reasonable ROE for FCG.

As to the capital structure, 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. Therefore, I conclude the capital structure is reasonable and should be approved.

Q. Does this conclude your Direct Testimony?

A. Yes.

(Whereupon, prefiled rebuttal testimony of Jennifer E. Nelson was inserted.)

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220069-GU

FLORIDA CITY GAS

REBUTTAL TESTIMONY OF JENNIFER E. NELSON

Topic: Cost of Capital

Filed: October 3, 2022

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I. INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Jennifer E. Nelson. I am an Assistant Vice President at Concentric Energy Advisors. My business address is 293 Boston Post Road West, Marlborough, Massachusetts, 01752.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this rebuttal testimony before the Florida Public Service Commission ("Commission") on behalf Pivotal Utility Holdings, Inc. d/b/a Florida City Gas ("FCG" or the "Company").

Q. Are you the same Jennifer E. Nelson who filed direct testimony in this proceeding on May 31, 2022?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of Mr. David J. Garrett, who testifies on behalf of the Office of Public Counsel ("OPC"), and Mr. Christopher C. Walters, who testifies on behalf of Federal Executive Agencies ("FEA"), as their testimonies relate to the Company's Cost of Capital.[1]

Positions not addressed in my rebuttal testimony should not be construed to mean I agree with those positions raised by the Intervenor Witnesses.

[1] Hereinafter, OPC witness Garrett and FEA witness Walters will be collectively referred to as "Intervenor Witnesses."

Q. Are you sponsoring or co-sponsoring any exhibits in your rebuttal testimony?

A. Yes. I am sponsoring the following exhibits:

- JEN-11: Constant Growth DCF Analysis
- JEN-12: Quarterly Growth DCF Analysis
- JEN-13: DCF-based Expected Market Return
- JEN-14: CAPM and Empirical CAPM Analyses
- JEN-15: Bond Yield Plus Risk Premium Analysis
- JEN-16: Capital Structure Analysis
- JEN-17: Recent Authorized ROEs and Equity Ratios
- JEN-18: Relationship between Industry Debt Ratios and Beta Coefficients
- JEN-19: Gross Domestic Product by Industry
- JEN-20: Frequency of Observed Annual Market Risk Premium
- JEN-21: Adjustments to OPC Witness Garrett's Implied Equity Risk Premium Analysis
- JEN-22: FEA Witness Walters' Corrected Beta Coefficients
- JEN-23: Adjustments to FEA Witness Walters' CAPM Analysis

II. SUMMARY AND OVERVIEW OF REBUTTAL TESTIMONY

Q. Please summarize the recommendations contained in your direct testimony and those of the Intervenor Witnesses regarding the appropriate cost of equity and capital structure for FCG.

A. In my direct testimony, I concluded that 10.75 percent is a just and reasonable return

on equity ("ROE") for FCG.[2] As my direct testimony discussed, my recommendation considers the results of three widely accepted methodologies in light of the current capital market environment and certain risks faced by the Company. With respect to the Company's capital structure, I concluded that the Company's requested investor-supplied capital structure of 59.60 percent common equity and 40.40 percent debt is consistent with the proportions of investor-supplied capital that finances the regulated natural gas operations of the proxy group and is therefore reasonable and should be approved.[3]

As explained in my direct testimony, the cost of equity cannot be precisely quantified, nor is it the result of a defined mathematical formula. Because the cost of equity is not directly observable, no single model is more reliable than all others in all market conditions.[4] One model's results may be reasonable in one market environment but insufficient in another market environment. Each model's results, therefore, must be viewed within the context of the current market environment and other relevant benchmarks.

Consistent with standard investor practice, it is important to consider a variety of methodologies and data points, as it puts into context both the quantitative and qualitative analyses and the associated recommendations. As such, I have updated many of the analyses contained in my direct testimony and provide additional analyses

[2] Direct Testimony of Jennifer E. Nelson, at 5-6.
[3] Direct Testimony of Jennifer E. Nelson, at 6.
[4] Direct Testimony of Jennifer E. Nelson, at 8.

in response to issues raised by the Intervenor Witnesses.

Q. Please provide an overview of your response to the Intervenor Witnesses' ROE and capital structure recommendations.

A. Quite simply, the Intervenor Witnesses' ROE and capital structure recommendations are below any reasonable measure of FCG's cost of equity and do not satisfy the *Hope* and *Bluefield* comparable risk, financial integrity, and capital attraction standards. Moreover, the Intervenor Witnesses' ROE and capital structure recommendations are particularly unreasonable when viewed in the context of the many market-based indicators of increasing capital costs and returns currently available to other natural gas utilities. Despite increases in government and utility bonds, market volatility, and inflation, the Opposing Witnesses disregard this current market data that indicate higher costs of capital and recommend the Commission reduce the Company's authorized ROE by 79 to 94 basis points.

OPC witness Garrett's 9.25 percent ROE recommendation, in particular, is fundamentally disconnected from his own analyses and conclusions, and cannot be reconciled with his opinion that the "actual" cost of equity is 8.00 percent. Aside from his position that regulatory commissions have been systematically incorrect over decades, he provides no empirical support for his specific 9.25 percent ROE recommendation. As such, OPC witness Garrett's recommendation is unsupported and should be given no weight.

With respect to the capital structure, the Intervenor Witnesses' capital structure

recommendations are significantly more leveraged than the Company's requested capital structure based on an improper review of capital structures at the publicly traded holding company level. Although OPC witness Garrett estimates a 109-basis point increase in the Company's cost of equity if his capital structure recommendation is approved, his overall ROE recommendation remains insufficient and would fail to meet the *Hope* and *Bluefield* capital attraction, financial integrity, and comparable risk standards.

Figure 1 below summarizes the ROE and equity ratio recommendations submitted by the witnesses in this proceeding.

Figure 1: Summary of ROE Results and Recommendations

	DCF Results	CAPM Results	Risk Premium Results	Investor-Supplied Equity Ratio	ROE Recommendation (Range)
Mr. Garrett (OPC)	7.10% - 8.00%	7.9%	N/A	48.7%	9.25% (7.10% - 9.00%)
Mr. Walters (FEA)	9.00% (7.99% - 9.31%)	9.40% (6.71% - 10.97%)	9.80% (9.27% - 10.42%)	≤50.00%	9.40% (9.00% - 9.80%)
Ms. Nelson - Direct (FCG)	8.05% - 10.87%	10.12%- 13.37%	9.73% - 9.80%	59.60%	10.75%
Ms. Nelson - Rebuttal (FCG)	8.50% - 11.11%	10.29%- 12.00%	9.75% - 9.88%	59.60%	10.75%

The fact that the Intervenor Witnesses' recommendations are similar and within a narrow range is not an indication of their reliability or reasonableness. Instead, it is due to their reliance on inputs that are flawed and contradictory to sound financial theory, biasing their ROE estimates downward. Moreover, the Intervenor Witnesses' 9.25 percent to 9.40 percent ROE recommendations are particularly unreasonable when

viewed in the context of: (1) the many market-based indicators of increasing capital costs, (2) the Company's significantly smaller size relative to the proxy group and the effect of flotation costs, and (3) returns currently available to other natural gas utilities.

Overall, it is my opinion that, if adopted, the Intervenor Witnesses' recommendations would be viewed as a departure from the Commission's practices, increasing the Company's regulatory and financial risk, and thus diminishing FCG's ability to compete for capital. Accepting their recommendations would likely have the counterproductive effect of increasing the Company's overall cost of capital, ultimately to the detriment of customers.

Q. Have you updated the ROE analyses filed with your Direct Testimony?

A. Yes, I have updated my Constant Growth and Quarterly Growth Discounted Cash Flow ("DCF"), Capital Asset Pricing Model ("CAPM"), Empirical CAPM ("ECAPM"), and Bond Yield Plus Risk Premium analyses to reflect data as of August 31, 2022.[5] I also updated the capital structure analysis to reflect data for the three years ended 2021.[6] I applied this data to the same group of proxy companies used in my Direct Testimony. My updated results are presented in Section VIII below.

Q. Do the updated analyses change your conclusions regarding the appropriate ROE and capital structure for FCG?

A. No, they do not. As shown in Figure 1 above, my updated analytical results continue

[5] *See* Exhibit JEN-11 through Exhibit JEN-15. As explained in Section VIII, I have reverted to my usual practice of averaging the forward-looking DCF-based expected market return estimates from *Value Line* and Bloomberg.

[6] Exhibit JEN-16.

to support an ROE of 10.75 percent. Given the Company's significantly smaller size relative to the proxy group, the effect of flotation costs, as well as the current higher interest rate and inflationary market environment, my recommended ROE of 10.75 percent continues to be reasonable, if not conservative. The updated capital structure analysis presented in Exhibit JEN-16 continues to support the Company's proposed capital structure as being consistent with the proportions of long-term capital that finances the regulated natural gas operations of the proxy group.

Q. How is the remainder of your rebuttal testimony organized?

A. The remainder of my rebuttal testimony is organized as follows:

- Section III – Responds to the Intervenor Witnesses' discussion regarding the trends in authorized ROEs and the current capital market environment;
- Section IV – Responds to the Intervenor Witnesses' capital structure recommendations;
- Section V – Responds to OPC witness Garrett;
- Section VI – Responds to FEA witness Walters;
- Section VII – Summarizes my updated ROE analytical results; and;
- Section VIII – Provides my conclusions and recommendations.

III. TRENDS IN AUTHORIZED ROES AND THE CURRENT CAPITAL MARKET ENVIRONMENT

A. Trend in Authorized ROEs

Q. The Intervenor Witnesses reference authorized ROEs for utilities in other jurisdictions.[7] Do you agree with their characterizations of the trend in authorized ROEs and the relevance of the trend on the Company's cost of equity?

A. No, I do not. National average authorized ROEs must be considered in the proper context in order to be useful. While I agree that investors consider ROEs authorized in other states when assessing the adequacy of returns available to utilities, I have several concerns with the nationwide average authorized ROE data presented by the Intervenor Witnesses.

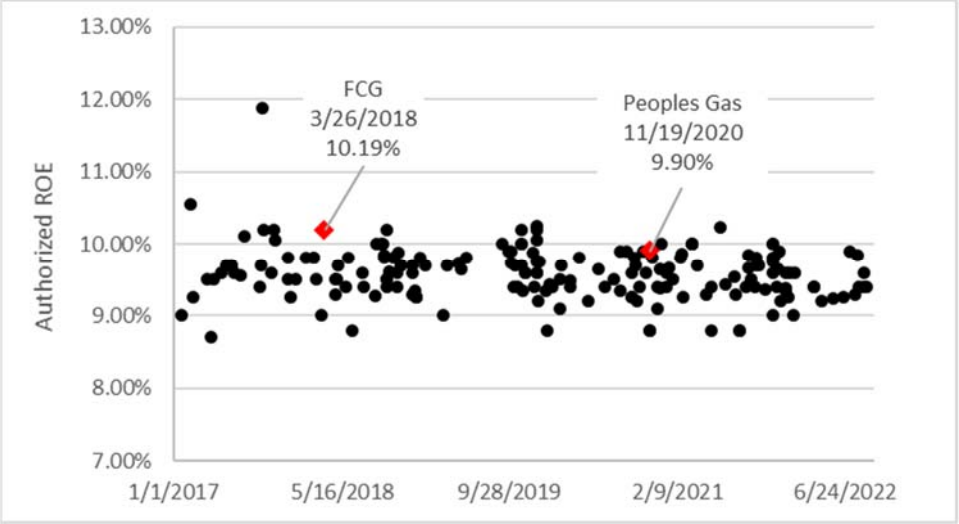
First, annual average data obscures variations in returns and does not address the number of cases nor the jurisdictions issuing orders within a given year. For example, one year may have fewer cases decided, and a relatively large portion of those cases decided by a single jurisdiction.

Second, I disagree that there has been a downward trend in ROEs as suggested by the Intervenor Witnesses. Indeed, FEA witness Walters' Figure CCW-1 shows that the average authorized ROE for both electric and natural gas utilities has been relatively stable since 2014. Further, as shown in Figure 2 (below), there has been no discernible downward trend in authorized ROEs for natural gas distribution utilities over the last

[7] Direct Testimony of FEA witness Walters, at 4-5; Direct Testimony of OPC witness Garrett, at 14.

five years.

Figure 2: Authorized ROE for Natural Gas Utilities (2017 – 2022)[8]



Third, authorized ROEs must be viewed within the context of the economic and capital market environment in which they were decided. Market conditions at the time the authorized returns were established may be very different than conditions going forward. For example, ROEs authorized when interest rates were very low in 2020 and 2021 are not a reasonable basis of comparison for evaluating the authorized ROE when bond yields have increased and are expected to continue increasing as the Federal Reserve tightens its monetary policy. As such, references to a trend in authorized ROEs beginning ten or twenty years ago must be appropriately viewed within the context of the economic and capital market environment in which they were decided. The current and forecasted economic and capital market environment in which this ROE will be decided cannot be ignored as suggested by the Intervenor Witnesses.

[8] Source: Regulatory Research Associates, January 1, 2017 – August 31, 2022. Excludes Limited Issue Rate Rider proceedings.

Q. How do recent authorized ROEs in more constructive jurisdictions such as the Commission compare ROEs authorized in less constructive jurisdictions?

A. As shown in Figure 3 below, authorized ROEs in jurisdictions ranked as "Above Average," by Regulatory Research Associates ("RRA"), such as the Commission, are higher than those authorized in less constructive jurisdictions.

Figure 3: Authorized ROEs for Natural Gas Utilities by RRA Ranking (2017-2022)[9]

	Above Average	Average	Below Average
Mean	9.91%	9.48%	9.63%
Median	9.90%	9.48%	9.60%
Maximum	10.55%	10.20%	11.88%
Minimum	9.20%	8.70%	9.10%

I note that the lowest 9.20 percent authorized ROE noted in Figure 3 above as the lowest ROE authorized for an "Above Average" jurisdiction relates to a December 20, 2019 decision for Washington Gas Light in Virginia. At the time of that decision, the Virginia Corporation Commission ("VCC") was ranked by RRA as "Above Average/3". However, three months after this decision, RRA lowered its ranking of the VCC to "Average/1." Excluding this ROE, the lowest ROE for a natural gas utility in the "Above Average" ranking is 9.60 percent, which is well above the Intervenor Witnesses' recommendations. The Intervenor Witnesses' recommendations are below the average and median authorized ROEs for natural gas utilities in "Average" and "Below Average" ranked jurisdictions.

[9] Source: Regulatory Research Associates. Natural gas distribution rate cases completed through August 31, 2022.

The Commission is currently ranked by RRA as "Above Average/2." If the Intervenor Witnesses' recommendations were adopted, it would represent a significant departure in Florida's constructive regulatory climate, increasing the Company's regulatory risk and therefore its cost of capital. As explained in my direct testimony at pages 49-52, the regulatory environment is one of the most important factors considered by the investment community and directly affects a utility's access to and the cost of capital. As such, it is important that Florida's perception as a constructive regulatory environment be maintained.

Q. What is your response to OPC witness Garrett's conclusion that utility authorized ROEs have generally been above the market cost of equity since 1990?[10]

A. Although OPC witness Garrett attempts to characterize his conclusion that authorized returns have been above the market required return as an undisputable fact, it is simply the outcome of his subjective analysis that is driven by his own flawed inputs and assumptions. As explained on page 8 of my direct testimony, the forward-looking cost of equity cannot be precisely quantified, even for the market. As such, his "Market Cost of Equity" is simply his subjective opinion driven by flawed and unreasonable inputs as explained below. Further, OPC witness Garrett's conclusions, if accepted, would suggest that all utility commissions, as well as all investors in the market, have been wrong for decades. OPC witness Garrett's conclusions are erroneous, unsupported, and should be rejected.

[10] Direct Testimony of OPC witness Garrett, at 13-14.

Q. Please further explain how OPC witness Garrett's analysis regarding authorized ROEs relative to the Market Cost of Equity is flawed and inaccurate.

A. There are several flaws with OPC witness Garrett's analysis and conclusion. For background, OPC witness Garrett's analysis is presented in his Figure 3 and Exhibit DJG-13. The orange dashed line in his Figure 3 (the "Market Cost of Equity") is the data presented in Column [7] in his Exhibit DJG-13, which is the sum of Column [5] (the risk-free rate) and Column [6] (the Risk Premium). As explained in the footnotes of his Exhibit DJG-13, the source of this data is the NYU School of Business, presumably Dr. Aswath Damodaran's website that OPC witness Garrett references frequently throughout his testimony.

The first flaw in his analysis is that the risk-free rate applied used to develop his Market Cost of Equity estimates is the 10-year Treasury bond yield. In my experience, the 30-year Treasury bond yield is often used as the risk-free rate in utility regulatory proceedings. Comparing authorized ROEs that are based on analyses that use a higher risk-free rate (*i.e.*, the 30-year Treasury bond yield typically used in utility regulatory proceedings) to the risk-free rate applied to estimate his "Market Cost of Equity" (*i.e.*, based on the 10-year Treasury bond yield) is an apples-to-oranges comparison.

The more critical flaw is his annual Risk Premium estimates, which are the output of Dr. Damodaran's Implied Equity Risk Premium model and are highly dependent upon the inputs and assumptions in that model. Dr. Damodaran's Implied Equity Risk Premium model is fairly complex. In my opinion, any analyst who applies Dr.

Damodaran's estimates should understand all the inputs and assumptions into his model to vet the reasonableness of those assumptions before relying substantially on the outputs of that model. My simplified understanding of Dr. Damodaran's model is that it applies a multi-stage DCF analysis for the S&P 500 Index in which the first stage of growth relies on an estimate of analysts' earnings growth rate for the S&P 500 Index for the first five years, and a terminal stage of growth equal to the 10-year Treasury bond yield for years six through perpetuity. I also understand that Dr. Damodaran assumes the 10-year Treasury bond yield as the discount rate. The assumed terminal growth rate is an especially critical input because the large majority of the cash flows that are discounted depend substantially on it. In my opinion, Dr. Damodaran's assumptions are not reasonable or consistent with the cost of equity analyses that I see typically applied in utility regulatory proceedings. These concerns should not be construed to mean I am criticizing Dr. Damodaran's model for academic purposes; rather, I simply do not believe Dr. Damodaran's Implied Equity Risk Premium model is useful for utility ratemaking purposes given its underlying assumptions. Moreover, I do not believe that it is appropriate to simply accept the inputs and assumptions used in Dr. Damodaran's Implied Equity Risk Premium model for all cost of equity analyses.

Q. Do you have any additional thoughts regarding OPC witness Garrett's "Market Cost of Equity" estimates?

A. Yes, I do. As noted above, OPC witness Garrett's position that authorized ROEs have been above the Market Cost of Equity for decades requires one to assume that all utility commissions, as well as all the investors in the market, have been wrong for decades. I find that presumption to be highly implausible. Because utility commissions consider

a wide range of market information, including both quantitative and qualitative data and analyses, I find it unlikely that all utility commissions, including this one, have been systematically incorrect in setting authorized returns over such a long period of time.

Additionally, if it were true that regulatory commissions were systematically authorizing ROEs for less risky utilities well above the market required return as OPC witness Garrett asserts, the discrepancy would have been arbitraged away over the last 30 years, consistent with the efficient market hypothesis OPC witness Garrett subscribes to.[11] In other words, if investors believed they could earn a significantly higher return for a less risky asset, they would move from more risky assets in the market to utility stocks, thus pushing down the cost of equity for utilities and increasing the market cost of equity. Because that has not happened, it implies OPC witness Garrett's analysis and conclusions are unsound.

As explained on pages 33-34 of my direct testimony, the long-term average total return on the market has been approximately 12.33 percent over the last 96 years and has been relatively stable. Over the long-term, realized returns should converge on expectations;[12] as such, it is highly improbable that investors are currently requiring returns on the overall market in the range of only 5 to 6 percent, as suggested by OPC witness Garrett's Exhibit DJG-13. In contrast, utility authorized ROEs generally reflect

[11] Direct Testimony of OPC witness Garrett, at 28.

[12] *See, e.g.,* Roger A. Morin, Ph.D., New Regulatory Finance, at 157 (2006).

a discount to the long-term average realized market returns of approximately 15-25 percent consistent with utility Beta coefficients (*i.e.,* 0.75-0.85). In other words, OPC witness Garrett's "Market Cost of Equity" estimates are disconnected from observed data and cannot be reconciled. OPC witness Garrett's conclusions reflect one person's subjective inputs and assumptions of one specific model and should not be construed as fact.

Q. What is your response to OPC witness Garrett's claims that "capital costs and awarded ROEs were much higher several decades ago than they are currently?"[13]

A. As capital costs have declined over the last three decades, authorized ROEs have also declined, that point is not disputed. OPC witness Garrett's concern appears to be that authorized ROEs have not fallen as much as interest rates. Apparently, OPC witness Garrett believes that capital costs and the cost of equity move in lockstep or in a one-to-one relationship, which is incorrect. Nonetheless, over time they have generally moved in the same direction. However, as shown in Figure 2 above, there is no discernable downward trend in authorized ROEs for natural gas distribution rate over the past five years as interest rates have stayed within a relatively narrow range. Now that interest rates have begun rising, it is reasonable and appropriate to expect that utility authorized ROEs should also begin rising.

Q. Please comment on FEA witness Walters' Table CCW-1 and the authorized ROEs for natural gas utilities during the first half of 2022.

A. I have concerns with FEA witness Walters' reference to authorized ROEs for natural gas utilities during the first half of 2022. First, the sample size of ROE decisions

[13] Direct Testimony of OPC witness Garrett, at 60.

between January and June 2022 is small. In fact, of the rate cases covered by RRA (FEA witness Walters' data source), there were only nine natural gas utility rate cases between January and June 2022 in which an ROE was determined. Further, three of the nine ROE decisions were from New York, a jurisdiction that routinely authorizes ROEs and equity ratios well below national averages based on a formula unique to the New York jurisdiction. I also note that between June 30 and August 31, 2022, there have been seven additional ROE determinations, which have averaged 9.55 percent or 22 basis points higher than the 9.33 percent observed in FEA witness Walters' Table CCW-1.

Second, the sixteen natural gas utility rate cases that have been decided between January and August 2022 were largely filed before the Federal Reserve began its monetary policy tightening and raising interest rates, and before inflation started its rapid increase. As such, the market conditions that existed during those proceedings may not necessarily be comparable to the market conditions experienced today.

Third, even the New York Public Service Commission, which routinely authorizes ROEs and equity ratios well below national averages as explained above, has recognized increasing capital costs in their authorized ROE decisions for natural gas utilities over the first half of the year. As shown in Figure 4 below, the ROEs authorized for the New York natural gas utilities increased 25 basis points from between January and June 2022. The 9.25 percent ROE authorized for Corning Natural Gas on June 16, 2022, reflected a 45-basis point increase over its prior ROE of 8.80

percent authorized a little more than a year earlier in May 2021.

Figure 4: New York Natural Gas ROEs Authorized in 2022

Company	Date of Final Order	Authorized ROE
Niagara Mohawk Power Corp.	1/20/2022	9.00%
Orange & Rockland	4/14/2022	9.20%
Corning Natural Gas Corp.	6/16/2022	9.25%

Q. Are the Intervenor Witnesses' recommendations consistent with those recently authorized for natural gas utilities elsewhere in the U.S.?

A. No, they are not. As noted above, the Intervenor Witnesses' ROE recommendations range from 9.25 percent to 9.40 percent. These recommendations rank in the bottom quarter of ROEs authorized for natural gas utilities over the last five years, as shown in Figure 5 below.

Figure 5: Percentile Ranking of Intervenor Witness Recommendations' Relative to Natural Gas Authorized ROEs 2017-2022

Witness	ROE Recommendation	Percentile Rank
Mr. Garrett (OPC)	9.25%	11.20%
Mr. Walters (FEA)	9.40%	24.70%

In other words, approximately 75.00 percent to 89.00 percent of ROEs authorized for natural gas utilities over the last five years were above the Intervenor Witnesses' ROE recommendations. I do not believe investors perceive FCG to be materially less risky than other natural gas utilities such that they would reduce their return requirements for FCG so far below those awarded for other natural gas utilities. Additionally, as noted earlier, the Intervenor Witnesses' recommendations are far removed from approved

returns in constructive jurisdictions like Florida.

Q. What is the practical implication of setting a return for FCG that is far below those authorized for other natural gas utilities?

A. The significant difference between the Intervenor Witnesses' ROE recommendations and those available to other natural gas utilities raises a very practical concern. FCG must compete with other companies, including utilities and the other NextEra Energy affiliates, for the long-term capital needed to provide utility service. Given the choice between two similarly-situated utilities, one with a return that falls far below industry levels, and another whose authorized return more closely aligns with those available to other utilities, investors will choose the latter.

Q. Have recent events emphasized the importance for a utility to maintain a strong financial profile?

A. Yes. The Intervenor Witnesses justify their ROE recommendation, in part, on their premise that FCG is a low-risk utility.[14] While utilities are generally considered to be less risky than other sectors, that does not mean they are risk-free. As the COVID-19 pandemic and Winter Storm Uri and the financial implications stemming from those events show, high impact adverse events can and do happen. A utility with a strong financial profile has a higher likelihood of withstanding adverse events and accessing capital at reasonable terms during constrained markets to the benefit of customers. Financial strength is especially critical during periods of market dislocation, as experienced in 2020 and during the Great Recession of 2008-2009 for example. In

[14] Direct Testimony of FEA witness Walters, at 64-65, 67; Direct Testimony of OPC witness Garrett, at 17.

fact, S&P noted that the utility sector's credit ratings weakened sharply in 2020:

> [T]he utility industry performed poorly from a credit quality perspective. *The negative outlooks or CreditWatch negative listings doubled and downgrades outpaced upgrades for the first time in a decade by about 7 to 1*.[15]

That trend continued in 2021, with S&P noting that "[f]or the second consecutive year, rating downgrades outpaced upgrades for the investor-owned North American regulated utility industry, causing the median rating on the industry to fall to the 'BBB' category."[16]

The depth and duration of the COVID-19 pandemic could have been more severe, and utilities must be prepared for unexpected adverse events with a margin of safety. Doing so enables utilities to provide safe and reliable service at a reasonable cost in all market environments to the benefit of customers.

Q. Do you agree with FEA witness Walters' conclusion that natural gas utility credit ratings have improved?[17]

A. No, I do not. Comparisons to 2009 when the U.S. was in the depths of the greatest economic downturn in the previous 75 to 80 years are not a relevant or meaningful benchmark. As the U.S. came out of the recession, it is not surprising utility credit ratings would improve. The more appropriate review would be to more recent years when economic conditions were more stable. For example, in 2017, 100 percent of the

[15] S&P Global Ratings, *North American Regulated Utilities' Negative Outlook Could See Modest Improvement*, at 1 (January 20, 2021).

[16] S&P Global Ratings, *For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category*, at 1 (January 20, 2022).

[17] Direct Testimony of FEA witness Walters, at 7.

natural gas utilities in FEA witness Walters' Table CCW-3 were rated BBB+ or higher. Since then, the percentage of A-rated utilities has fallen from 67 percent to 51 percent, and the percentage of BBB-rated natural gas utilities has increased from 33 percent to 50 percent. This is consistent with the increase in downgrades in 2020 and 2021 noted by S&P above. Therefore, I disagree with FEA witness Walters' characterization that utility credit ratings have improved.

B. Capital Market Environment

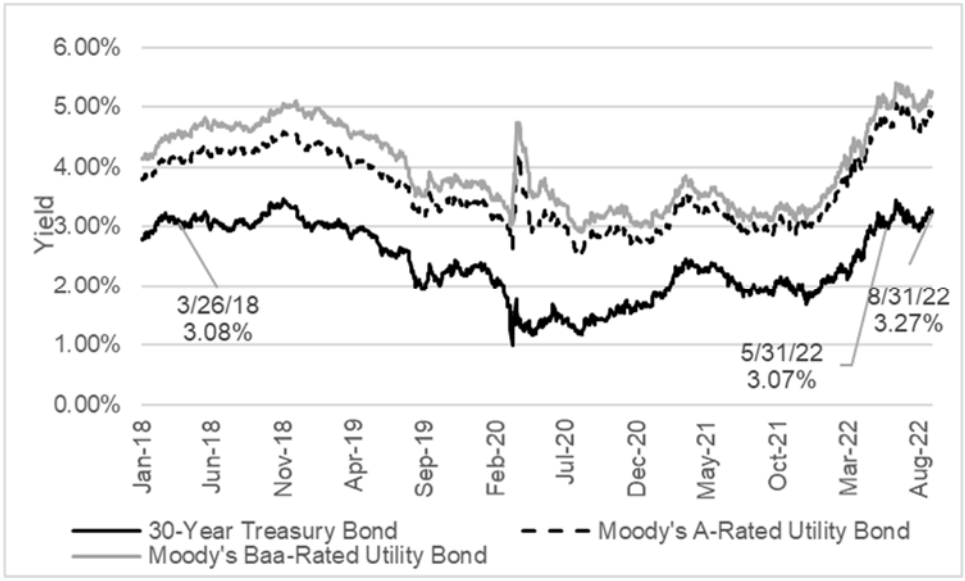
Q. Please briefly summarize the Intervenor Witnesses' positions regarding the current capital market environment and its implications for the Company's cost of equity?

A. While the Intervenor Witnesses generally agree with the facts presented in my direct testimony regarding higher interest rates and inflation, they largely dismiss them, suggesting, without any support, that they will be temporary or will not have a material effect on FCG. As discussed in my direct testimony, there are numerous market-based indicators that capital costs have risen since the Company's last rate case, including: (1) higher interest rates, including the 30-year Treasury bond yield and utility bond yields; (2) higher inflation; (3) higher utility Beta coefficients, including the proxy group; (4) an increase in the spread between utility bond yields and the 30-year Treasury bond yield; and (5) continued elevated market volatility. Neither of the Intervenor Witnesses have disputed these facts; rather, they simply dismiss them and conclude that capital costs are low and will remain low.

Q. What has been the trend in bond yields and inflation since you filed your Direct Testimony?

A. Government bond yields and utility bond yields have continued to increase, as shown in Figure 6 below.

Figure 6: 30-Year Treasury Bond Yield and Utility Bond Yields (2018-2022)[18]



The 30-year Treasury bond yield has increased 20 basis points since my direct testimony was filed on May 31, 2022, and 19 basis points since the Commission's order in FCG's last rate case in March 2018. Utility bond yields have risen approximately 25 to 30 basis points between May 31, 2022 and August 31, 2022, and are also approximately 70 basis points above the levels seen at the time of the Commission's order in the Company's last rate case.[19]

[18] Source: Bloomberg Financial.

[19] Source: Bloomberg Financial.

Further, inflation remains elevated at the highest levels in the last 40 years, and above the levels experienced at the time of the Company's last rate case was concluded, as shown in Figure 7 below.

Figure 7: Year-over-Year Inflation Rates (March 2018 to July 2022)[20]

	March 2018	May 2022	July 2022
Consumer Price Index	2.3%	8.5%	8.5%
Producer Price Index	2.9%	11.0%	9.8%
Personal Consumption Expenditures Price Index	2.2%	6.3%	6.3%

Q. Do you agree with OPC witness Garrett's contention that inflation disproportionately affects utility customers rather than utility shareholders?[21]

A. No, I do not. OPC witness Garrett misses a key point: that capital costs are a cost to the utility and not just to its customers. As explained in my direct testimony, inflation directly affects a utility's capital costs, both debt and equity costs.[22] As noted in a recent Regulatory Research Associates ("RRA") article, rate cases around the country cite inflationary concerns that utilities face, including rising insurance premiums and labor and materials cost escalation, with highest year-over-year inflation seen in the South region.[23] These cost pressures are further exacerbated on the capital-intensive nature of utilities, with large capital investments required across the country to address aging infrastructure and grid modernization plans. Because utilities have an obligation to serve, they cannot delay capital investments until inflation subsides, or they risk the

[20] Sources: U.S. Bureau of Labor Statistics; Federal Reserve Bank of St. Louis, FRED Database.

[21] Direct Testimony OPC witness Garrett, at 5.

[22] Direct Testimony of Jennifer E. Nelson, at 70.

[23] RRA Regulatory Focus. "Inflation rearing its head in electric, gas general rate cases nationwide." September 7, 2022.

ability to continue providing safe and reliable service. Failing to reflect higher capital costs in the authorized rate of return caused by higher inflation would not provide FCG with a reasonable opportunity to earn its cost of equity, violating the *Hope* and *Bluefield* standards.

Q. FEA witness Walters asserts that "robust valuations" are "evidence" that utilities can access capital "at relatively low cost."[24] What is your response?

A. FEA Witness Walters' position fails to acknowledge that because utilities are capital intensive enterprises, their "robust" valuations are strongly related to the interest rate environment. As shown in Figure 8 below, between 2000 and 2008, utility valuations as measured by the proxy group relied on by me and the Intervenor Witnesses were within a relatively confined range. However, as the Federal Reserve deliberately reduced interest rates to provide extraordinary support for the U.S. economy in the wake of the Great Recession in 2008 and later during the COVID-19 pandemic in 2020, utility valuations increased by more than 2.5 times over the valuation levels seen immediately prior to the 2008 Great Recession.

[24] Direct Testimony of FEA witness Walters, at 9.

Figure 8: Proxy Group Equity Valuation vs. 30-Year Treasury Yields (2000-2022)[25]

As Figure 8 above shows, there is a strong, statistically significant inverse relationship between the 30-year Treasury yield and natural gas utility valuations. A simple linear regression of the two variables indicates that the 30-year Treasury yield explains approximately 64.00 percent of the variation in natural gas utility valuations (as measured by FEA witness Walters' and my proxy group).

Because the recent low level of interest rates was the result of the Federal Reserve's monetary policy deliberately put in place to support the U.S. economy during volatile, crisis-induced market environments, it is difficult to conclude that utilities' "robust" valuations reflect investors' perceptions that utilities' cost of equity is low. As

[25] Source: S&P Capital IQ, Yahoo! Finance; Price level of FEA witness Walters' and my proxy group is calculated as an Index.

explained in my direct testimony, low interest rates are often associated with higher market volatility, which suggests an *increase* in the cost of equity, not a decrease.[26] Importantly, the Federal Reserve is aggressively unwinding its expansionary monetary policies. Historically, utility valuations have often declined as interest rates rise, as indicated by the negative relationship between the two.

Q. What is your response to FEA witness Walters' position that higher levels of volatility in the overall market do not indicate a similar increased level of risk for utilities?[27]

A. FEA witness Walters conflates my discussion of increased market volatility (and therefore increased risk in the market as a whole) with the presumption that utilities are generally regarded as less risky.[28] As explained in my direct testimony, however, both the utility sector and the S&P 500 lost approximately 30.00 percent of its value at the onset of the COVID-19 pandemic.[29] Additionally, the returns from the companies in my proxy group have been more volatile (*i.e.*, riskier) than the S&P 500. As shown in Figure 20 on page 66 of my direct testimony, the proxy group's relative volatility ratio has been above 1.0. As that chart also demonstrates, the proxy companies' returns have been more correlated with returns of the S&P 500 Index. That is, the proxy companies have been trading in a more similar pattern as the S&P 500 Index. Although FEA witness Walters' position may be based on past conventional wisdom that utilities are always defensive stocks, that is not always the case. Indeed, utilities have been more

[26] Direct Testimony of Jennifer E. Nelson, at 60-61.
[27] Direct Testimony of FEA witness Walters, at 66-67.
[28] Direct Testimony of FEA witness Walters, at 67.
[29] Direct Testimony of Jennifer E. Nelson, at 59.

volatile, and therefore riskier, than the broad market since at least February 2020. That data supports an increase in the cost of equity.

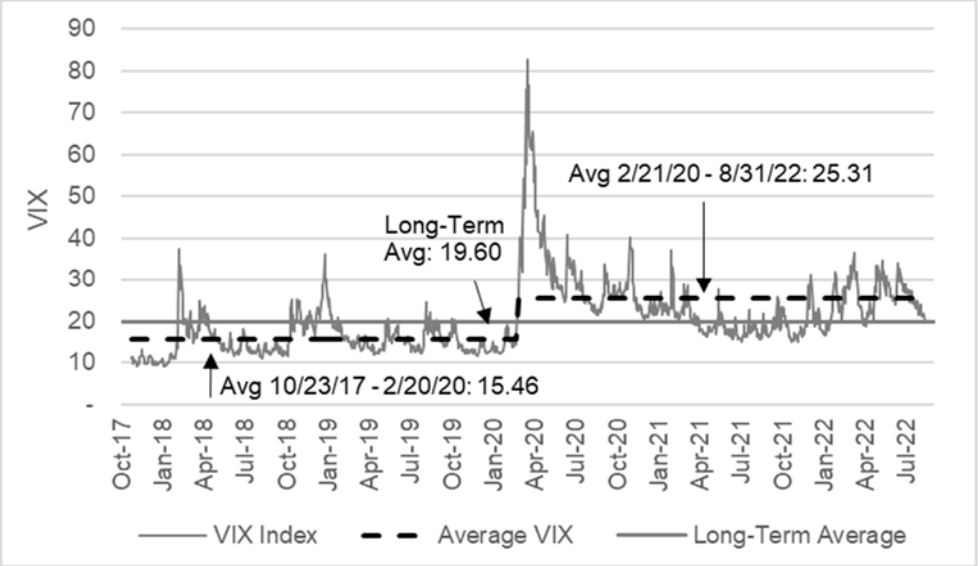
Lastly, as explained in my direct testimony and as FEA witness Walters agrees,[30] the CAPM theory is based on the premise that investors are compensated for taking on undiversifiable, or market, risk. Because market risk as measured by the Volatility Index ("VIX") has increased, it indicates higher investor return requirements under the CAPM theory.

Q. Has market volatility remained elevated since you filed your direct testimony?

A. Yes. As shown in Figure 9 below, the VIX has generally been above its long-term average throughout 2022. Since mid-February 2020, market volatility has been, on average, about 30 percent above its long-term average (19.60). As Figure 9 also shows, the current VIX levels are, on average, about 63.70 percent higher than the average level experienced between 2017-mid-February 2020 (15.46).

[30] Direct Testimony of FEA Witness Walters, at 64.

Figure 9: VIX (2017-2022)



IV. CAPITAL STRUCTURE

Q. What are the Intervenor Witnesses' recommendations with respect to the Company's capital structure?

A. OPC witness Garrett recommends a financial capital structure consisting of 51.30 percent debt and 48.70 percent equity based on investor-supplied capital because, according to him, utility capital structures should be more heavily weighted toward debt.[31] OPC witness Garrett's recommendation is based on his review of the capital structure of companies in other industries and the proxy companies at the publicly traded holding company level in 2021. Similarly, FEA witness Walters also reviews recent authorized equity ratios and the capital structures at the publicly traded holding company level, recommending a capital structure that contains "no higher than 50.0%"

[31] Direct Testimony of OPC witness Garrett, at 71, 80.

common equity.[32]

Q. Do you agree with the Intervenor Witnesses' approach and conclusions?

A. No, I do not. As explained below, companies (including subsidiary companies) are financed in light of the specific risks and funding requirements associated with their individual operations. OPC witness Garrett acknowledges as much, noting that utility capital structures are established "based on the operational and market risk factors that apply to the individual utility."[33] However, his capital structure recommendation is based, in part, on the proxy group average debt-to-equity ratio at the publicly traded holding company level – not on FCG's individual operational and market risk factors.

The proper point of comparison is the mix of investor-supplied capital in place at the *regulated* utility operating companies, not at the publicly-traded holding companies. The nature of utility operations, and the corresponding nature of the assets providing utility service, create common financing objectives and constraints addressed by financing practices at the operating company level. The Intervenor Witnesses, however, recommend increasing the Company's financial leverage by reference to the publicly traded holding companies and other industry capital structures, which would increase the regulated utilities' financial risk and, in turn, its cost of capital to the detriment of customers.

[32] Direct Testimony of FEA witness Walters, at 2.

[33] Direct Testimony of OPC witness Garrett, at 78.

Q. Please explain in more detail why the Intervenor Witnesses' capital structure recommendations are improper.

A. OPC witness Garrett's recommendation is based on the proxy group publicly traded holding company average 2021 debt-to-equity ratio of 1.13. Similarly, FEA witness Walters' recommendation is based on his review of the proxy group publicly traded holding company equity ratios in 2021. Notwithstanding the fact that the Intervenor Witnesses' recommendations are based on an improper analysis of capital structures at the publicly traded holding company level, their recommendations presume that FCG should be financed with the same proportions of equity and debt as the "average" natural gas utility in 2021. However, as explained below, utility capital structures vary widely based on the unique needs of each company and the assets being financed. While I agree that reviewing the actual and authorized capital structures in place at other natural gas utilities can inform the reasonableness of a utility's capital structure, the Intervenor Witnesses have not demonstrated that the Company's requested capital structure deviates substantially from sound utility practice.[34]

Q. For context, please summarize the factors utilities generally consider in their financing practices.

A. Companies (including subsidiary companies) are financed in light of the specific risks and funding requirements associated with their unique individual operations. Capital structure management is dynamic, complex, and must satisfy multiple objectives subject to multiple constraints. It therefore is important to understand utility financing

[34] An example would be if an operating subsidiary was financed with 100 percent equity. *See also*, David C. Parcell, The Cost of Capital – A Practitioner's Guide, at 47 (2020 Edition).

practice, including the principles and constraints that drive financing decisions, and how that practice is reflected in the cost of capital. As explained below, utility financing practices reflect the nature of regulation and utilities' investments made under the regulatory compact. Although regulated utilities face common financing principles and constraints, the unique risks and operations of each utility result in a wide variation of capital structures.

In many respects, the nature of regulation determines the nature of utility assets, and how they are financed. In exchange for the obligation to serve, equity investors expect utilities to have a reasonable opportunity to earn a fair return on prudent investments over the life of the investments. It is the nature of regulation, therefore, that enables utilities to finance large, essentially irreversible, investments that are recovered over decades. Moreover, because the obligation to serve is not contingent on capital market conditions, utility capital structures (and the financial strength they support) are established to ensure capital access not only during normal markets, but when markets are constrained as well. When markets are constrained, only those utilities with sufficient financial strength can attract capital at reasonable terms, to customers' benefit. That financial strength provides utilities with critically important financing flexibility. Relying more heavily on debt, as the Intervenor Witnesses propose, increases the risk of refinancing maturing obligations during less accommodating market environments at likely higher costs, which reduces financing flexibility. Financing flexibility, therefore, has a cost. As Moody's explains:

> Liquidity and access to financing are of particular importance in this sector. Utility assets can often have a very long useful life – 30, 40

> or even 60 years is not uncommon, as well as high price tags…Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to the capital markets to assure adequate sources of funding and to maintain financial flexibility.[35]

Because of utilities' obligation to serve, financial flexibility brought about by the access to both long-term capital and short-term liquidity is critical for utilities' financial integrity and their ability to continually attract capital. The requirement to access the capital markets in all market conditions contrasts with the financial needs of other entities without the legal obligation to serve. Unregulated companies may adjust the timing and amount of major capital expenditures to align with economic cycles and defer decisions and investments to better match market conditions; whereas utilities have limited options to do so. Ensuring the financial strength required to access capital because of reduced spending flexibility, therefore, is critically important not only to utilities and shareholders, but to customers as well.

Q. Are there recent examples within the proxy group that demonstrate the importance of a strong balance sheet and financial profile to maintain efficient access to capital?

A. Yes, there are. In February of 2021, Winter Storm Uri hit Texas and the midwestern U.S., knocking out electric power to millions of customers and constraining natural gas supplies, which pushed customer demand and natural gas commodity costs to record highs. Because of their obligation to serve, natural gas utilities cannot delay or defer purchasing natural gas in the winter, as many customers rely on natural gas to heat their homes. Consequently, as Moody's noted, the surge in natural gas commodity costs

[35] Moody's Investor Service, *Rating Methodology: Regulated Electric and Gas Utilities*, at 25 (June 23, 2017).

"strained liquidity for utilities in Texas, Oklahoma, Kansas, and neighboring states."[36] Two of the proxy companies, Atmos Energy Corporation and ONE Gas, Inc., each reported more than $2 billion in additional natural gas commodity costs attributed to Winter Storm Uri.[37] However, each was able to issue more than $2 billion in low-cost debt,[38] which may not have been possible but for their A-rated credit ratings,[39] strong balance sheets, and expectation for constructive regulatory treatment in recovering the natural gas commodity costs.[40] In this situation, Atmos Energy Corporation's and ONE Gas's customers benefited from these companies' strong balance sheets – each of which had approximately 58 percent to 60 percent equity in their regulated operating company capital structures as of December 31, 2020 (*see* Exhibit JEN-10).

Adverse events can happen unpredictably, and Florida is no stranger to severe weather events. As such, it is important that utilities maintain a strong financial profile that enables efficient access to capital when needed in all market environments.

Lastly, the examples of Atmos Energy and ONE Gas, Inc. raise another problem with the Intervenor Witnesses' analyses: their conclusion regarding the appropriateness of

[36] S&P Capital IQ Pro, "Gas utilities 'most severely affected' by winter storm prices, Moody's says," March 8, 2021.

[37] S&P Capital IQ Pro, "Gas utilities 'most severely affected' by winter storm prices, Moody's says," March 8, 2021.

[38] S&P Capital IQ Pro, "Atmos Energy completes senior notes offering," March 9, 2021; "One Gas to pay $2.2B for gas purchases, secures $2.5B term loan facility," February 22, 2021.

[39] Nonetheless, both companies were downgraded. S&P downgraded Atmos Energy Corporation from A to A- on February 22, 2021. S&P downgraded ONE Gas Inc. two notches from A to BBB+ on February 23, 2021.

[40] *See, e.g.*, S&P Capital IQ Pro, "Gas utilities face multibillion-dollar financing needs after storm price surge," February 22, 2021.

the proxy group average publicly traded holding company equity ratio is skewed by relying only data from 2021. As discussed on page 76 of my direct testimony, it is important to review capital structures over several periods rather than a point in time to avoid misleading conclusions drawn from temporary or abnormal data. In other words, the proxy group average equity ratio in 2021, which the Intervenor Witnesses' recommendations rely upon,[41] is skewed by the fact that two of the six proxy companies uncharacteristically took on significant debt in order to maintain safe and reliable service in an emergency. By focusing only on 2021 and not reviewing capital structures over a longer period, the Intervenor Witness both mistakenly draw the conclusion that it is reasonable to set FCG's capital structure based on abnormal data in 2021. I disagree with that conclusion.

Q. Why are the Intervenor Witnesses' comparisons to the capital structures in place for the proxy group at the publicly traded holding company level an improper measure of the appropriate capital structure for FCG?[42]

A. Comparisons to the capital structures at the proxy group publicly traded holding company level are apples-to-oranges comparisons. Because capital at the publicly traded holding company level may finance unregulated operations, comparisons to the publicly traded holding company capital structure leads to flawed and misleading conclusions. As explained earlier, regulated utilities' obligation to serve presents a unique set of constraints that affect regulated utilities' financing practices relative to unregulated operations, which reduces the financing flexibility critical for utilities.

[41] *See* FEA witness Walters Exhibit CCW-2 and OPC witness Garrett Exhibit DJG-14.

[42] OPC witness Garrett Exhibit DJG-14; FEA witness Walters Exhibit CCW-2.

Comparing the data in OPC witness Garrett Exhibit DJG-14 and my Exhibit JEN-10 (and updated in JEN-16), it is clear that the publicly-traded consolidated holding companies are financed differently than their regulated natural gas operating subsidiaries. The reason is because the capital at the publicly-traded holding company level finances a variety of business segments (both regulated and unregulated) each with different risk profiles. Moreover, several of the proxy group holding companies also have electric or water utility operations, which would be contained within the consolidated capital structures and have a different risk profile than natural gas operations. For these reasons, the proper comparison of the Company's capital structure is to the capital structures that finance the proxy companies' *regulated natural gas* operations.

Q. FEA witness Walters reviews the annual average authorized equity ratio from 2010 to 2022 to support his capital structure recommendation. Is the Company's requested equity ratio consistent with the range of recent authorized equity ratios?

A. Yes, it is. As explained above, setting the authorized capital structure based on annual averages implies all utilities should be financed as an average utility, when in fact the range of authorized equity ratios is wide. The Company's requested equity ratio is within the range of authorized equity ratios between 2019 and 2022, which ranges from 46.26 percent and 60.18 percent.

Q. FEA witness Walters refers to a 2016 Order from the Minnesota Public Utilities Commission that found the "[p]roxy-group averages have much higher probative value than proxy-group ranges."[43] Do you have a response?

A. Yes. I respectfully disagree with the Minnesota Public Utilities Commission's finding in that case. As noted above, utilities are financed according to their unique risks and circumstances of the assets being financed and, therefore, it is reasonable to expect a wide range of utility capital structures. The mere fact that a utility's capital structure deviates from the average does not automatically demonstrate it is unreasonable. Moreover, setting utility capital structures to the average assumes that all utilities have the same risks and underlying assets and should be financed with the same proportions of equity and debt, which is clearly not the case.

Q. OPC witness Garrett reviews the debt ratios of a variety of industry sectors to support his more leveraged capital structure recommendation.[44] Do you agree with his analysis and conclusions?

A. No, I do not. There are several issues with OPC witness Garrett's analysis. First, the natural gas utility sector is not in OPC witness Garrett's list of industries with debt ratios of at least 56 percent. Moreover, the debt ratio data in his analysis is at the publicly traded holding company level. As explained earlier, utility debt ratios at the publicly traded holding company level are an improper benchmark to evaluate the reasonableness of FCG's requested capital structure.

[43] Direct Testimony of FEA witness Walters, at 69.
[44] Direct Testimony of OPC witness Garrett, at 73-75; Exhibit DJG-15.

Second, OPC witness Garrett's data does not support the premise of his conclusions. OPC witness Garrett argues that utilities can "afford" to have higher debt ratios because they "have large amounts of fixed assets, stable earnings, and low risk relative to other industries."[45] He argues that low risk companies, such as utilities, should "operate with relatively high levels of debt". OPC witness Garrett concludes that the companies contained in his Figure 15 are "generally well-established industries with large amounts of capital assets" and are therefore comparable to public utilities.[46] However, many of the industries contained in OPC witness Garrett's Figure 15 contradict his conclusions. For example, based on the Beta coefficients, the Air Transport and Hotel/Gaming industries are significantly more risky than public utilities and certainly are not considered to have "stable" earnings. Yet, these industries are two of the top three industries with the highest debt ratios.

Nonetheless, I tested OPC witness Garrett's theory that low-risk industries should have higher debt ratios. If it's true that business risk is a primary driver of debt ratios, as suggested by OPC witness Garrett, there should be a strong, inverse relationship between the Beta coefficient and debt ratios. In other words, companies with low Beta coefficients (*i.e.*, low risk) would have higher debt ratios. However, that is not the case. As shown in Exhibit JEN-18, I downloaded the long-term debt ratio and Beta coefficient for all U.S. firms covered by *Value Line* and calculated the average debt ratio and Beta coefficient for each industry. I then performed a linear regression in

[45] Direct Testimony of OPC witness Garrett, at 71.

[46] Direct Testimony of OPC witness Garrett, at 74.

which the long-term debt ratio was the dependent variable, and the Beta coefficient was the independent variable. The result was that the R-square was 0.6 percent, and the slope coefficient was positive, not negative as would be expected if OPC witness Garrett's premise was true. Stated differently, industries of higher risk correspond to higher debt ratios, not lower.[47] However, the regression was not statistically significant. In other words, OPC witness Garrett's premise is not supported by the data and there is no relationship between debt ratios and Beta coefficients. Consequently, his theory – and the conclusion he draws from it – is not sound and should be rejected.

Q. OPC witness Garrett refers to previous capital structures of Gulf Power Company and Peoples Gas System to support his objection to the Company's request for the same capital structure as its parent FPL.[48] Are his comparisons to Gulf Power Company and Peoples Gas System appropriate?

A. No, they are not. OPC witness Garrett appears to suggest that because the approved equity ratios of FCG and Gulf Power Company, which were previously both owned by Southern Company, were not the same, this therefore indicates that using the same capital structure as the regulated utility's parent is not appropriate. The flaw with his argument is that prior to its recent merger and consolidation with and into FPL, Gulf Power Company was its own legal entity and issued its own debt. FCG, on the other hand, does not and has not issued or held its own debt. As a result, FCG used the capital structure of its parent company in its last base rate case in Docket No. 20170179-GU as explained on page 75 of my direct testimony.

[47] This makes intuitive sense because companies with higher debt leverage have higher financial risk.
[48] Direct Testimony of OPC witness Garrett, at 79.

With respect to Peoples Gas System and Tampa Electric Company, which are owned by the same parent, I acknowledge that it does not appear their authorized equity ratios have been identical, and I have not done an in-depth analysis for any differences in their proposed equity ratios, differences in their authorized equity ratios, or the reasons for such differences. However, I agree with OPC witness Garrett that the equity ratios for both companies appear to be very similar since at least 2009. The minor differences in the authorized equity ratios between Tampa Electric Company and Peoples Cas System certainly do not support OPC witness Garrett's recommended capital structure for FCG that is significantly more leveraged.

Finally, as explained in my direct testimony, the Company's request to apply the parent company's capital structure for ratemaking purposes is consistent with the Commission's precedent and the FERC's precedent, which Intervenor Witnesses do not refute.

Q. What are your conclusions regarding FCG's requested capital structure?

A. There simply is no basis to conclude that the Company's requested equity ratio of 59.60 percent on an investor-supplied basis deviates substantially from sound utility practice. As discussed above:

- FCG's requested capital structure reflects its specific financing requirements and risk profile, and enables it to maintain its financial strength, which translates into favorable access to capital for the benefit of customers;
- The Company's requested capital structure is reasonable compared to the

range of equity ratios for the regulated natural gas operating companies held by the proxy group as well as to authorized equity ratios for natural gas utilities in other jurisdictions; and

- The Company's requested capital structure is based on its actual financing from its parent and is consistent with regulatory precedent and guidance regarding capital structure determinations for companies that do not issue their own debt or have their own credit ratings.

For these reasons, the Intervenor Witnesses' recommendations should be rejected. FCG's requested capital structure is reasonable and appropriate and should be approved by the Commission.

V. RESPONSE TO OPC WITNESS GARRETT

Q. Please summarize OPC witness Garrett's recommendation regarding the Company's cost of equity.

A. OPC witness Garrett believes the Company's "actual" cost of equity is "about 8.00 percent," using the Constant Growth DCF model (7.10 percent to 8.00 percent) and the CAPM (8.00 percent).[49] However, OPC witness Garrett disregards the results of his analytical approaches and instead recommends a 9.25 percent ROE, which reflects his acknowledgement that "the 'end result' should be just and reasonable" to satisfy the standards set in the U.S. Supreme Court's ("Supreme Court") *Hope* and *Bluefield* decisions.[50] If OPC witness Garrett's conclusion is that a cost of equity of 8.00 percent

[49] Direct Testimony of OPC witness Garrett, at 6, 67 and Exhibit DJG-12.

[50] Direct Testimony of OPC witness Garrett, at 6.

would not satisfy the Supreme Court's "end result" doctrine, I agree. Nor would it satisfy *Hope* and *Bluefield's* "comparable earnings," "financial integrity," "capital attraction" standards. In fact, there is no correlation at all between his analysis and his 9.25 percent recommendation. For that reason, the Commission should give no weight to his analyses or ultimate ROE recommendation. In the end, the results of his ROE analyses, and his overall 9.25 percent ROE recommendation, are far too low to be reasonable and would only serve to increase the Company's risk and, therefore, its cost of capital to the detriment of customers.

Q. Are OPC witness Garrett's analytical results and recommendation reasonable measures of the Company's cost of equity?

A. No, they are not. As discussed in more detail below, there are significant inconsistencies in OPC witness Garrett's testimony and analytical models. For example, OPC witness Garrett's DCF model is based on inappropriate growth rates that are not reflective of the proxy group or his dividend yields, and his CAPM relies on an excessively low Market Risk Premium that is at odds with actual observed market risk premia. Those flawed assumptions drive his analyses to produce unreasonably low ROE estimates.

ROE estimates of 8.00 percent and lower have little practical value in determining the Company's ROE. No regulatory commission that I am aware of has authorized an ROE of 8.00 percent for a natural gas utility in more than 40 years. As noted earlier, even his 9.25 percent ROE recommendation falls in the bottom 11th percentile of authorized ROEs for natural gas utilities in the last five years and is well below the

range of ROEs authorized for natural gas utilities in constructive regulatory jurisdictions. OPC witness Garrett's 9.25 percent ROE recommendation far exceeds both his highest analytical result and the 8.00 percent return that he concludes most likely represents the "actual" cost of equity. That is, it is impossible to reconcile his analytical results with his recommendation. In my opinion, OPC witness Garrett's 9.25 percent ROE recommendation has no empirical basis and, therefore, should be given no weight.

Q. Please summarize the principal areas with which you disagree with OPC witness Garrett's analyses and conclusions.

A. The principal areas in which I disagree with OPC witness Garrett include: (1) his interpretation of the Company's risk profile; (2) the growth rate assumptions used in his DCF analyses; (3) the Market Risk Premium applied in his CAPM; (4) the relevance and interpretation of the Bond Yield Plus Risk Premium approach; (5) the risks associated with FCG's relatively small size; and (6) the inclusion of flotation costs. I discuss each of these points below.

A. Utility Risk Profiles and the Cost of Equity

Q. As a general matter, what is your response to OPC witness Garrett's repeated references to utilities being low risk investments that are "relatively insulated from overall market conditions"?[51]

A. If OPC witness Garrett's point is that utility Beta coefficients tend to be less than 1.00 (that is, by that measure they are less risky than the overall market), that point has never

[51] Direct Testimony of OPC witness Garrett, at 27.

been in dispute. However, regulation does not insulate utilities from either business or market risks.

To that point, his proxy group average Beta coefficient is 0.83, meaning that, on average, for every 100-basis point change in the market return, the proxy group's returns change 83 basis points. Although that reflects a smaller change than the market, it certainly does not support the position that utility investors are insulated from market changes and are "exposed to little market risk." In other words, although utilities may be lower in risk than the overall market, they are not risk-free. OPC witness Garrett's simple observation that utility Beta coefficients are less than 1.0 does not justify his 8.00 percent cost of equity, nor his 9.25 percent ROE recommendation.

Lastly, as shown in Figure 20 on page 66 of my direct testimony, the proxy group's relative volatility to the overall market has been above 1.00 since at least January 2019, indicating that the proxy group's returns have been more volatile than the overall market (as measured by the S&P 500 Index). As also shown in Figure 20 on page 66 of my direct testimony, the relative correlation with the overall market increased substantially after the onset of the COVID-19 pandemic. Given the recent volatility and high correlation between utilities and the overall market, OPC witness Garrett's assumption that utility stocks are low risk and are "relatively insulated from market conditions" is not an accurate reflection of investors' current perceptions of utility risk. Because both market risk and relative utility risk has increased, it indicates an increase in the cost of equity, not a decrease.

Q. OPC witness Garrett suggests company-specific risks should not be reflected in the Company's cost of equity because those risks are diversifiable.[52] Do you have a response?

A. Yes. OPC witness Garrett's position that investors do not expect to be compensated for firm-specific risk contradicts his position that "[r]isk is among the most important factors for the Commission to consider when determining the allowed return."[53] On page 17 of his direct testimony, OPC Witness Garrett emphasizes this essential financial principle fundamental to the cost of capital, observing:

> 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.

OPC Witness Garrett's position that diversification eliminates firm-specific risk stems from the Modern Portfolio Theory underlying the CAPM.[54] However, the objective in this proceeding is to estimate the cost of equity for one enterprise, FCG, which necessarily requires an assessment of FCG's risk relative to a group of peers that are comparable in risk. The objective is not to evaluate the diversification attributes of adding FCG to an investment portfolio. As OPC witness Garrett acknowledges, within a portfolio each investment will have a unique risk profile – some higher, some lower – which indicates that the return required for each investment will differ.[55] The fact that investors can mitigate exposure to risk through diversification, however, does not mean they ignore firm-specific risk in their return requirements for each investment

[52] Direct Testimony of OPC witness Garrett, at 22-23.

[53] Direct Testimony of OPC witness Garrett, at 20.

[54] Notably, the assumption regarding diversification is not an assumption underlying the DCF or Risk Premium models.

[55] Direct Testimony of OPC witness Garrett, at 22.

within a portfolio.

B. Constant Growth and Quarterly DCF Models

Q. Please briefly describe OPC witness Garrett's Constant Growth DCF analyses and results.

A. OPC witness Garrett applies an annual form of the Constant Growth DCF Model, which produces an ROE estimate of 7.10 percent. For the dividend yield component, OPC witness Garrett relies on the annualized current quarterly dividend and 30-day average stock prices (based on "adjusted" closing stock prices) as of July 14, 2022.[56] To estimate expected growth, OPC witness Garrett looks to three measures, including: (1) nominal GDP, (2) real GDP, and (3) the current risk-free rate.[57,58] Of those, he chooses the highest estimate, 3.80 percent.[59] Separately, OPC witness Garrett derives an ROE estimate of 8.0 percent based on *Value Line's* projected dividend growth estimates, which averages 4.8 percent for the proxy group.[60] He, however, deems these short-term analyst growth rates to be "unreasonably high." He states that the resulting 8.0 percent ROE should not be considered, despite recommending a final ROE above both his recommended DCF ROE estimate of 7.1 percent and calculated cost of equity estimate of 8.0 percent.[61]

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[56] OPC witness Garrett Exhibit DJG-3.

[57] OPC witness Garrett Exhibit DJG-5.

[58] OPC witness Garrett's erroneous consideration of the risk-free rate as a proxy for sustainable long-term growth for utilities ignores the fact that utilities are not risk-free assets, such as government bonds. Utility stocks are capital-intensive in nature with a large number of risks for which investors must be compensated for.

[59] Direct Testimony of OPC witness Garrett, at 43; OPC witness Garrett Exhibit DJG-5.

[60] OPC witness Garrett Exhibit DJG-6.

[61] Direct Testimony of OPC witness Garrett, at 44.

Given that current inflation is at 8.60 percent, OPC witness Garrett's measure of sustainable growth using nominal GDP growth of 3.80 percent implies negative growth in real terms. In my opinion, it is unlikely an investor would be willing to assume the risks of equity ownership in exchange for negative real growth or even only modestly greater growth than OPC witness Garrett's estimate of expected long-term inflation. Under those conditions, investors would likely prefer debt securities, with their higher yield[62] and considerably less risk of capital loss (if held to maturity) than common equity, with a lower yield, higher volatility,[63] and little prospect of meaningful capital appreciation. As such, OPC witness Garrett's sustainable growth DCF results should be rejected.

Q. What are your general concerns with the growth rates on which OPC witness Garrett's DCF analysis relies?

A. None of OPC witness Garrett's growth rate estimates (presented in his Exhibit DJG-5) are appropriate measures of growth for his DCF analysis. Because his growth rates are generic in nature, they fail to account for the individual and unique risks and prospects faced by the proxy companies. OPC witness Garrett assumes a single, perpetual growth rate of 3.80 percent for all his proxy companies, taking the highest of his three estimates.[64] Two of his three estimates are based on one source for GDP, as he cited

[62] For example, as of August 31, 2022, utility bond yields were 4.93 percent and 5.25 percent for A-rate utility bonds and Baa-rated utility bonds, respectively. This compares to OPC witness Garrett's average dividend yield of the proxy group of 3.20 percent.

[63] For example, the Beta coefficients for debt currently range from 0.20 for Aaa-rated debt to 0.60 for Ba-rated debt, and up to 0.90 for Caa-rated debt. In other words, the proxy group Beta coefficients are currently higher (and therefore are riskier) than Ba-rated bonds, which are below investment grade. *See* Kroll Cost of Capital Navigator, accessed September 21, 2022.

[64] OPC witness Garrett Exhibit DJG-5.

the nominal GDP and real GDP rate from Congressional Budget Office. These are essentially the same metric, as nominal GDP is simply real GDP plus inflation. As explained below, and in my response to FEA witness Walters, utility growth is not limited by GDP growth. Therefore, I disagree with the use of GDP growth as a measure of long-term growth in the DCF model.

Q. Please explain why OPC Witness Garrett's 3.80 percent growth rate assumed for all companies in his DCF analysis is improper.

A. OPC witness Garrett's 3.80 percent growth rate is not based on any measure of company-specific growth, or even growth in the utility industry in general. Rather, the sole purpose of the proxy group is to calculate the dividend yield. Under the DCF model's strict assumptions, however, expected growth and dividend yields are related. That is, the market price of an individual stock reflects investors' perceptions of the unique risks and prospects (including earnings growth) of that individual company. They are not based exclusively on generic economic indicators such as GDP growth or the current risk-free rate. OPC witness Garrett's assumption that one growth rate applies to all companies, even though dividend yields vary across those companies, directly contradicts the very financial theory underlying the DCF model and investor practice.

Q. On page 45 of his testimony, OPC witness Garrett argues that the growth estimates included in your Discounted Cash Flow analyses violate the principle that "no company can grow at a greater rate than the economy" over the long term. Do you have a response?

A. Yes, I do. The DCF model assumes the growth rate component equals the expected

rate of capital appreciation. Therefore, the appropriate growth rate applied in the DCF model is the investors' growth expectation embodied in the valuation of the firm (*i.e.*, stock price appreciation). The relevant question, therefore, is whether investors rely on analysts' growth rates in valuing their investment opportunities, not OPC witness Garrett's opinion as to whether they are economically "sustainable". OPC witness Garrett has not demonstrated that investors rely on his generic measures of growth rather than analysts' growth rate expectations. In fact, numerous academic studies have shown that investors do rely on analysts' earnings growth forecasts and that they are better predictors of stock prices.[65]

Moreover, in practice, long-term growth in GDP is not an upper limit for terminal growth as asserted by the Intervenor Witnesses. GDP is a measure of the value of the total output of goods and services in an economy; it is simply the sum of all private industry and government output in the United States, and its growth rate is simply an average of the value of those industries. To illustrate, Exhibit JEN-19 presents the compound annual growth rate ("CAGR") of the industries that comprise GDP from 1947 to 2021. Of the 15 industries represented, five industries, including utilities, grew faster than the overall GDP, and ten industries grew slower than the overall GDP. That is, as a component of GDP, utilities have, over the long-term, grown at a faster pace than the overall level of GDP. Importantly, the earnings growth estimates that I have applied, as well as FEA witness Walters, are below utilities' long-term historical GDP growth, on average; thus, demonstrating their reasonableness.

[65] Direct Testimony of Jennifer E. Nelson, at 24-25.

Q. Is there additional evidence that equity growth exceeds GDP growth in the long-term?

A. Yes. As explained earlier, the long-term growth component in the DCF model reflects the return expected from capital appreciation. According to Kroll, the long-term average historical rate of capital appreciation for the S&P 500 between 1926 and 2021 has been 8.20 percent,[66] well above long-term historical GDP growth and the Intervenor Witnesses' GDP growth estimates. Consequently, long-term equity growth has not been limited by GDP growth. Additionally, as noted earlier, the projected earnings growth rates assumed by FEA witness Walters and me are below the long-term average capital appreciation growth rate, demonstrating their reasonableness. As such, the Intervenor Witnesses' ROE estimates and the GDP growth analyses upon which they are based, should be rejected.

Q. Has the Commission previously found that GDP growth is not an appropriate measure of growth in the DCF model?

A. Yes. In Order No. PSC-2021-0206-FOF-WS in Docket No. 20200139-WS, the Commission found that using GDP growth as a measure of long-term growth in the DCF model "is inappropriate because it is not based on any measure of growth in the utility industry."[67]

[66] Source: Kroll 2022 SBBI Yearbook, at 145.
[67] Order No. PSC-2021-0206-FOF-WS, at 95.

Q. OPC witness Garrett includes a Constant Growth DCF analysis using projected dividend growth rates from *Value Line*. Do you agree with the use of dividend growth rates in the DCF model?

A. No, I do not. As explained in my direct testimony, over the long term, dividend growth can only be sustained by earnings growth.[68] Additionally, *Value Line* is the only source I am aware of that publishes dividend growth rate projections. The fact that dividend growth rate projections are not widely reported by other sources further supports the conclusion that earnings growth is the most meaningful measure of growth among the investment community. In other words, if investors relied heavily on projections of dividend growth, more sources would offer that data. Further, as explained in my direct testimony, academic research has shown that analysts' consensus earnings forecasts are better at predicting the valuation of common stocks, including the 1989 study by Myron Gordon, *et.al*., cited by FEA witness Walters.[69] Lastly, when providing guidance to investors regarding the total return targets in their investor presentations, companies define the total return as the dividend yield plus *earnings* growth, and not as dividend, book value, or sustainable growth estimates.[70] This demonstrates that companies recognize investors are most concerned with earnings growth when making investment decisions.

[68] Direct Testimony of Jennifer E. Nelson, at 24.

[69] Direct Testimony of Jennifer E. Nelson, at 24-25. *See also*, Direct Testimony of FEA witness Walters, at 26. The 1989 Gordon study was provided by FEA witness Walters as CCW Confidential Workpaper 14.

[70] *See e.g.,* ALLETE Inc., March 16, 2021, Investor Presentation, at 14; Alliant Energy, June 1, 2021, Investor Presentation, at 3; American Electric Power Company, Inc., August 12, 2021, Investor Presentation at 7; Duke Energy Corporation, May 10, 2021, Earnings Review and Business Update, at 13; Xcel Energy, September 10, 2021, Investor Presentation, at 2.

C. Capital Asset Pricing Model

Q. Please summarize OPC witness Garrett's CAPM analysis and results.

A. OPC witness Garrett's CAPM estimate relies on a risk-free rate of 3.20 percent, a Market Risk Premium of 5.60 percent, and Beta coefficients as reported by Value Line. Those assumptions combine to produce an average CAPM estimate of 7.90 percent.[71]

Q. Do you agree with OPC witness Garrett's CAPM analysis?

A. No, I disagree with OPC witness Garrett's sole reliance on historical Treasury yields to estimate the risk-free rate, as well as the various approaches he uses to estimate the Market Risk Premium.

Q. Turning to the risk-free rate component of the CAPM, do you agree with OPC witness Garrett's use of the 30-year average Treasury yield?

A. Although I agree it is appropriate to consider the current average 30-year Treasury yield, it also is important to reflect forward-looking expectations of the risk-free rate because the cost of equity is forward-looking. Doing so ensures that the CAPM results reflect not only current interest rates, but also investors' expectations of interest rates, which may be different. For that reason, I relied on both the current 30-day average 30-year Treasury yield and the projected near-term 30-year Treasury yield as reported by *Blue Chip Financial Forecasts*.[72] Moreover, the use of forward-looking data more closely aligns with the Company's forward test year and proposed four-year rate plan.

[71] OPC witness Garrett Exhibit DJG-11.

[72] Direct Testimony of Jennifer E. Nelson, at 31.

Q. Turning now to the Market Risk Premium, how did OPC witness Garrett derive his estimate?

A. OPC witness Garrett estimates the Market Risk Premium by reviewing: (1) surveys of expected market risk premia from IESE Business School; (2) Dr. Damodaran's average implied equity risk premium; (3) the "normalized" market risk premium reported by Kroll (formerly Duff & Phelps); and (4) and the results of his own "Implied Equity Risk Premium" calculation based on Dr. Damodaran's model.[73] Based on those results, OPC witness Garrett concludes that the average of his four estimates, 5.60 percent, is appropriate.[74]

Q. What is your concern with the use of Kroll's 5.50 percent Market Risk Premium?

A. My primary concern is that it is not clear that Kroll develops its Market Risk Premium in relation to its normalized risk-free rate. The Market Risk Premium is calculated as the difference between the expected market return and risk-free rate; therefore, it is a function of the expected market return and risk-free rate at a point in time. Consequently, the Market Risk Premium and risk-free rate are not independent of each other, they are interrelated. In fact, academic studies have shown that the two are inversely related.[75] As the risk-free rate decreases, the Market Risk Premium increases and vice versa.

However, as shown in Figure 10 below, there is no clear relationship between Kroll's recommended Equity Risk Premium and risk-free rate. Whereas, as explained above,

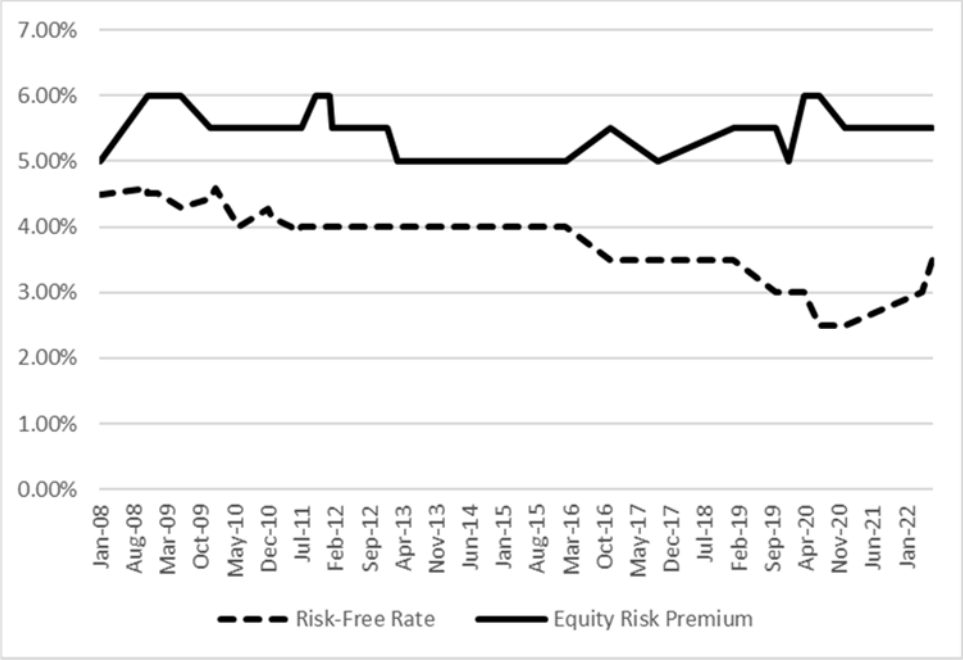
[73] Direct Testimony of OPC witness Garrett, at 55 and Exhibit DJG-10.

[74] Direct Testimony of OPC witness Garrett, at 55 and Exhibit DJG-10.

[75] Direct Testimony of Jennifer E. Nelson, at 41, footnote 36, 42-43.

academic studies indicate that the two lines should move in opposite directions, Figure 10 shows they do not.

Figure 10: Kroll Recommended Equity Risk Premium and Risk-Free Rate (2008-2022)[76]



The conclusion that there is no clear relationship between the two variables is supported by statistical analysis. To assess whether there is a relationship, I ran a linear regression in which Kroll's Equity Risk Premium was the dependent variable and the risk-free rate was the independent variable. The R-square was 0.09 percent, which indicates that Kroll's Risk-Free Rate explains only 0.09 percent of the change in the Equity Risk Premium. This runs counter to the fundamental fact that the Market Risk Premium is a function of the Risk-Free rate, as noted earlier. Moreover, the slope coefficient is

[76] Source: Kroll Cost of Capital Navigator.

positive which signifies that the two are positively related (*i.e.*, move in the same direction) and not inversely related (*i.e.*, move in opposite directions), again contrary to academic literature. However, the slope coefficient was not statistically significant, which means we can't have any confidence in the statistical results. This is not to suggest that Kroll is not a valid or credible source of data. Rather, it suggests that the usefulness of their Equity Risk Premium recommendation is questionable given it does not comport with academic and financial theory.

Q. What is your concern with the use of surveys such as the IESE Business School Survey OPC witness Garrett considers?

A. My issue with relying on surveys is that it is not clear how the survey respondents derived the Market Risk Premium in their response (*e.g.*, the source for their information) or the risk-free rate on which they relied, nor does the survey establish for what purpose the respondents applied the Market Risk Premium estimate. We do not know what capacity the survey respondents are serving in their responses – are they responding as an individual investor or are they responding with the rate of return requirements in their line of business? In other words, we cannot verify their inputs and assumptions to assess the relevance and appropriateness of those assumptions to the cost of equity estimation in the regulatory setting.

Q. Please now describe OPC witness Garrett's implied market risk premium methodology.

A. As OPC witness Garrett describes, his implied market risk premium method develops the Internal Rate of Return that sets the current value of the market index equal to the projected value of cash flows associated with owning the market index. OPC witness

Garrett observes that Dr. Damodaran "promotes the implied ERP method."[77] Although there are some differences, OPC witness Garrett's approach is similar to the model Dr. Damodaran provides on his website.[78]

OPC witness Garrett's method is a two-stage form of the DCF model, which calculates the present value of cash flows over the five-year initial period, together with the terminal price (based on the Gordon Model[79]), to be received in the last (*i.e.,* terminal) year. The model's principal inputs include the following assumptions:

- Over the coming five years, the S&P 500 Index will appreciate at a rate equal to the compound growth rate in "Operating Earnings" from 2011 through 2021;
- Cash flows associated with owning the S&P 500 Index will be equal to the historical average Earnings, Dividends, and Buyback yields, applied to the projected Index value each year; and
- Beginning in the terminal year, the S&P 500 Index will appreciate, in perpetuity, at a rate equal to the 30-day average yield on 30-year Treasury securities, as of July 14, 2022.[80]

As discussed below, reasonable changes to those assumptions have a considerable effect on OPC witness Garrett's calculated expected market return.

[77] Direct Testimony of OPC witness Garrett, at 54.

[78] *See,* http://pages.stern.nyu.edu/~adamodar

[79] Direct Testimony of OPC witness Garrett, at 52-53.

[80] OPC witness Garrett Exhibits DJG-7, DJG-9. The model also assumes that all payments are received at year-end, rather than during the year. That assumption also tends to understate the Implied Risk Premium.

Q. Please explain your concerns with OPC witness Garrett's implied equity risk premium calculation.

A. OPC witness Garrett's implied equity risk premium estimate is based on a series of questionable assumptions, none of which are consistent with, or relevant to, investor practice or their use in regulatory proceedings. Further, a small set of very reasonable adjustments produces a market return estimate more consistent with (yet still below) the historical experience he considers relevant. The revised results continue to produce ROE estimates far below any reasonable measure, underscoring the sensitive nature of OPC witness Garrett's analyses and the tenuous nature of the conclusions he draws from them.

Q. Do you have any observations regarding OPC witness Garrett's assumed first-stage growth rate?

A. Yes. OPC witness Garrett's 7.09 percent growth rate relates only to geometric (or compound) growth in operating earnings, and does not reflect capital appreciation, or growth in dividends or stock buy backs.[81] If OPC witness Garrett's position is that historical growth rates are meant to reflect expected growth, they should also reflect year-to-year variation (that is, uncertainty). That is best accomplished using the arithmetic average growth rate rather than the compound growth rate. I therefore calculated the arithmetic average of the four metrics included in OPC witness Garrett's exhibit. The average growth rate, 10.71 percent, produced an estimated market return of about 9.91 percent,[82] higher than OPC witness Garrett's 9.00 percent implied market

[81] OPC witness Garrett Exhibit DJG-9.

[82] Exhibit JEN-21.

return, but still well below historical experience.

Q. How did OPC witness Garrett develop his assumed terminal growth rate?

A. The terminal growth rate represents investors' expectations of the rate at which the broad stock market will grow, in perpetuity, beginning in the terminal stage. OPC witness Garrett assumes terminal growth, beginning six years from now and extending indefinitely into the future, is equal to the average yield on 30-year Treasury securities over the 30 days ended July 14, 2022. Because OPC witness Garrett's model assumes the first stage lasts for five years (and the terminal stage is perpetual), the results are highly sensitive to the assumed terminal growth rate. To put that effect in perspective, the terminal value (which is directly related to the terminal growth rate) represents approximately 82.28 percent of the "Intrinsic Value" in OPC witness Garrett's analysis.[83]

Q. Is OPC witness Garrett's terminal growth rate assumption reasonable?

A. No, it is not. OPC witness Garrett followed Dr. Damodaran's approach, which is to use the risk-free rate as the terminal growth rate that Dr. Damodaran refers to as the "default" assumption.[84] In terms of historical experience, over the long term, the broad economy has grown at a long-term compound average growth rate of approximately 6.04 percent.[85] As noted earlier, Kroll reports the long-term rate of capital appreciation on large company stocks to be 8.20 percent.[86]

[83] Exhibit JEN-21. Please note that regardless of the assumed first and terminal-stage growth rates, the terminal stage consistently represents approximately 82.00 percent of the Intrinsic Value.

[84] *See*, http://pages.stern.nyu.edu/~adamodar/.

[85] Source: Bureau of Economic Analysis for the years 1929 to 2021.

[86] Kroll, 2022 SBBI Yearbook, at 145.

Assuming long-term inflation will be approximately 2.00 percent[87] implies perpetual real growth will be quite low.[88] That is, OPC witness Garrett's long-term growth rate of 3.21 percent assumes that real growth will be close to just 1.00 percent in perpetuity. Nowhere in his testimony has OPC witness Garrett explained the fundamental, systemic changes that would so dramatically reduce long-term economic growth, nor has he demonstrated that investors expect real growth of 1.00 percent for riskier equities in perpetuity. Given that equities are riskier than government bonds, it is highly improbable that investors' return requirements would be based on expected growth at a rate equal to the risk-free rate, particularly in times of historically high inflation.

Q. Have actual observed Market Risk Premia been consistent with the Market Risk Premia estimates produced by Dr. Damodaran and OPC witness Garrett's implied equity risk premia models?[89]

A. No, they have not. As shown in Figure 11 below, Dr. Damodaran's annual implied equity risk premium has been far removed from actual observed market risk premia in recent years.

[87] For example, in line with the Federal Reserve's target rate of inflation. *See also*, OPC witness Garrett Exhibit DJG-5. Inflation estimated by subtracting real GDP of 1.8 percent (row ([1]) from Nominal GDP of 3.8 percent (row [2])

[88] 1.12% = [(1.0321/1.02)-1].

[89] OPC witness Garrett states that his implied equity risk premium approach is based on Dr. Damodaran's method. *See* Direct Testimony of OPC witness Garrett, at 54.

Figure 11: Dr. Damodaran's Annual Implied Equity Risk Premium vs. Observed Market Risk Premium[90]

Year	Dr. Damodaran's Implied Equity Risk Premium	Actual Market Risk Premium
2010	5.20%	10.81%
2011	6.01%	-1.71%
2012	5.78%	13.54%
2013	4.96%	29.51%
2014	5.78%	10.28%
2015	6.12%	-1.09%
2016	5.69%	9.66%
2017	5.08%	19.16%
2018	5.96%	-7.20%
2019	5.20%	28.94%
2020	4.72%	16.98%
2021	4.24%	26.98%
Average	**5.40%**	**12.99%**

Q. How do you respond to OPC witness Garrett's position that your Market Risk Premium estimates are "unreasonably high"?[91]

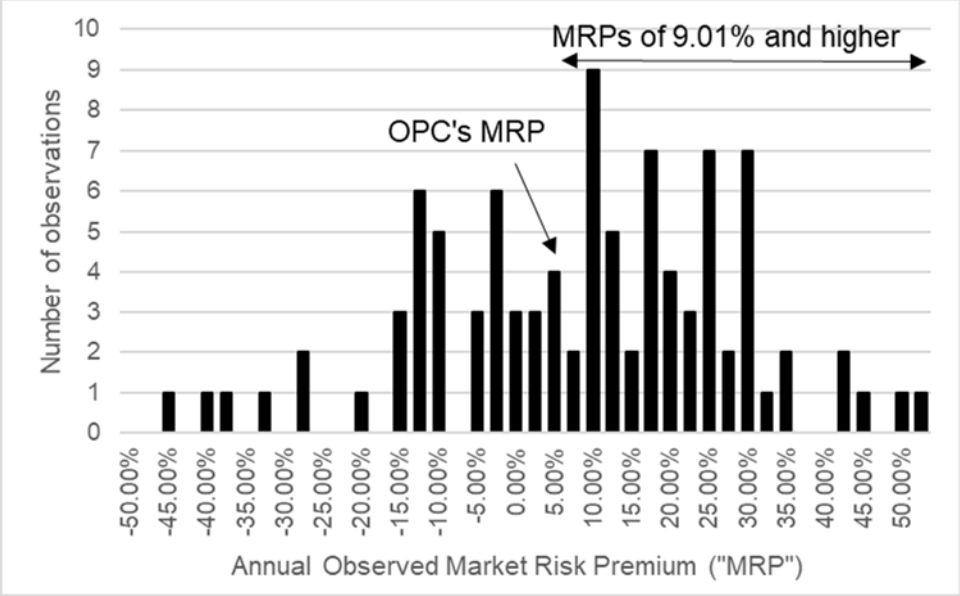
A. As shown in Figure 10 on page 36 of my direct testimony, my Market Risk Premium estimates range from 9.01 percent to 12.27 percent. To assess the frequency with which my and OPC witness Garrett's Market Risk Premium estimates have occurred, I gathered the annual observed Market Risk Premium for the last 96 years (1926-2021) reported by Kroll to calculate the annual observed Market Risk Premium. I then developed a chart to count the number of years the annual Market Risk Premium fell within specific ranges. As shown in Figure 12 below, the Market Risk Premia in the

[90] Sources: https://pages.stern.nyu.edu/~adamodar/New_Home_Page/home.htm; Kroll, 2022 SBBI Yearbook, Appendix A-1 and A-7.

[91] Direct Testimony of OPC witness Garrett, at 57.

range of OPC witness Garrett's estimates have occurred very infrequently over the last 96 years, whereas Market Risk Premia of 9.01 percent (the lowest of my estimates) and higher have occurred in 48 of 96 years (*i.e.,* half the time). In other words, looking to the last nearly 100 years, Market Risk Premia in the range of my estimates (and higher) are common occurrences, and therefore are not unreasonable.

Figure 12: Frequency Distribution of Observed Market Risk Premium (1926-2021)[92]



Q. What is your response to OPC witness Garrett's position that the Beta coefficients derived from *Value Line* may lead to "overestimated" results?[93]

A. Commercial providers of Beta coefficients, including *Value Line*, provide adjusted Beta coefficients using the Blume adjustment.[94] Marshall Blume observed a tendency

[92] Source: Kroll, 2022 SBBI Yearbook, Appendix A-1, A-7. *See* Exhibit JEN-20.

[93] Direct Testimony of OPC witness Garrett, at 49.

[94] *See*, http://www.valueline.com/Tools/Educational_Articles/Stocks/Using_Beta.aspx

of raw Beta coefficients to change gradually over time. Given the commercial use and longstanding acceptance of adjusted Beta coefficients, adjusted Beta coefficients are the proper measure of systematic risk in the CAPM. In my experience, the substantial majority of ROE witnesses in utility rate cases (including OPC Witness Garrett) rely on Blume-adjusted Beta coefficients, such as those published by *Value Line*. Despite his concerns regarding that adjustment, OPC witness Garrett relies on *Value Line* Beta coefficients to produce his CAPM-based estimate of 7.90 percent. I do not consider that result "too high".

With respect to OPC witness Garrett's reference to the Vasicek adjustment, as I explain in my response to FEA witness Walters below, the issue of whether the Vasicek adjustment is "preferable" is not settled. Further, if there was consensus from the investment community that Vasicek-adjusted Beta coefficients were superior, they would be widely used and reported by independent sources. Because that is not the case, it appears that the investment community does not agree with the Intervenor Witnesses' positions.

Q. What is your response to OPC witness Garrett's argument that, because you rely on adjusted Beta coefficients, the ECAPM is unnecessary?

A. OPC witness Garrett's position is mistaken. The ECAPM is not an adjustment to the Beta coefficient. Rather, it is an adjustment to the alpha parameter. The alpha adjustment in the ECAPM effectively increases the intercept but reduces the slope of

the Security Market Line.[95] As explained in my direct testimony, the Security Market Line described by the CAPM formula is not as steeply sloped as predicted, an effect not addressed by the "Blume" adjustment applied in *Value Line's* and Bloomberg's Beta coefficients.[96] As Dr. Morin states (emphasis added):

> Some have argued that the use of the ECAPM is inconsistent with the use of adjusted betas, such as those supplied by Value Line and Bloomberg. This is because the reason for using the ECAPM is to allow for the tendency of betas to regress toward the mean value of 1.00 over time, and, since Value Line betas are already adjusted for such trend, an ECAPM analysis results in double-counting. **This argument is erroneous. Fundamentally, the ECAPM is not an adjustment, increase or decrease, in beta**. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. The ECAPM and the use of adjusted betas comprised two separate features of asset pricing. Even if a company's beta is estimated accurately, the CAPM still understates the return for low-beta stocks. Even if the ECAPM is used, the return for low-beta securities is understated if the betas are understated. Referring back to Figure 6-1, the ECAPM is a return (vertical axis) adjustment and not a beta (horizontal axis) adjustment. **Both adjustments are necessary**.[97]

In a 2011 study by Stéphane Chrétien and Frank Coggins, the authors studied the CAPM's ability to estimate the risk premium for the utility industry in particular subgroups of utilities, including a group of U.S. natural gas utilities.[98] The study considered the traditional CAPM approach, the Fama-French three-factor model, and

[95] *See, e.g.*, Bente Villadsen, Michael J. Vilbert, Dan Harris, A. Lawrence Kolbe, Risk and Return for Regulated Industries, at 82 (2017). *See*, Direct Testimony of Jennifer E. Nelson, at 38.

[96] *See*, Direct Testimony of Jennifer E. Nelson, at 38. The Security Market Line is represented in Figure 8.

[97] Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 191. (emphasis added)

[98] Stéphane Chrétien and Frank Coggins, *Cost of Equity for Energy Utilities: Beyond The CAPM*, Energy Studies Review, Vol. 18, No. 2 (2011).

a model similar to the ECAPM. In the study, the ECAPM relied on adjusted Beta coefficients similar to the approach applied by *Value Line*. As Chrétien and Coggins found, the ECAPM significantly outperformed the traditional CAPM model at predicting the observed risk premium for the various utility subgroups. Their model showed that the CAPM underestimated the risk premium for U.S. natural gas distribution utilities by as much as 7.39 percent, which was statistically significant. For these reasons, OPC witness Garrett's criticisms of the ECAPM are without merit and should be rejected.

D. Bond Yield Plus Risk Premium Analysis

Q. Please summarize OPC witness Garrett concerns with your application of the Bond Yield Plus Risk Premium analysis.

A. OPC witness Garrett disagrees with the analysis because he believes "these types of risk premium 'models' are merely clever devices used to perpetuate the discrepancy between awarded ROEs and market-based cost of equity."[99] OPC witness Garrett further believes the Bond Yield Plus Risk Premium analysis is unnecessary because we already have a "real risk premium model to use, the CAPM".[100] He then asserts "the risk premium models used by utility witnesses are almost exclusively found in the texts and testimonies of such witnesses."[101] Lastly, OPC witness Garrett suggests that my Bond Yield Plus Risk Premium analysis contradicts my position that cost of equity is

[99] Direct Testimony of OPC witness Garrett, at 60-61.

[100] Direct Testimony of OPC witness Garrett, at 61.

[101] Direct Testimony of OPC witness Garrett, at 61.

a forward-looking concept.[102]

Q. What is your response to OPC witness Garrett on those points?

A. I disagree. Authorized returns reflect the same type of market-based analyses at issue in this proceeding. Because authorized returns are publicly available (the proxy companies disclose authorized returns, by jurisdiction, in their SEC Form 10-Ks),[103] it is reasonable to conclude that data is reflected, at least to some degree, in investors' return expectations and requirements. From that perspective, ROE recommendations that are far removed from prevailing levels, such as OPC witness Garrett's, should be reconciled, in part, by reference to differences in risk. I do not believe OPC witness Garrett's recommendation reasonably does so.

Further, although there is no disagreement that every case has its unique set of issues and circumstances, reviewing over 1,200 natural gas distribution cases over many economic cycles (1980 through August 2022) and using that data to develop the relationship between the Equity Risk Premium and interest rates, as I have, mitigates that concern. As such, OPC witness Garrett's concerns that authorized returns may be influenced by factors other than objective market drivers is unfounded.

[102] Direct Testimony of OPC witness Garrett, at 60.

[103] *See*, *for example*, Atmos Energy Corporation, SEC Form 10-K for the fiscal year ended September 30, 2021, at 7; New Jersey Resources Corporation, SEC Form 10-K for the fiscal year ended September 30, 2021, at 97; NiSource Inc., SEC Form 10-K for the year ended December 31, 2021, at 8; Northwest Natural Holdings, SEC Form 10-K for the year ended December 31, 2021, at 39; ONE Gas, Inc., SEC Form 10-K for the year ended December 31, 2021, at 7; and Spire Inc., SEC Form 10-K for the fiscal year ended September 30, 2021, at 121-123.

Q. Is OPC witness Garrett correct when he asserts that Bond Yield Plus Risk Premium models are not covered in financial texts, but almost exclusively found in texts written by utility witnesses?[104]

A. No, OPC witness Garrett's statement is incorrect in several respects. First, the Bond Yield Plus Risk Premium approach is covered in basic finance texts.[105]

Second, the point made by my Risk Premium approach, which is that the Equity Risk Premium is inversely related to interest rates, is also the subject of published academic research cited on page 41 (footnote 36) of my direct testimony. Although OPC witness Garrett believes such research is only provided by utility witnesses, one of the articles cited in my direct testimony (footnote 36) was written by Staff members of the Virginia Corporation Commission (*i.e.*, Maddox, Pippert, and Sullivan). Those authors also found that the Equity Risk Premium is not stable over time and increases as interest rates decrease. In short, OPC witness Garrett's assertion that the Risk Premium approach is not covered in finance texts and is a construct of utility witnesses is entirely incorrect and should be given no weight.

Lastly, OPC witness Garrett's statement that Risk Premium models are "almost" exclusively found in utility witness' testimony is inaccurate. For example, FEA witness Walters performs a Risk Premium analysis based on authorized ROEs. As additional examples, I have recently seen regulatory commission staff witnesses

[104] Direct Testimony of OPC Witness Garrett, at 61.

[105] *See, e.g.,* Eugene F. Brigham, Louis C. Gapenski, Financial Management, Theory and Practice, 1994, The Dryden Press., at 341.

include Risk Premium analyses in Texas (PUC Dockets 52195 and 49494), North Carolina (Docket G-9, Sub 743), and Arkansas (Docket No. 19-008-U). I am not sure what OPC witness Garrett means by "almost exclusively," but his assertions that the method is used to "justify a cost of equity that is much higher than one that would be dictated by market forces"[106] and "perpetuate the discrepancy between awarded ROEs and market-based cost of equity"[107] are simply unsupported and incorrect.

Q. What is your response to OPC witness Garrett's position that your Bond Yield Plus Risk Premium analysis is not forward-looking?[108]

A. OPC witness Garrett is incorrect. As discussed earlier, the approach quantifies the longstanding principle that the Equity Risk Premium is not constant but varies over time and with market conditions. The analysis uses a regression analysis of historical data to model the relationship between the Equity Risk Premium and 30-year Treasury yields over a 40-year period. Applying forward-looking (that is, projected) interest rates produce a forward-looking estimate of the Equity Risk Premium. Therefore, the model and its results are, in fact, forward-looking.

E. <u>Small Size Risk</u>

Q. Please summarize OPC witness Garrett's concern with the small size analysis.

A. OPC witness Garrett disagrees that a size premium exists and recommends the Commission reject a size premium.[109]

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[106] Direct Testimony of OPC witness Garrett, at 61.
[107] Direct Testimony of OPC witness Garrett, at 61.
[108] Direct Testimony of OPC witness Garrett, at 60.
[109] Direct Testimony of OPC witness Garrett, at 64.

Q. Are you aware of empirical analyses of the size premium in addition to the studies included in your direct testimony?

A. With respect to the evidence regarding the size effect of utility companies, I cite to several articles on pages 45-46 of my direct testimony supporting the existence of a size premium for utility companies. Additionally, a study by T.M. Zepp concludes that size premia do exist. The Zepp study is highly relevant as it focuses specifically on the utility industry and the effect of the size premium in a regulated environment.[110]

Additionally, the 2011 study by Stéphane Chrétien and Frank Coggins referenced earlier considered the Fama-French three-factor model that explicitly included an adjustment to the CAPM for risk associated with size. Chrétien and Coggins found that the Beta coefficient on the size variable for a group of U.S. natural gas utilities was positive and statistically significant, supporting the position that small size risk is relevant for regulated utilities.[111]

Moreover, Kroll's *2021 Cost of Capital Navigator* presents a Size Study based on the relationship of various measures of size and return. Relative to the relationship between average annual return and the various measures of size, Kroll states:

> The "size" of a company is one of the most important risk elements to consider when developing cost of equity estimates for use in valuing a business simply because size has been shown to be a *predictor* of equity returns. In other words, there is a significant (negative) relationship between size and historical equity returns –

[110] Thomas M. Zepp, *Utility stocks and the size effect – revisited*, The Quarterly Review of Economics and Finance, 43 (2003)

[111] Chrétien, Stéphane, and Frank Coggins. *Cost Of Equity For Energy Utilities: Beyond The CAPM.* Energy Studies Review, vol. 18, no. 2, at 31.

> as size *decreases*, returns tend to *increase*, and vice versa. Traditionally, researchers have used market value of equity (*i.e.*, "market capitalization" or "market cap") as a measure of size in conducting historical rate of return research. [112]

Lastly, I have not explicitly accounted for the size premium in my recommended ROE. Rather, I have used the analyses to consider where, within the range of analytical results, is a just and reasonable ROE for FCG.[113]

Q. What is your response to OPC witness Garrett's reference to studies that assert that the size premium has disappeared?[114]

A. OPC witness Garrett has taken the conclusions from certain of these studies out of context. For example, OPC witness Garrett cites to Ibbotson (the former publisher of the historical data on returns now published by Kroll) as support for the argument that the size premium has disappeared. However, the passage cited by OPC witness Garrett is simply an acknowledgment that some have argued the small size premium no longer exists. In the paragraph immediately preceding the passage cited by OPC Witness Garrett, Ibbotson refutes those arguments, explaining:

> Because investors cannot predict when small-cap returns will be higher than large-cap returns, it has been argued that they do not expect higher rates of return for small stocks. As was illustrated earlier in this chapter, even over periods of many years, investors in small stocks do not always earn returns that are higher than those of investors in large stocks. By simple definition, one cannot expect risky companies to always outperform less risky companies; otherwise they would not be risky. Over the long-term, however, investors do expect small stocks to outperform large stocks.[115]

In the current 2022 version of this publication, Kroll explains further (emphasis in

[112] Kroll, 2022 Cost of Capital Navigator, "Size as a Predictor of Equity Returns", page 1.

[113] Direct Testimony of Jennifer E. Nelson, at 48.

[114] Direct Testimony of OPC witness Garrett, at 63-64.

[115] Morningstar, Inc., 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook, at 112.

original):

> The increased risk faced by investors in small stocks is quite real. It is important to note, however, that the risk/return profile is over the *long-term*. The long-term expected return for any asset class can be quite different from short-term expected returns. Investors in small-cap stocks should expect losses and periods of underperformance relative to large-cap stocks. While this might lead some market observers to speculate that there is no size premium, statistical evidence suggests that periods of smaller stocks' underperformance should be expected. The evidence also suggests that the longer small-cap companies are given to "race" against large-cap companies, the greater the chance that small-cap companies outpace their larger counterparts.[116]

Kroll goes on to demonstrate that the period over which the size premium is analyzed is a significant factor in whether small-cap stocks outperform large-cap stocks. Over the entire period covered by Kroll (1926-2021), the percentage of periods in which small-cap stocks outperformed large-cap stocks increased as the holding period increased, as shown in Figure 13 below:

Figure 13: Small-Cap Companies' Performance Minus Large-Cap Companies Performance (1926-2021)[117]

Holding Period	Small Stocks Outperform	Large Stocks Outperform
1 Month	50%	50%
60 Months (5 Years)	55%	45%
120 Months (10 Years)	66%	34%
240 Months (20 Years)	88%	12%
360 Months (30 Years)	96%	4%

To be clear, Ibbotson (and now Kroll) fully supports the inclusion of the size premium in the cost of equity estimation and is the source of the small size decile study used in

[116] Kroll 2022 SBBI Yearbook, at 155.

[117] Source: Kroll 2022 SBBI Yearbook, Exhibit 7.3, at 156.

my small size analysis. To imply that Ibbotson concludes that the size premium does not exist is out of context and disingenuous.

Q. Do you have additional evidence supporting the existence of the higher risk and therefore returns for smaller companies?

A. Yes, I do. Kroll, a source on which the Intervenor Witnesses both rely to develop their Market Risk Premium, reports a clear relationship over time between size and risk. In its 2022 SBBI Yearbook, Kroll reported the following summary statistics of annual returns over the 1926 to 2021 period shown in Figure 14 below.

Figure 14: Summary Statistics of Annual Returns, 1926-2021[118]

	Total Return (Geometric Mean)	Total Return (Arithmetic Mean)	Standard Deviation
Large Capitalization Stocks	10.5%	12.3%	19.6%
Small Capitalizations Stocks	12.1%	16.3%	31.2%

The standard deviation of returns measures the variation, or volatility, in annual returns, with a higher standard deviation indicating greater volatility (*i.e.,* risk). As Figure 14 above shows, over the long-term, the standard deviation in returns for small capitalization stocks has been higher (*i.e.*, more volatile) than those for large capitalization stocks. Additionally, average total returns have been higher for small capitalization stocks, which is consistent with the fundamental risk-return relationship.

Further, Kroll breaks down the data shown in Figure 14 above into deciles based on market capitalization. As Figure 15 below shows, the long-term geometric and

[118] Kroll, 2022 SBBI Yearbook, Exhibit 7.1, at 154.

arithmetic mean returns from 1926 to 2021, as well as the standard deviation of returns over that same period, generally increase as size decreases.

Figure 15: Annual Average Returns and Standard Deviation of Returns by Decile[119]

Size Decile	Annual Arithmetic Mean Return	Annual Geometric Mean Return	Annual Standard Deviation of Returns
1st	11.54%	9.83%	18.74%
2nd	13.04%	10.85%	21.13%
3rd	13.68%	11.23%	22.94%
4th	13.82%	10.99%	25.05%
5th	14.47%	11.46%	25.65%
6th	14.83%	11.52%	26.58%
7th	15.51%	11.85%	28.46%
8th	15.80%	11.43%	32.20%
9th	16.93%	11.74%	36.30%
10th	20.04%	13.37%	41.47%

Additionally, Kroll's decile study shows that as companies decrease in market capitalization (*i.e.*, size), the Beta coefficient increases, which supports the principle that risk increases as size decreases. Figure 16 below reproduces Kroll's Beta coefficients for each size decile.

[119] Source: Kroll 2022 CRSP Deciles Size Study, Cost of Capital Navigator as of December 31, 2021. The 1st decile consists of the largest companies based on market capitalization and the 10th decile consists of the smallest companies based on market capitalization.

Figure 16: Beta Coefficients by Size Decile[120]

Size Decile	OLS Beta Coefficient	Sum Beta
1st	0.92	0.92
2nd	1.04	1.06
3rd	1.11	1.14
4th	1.13	1.20
5th	1.17	1.25
6th	1.18	1.28
7th	1.25	1.39
8th	1.30	1.48
9th	1.34	1.54
10th	1.39	1.67

Figures 15 and 16 above demonstrate that, as company size decreases, (1) the annual average long-term historical return (on both an arithmetic and geometric basis) increases, and (2) the volatility of those returns (*i.e.*, risk), as measured by the standard deviation and the Beta coefficients, increases. In other words, the smaller the company, the greater the volatility in returns and the higher the average observed annual return over the long-term, which is consistent with the basic financial principle of risk and return. Consequently, actual data regarding historical returns and volatility of those returns support the existence of a return premium for small companies.

Q. Does Kroll's decile study include utility companies?

A. Yes. Kroll's decile size study includes all companies on the New York Stock Exchange ("NYSE"), NYSE American ("NYSE MKT", a market for small capitalization stocks), and the NASDAQ. It excludes close-ended mutual funds, preferred stocks, real estate investment trusts, foreign stocks, American Depositary Receipts, unit investment

[120] Source: Kroll 2022 CRSP Deciles Size Study, Cost of Capital Navigator as of December 31, 2021. The 1st decile consists of the largest companies based on market capitalization and the 10th decile consists of the smallest companies based on market capitalization.

trusts, and Americus trusts.[121]

Q. What is your conclusion regarding the appropriateness of recognizing the incremental risk associated with FCG's small size in the authorized ROE?

A. As OPC witness Garrett observes, risk is one of the most important factors when determining the cost of equity and the authorized ROE. However, OPC witness Garrett's position that the Commission should ignore the incremental risk associated with its significantly smaller size contradicts the fundamental financial principle that the cost of equity is a function of risk. Failure to recognize FCG's incremental risk associated with its significantly smaller size in the authorized ROE would violate this principle and would not provide FCG with a reasonable opportunity to earn its cost of equity.

F. Flotation Costs

Q. Please summarize OPC witness Garrett's concern with the flotation costs.

A. OPC witness Garrett disagrees with the inclusion of flotation costs, arguing that including flotation costs should be considered a way to "increase an already inflated ROE proposal."[122]

Q. Do you agree with OPC witness Garrett's conclusions on flotation costs?

A. No, I do not. Flotation costs are legitimate costs associated with issuing equity, including out-of-pocket costs for preparing, filing, underwriting, and other costs of issuing equity. These costs reduce the net proceeds a company receives from an equity

[121] Kroll CSRP Deciles Size Study Methodology, Cost of Capital Navigator, pages 1-2.

[122] Direct Testimony of OPC witness Garrett, at 64-67.

issuance. For the same reasons that debt issuance costs are recovered through the cost of debt, equity issuance costs should also be recovered. Failing to allow for the recovery of flotation costs inhibits a utility's ability to fully earn its authorized ROE, diminishing its ability to efficiently attract capital.

Further, contrary to OPC witness Garrett's position, flotation costs are not expenses and, therefore, are not included on the income statement or the Company's expense schedules. Like rate base or long-term debt issuance costs, flotation costs are incurred over time and remain part of the cost structure well beyond the test year. Therefore, they are properly included on the balance sheet.

Lastly, I understand that the Commission has allowed recovery of flotation costs through the authorized ROE in previous rate cases as noted on page 58 of my direct testimony.

Q. Please reiterate why is it important to recognize flotation costs in the authorized ROE?

A. As explained in my direct testimony, to attract and retain investors, a regulated utility must have a reasonable opportunity to earn a return that is competitive to returns available to other investments of similar risk and compensatory to investors. To the extent a company is denied the opportunity to recover equity issuance costs, actual returns will fall short of expected (or required) returns, diminishing its ability to attract capital on reasonable terms.

Q. Is OPC witness Garrett's position that "the market already accounts for flotation costs"[123] correct?

A. No, it is not. The models used to estimate the cost of equity assume no friction; therefore, an adjustment must be made to reflect equity issuance costs.

VI. RESPONSE TO FEA WITNESS WALTERS

Q. Please summarize FEA witness Walters' recommendation regarding the Company's cost of equity?

A. FEA witness Walters recommends an ROE of 9.40 percent, the midpoint of his 9.00 percent to 9.80 percent recommended range.[124] FEA witness Walters sets his recommendation by reference to: (1) his Constant Growth and Multi-Stage DCF models (with median and average results ranging from 7.99 percent to 9.31 percent);[125] (2) his Risk Premium study (ranging from 9.27 percent to 10.42 percent);[126] and (3) his CAPM analyses (ranging from 6.71 percent to 10.97 percent).[127] The low end of his recommended range is set by reference to his DCF-based ROE recommendation (9.00 percent), and the high end set by reference to his Risk Premium-based ROE recommendation (9.80 percent).[128]

[123] Direct Testimony of OPC witness Garrett, at 65-66.
[124] Direct Testimony of FEA witness Walters, at 2, 51.
[125] Direct Testimony of FEA witness Walters, at 36, Table CCW-8.
[126] Direct Testimony of FEA witness Walters, at 41, Table CCW-9.
[127] Direct Testimony of FEA witness Walters, at 50, Table CCW-11.
[128] Direct Testimony of FEA witness Walters, at 51, Table CCW-12.

Q. What are the principal analytical areas in which you disagree with FEA witness Walters' ROE analyses?

A. The principal areas in which I disagree with FEA witness Walters include: (1) certain inputs and assumptions applied in his DCF analyses; (2) the assumptions and methods underlying his Risk Premium analyses; and (3) his application of the CAPM.

A. Application of the Discounted Cash Flow Model Analyses

Q. Please summarize FEA witness Walters' DCF analyses.

A. FEA witness Walters uses two DCF models, a constant growth DCF model (using both analysts' projected earnings growth and sustainable growth rates) and a Multi-Stage DCF ("MSDCF") model. In both analyses, he applies stock price data for the 13-week period ending July 8, 2022. For FEA witness Walters' long-term growth rate component in his Analysts' Growth Constant Growth DCF model, he uses three- to five-year projected earnings growth rates from Zacks, S&P Global Market Intelligence ("MI"), and Yahoo! Finance. His Sustainable Growth Constant Growth applies an estimate of projected retention growth from *Value Line*. FEA witness Walters uses projected GDP growth from *Blue Chip Financial Forecasts* as the terminal growth rate in his MSDCF analysis. Using these inputs, he derives DCF-based ROE estimates ranging from 9.02 percent to 9.31 percent for his Constant Growth DCF models, and between 7.99 percent and 8.19 percent for his MSDCF model.[129] From these results, FEA witness Walters concludes that a reasonable DCF-based ROE estimate is 9.00

[129] Direct Testimony of FEA witness Walters, at 36.

percent.[130]

Q. Do you have any general comments about FEA witness Walters' DCF-based estimate of 9.00 percent?

A. Yes, I do. FEA witness Walters' 9.00 percent DCF-based estimate (which forms the bottom end of his recommended range and accounts for 50 percent of his ultimate 9.40 percent recommendation) is approximately equal to the mean and median results of each of his three approaches shown in his Table CCW-8. ROE estimates of 7.99 percent and 8.19 percent are far removed from any reasonable estimate of FCG's ROE, do not meet any of the *Hope* and *Bluefield* standards for a fair return, and should be given no weight.

Q. Are there aspects of the DCF analysis with which you and FEA witness Walters agree?

A. Yes. I agree with FEA witness Walters' position that analysts' projected EPS growth rates are the best predictor of future stock returns.[131] As explained in my response to OPC witness Garrett, this conclusion is supported by academic literature, including the 1989 Gordon study cited by FEA witness Walters. Accordingly, analysts' projected EPS growth rates are the most appropriate for use in the DCF model. Therefore, my primary disagreements are with FEA witness Walters' Sustainable Growth DCF and MSDCF analyses.

[130] Direct Testimony of FEA witness Walters, at 36.

[131] Direct Testimony of FEA witness Walters, at 26.

Q. Do you agree with FEA witness Walters' position that the growth rates applied in the DCF model are limited by forecasted Gross Domestic Product ("GDP") growth?[132]

A. No, I do not. FEA witness Walters' MSDCF analysis is premised on the assumption that analysts' projected EPS growth rates are unsustainable because a utility stock cannot grow at a faster pace than the growth in the overall economy.[133] Therefore, he concludes that the projected GDP growth rate is the maximum long-term sustainable growth rate, which he applies as the terminal growth rate in his MSDCF analysis. As explained in my response to OPC witness Garrett and further discussed below, the premise of FEA witness Walters' MSDCF analysis does not hold, rendering the analysis and its results unsupported.

Using electricity sales as a proxy for utility sales, FEA witness Walters' MSDCF analysis is based on his presumption that utility growth is linked to sales growth as utilities invest capital to meet demand, which depends ultimately on economic growth.[134] While this assumption may have been true decades ago, it does not currently hold as utilities are investing more capital in non-revenue producing investment, such as infrastructure replacement and grid modernization. These non-revenue producing investments generally do not increase customer growth or sales. As the U.S. Energy Information Administration ("EIA") noted in a recent article:

> Distribution spending has outpaced growth in both the number of electric customers and in retail electricity sales because much of the

[132] Direct Testimony of FEA witness Walters, at 27-28, 32-33.

[133] Direct Testimony of FEA witness Walters, at 32-33.

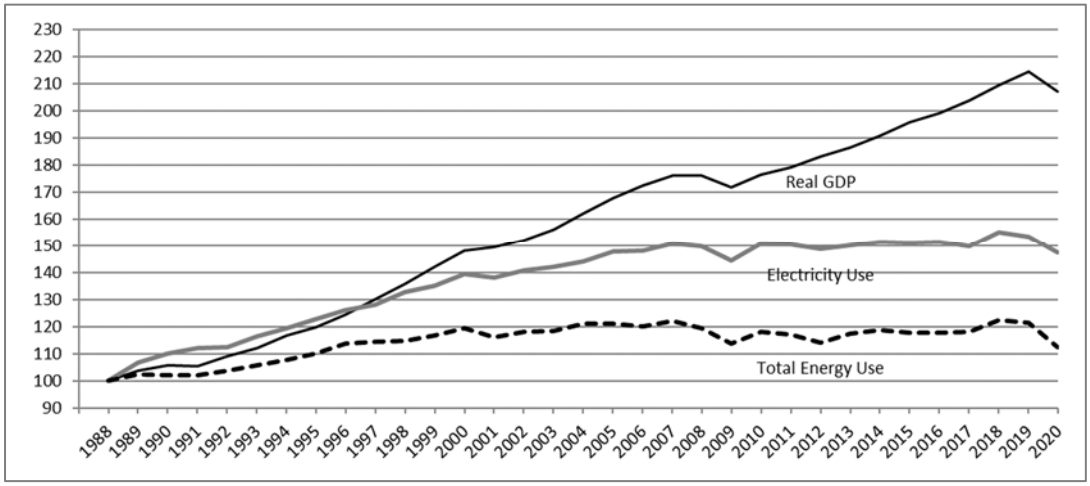
[134] Direct Testimony of FEA witness Walters, at 32.

> increased distribution spending in the last 20 years has been on projects that are not directly related to customer growth or increased sales. These investments are not driven by an increase in the number of customers or sales. These projects include replacing aging equipment, modernizing and upgrading maintenance and billing technology, and fortifying distribution structures against weather-related damage.[135]

These statements hold true for natural gas utilities as well because capital expenditures for gas utilities, including FCG, substantially include infrastructure replacement programs to upgrade and replace old distribution mains and services, which do not increase sales. Furthermore, states are placing more emphasis on energy efficiency and conservation investments, which have resulted in flat or declining sales. FEA witness Walters' Exhibit CCW-8 supports the EIA's finding that, over approximately the last 20 years, electricity sales and total energy use have ***not*** been linked to U.S. economic growth, contradicting the premise of his Multi-Stage DCF analysis. In fact, FEA witness Walters' Exhibit CCW-8 shows electricity sales have been flat since approximately 2006, while real GDP has climbed (reproduced as Figure 17 below).

[135] U.S. Energy Information Administration, "Major Utilities' spending on the electric distribution system continues to increase," *Today in Energy*, May 27, 2021. https://www.eia.gov/todayinenergy/detail.php?id=48136

Figure 17: Exhibit CCW-8 - Electricity Sales and Real GDP (1988 – 2020)



The fact is utilities' earnings growth is primarily linked to rate base growth. Since non-revenue producing investments have been significant drivers of rate base growth over the last 20 years, the link between utility earnings and sales has decoupled. Consequently, FEA witness Walters' Multi-Stage DCF estimates should be rejected as his own data does not support the premise underlying his terminal growth rate that utility growth is linked to sales and is limited by GDP growth.

Q. What are your concerns with FEA witness Walters' sustainable growth DCF analysis and results?

A. The underlying premise of the "retention growth" calculation is that future earnings increase as the retention ratio[136] (*i.e.*, the portion of earnings not paid out in dividends) increases. However, that premise has been proven unreliable. A 2003 study by Arnott and Asness found that, over the course of 130 years of data, future earnings growth is associated with high, rather than low, dividend payout ratios. Since the payout ratio is

[136] The retention ratio (*b*) = (1- the dividend payout ratio).

the inverse of the retention ratio, Arnot and Asness's study indicates that future earnings growth is negatively related to the retention ratio. In other words, there is a *negative*, not a *positive* relationship between earnings growth rates and the retention ratio. Because the underlying premise of the sustainable growth model does not hold, sustainable growth rates should not be relied on in the DCF model.

Additionally, the 1989 study by Myron Gordon cited by FEA witness Walters indicates that sustainable growth rates are a less reliable predictor of future stock returns relative to analysts' projected earnings growth rates. Therefore, the DCF results produced by those growth rates are unsupported, including by FEA witness Walters' own evidence.

Q. FEA witness Walters criticizes your Quarterly Growth DCF analysis asserting it "overstates" the fair rate of return.[137] What is your response?

A. I disagree with FEA witness Walters. FEA witness Walters' position appears to be that the return earned from quarterly compounding of dividends is separate and incremental to investors' required return and that "the return available to investors from reinvesting dividends is not a cost to the utility."[138] However, since dividends are paid quarterly, investors unquestionably consider the cash flow effects of such quarterly payments when determining their required returns.

The Quarterly Growth DCF model is a refinement of the Constant Growth DCF model relied upon by the ROE witnesses in this proceeding. As noted in my direct testimony,

[137] Direct Testimony of FEA witness Walters, at 52.

[138] Direct Testimony of FEA witness Walters, at 54-55.

rather than assuming annual cash flows, the model incorporates investors' expectations of quarterly dividends, reinvested at the investor-required ROE.[139] In that regard, the Quarterly DCF model is not fundamentally different than the annual form of the model (on which FEA witness Walters relies); both assume that cash flows are reinvested at the required rate of return. The only difference, then, relates to the timing of the cash flows.

Since utilities pay dividends on a quarterly basis, it is more precise and consistent with the DCF model's fundamental structure to use the Quarterly DCF model to estimate the market-required Cost of Equity.[140] The stock prices paid by investors (an input in both the Constant Growth and Quarterly Growth DCF models) assume the quarterly timing of dividend payments; therefore, a proper DCF-based Cost of Equity estimate must also reflect the actual timing of quarterly dividends. As Dr. Roger Morin explains:

> Clearly, given that dividends are paid quarterly and that the observed stock price reflects the quarterly nature of dividend payments, the market-required return must recognize quarterly compounding, for the investor receives dividend checks and reinvests the proceeds on a quarterly schedule... The annual DCF model inherently understates the investors' true return because it assumes all cash flows received by investors are paid annually.[141]

As explained in my direct testimony, although the half-year dividend growth adjustment applied in the Constant Growth DCF analysis is meant to approximate the payment of quarterly dividends, it is a conservative, simplifying assumption that does

[139] Direct Testimony of Jennifer E. Nelson, at 27-28.

[140] Direct Testimony of Jennifer E. Nelson, at 27-28.

[141] Roger A. Morin, Ph.D., New Regulatory Finance, Public Utility Reports, Inc., at 344 (2006).

not fully reflect the quarterly receipt and reinvestment of dividends.[142] As such, it underestimates the cost of equity for quarterly-dividend-paying companies, such as utilities. In other words, the Quarterly Growth DCF model does not add an incremental cost as FEA witness Walters suggests; it is a more precise estimate of the investor-required return cost of equity. As such, FEA witness Walters' position is unsupported and should be rejected.

Q. What is your recommendation regarding FEA witness Walters' DCF estimates?

A. The underlying premises of FEA witness Walters' Constant Growth DCF analysis using sustainable growth rates and his MSDCF analysis do not hold and are unsupported by the evidence and academic studies. Therefore, I recommend that the Commission give no weight to these results.

B. Application of the Risk Premium Method

Q. Please briefly describe FEA witness Walters' Risk Premium analyses.

A. FEA witness Walters develops two Risk Premium based approaches. Both approaches are based on his definition of the Risk Premium as the difference between the average annual authorized equity returns for electric utilities and a measure of long-term bond yields for each year between 1986 and 2022.[143] FEA witness Walters' first approach to estimating the Risk Premium looks to the 30-year Treasury yield, and his second approach considers A-rated utility bond yields.[144]

[142] Direct Testimony of Jennifer E. Nelson, at 27-28.
[143] Direct Testimony of FEA witness Walters, at 36-37.
[144] Direct Testimony of FEA witness Walters, at 36-37.

In developing his risk premium estimates, FEA witness Walters reviews risk premiums over five-year and ten-year rolling averages. Based on this review, he concludes that risk premium estimates "between the 50th and 75th percentile of the rolling five-year average risk premiums" are "appropriate in the current market," which produces risk premiums ranging from 5.68 percent to 6.44 percent for his analysis using Treasury bond yields.[145] Combining this range of risk premium estimates with a projected 30-year Treasury bond yield of 3.80 percent from *Blue Chip Financial Forecasts,* produces ROE estimates of 9.48 percent to 10.24 percent.

Using the same approach with his utility bond yield analysis, FEA witness Walters calculates that the third quartile of the utility bond yield risk premium ranges from 4.24 percent to 5.33 percent.[146] Combining this range of risk premium estimates with the 13-week average utility A-rated and Baa-rated utility bond yields as of July 8, 2022, FEA witness Walters calculates ROE estimates of 9.27 percent to 10.07 percent using A-rated utility bond yields and 9.62 percent to 10.42 percent using Baa-rated utility bond yields.[147]

Q. Do you have any concerns with FEA witness Walters' Risk Premium analyses?

A. Yes, I have two concerns with his analyses. First, FEA witness Walters' method understates the required risk premium in the current market because it fails to adequately reflect the inverse relationship between the Equity Risk Premium and bond yields. Second, he does not apply projected utility bond yields even though he applies

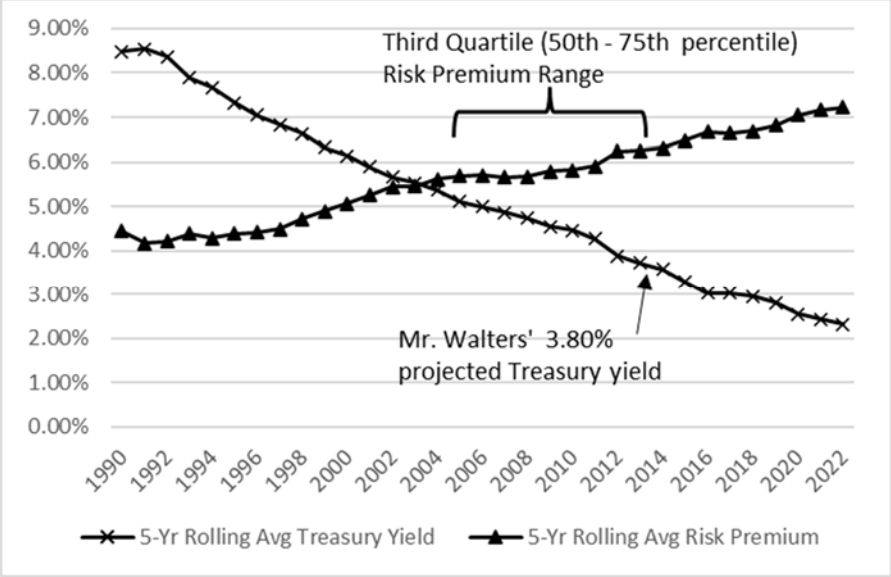
[145] Direct Testimony of FEA witness Walters, at 40.
[146] Direct Testimony of FEA witness Walters, at 40.
[147] Direct Testimony of FEA witness Walters, at 40.

a projected 30-year Treasury bond yield. Because the cost of equity is forward-looking, FEA witness Walters should have also considered projected utility bond yields in the Risk Premium analysis.

Q. Please elaborate how FEA witness Walters' risk premium analysis fails to fully reflect the inverse relationship between his risk premium and bond yields.

A. As shown in Figure 18 below, which demonstrates a clear inverse relationship between the risk premium and bond yields, FEA witness Walters' "Third Quartile" risk premium range understates the appropriate risk premium with his projected 30-year Treasury bond yield of 3.80 percent. As such the low end of his Risk Premium ROE estimates are biased downward.

Figure 18: FEA witness Walters' Treasury Yield-Based Risk Premium Analysis[148]



In other words, FEA witness Walters' 3.80 percent projected 30-year Treasury bond yield reflects approximately the 30th percentile of his historical Treasury bond yield

[148] FEA witness Walters Exhibit CCW-11; five-year rolling averages.

data. Therefore, the 70th percentile (*i.e.*, 100% - 30%) of his risk premium range more accurately reflects the inverse relationship shown in Figure 18 above.

The same is true for FEA witness Walters' analysis using utility bond yields. His A-rated and Baa-rated utility bond yields of 4.74 percent and 5.09 percent are in the 25th to 29th percentile of his historical utility bond yields. As such, the low end of his risk premium estimates (*i.e.,* between the 50th and 70th percentile) understate the cost of equity. If FEA witness Walters believes the 50th percentile of his risk premium estimates is appropriate, then he should also use the 50th percentile of his bond yields to calculate the ROE.

Q. Have you updated FEA witness Walters' Risk Premium analysis to incorporate projected A-rated and Baa-rated utility bond yields?

A. Yes, I have. *Blue Chip Financial Forecasts* dated July 1, 2022 (the source of FEA witness Walters' 3.80 percent projected Treasury yield) publishes average near-term projected Aaa-rated and Baa-rated Corporate bond yields of 5.10 percent and 6.20 percent, respectively.[149] Applying FEA witness Walters' 2022 utility to Corporate A/Aaa and Baa spreads of 0.45 percent and -0.02 percent,[150] respectively, to the *Blue Chip Financial Forecast* estimates results in a projected A-rated utility bond yield of 5.55 percent and a projected Baa-rated utility bond yield of 6.18 percent.[151] I note that the projected bond yields of 5.55 percent and 6.18 percent reflect the 32nd and 48th

[149] Source: Blue Chip Financial Forecasts, Vol. 41, No. 7, July 1, 2022, at 2.

[150] *See* FEA Witness Walters Exhibit CCW-13.

[151] Projected A-rated utility bond yield: 5.55% = 5.10% + 0.45%; projected Baa-rated utility bond yield: 6.18% = 6.20% - 0.02%.

percentile of FEA witness Walters' historical utility bond yields and therefore are within the inverse of the percentile range of his utility bond yield risk premium estimates. In other words, adjusting his analysis to properly reflect forward-looking utility bond yields, as he does with his Treasury bond yield analysis, produces an ROE estimate of 9.79 percent to 10.42 percent.

Q. What would FEA witness Walters' Risk Premium-based ROE results be if his analysis was revised to use projected utility bond yields and the proper Risk Premium estimates that align with his bond yields?

A. Although FEA witness Walters' Risk Premium-based ROE recommendation is consistent with my Bond Yield Plus Risk Premium ROE estimates, the low end of his Risk Premium ROE results reflect assumptions that bias his results downward. Therefore, I recommend several adjustments to FEA witness Walters' Risk Premium analyses to correct certain deficiencies, as explained above.

First, because his projected Treasury bond yield and current utility bond yields are in the 25th to 30th percentile of his historical bond yields, they should only be combined with the high end (75th percentile) of his risk premium estimates (6.44 percent for his Treasury bond yield analysis and 5.33 percent for his utility bond yield analysis). Second, I also calculated projected utility bond yield estimates using FEA witness Walters' data and conservatively applied those to the low end (50th percentile) of his utility bond yield risk premium estimates (4.24 percent). As shown in Figure 19 below, those adjustments produce a range of updated ROE estimates of 9.79 percent to 10.42 percent, as much as 62 basis points above his 9.80 percent Risk-Premium based ROE

recommendation. The mean and median of FEA witness Walters' revised results are 10.19 percent and 10.24 percent, respectively.

Figure 19: FEA witness Walters' Revised Risk Premium ROE Results

Risk Premium Model	Bond Yield	Risk Premium	ROE
Treasury Bond Yield	3.80%	6.44%	10.24%
Current A-Rated Utility	4.74%	5.33%	10.07%
Current Baa-Rated Utility	5.09%	5.33%	10.42%
Projected A-Rated Utility	5.55%	4.24%	9.79%
Projected Baa-Rated Utility	6.18%	4.24%	10.42%
		Mean	**10.19%**
		Median	**10.24%**

C. Application of the Capital Asset Pricing Model

Q. Please briefly summarize FEA witness Walters' CAPM analysis and results.

A. FEA witness Walters' CAPM analysis combines three estimates of the Market Risk Premium and three estimates of the Beta coefficient, along with his projected risk-free rate of 3.80 percent from *Blue Chip Financial Forecasts*, to calculate nine CAPM estimates, summarized in Figure 20 below.

Figure 20: FEA witness Walters' CAPM Results, As Filed[152]

Market Risk Premium Description	Current *Value Line* Beta (0.83)	Historical *Value Line* Beta (0.74)	S&P MI Beta (0.58)
Kroll (D&P) Normalized Method	8.08%	7.56%	6.71%
Risk Premium Method	10.55%	9.78%	8.53%
DCF Method	10.97%	10.15%	8.82%

Based on that range of estimates, FEA witness Walters concludes that a reasonable

[152] Direct Testimony of FEA witness Walters, at 50, Table CCW-11; Exhibit CCW-16 page 1.

CAPM estimate is 9.40 percent.[153]

Q. What aspects of FEA witness Walters' CAPM analyses do you agree with?

A. I agree with the use of *Value Line* Beta coefficients and the use of a projected 30-year Treasury yield as the risk-free rate. Additionally, although I believe *Value Line's* current Beta coefficients appropriately reflect the proxy group's higher risk in the current market environment, I have also considered a longer-term perspective of historical Beta coefficients. However, I disagree with FEA witness Walters' Market Risk Premium estimates, and his use of MI Beta coefficients that use the Vasicek adjustment methodology. I also disagree with FEA witness Walters' criticisms of the ECAPM analysis.

Q. Please summarize the Market Risk Premium estimates FEA witness Walters applies in his CAPM analyses.

A. FEA witness Walters' first CAPM analysis applies Kroll's 5.50 percent Market Risk Premium and 3.50 percent "normalized" risk-free rate with each of his three Beta coefficient estimates. His second approach calculates an expected market return by combining the historical average real market return of 9.20 percent over the 1926-2021 period as reported by Kroll, combined with an expected inflation rate of 2.50 percent to calculate an expected market return of 11.93 percent. Subtracting his 3.80 percent projected risk-free rate results in a Market Risk Premium of 8.10 percent.[154]

FEA witness Walters' third Market Risk Premium is similar to my forward-looking

[153] Direct Testimony of FEA witness Walters, at 50.

[154] FEA Witness Walters Exhibit CCW-16, page 1.

Constant Growth DCF-based approach that calculates the expected market return of the S&P 500 Index. However, he applies the FERC's methodology that excludes non-dividend paying companies and companies with growth rates less than zero or greater than 20.00 percent. FEA witness Walters performs a second analysis using "all companies in the S&P 500 Index rather than just the dividend paying companies."[155] His analyses produce expected market returns of 12.29 percent for the analysis excluding non-dividend paying companies and 12.48 percent for the analysis including "all companies." Subtracting his 3.80 percent projected risk-free rate from these expected market return estimates results in Market Risk Premium estimates of 8.50 percent and 8.70 percent (rounded), with an average of 8.60 percent.[156]

Q. What is your response with the use of Kroll's 5.50 percent Market Risk Premium and "normalized" risk-free rate of 3.50 percent?

A. For the reasons explained in my response to OPC witness Garrett, Kroll's estimates contradict financial theory, resulting in CAPM ROE estimates that are far removed from any reasonable estimate of FCG's Cost of Equity. They should therefore be rejected. Notably, FEA witness Walters apparently agrees as it does not appear he gave the three CAPM estimates using Kroll's 9.00 percent market return (ranging from 6.71 percent to 8.08 percent) any weight in determining his 9.40 percent CAPM-based ROE estimate.

[155] Direct Testimony of FEA witness Walters, at 46.

[156] Direct Testimony of FEA witness Walters, at 46; Exhibit CCW-16, page 2.

Q. What are your concerns with FEA witness Walters' Market Risk Premium estimates using the DCF methodology?

A. I respectfully disagree with FEA witness Walters' approach, as it is internally inconsistent and does not fully reflect the expected market return as a whole. The purpose of the expected market return analysis is to estimate the return investors expect for the *market as a whole*, including high and low-growth companies, not to estimate the aggregate return for companies that pay dividends or those that FEA witness Walters believes have proper growth rates. At any point in time, the market as a whole includes companies that are both dividend and non-dividend paying, as well as those with negative and positive growth, even companies with very high or very low growth. Excluding companies because they are non-dividend paying, or because the expected growth rates do not meet arbitrary thresholds, results in an estimate of a *subset* of the market, not the market *as a whole*. A good analogy is an investment in a mutual fund or Exchange Traded Fund that tracks the S&P 500 Index. Every dollar invested in these funds is invested in *all* companies in the S&P 500 Index; the investor cannot pick and choose only dividend-paying companies, or only companies with growth rates she deems sustainable. Further, excluding companies that are believed to be unreasonable creates an internal inconsistency in the CAPM. A fundamental assumption of the CAPM is that the required return is proportional to the risk of the investment. Under the CAPM, the Beta coefficient is the measure of risk, and is calculated by comparing the subject security's returns to the overall market returns. Because the Beta coefficient is calculated relative to the overall market (*e.g.*, the S&P 500 Index or the New York Stock Exchange), it is important that the expected market return also reflect the overall

market. Therefore, it is inconsistent to combine Beta coefficients calculated relative to the entire market with a Market Risk Premium estimate calculated using only a subset of the market. Consequently, any credible estimate of the expected return on the market as a whole must include all companies.

Q. Please explain further why excluding non-dividend paying companies does not fully reflect the expected market return.

A. According to FEA witness Walters' workpapers, there are 118 companies in the S&P 500 Index that do not currently pay dividends, including some of the largest companies in the index in terms of market capitalization. Alphabet Inc. (the parent of Google), Amazon, Boeing, Disney, Facebook, Ford Motor Company, General Motors, PayPal, Tesla, and Netflix are among the 118 companies that are excluded from the analysis for not paying dividends. Because the approach calculates a market capitalization-weighted estimate of the market return, excluding these companies removes approximately $11.9 trillion (approximately 30 percent) from the total market capitalization, skewing the analysis. In my opinion, it is not reasonable exclude 30 percent of the market in calculating an expected market return that is meant to reflect the entire market.

Q. Does FEA witness Walters' DCF methodology using "all companies" alleviate your concern?

A. No, it does not. Although FEA witness Walters asserts that his second DCF approach includes "all companies," it only adds back the non-dividend paying companies. He still excludes companies with negative growth rates or growth rates greater than 20.00 percent, including Amazon, AT&T, Boeing, Chevron, Exxon Mobil, General Electric,

Mastercard, Tesla, and several of the largest airline companies. In total, excluding companies whose growth rates do not meet arbitrary growth rate thresholds removes approximately $9.7 trillion (or approximately 25 percent) of the total market capitalization of the S&P 500 Index. As with the exclusion of non-dividend paying companies, I do not believe it is reasonable or appropriate to skew the expected market return estimate based on arbitrary growth rate thresholds.

Q. FEA witness Walters suggests your expected market return is "inflated" because expected individual growth rates of certain companies exceed his measure of long-term sustainable growth.[157] What is your response?

A. I disagree. Determining whether a company's individual growth rate is sustainable is highly subjective and introduces bias in the analysis. FEA witness Walters' criticism focuses on individual company growth rates he deems as "too high"; however, he fails to acknowledge that my expected market return estimates also include growth rates that could be considered unsustainably low. The expected return on the market as calculated in my Exhibit JEN-4 includes 44 growth rates equal to or lower than FEA witness Walters' 2.50 percent inflation estimate (implying negative real growth). Twenty-seven of those are negative growth rates. That is, the analysis includes both high and low growth rates, and is not biased toward only high growth rates. In other words, by not attempting to evaluate the sustainability of each of the 500 individual companies' growth rate as FEA witness Walters does, I do not introduce bias into my expected market return analysis. More importantly, and as noted earlier, a proper market return estimate must include all companies in the analysis to avoid internal

[157] Direct Testimony of FEA witness Walters, at 52.

inconsistencies.

Q. What is your response to FEA witness Walters' reference to professional investor forecasts that indicate expected market returns range from 1.90 percent to 7.40 percent?[158]

A. I have several concerns with his references. First, FEA witness Walters' 9.40 percent ROE estimate is entirely at odds with the data he presents. In this instance, FEA witness Walters refers to the market return forecasts summarized in Figure 21, below.

Figure 21: Summary of FEA witness Walters' Market Return Forecast References[159]

Institution	Term (Yrs.)	Market Return Forecast
BlackRock Capital Management	30	7.40%
JP Morgan Chase	10 - 15	4.10%
Vanguard	10	2.30% – 4.30%
Research Affiliates	10	1.90% - 5.20%

According to these investment firms, the expected market return ranges from 1.90 percent to 7.40 percent for U.S. equities. FEA witness Walters, nonetheless, recommends an ROE of 9.40 percent, whereas if he really believed these expected returns were meaningful measures of investor-required returns, his CAPM ROE recommendation would range between 2.70 percent and 6.79 percent. These estimates simply have no meaningful value in determining FCG's Cost of Equity.

[158] Direct Testimony of FEA witness Walters, at 47.

[159] Direct Testimony of FEA witness Walters, Table CCW-10, at 47.

Q. Please summarize the three Beta coefficient estimates FEA witness Walters applies in his CAPM analysis.

A. FEA witness Walters reviews the average adjusted Beta coefficient for his proxy group from three sources: (1) *Value Line's* current Beta coefficient (0.83), (2) *Value Line's* average historical Beta coefficient since Q3 2014 (0.74), and (3) average Vasicek-adjusted Beta coefficient from S&P Global Market Intelligence ("MI") (0.58). In FEA witness Walters's view, *Value Line's* current Beta coefficients are "abnormally high and are unlikely to be sustained over the long-term" necessitating the use of the two alternative Beta coefficients.[160]

Q. What are your concerns with FEA witness Walters' MI Beta coefficient estimates that apply the Vasicek adjustment rather than the Blume adjustment?

A. While I agree MI is a reliable source of utility financial and rate case data, I disagree with FEA witness Walters' position that Beta coefficients calculated using the Vasicek adjustment are "superior" to those calculated using the Blume adjustment.[161] This is an overstatement. The conclusion as to which approach is "superior" remains open to debate and there is no consensus on that issue. As Duff & Phelps explains, "[w]hether betas tend to move toward market averages or industry averages over time is an issue open to debate."[162] Further, there is no evidence that Vasicek-adjusted Beta coefficients perform better than Blume adjusted Beta coefficients. If there was consensus in the financial community that the Vasicek adjustment methodology was "superior" to the Blume adjustment methodology, it would be more widely adopted by

[160] Direct Testimony of FEA witness Walters, at 43.
[161] Direct Testimony of FEA witness Walters, at 44.
[162] Duff & Phelps 2020 Valuation Handbook, p. 5-9.

well-known investor data resources, such as *Value Line* and Bloomberg. However, that is not the case. In my experience, the vast majority of the Beta coefficients used in regulatory proceedings by ROE witnesses employ the Blume adjustment methodology. Moreover, as discussed below, the Vasicek adjustment methodology requires more inputs and calculations and is more susceptible to subjective judgment than are the Beta coefficients independently reported by *Value Line* and Bloomberg that use the Blume adjustment methodology

Q. What issues did your review of FEA witness Walters' MI Beta coefficient workpaper raise?

A. As with any methodology of calculating the Beta coefficient, the reasonableness of the estimate depends greatly on the inputs and assumptions underlying the methodology. I reviewed FEA witness Walters' MI Beta Coefficient workpaper[163] that contains the backup support for his MI Beta coefficient calculation using S&P's Beta Generator model and found two primary concerns.

The first concern is that on the major holidays in which the stock market was closed (*e.g.*, Good Friday, Christmas, Independence Day), FEA witness Walters' workpaper lists an "NA" for the proxy companies' stock prices but lists a stock price for the S&P 500 Index. This results in several data points over the five-year period in which the weekly return for the proxy companies is calculated as 0 percent, but a non-zero weekly return is calculated for the S&P 500. Because the Beta coefficient is calculated based on the relative standard deviation and correlation between the proxy company and the

[163] FEA witness Walters' workpaper "CCW Confidential WP 16.xlsm".

S&P 500, a weekly return of 0 percent for the subject company may skew the results downward. The current version of S&P's Beta Generator model[164] shows that it includes prices for the proxy companies on holidays rather than "NA", allowing it to properly calculate weekly returns for those dates. As shown in Figure 22 below, the average Beta coefficients from MI applying the same inputs as FEA witness Walters are approximately 12 basis points higher than his Beta coefficients as filed. While I believe the corrected MI Beta coefficients remain too low in the current market, they are closer to FEA witness Walters' longer term historical Betas.

Figure 22: Corrected MI Beta Coefficients[165]

Proxy Company	Ticker	FEA witness Walters' MI Beta (As Filed)	Corrected MI Beta (accessed 9/14/2022)
Atmos Energy Corporation	ATO	0.58	0.68
New Jersey Resources Corporation	NJR	0.61	0.72
NiSource Inc.	NI	0.60	0.73
Northwest Natural Holding Company	NWN	0.53	0.65
ONE Gas, Inc.	OGS	0.60	0.71
Spire Inc.	SR	0.59	0.69
Average		**0.58**	**0.70**

The second issue relates to the sample group of comparable companies used in S&P's Vasicek adjustment methodology. S&P's Beta Generator model allows the analyst to select any comparable group, up to nine companies. FEA witness Walters included the six natural gas utilities in his and my proxy group. As S&P notes, the Vasicek

[164] Source: S&P Capital IQ Pro, downloaded September 14, 2022. It's possible that FEA witness Walters is working with an older version of S&P's Beta Generator model.

[165] Exhibit JEN-22; FEA witness Walters' Exhibit CCW-15.

adjustment "adjusts the raw beta via weights determined by the variance of the individual security versus the variance of a larger sample of comparable companies."[166] Because S&P's Beta generator model allows the analyst to select the sample group, the size and makeup of the chosen sample group is highly subjective and could substantially affect the results. In my opinion, S&P's Beta Generator model – and the Vasicek adjustment generally – is susceptible to debate over the proper size and selection of the comparable group used in the adjustment. Adjusted Beta coefficients from *Value Line* and Bloomberg, however, are simpler, independently reported, and easily verifiable; therefore, they are not exposed to these criticisms.

Q. Please summarize FEA witness Walters' concerns with your ECAPM analysis.

A. FEA witness Walters' principal concern with my ECAPM analysis is the use of adjusted Beta coefficients such as those published by *Value Line*.[167] As I have explained above in response to OPC Witness Garrett the Beta coefficient adjustment and the alpha adjustment are entirely different adjustments and concepts, and both adjustments are necessary.

Q. FEA witness Walters points to an Order from the Illinois Commerce Commission to suggest that the ECAPM is not an accepted methodology.[168] Is the ECAPM an accepted methodology?

A. Yes, it is. The ECAPM (sometimes referred to as the "Zero Beta CAPM") has been accepted by regulatory commissions in Alaska, Maryland, Mississippi, New York, and

[166] Direct Testimony of FEA Witness Walters, at 44.
[167] Direct Testimony of FEA witness Walters, at 60-62.
[168] Direct Testimony of FEA witness Walters, at 62.

North Carolina.[169] Additionally, I am aware the ECAPM has been presented by state regulatory commission staff in Maryland, Nevada, and by the Department of Commerce in Minnesota.[170] Consequently, I believe the ECAPM is an accepted approach and should be considered by the Commission.

Q. What would FEA witness Walters' CAPM-based ROE results be with the adjustments you recommend?

A. As discussed above, I suggest the following adjustments to FEA witness Walters' CAPM analyses. First, FEA witness Walters' CAPM results using Kroll's "normalized" Market Risk Premium and risk-free rate should be rejected. Second, although I disagree with the use of Vasicek-adjusted Beta coefficients, FEA witness Walters' corrected proxy group average adjusted Beta coefficients from S&P's Beta Generator model is 0.70. Lastly, although FEA witness Walters' DCF-based expected market return produces CAPM results within my recommended ROE range (with his corrected MI Beta coefficient), I also recommend his DCF-based expected market return be adjusted to include all companies, including non-dividend paying companies,

[169] *See,* Regulatory Commission of Alaska, Docket No. P-97-4, Order No. 151, at 146; Maryland Public Service Commission, Case No. 9311, Order No. 85724, at 105; Mississippi Public Service Commission, Docket No. 01-UN-0548, *Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi*, Final Order, December 3, 2001, at 19; New York Public Service Commission, Case 16-G-0058, P*roceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Gas Rate Plans, December 16, 2016, at 32; *In the Matter of Application of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina*, Docket No. E-22, Sub 562 Order Accepting Public Staff Stipulation in Part, Accepting CIGFUR Stipulation, Deciding Contested Issues, and Granting Partial Rate Increase, February 24, 2020, at 40.

[170] *See,* Maryland Public Service Commission, Case No. 9311, Order No. 85724, at 88; Minnesota Public Utilities Commission, MPUC Docket No. G011/GR-15-736, *Findings of Fact, Conclusions of Law, and Recommendation*, August 19, 2016, at 29; Public Utilities Commission of Nevada, Docket No. 12-02019, Second Modified Final Order, at 36.

and all growth rates. Correcting these deficiencies produces CAPM-based ROE results ranging from 9.45 percent to 12.72 percent, as summarized in Figure 23 below. FEA witness Walters' mean and median CAPM-based ROE results with my adjustments are 10.71 percent and 10.55 percent, respectively; with an average of 10.63 percent.

Figure 23: FEA witness Walters CAPM Results[171]

Market Risk Premium Description	**Current *Value Line* Beta (0.83)**	**Historical *Value Line* Beta (0.74)**	**S&P MI Beta (0.70)**
Risk Premium Derived	10.55%	9.78%	9.45%
FERC S&P 500 DCF Method (as filed)	10.97%	10.15%	9.80%
S&P 500 DCF Method – ALL companies	12.72%	11.70%	11.26%
Mean	**10.71%**		
Median	**10.55%**		
Average of Mean and Median	**10.63%**		

D. Summary of FEA witness Walters' Revised ROE Results

Q. Please summarize FEA witness Walters' ROE analyses with the adjustments you recommend.

A. As shown in Figure 24 below, sensible adjustments to FEA witness Walters' ROE analyses produce ROE results ranging from 9.23 percent to 10.63 percent, as much as 120 basis points above his 9.40 percent recommendation.

[171] Exhibit JEN-23.

Figure 24: Summary of FEA witness Walters' Revised ROE Results

ROE Methodology	Range	Average of Mean and Median ROE Estimate
Constant Growth DCF (Analysts' Growth)	9.14% - 9.31%	9.23%
Risk Premium	9.79% - 10.42%	10.22%
CAPM	9.45% - 12.72%	10.63%
Mean	**10.02%**	
Median	**10.22%**	
Average of Mean and Median	**10.12%**	

VII. CONSISTENCY OF ROE ANALYTICAL RESULTS

Q. Have you assessed the reliability of your ROE and capital structure analyses using the latest data?

A. Yes. To test the reliability of my analysis, as compared to that of the Intervenor Witnesses, I conducted the Constant Growth DCF, Quarterly Growth DCF, CAPM, ECAPM, Bond Yield Risk Premium, and capital structure analyses using data through August 31, 2022. I then applied the results to the same proxy group of companies analyzed in my direct testimony. Because the Bloomberg and *Value Line* DCF-based expected market return estimates are closer to the long-term average historical market return and both are below the expected market return estimates filed in my Direct Testimony, I have reverted to my usual practice of averaging the two together to calculate the expected market return. Figure 25 below summarizes my updated results.

Figure 25: Updated ROE Results[172]

Constant Growth DCF	**Low**	**Mean**	**High**
30-Day Average	8.50%	9.53%	10.76%
90-Day Average	8.52%	9.55%	10.79%
180-Day Average	8.62%	9.66%	10.85%
Quarterly Growth DCF	**Low**	**Mean**	**High**
30-Day Average	8.69%	9.75%	11.01%
90-Day Average	8.71%	9.77%	11.03%
180-Day Average	8.82%	9.89%	11.11%
CAPM		**Current 30-Year Treasury Yield (3.11%)**	**Projected 30-Year Treasury Yield (3.66%)**
Long-Term Historical Average Market Return and 10-year Beta Coefficients			
Proxy Group Average		10.29%	10.41%
Proxy Group Median		10.30%	10.42%
DCF-based Market Return and Value Line Beta Coefficients			
Proxy Group Average		11.51%	11.60%
Proxy Group Median		11.18%	11.29%
Empirical CAPM		**Current 30-Year Treasury Yield (3.11%)**	**Projected 30-Year Treasury Yield (3.66%)**
Long-Term Historical Average Market Return and 10-year Beta Coefficients			
Proxy Group Average		10.80%	10.89%
Proxy Group Median		10.81%	10.90%
DCF-based Market Return and Value Line Beta Coefficients			
Proxy Group Average		11.93%	12.00%
Proxy Group Median		11.68%	11.76%
Bond Yield Plus Risk Premium			
Current 30-Year Treasury Yield (3.11%)		9.75%	
Projected 30-Year Treasury Yield (3.66%)		9.88%	

As shown in Figure 25 above, my recommended ROE range of 10.75 percent remains

supported by the updated results. With respect to the Company's capital structure, as Exhibit JEN-16 shows, the Company's capital structure remains consistent with the proxy group.

VIII. CONCLUSION

Q. What is your conclusion regarding the ROE and capital structure for FCG?

A. Based on the analyses discussed throughout my direct and rebuttal testimonies, I continue to believe 10.75 percent is a reasonable and appropriate estimate of the Company's cost of equity. The results of my updated results shown in Figure 25 above, combined with my analyses of capital market data analysis, continue to support the reasonableness of my ROE estimates and my recommendations. Further, my analyses in response to the Intervenor Witnesses show their ROE recommendations are unreasonably low and modest adjustments produce more reasonable results.

As to the capital structure and cost of debt, a capital structure including 59.60 percent common equity and 40.40 percent long-term debt remains consistent with the capital structures in that fund the regulated natural gas operations of the proxy companies. Therefore, I conclude the capital structure and cost of debt are reasonable and should be approved.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

(Whereupon, prefiled direct testimony of Tara B. Dubose was inserted.)

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220069-GU

FLORIDA CITY GAS

DIRECT TESTIMONY OF TARA B. DUBOSE

Topics: **Revenue Forecast,**
Cost of Service Study,
Revenue Allocation,
Rate Design, Tariff Changes

Filed: May 31, 2022

TABLE OF CONTENTS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Tara B. DuBose. My business address is Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.

Q. By whom are you employed and what is your position?

A. I am employed by Florida Power & Light Company ("FPL") as the Manager of Cost of Service and Load Research in the Rates & Tariffs Department.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for managing load research and cost of service activities for retail rates. In this capacity, I am responsible for the preparation of retail cost of service studies on behalf of FPL and Pivotal Utility Holdings, Inc. d/b/a Florida City Gas ("FCG" or the "Company"). Additionally, as part of this case, my responsibilities include FCG's revenue forecast, revenue allocation, and rate design.

Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Science in Business Administration with a concentration in Accounting from the University of South Carolina - Aiken in 1996. In 2007, I earned a Master of Business Administration with a concentration in International Business from the University of South Carolina. I am also a Certified Public Accountant in the state of South Carolina. From 1996 to 2000, I was employed as a Financial Analyst for the Comptroller General's office for the state of South Carolina and as an Auditor in public accounting firms. From 2000 to 2011, I was employed at SCANA Corporation

(now Dominion Energy), where I held a variety of positions including Auditor III in Internal Audit, Senior Regulatory Accountant for Retail Electric and Gas Distribution Rates, and Supervisor of Electric Transmission Rates and Gas Transportation Rates. I joined FPL in 2011 as a Principal Rate Analyst for Rate Design, responsible for retail tariff and rate development and progressed to my current position of Manager of Cost of Service and Load Research.

I am a member of the Edison Electric Institute ("EEI") Rates and Regulatory Affairs Committee. I have completed various relevant training courses throughout my career including the New Mexico State University Center for Public Utilities Basics Course for gas rates, the EEI Advanced Rate Design Course for electric rates, the EEI and University of Wisconsin - Madison Transmission & Wholesale Markets School and the Association of Edison Illuminating Companies ("AEIC") Fundamentals of Customer Load Data Analysis Course. I was also a past member of the Southern Gas Association, served as the Chairman of the Southeastern Electric Exchange ("SEE") Rate & Regulatory Committee and have been a guest speaker at SEE Committee meetings.

Q. Have you previously filed testimony before this Commission?

A. Yes, I provided testimony in Docket No. 20210015-EI. I have also provided testimony before the Federal Energy Regulatory Commission ("FERC") in wholesale rate and cost of service matters.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

- Exhibit TBD-1 MFRs Sponsored or Co-sponsored by Tara B. DuBose
- Exhibit TBD-2 Forecast of Bills, Therms, Demand Charge Quantities, and Revenues for the 2023 Test Year at Present Rates
- Exhibit TBD-3 Comparisons of Rates of Return and Parity at Present Rates to Equalized Rates and to Proposed Rates
- Exhibit TBD-4 Parity of Major Customer Classes at Proposed Rates
- Exhibit TBD-5 Analysis of Proposed Revenue Requirement Increases
- Exhibit TBD-6 FCG Bill Comparisons

Q. Are you sponsoring or co-sponsoring any Minimum Filing Requirements ("MFRs") in this case?

A. Yes. Exhibit TBD-1 lists the MFRs I am sponsoring and co-sponsoring.

Q. What test year is the Company using for its proposed base rate increase?

A. The Company is using a projected 2023 Test Year based on the 12-month period ending December 31, 2023. The MFRs reflect information and data requested for various years since FCG's last rate case, including the 2021 Historical Test Year, 2022 Prior Year, and 2023 Test Year.

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

A. I will support and describe the specific methods employed in developing the forecast of revenues from sales for the 2022 Prior Year ending December 31, 2022, and for the 2023 Test Year ending December 31, 2023. I will support and describe the methodology used to develop the class cost of service study

("COSS"), revenue requirement allocation, and rate design for this case and present the results.

Q. Please summarize your testimony.

A. My testimony supports the results of the FCG COSS, the final proposed revenue requirement allocations, and the resulting proposed base rates and service charges that will produce revenues sufficient to recover the Company's jurisdictional revenue requirements for the 2023 Test Year. The proposed FCG COSS fairly presents each rate class's cost responsibility, rate of return ("ROR"), and parity position (*i.e.*, rate class ROR relative to system average ROR). The COSS allocates the rate base, revenues, and expenses to the individual rate classes based on the appropriate cost drivers previously approved by this Commission.

The results of the consolidated FCG rate class COSS show that at present rates several rate classes, such as RS-1, GS-1, GS-120K, and GS-1250K, are well below parity, while other rate classes, RS-100, RS-600, GS-6K, GS-25K, and Gas Lighting, are well above parity. Exhibit TBD-3, Table 1 compares the present revenue requirements, ROR, and related parity index for each rate class to equalized revenue requirements and calculates the differential. Exhibit TBD-3, Table 2 shows the same comparison at present versus final proposed revenue requirement allocations. The MFR H schedules provide the details supporting these results.

The Commission should approve the FCG COSS methodologies, the proposed revenue requirement allocations, and the proposed rates presented in my testimony.

Q. Can you please summarize the estimated bill impacts of FCG's proposed increase in base revenues?

A. Yes. As explained in the direct testimony of FCG witness Campbell, FCG is proposing a four-year rate plan based on a 2023 Test Year ending December 31, 2023. FCG's total base revenue requirements for the 2023 Test Year reflect the need for an increase in base revenues of $29 million as further described by FCG witnesses Campbell and Fuentes.[1] This revenue increase includes the transfer of $5.7 million from SAFE clause recovery to base recovery and $3.8 million related to a previously approved Liquefied Natural Gas ("LNG") Facility projected to be placed in-service in March 2023 as described by FCG witness Howard. Thus, the net incremental increase in base revenues is $19.4 million as explained by FCG witness Fuentes.[2] Exhibit TBD-5 provides an analysis of these incremental increases in revenue requirements at proposed rates.

FCG's filing proposes adjustments to rates and charges to more closely reflect the projected COSS for the various rate classes, and thus move customer classes

[1] As reflected in MFR E-2, there was a miscalculation in the original present revenue forecast, which was corrected in the COSS and revenue allocation. The corrected amount results in present revenues being $155,495 higher in the COSS MFRs than reflected in the corresponding financial MFRs, which results in a corrected total base rate increase of $28.8 million for the 2023 Test Year.

[2] See footnote 1. The corrected net incremental base rate increase for the 2023 Test Year is $19.2 million.

closer to parity. As further described below, in allocating revenues and designing rates and charges, FCG applied the Florida Public Service Commission's ("FPSC" or "Commission") guideline on gradualism — the practice of limiting base rate increases for a specific rate class to 1.5 times the system average increase in total rate class operating revenues with clauses and providing no rate decreases — and appropriately recognized the competitive nature of the natural gas industry. Exhibit TBD-4 presents the parity of major customer classes at present and proposed rates

As shown on Exhibit TBD-6, the compound annual growth rate ("CAGR") of the typical residential bill from 2019 to 2026, is projected to be approximately 4.9%.

The commercial and industrial ("CI") rate classes will experience varying increases under FCG's four-year rate plan depending on the current rate of return for each class as compared to the system average rate of return, *i.e.*, parity index for each respective class. Exhibit TBD-6 shows the CAGR for an average customer in each of the four major rate classes, is projected to range from 5.0% to 5.9%. While FCG's comparative rate standing during the four-year term obviously will be a function of gas utility rates during that same time frame, FCG will remain well positioned to provide safe, reliable, and affordable natural gas service.

As described in greater detail by FCG witnesses Campbell and Fuentes, FCG is requesting the adoption of Reserve Surplus Amortization Mechanism ("RSAM") adjusted depreciation rates that allow for the creation and utilization of a RSAM during the four-year rate plan. As described by FCG witness Fuentes, the adoption of the RSAM results in a commensurately lower annual revenue requirement of approximately $2.7 million compared to an alternative that does not adopt FCG's four-year rate plan with RSAM. FCG has provided MFRs, tariffs, and exhibits with and without the impacts of the RSAM. Adopting the proposed four-year rate plan with RSAM reduces the average residential bill by approximately $0.94 per month or $45.12 over the term of FCG's proposed four-year rate plan. For average CI customers' bills, the reductions resulting from the four-year rate plan range from $5.15 per month or $247.20 over the four-year term for GS-1 to $465.83 per month or $22,359.84 over the four-year term for GS-120K.

II. RATE DESIGN PRINCIPLES AND RATE STRUCTURE

Q. What are the overall goals that FCG seeks to achieve through its rate design?

A. FCG's overall goal is to design rates that are fair, just, and reasonable among all customers.

Q. Please provide an overview of FCG's base rates.

A. FCG's FPSC Natural Gas Tariff book ("Tariff") contains rate schedules for the various types of customers served by FCG. These include residential customers;

small, medium, and large commercial and industrial customers; special contract, load enhancement, and economic development customers; gas lighting customers; and special or limited purpose customers that include standby generators and natural gas vehicles. Each of these customers are served through different rate schedules designed to reflect the differences in the usage characteristics of each customer, the cost incurred by FCG to provide service to each customer, and the competitive nature of the natural gas industry.

Q. Please describe the various types of rate schedules.

A. Rate schedules generally contain specific prices that are applied to each customer's natural gas usage amount. Most rate schedules incorporate a Customer Charge, which is a fixed amount designed to recover a portion of the fixed costs of providing service and does not vary with usage. Another price component is the Distribution Charge, which is a per therm charge that applies to all rate schedules and is designed to recover the remainder of the fixed costs and the variable costs of providing service and varies with the amount of natural gas consumed throughout the month. Some of the larger CI rate schedules also include a demand charge, which is a customer-specific charge per Demand Quantity Charge ("DCQ") that is reset in April of each year based on the maximum daily consumption over the prior three-year period to reflect the Company's cost of supplying service to meet the maximum demand the customers place on FCG's system. Finally, each rate schedule contains general terms and conditions that describe how the customer's monthly bills are determined.

III. REVENUE FORECAST

Q. Please describe the steps for developing the forecast of base revenues by rate class.

A. First, the billing determinant forecast for customers billed, therm sales, and demand is developed by rate schedule. Next, these billing determinants are applied to the currently applicable rates to provide the base revenue forecast at present rates. The customer, distribution, and demand rates are then adjusted as discussed below in Section V and applied to the forecasted billing determinants to provide the forecasted base revenue at proposed rates.

Q. How were the DCQ billing units determined for each class?

A. The DCQ is a specific billing unit for each customer and was determined in the manner described in the Company's Tariff for the relevant rate schedules. Specifically, every April, the Company performs a three-year review of each customer's daily consumption for customers in the commercial and industrial rate schedules: GS-120K, GS-1250K, and GS-11M, and GS-25M. This analysis identifies the customer's peak daily consumption over the past three years, and if the current DCQ has been exceeded three times, the new highest peak becomes the DCQ for the coming year. Similarly, the DCQ can also decrease based on the customer's daily consumption over the prior 3-years. For purposes of the revenue forecast and COSS, FCG used the most current DCQ billing units based on the April 2021 review.

Q. Please describe FCG's base revenue forecast at present rates.

A. The customer and therms forecasts are provided by FCG witness Campbell for the 2023 Test Year. As shown in MFR E-2, the base revenue forecast at present rates was developed by applying the forecasted therms and number of customers billed for each rate schedule provided by FCG witness Campbell for the 2023 Test Year period to existing base rates for each rate schedule per the Company's Tariff. As shown on Exhibit TBD-2, FCG forecasts a total of $62.8 million revenues from present base rates for the 2023 Test Year.

Q. Are there any exemptions to this process for the revenue forecast?

A. Yes. For purposes of the revenue forecast and COSS, Rate Schedule Load Enhancement Service ("LES") was not treated as a separate rate schedule. Rate Schedule LES is an optional rate available to customers that would otherwise qualify for service under Rate Schedules KDS, TSS, OSS, GS-120K, GS-1,250K, GS-11M or GS-25M and provide verifiable documentation showing a viable alternative fuel or the opportunity to completely bypass FCG's system. Customers that qualify for the LES are eligible for a negotiated, discounted volumetric rate that is subject to approval by the Commission. Per FCG's Tariff, the discount provided to LES customers is recovered from all other customers through the Competitive Rate Adjustment ("CRA") rider. For purposes of the revenue forecast and COSS, LES customers were aggregated and their revenues were forecasted at 100% of their otherwise applicable rate schedules. This approach better aligns the revenues and costs incurred to provide service to the LES customers with the appropriate rate schedule, while

recognizing that the difference between the revenues under the tariffed rate and the negotiated LES rate are recovered through the CRA.

IV. THE CLASS COST OF SERVICE STUDY

Q. Please describe the concept of rate class and how rate classes are established.

A. In general terms, rate classes are groups of individual rate schedules with like billing attributes (such as customer type, monthly consumption, demand or load, delivery circumstances, and cost causation) and rate design inter-relationships that are combined for cost of service purposes.

Q. How are rate classes used in the class COSS?

A. The COSS allocates costs to each rate class. For FCG, most rate schedules are separate rate classes, with a few exceptions. The generator standby rate schedules RSG and CSG have been grouped into their corresponding residential and commercial rate classes, RS-100 and GS-1. Additionally, the LES customers have been included in their respective rate classes, GS-120K, GS-1250K GS-11M, or GS-25M, similar to the revenue forecast.

Q. Please describe the objectives of a COSS.

A. A COSS allocates the Company's costs among the different rate schedules based on cost causation principles. The COSS produces specific data for each rate class, including rate base, net operating income ("NOI"), rate of return

("ROR"), target revenues, and unit costs. Target revenues and unit costs serve as the initial basis in the rate design process.

There are two primary objectives in a COSS. First is the development of cost information by function (production, storage, transmission, and distribution) and classification (customer, commodity, demand, and revenue) to develop cost-based allocations for each rate class. Second is the determination of the rate of return and parity for each rate class based on present rates. This information is used as a guide to allocate the Company's proposed revenue increase by rate class as further described in Section V of my testimony.

Q. Please describe the COSS process and the cost allocation methodologies used.

A. The Company's COSS follows the presentation format contained in the H Schedules of the prescribed MFR forms. A COSS consists of three individual activities: functionalization, classification, and allocation.

Functionalization assigns plant investments and associated operating expenses to four basic functional categories: production, storage, transmission, and distribution. COSS functional categories are assigned using the FERC Uniform System of Accounts. MFR Schedule H-3, pages 2 and 3 present the functionalized cost of service, and pages 4 and 5 present the functionalized rate base. All FCG costs are in the distribution functional category.

Classification is the process of grouping functionalized costs based on cost causation. There are three common groups used to classify costs: capacity or demand, commodity, and customer.

1. Capacity or demand costs, such as those relating to mains, services, or meters, are incurred to meet the maximum demand service requirements of the total customer base. Capacity costs were allocated based upon the standard peak and average method applied in previous base rate cases.

2. Commodity costs correspond directly to the volume of gas sold or transported. Commodity related costs were allocated based on annual sales volumes.

3. Customer costs are a function of the number of customers served, as they are incurred to connect customers to the distribution system, meter and read their usage, and maintain their accounts. Customer costs were allocated based on the relative number of customers served in each customer class. The "weighted number of customers" allocator was used to distribute costs based on the relative investment in meters, regulators, and service lines required to serve representative customers in each class. The weightings can be found on MFR Schedule E-7.

The cost classification methodology used in this case is the same as that used in the 2000, 2003, and 2017 rate cases. The classification of each functionalized cost component is contained in MFR schedule H-3, pages 2 - 5.

In the last step of the COSS, functionalized and classified costs are allocated or directly assigned to the customer classes. Most costs are allocated by applying a series of factors that distribute costs based on the causal relationships between the respective customer classes and the classified costs. Only operations and maintenance costs associated with the Third-Party Supplier ("TPS") rate schedule were directly assigned to those customers. MFR Schedule H-2, page 5, details the development of allocation factors by customer class.

Q. How were customers on special contracts addressed in the COSS?

A. FCG offers special contracts to qualifying customers under Rate Schedule Contract Demand Service (KDS). The objective of this rate schedule is to enable the Company to attach incremental load to its system by providing the Company with the flexibility to negotiate individual service agreements with potential new customers considering competitive and economic market conditions and system growth opportunities. Rate Schedule KDS is available to non-residential customers that have new or incremental demand of 250,000 therms per year at one location. The distribution charge under rate schedule KDS is a negotiated rate that cannot be set lower than the incremental cost FCG incurs to serve the new customer. The negotiated rate is fixed for the duration of the term of the contract and, as such, the KDS customers' rates do not change in a base rate proceeding. Therefore, for purposes of the COSS no costs were allocated to these customers. Instead, the projected revenues generated from the KDS customers were credited to all other customers. Additionally, the KDS customers' billing units were excluded from all COSS allocators.

Q. How were revenue requirements associated with the Safety, Access, and Facility Enhancement ("SAFE") program incorporated into the COSS consistent with Order No. PSC-15-0390-TRF-GU from Docket No. 150116-GU?

A. The SAFE program costs as of December 31, 2022, were included in total revenue requirements for the test year and, thus, are part of the overall deficiency between present base revenues and proposed base revenue requirements. As explained by FCG witness Fuentes, the total revenue deficiency of $29.0 million[3] includes $5.7 million of revenue requirements related to the SAFE program.

Q. Is FCG proposing to implement the previously approved revenue increase of $3.8 million associated with the LNG Facility as part of total base rate increase requested in this proceeding?

A. Yes. As explained by FCG witnesses Fuentes and Howard, the total cost of the LNG Facility is included in the calculation of the total revenue requirements for the 2023 Test Year and is included in the total base rate increase to become effective February 1, 2023.

As explained by FCG witness Howard, as part of the Stipulation and Settlement in FCG's last rate case approved by Commission Order No. PSC-2018-0190-FOF-GU in Docket No. 20170179-GU (the "2018 Settlement"), FCG was authorized to construct a new LNG Facility and to implement a subsequent

[3] See footnote 1.

increase in its base rates and charges in an amount sufficient to recover an additional revenue requirement of $3.8 million upon the in-service date of the LNG Facility. As explained by FCG witness Howard, the LNG Facility is currently scheduled to be placed in-service in March 2023.

For purposes of determining the revenue deficiency for the 2023 Test Year, as explained by FCG witness Howard, the updated total cost of the LNG Facility is included in the 2023 Test Year Per Book forecast sponsored by FCG witness Campbell and included in the calculation of rate base and net operating income. As a result, the revenue requirements associated with the updated total cost of the LNG Facility, including the previously approved $3.8 million in annual revenue requirements, are included in FCG's requested $29.0 million[4] total base revenue increase described by FCG witness Fuentes.

For these reasons, FCG is proposing to include the total revenue requirements associated with the LNG Facility as part of its base rate increase to become effective February 1, 2023. This will avoid potential customer confusion with multiple base rate increases over just a few short months (*i.e.*, base rate increase in February 2023 followed by another base rate increase for the LNG Facility in March 2023), as well as avoid costs associated with multiple customer notifications.

[4] See footnote 2.

Q. How were the previously approved revenue requirements associated with the FCG's LNG Facility incorporated into the COSS?

A. Pursuant to the 2018 Settlement, the previously approved revenue increase of $3.8 million associated with the LNG Facility is to be allocated to the rate classes consistent with the rate design adopted and reflected in the 2018 Settlement. Therefore, for cost allocation and rate design purposes, the previously approved revenue increase of $3.8 million associated with the LNG Facility was isolated from the rest of FCG's proposed base rate increase during rate design and separately allocated to rate classes pursuant to the 2018 Settlement. This is reflected in Exhibit TBD-5, Analysis of Proposed Revenue Requirement Increases.

Q. How is the ROR by rate class determined?

A. ROR is calculated by dividing NOI by rate base. The retail jurisdictional ROR represents the jurisdictional adjusted NOI divided by the jurisdictional adjusted rate base. The ROR for each rate class is calculated once the various components of jurisdictional adjusted rate base and jurisdictional adjusted NOI are allocated to all rate classes. ROR on a total retail and on an individual rate class level are reported in the MFR H schedules.

Q. How are comparisons in ROR by rate class made?

A. A measure of how a rate class's ROR compares to the total retail ROR can be computed by dividing the class ROR by the total retail ROR. The resulting figure is referred to as the parity index. A rate class with a parity index of 100% would earn the same ROR as the retail average and deemed to be precisely at

parity. A rate class with a parity index of less than 100%, or below parity, would earn a ROR that is less than the retail average ROR, while the opposite would be true for a rate class with an index above 100%.

Q. What does the FCG COSS indicate regarding the retail average ROR and the parity indices by rate class?

A. At present rates,[5] FCG's COSS shows a projected ROR of 2.75% for the 2023 Test Year, which is the same earned ROR as shown on MFR H-1 Schedule C. The FCG COSS shows that at present rates, certain rate classes, such as RS-100, RS-600, GS-6K and GS-25K are above parity, while other rate classes, such as RS-1, GS-1, GS-120K andGS-1250K, are below parity. MFR H-1 provides the details supporting these results.

Q. Please explain the other results produced in the FCG COSS.

A. As previously mentioned, a COSS also calculates revenue requirements or proposed revenues by rate class. Revenue requirements consist of a return on rate base plus operating expenses and income taxes and represent the level of revenues required to earn a particular ROR. Consistent with the Commission's filing requirements, three sets of projected revenue requirements by rate class have been developed. One set of revenue requirements, shown in MFR H-1 Schedule C, is based on each rate class's projected individual ROR at present rates.

[5] See footnotes 1 and 2.

The second set of revenue requirements, "Equalized at Proposed Rates" presented on the last line of MFR H-1, Schedule D, provides the equalized revenue requirements by rate class, that is, at the retail ROR or at 100% parity, and underlying unit costs for each billing determinant (*i.e.*, demand, energy, and customer). The unit costs shown in MFR H-1, Schedule D are derived by dividing the customer, distribution, demand, and lighting-related revenue requirements by the appropriate billing units. The rate classes' equalized revenue requirements at the requested retail ROR serve as the initial basis in the rate design process, which is addressed in my testimony below.

The third set of revenue requirements, shown in MFR H-1 Schedule B, is based on FCG's proposed allocations to each rate class as further described below in Section V. MFR H-1, Schedule A shows proposed revenue requirements for each rate class and proposed rates.

Q. Are other COSS results included in this filing for comparative purposes?

A. Yes. As referenced in testimony of FCG witness Fuentes, FCG has prepared a set of revenue requirements that do not include the RSAM. The COSS that results from those revenue requirements without RSAM are also included in the MFR H schedules.

Q. Should the Commission approve the FCG COSS?

A. Yes, the Commission should approve the proposed FCG COSS methodology and results presented in my testimony. The methodologies used to allocate rate base, revenues, and expenses among the rate classes were accurately applied,

are consistent with the methodology used in FCG's last rate case in Docket No. 20170179-GU, and align costs and benefits to the customer classes. The FCG COSS results accurately represent the cost responsibility of all customers on FCG's system.

V. ALLOCATION OF RATE INCREASE TO RATE CLASSES

Q. Please identify the steps necessary to allocate the proposed revenue requirement into rate design.

A. There are two main steps in the process. First, the total amount of the proposed revenue requirement is allocated to the various rate classes based on the COSS. Each rate class is then analyzed to consider the Commission's guidelines for gradualism and the competitive nature of the natural gas industry. The second step is to design the specific rate components for each rate class. In developing these components – customer charge, distribution charge, and demand charge – FCG considers rate stability and applies increases and changes ratably where appropriate based on the cost of providing service while taking into consideration customer acceptance and understanding, effects on conservation, objectivity in administering rates, and the competitive nature of the natural gas industry.

Q. Please describe how the proposed revenue increase is allocated to each rate class.

A. Revenues are allocated in order to achieve FCG's requested revenue requirement. The COSS provides a guide for evaluating any proposed changes

to the level of revenues by rate class. More specifically, the allocation of any revenue requirement increase should be assessed in terms of its impact on the ROR and parity index for the respective rate class. The ROR and parity were calculated for each rate class at present rates and are provided in Exhibit TBD-3. When a rate class is under parity, its ROR is less than the overall FCG ROR. An important goal in setting rates is to move all rate classes as close to the FCG ROR as is reasonable to minimize cross-class subsidies.

FCG has set the proposed revenues by rate class to improve parity among the rate classes to the greatest extent possible, while following the Commission practice of gradualism and considering the competitive nature of the natural gas industry as further discussed below. The proposed revenues for each rate class are presented in Exhibit TBD-3, Table 2.

Q. Please explain why FCG is applying the Commission's guidelines for gradualism.

A. The Commission has clearly supported the concept that rates should be based on the fully allocated cost of service method with the objective of achieving parity among rate classes. The Commission has also supported the concept of gradualism when moving rate classes closer to parity in rate proceedings. FCG calculated the ROR and parity for each rate class at present rates, which are provided in Exhibit TBD-3. As indicated therein, parity indices vary by rate class, with some class indices well above parity while others fall well below parity. Moving all rate classes to parity could result in one or more rate classes

receiving an overly large revenue requirement increase. In response to this concern, FCG has applied the Commission's "gradualism" principle to allocate costs by rate class. The concept of gradualism, as applied in Florida, limits the revenue increase for each rate class to 1.5 times the system average increase in total operating revenues, including adjustment clauses, and provides that no rate class be decreased.

FCG has not had a general base rate increase since 2018 and is requesting a 44% increase in total revenues for the 2023 Test Year. Under the Commission's guideline of gradualism, any increase to a rate class is limited to 1.5 times 44%, or 66%. As shown on Exhibit TBD-3, under FCG's proposed rates, no class is receiving more than a 56% increase including the transfer of SAFE revenue requirements from clause to base and the addition of previously approved LNG revenues. The revenue increase net of these pre-approved items is 29.7% as shown on Exhibit TBD-5.

Q. Why is it appropriate to consider the competitive nature of the gas industry when allocating revenues?

A. Unlike electric customers, natural gas customers have many alternative fuel sources, such as electric, fossil fuels, and biofuels, and can switch from natural gas service if it becomes uneconomical. Additionally, if natural gas service becomes uneconomical, large CI customers can bypass FCG's system or relocate their business outside of FCG's service territory or even the state of Florida. If customers were to leave FCG's system, it would both reduce FCG's

revenues and the customer base from which FCG's costs are recovered. Essentially, FCG could be left with stranded, unrecovered costs and expenses that were prudent at the time the investment was made. Therefore, in designing natural gas rates it is appropriate to consider the competitive nature of the natural gas industry to mitigate the potential for fuel switching and bypass, particularly for the large CI customers who have a significant impact on FCG's revenues and costs.

FCG's COSS indicates that parity indices vary by rate class, with some class indices well above parity while others fall well below parity. Moving all rate classes to parity, even when applying the Commission's gradualism guidelines, could result in disproportionate increases to certain large CI customer classes that could, without adjustment, make switching or bypass more economical than continuing to receive natural gas service from FCG. As shown on Exhibit TBD-3 the large CI rate classes GS-120K and GS-1250K are significantly under parity at present rates and, therefore, would have received an increase of 66% if taken to the full 1.5 times system average limit of the Commission's principle of gradualism. However, to address the potential for fuel switching and bypass, FCG slightly reduced the proposed increases to rate classes GS-120k and GS-1250K.

Q. What impact would FCG's proposed revenues by rate class have on parity?

A. As shown in Exhibit TBD-3 Table 2, under FCG's proposed revenues by rate class, the parity of all rate classes except GS-120K is improved. As previously discussed, to mitigate the bill impacts on large CI customers that were significantly under parity, lower percentage increases than were allowed under gradualism, were given to the large CI rate classes GS-120K and GS-1250K. While this resulted in a rate increase to both rate classes, the increase did not improve the parity of the GS-120K rate class.

Q. How does FCG propose to achieve these proposed revenues by rate class?

A. FCG proposes to achieve these proposed revenues through changes to existing rates while incorporating proposed revisions to service charges further described below. Each element of FCG's proposal is outlined below.

VI. TARIFF CHANGES

Q. Please explain FCG's objective for the proposed changes to existing rates.

A. The proposed changes to existing rates are consistent with the objectives of providing rates that are cost-based, send appropriate price signals, and are understandable to customers.

Q. Please describe in general terms the methodology you used in developing the proposed changes to FCG's existing base rates.

A. Exhibit TBD-3 Table 1 shows the maximum increase if all rate classes were to

achieve 100% parity. To develop FCG's proposed increases by rate class shown on Exhibit TBD-3 Table 2, consideration was given to both the Commission's gradualism guidelines and the competitive nature of the natural gas industry for each class's proposed rate of return to achieve the overall rate increase by rate class.

First, the previously approved LNG revenue requirements were subtracted from each rate class based on the required allocations. Next, customer charges and demand charges were increased by 25% for all rate schedules except the standby generator schedules. For those rate schedules, customer rates were increased by 50% to account for the additional metering costs. The projected revenues from the customer and demand charges were then subtracted from the total proposed revenue requirements for each class and the balance of the increase was applied to the distribution rates. The resulting projected revenues and increases by rate class are presented in TBD-3 Table 2.

Q. Please describe the methodology used to recover the proposed revenues from the gas lighting rate class.

A. The revenue requirements allocated to the gas lighting rate class were divided by the number of therms forecasted for the rate class to develop a cents per therm gas lighting rate.

Q. Is FCG proposing any changes to the residential Tariffs?

A. No. FCG is only proposing to change the base rates in order to achieve the proposed revenues for the residential rate classes.

Q. Is the Company proposing any changes to the CI Tariffs?

A. No. FCG is only proposing to change the base rates in order to achieve the proposed revenues for the CI rate classes.

Q. Is FCG proposing any new tariffs, rate schedules, or riders?

A. No.

Q. Is the Company proposing any changes to its service charges?

A. Yes. The Company is proposing to adjust some of its miscellaneous charges to ensure that costs generated by individual customer requests are recovered from the customers requiring the service, instead of spreading them over the general body of customers. FCG's proposed service charge updates can be found in the "Summary of Other Operating Revenue" shown on MFR H-1, Schedule A. The support for these charges is set forth in MFR Schedule E-3, which is sponsored by FCG witness Howard. The resulting revenue increases are included in the COSS and accounted for in the Company's final rates as presented in MFR H-1.

Q. Which MFRs provide additional information on the proposed changes to existing rates that you have outlined?

A. Proposed changes to existing base rates by rate schedule can also be found on MFR E-2. Legislative and clean versions of FCG's proposed Tariff sheets are provided in MFR E-9.

VII. CONCLUSIONS

Q. Please summarize your cost analysis and rate design.

A. The proposed rates should be approved as they will provide revenues to meet the Company's revenue requirement in this case. The rates are designed to move the rate classes towards parity, while adhering to the Commission's practice of not increasing any class more than 1.5 times the system average increase in revenue with clauses, and not providing any rate decreases, as well as considering the competitive nature of the natural gas industry and customers' ability to switch fuel or bypass if natural gas service becomes uneconomical.

Q. Does this conclude your direct testimony?

A. Yes.

(Whereupon, prefiled rebuttal testimony of Tara B. Dubose was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220069-GU

FLORIDA CITY GAS

REBUTTAL TESTIMONY OF

TARA B. DUBOSE

Topics: **Cost of Service, Revenue Allocation**

Filed: October 3, 2022

TABLE OF CONTENTS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Tara DuBose. My business address is Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.

Q. Did you previously submit direct testimony?

A. Yes. On May 31, 2022, I submitted written direct testimony on behalf of Pivotal Utility Holdings, Inc. d/b/a Florida City Gas ("FCG" or the "Company"), together with Exhibits TBD-1 through TBD-6.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to address the testimony of the Federal Executive Agencies ("FEA") witness Brian C. Collins regarding FCG's proposed cost of service study ("COS") and proposed revenue increase distribution. Specifically, I will respond to FEA witness Collins' proposal to allocate capacity costs using a design day allocation and explain why such an allocation is not reasonable, is inconsistent with the principles of gradualism, and is not reflective of how FCG operates and provides service to its customers.

Q. Are you sponsoring or co-sponsoring any exhibits with your rebuttal testimony?

A. Yes. I am sponsoring the following exhibits with my rebuttal testimony:

- Exhibit TBD-7 – Customers and Usage Comparison by Customer Group
- Exhibit TBD-8 – Comparison of FEA to FCG Revenue Allocations
- Exhibit TBD-9 – Comparison of FEA to FCG Increase Allocations

I also co-sponsor Exhibit LF-10 – FCG's Notice of Identified Adjustments filed August 16, 2022, filed with the rebuttal testimony of FCG witness Fuentes.

II. GENERAL RESPONSE TO FEA'S CONCERNS

Q. Before addressing the specific issues and recommendations raised by FEA, do you have any general observations?

A. Yes. I note that all of the FEA customers take natural gas service under FCG's commercial and industrial ("CI") rates. Not surprisingly, FEA witness Collins proposed allocation, if adopted, would significantly shift costs from the CI customer classes to the residential customers classes, with most residential customers experiencing a revenue increase in excess of 66% under his proposal. As further explained below, such an allocation is not reasonable, is inconsistent with the principles of gradualism, and is not reflective of how FCG operates and provides service to its customers.

Relying on the National Association of Regulatory Utility Commissioners Gas Distribution Rate Design Manual ("NARUC Manual"), FEA witness Collins proposes to allocate capacity costs using a design day allocation. FEA witness Collins generalizes that the expected demand on the system peak day is the key consideration for demand cost allocations. Contrary to his assertion, however, the NARUC Manual recognizes that different demand cost allocation methods can and often are used. Indeed, page 19 of the NARUC Manual provides that "there is no one correct cost of service, but rather a range of reasonable alternatives." Page 27 of the NARUC Manual

further states the "most commonly used demand allocations for natural gas distribution utilities are the coincident demand method, the non-coincident demand method, the peak and average method, or some modification or combination of the three."

FEA witness Collins also overlooks that the Peak and Average ("P&A") cost allocation methodology used by FCG in this proceeding has been widely used by investor-owned natural gas utilities in Florida, including FCG, Peoples Gas System, and Florida Public Utilities. As further explained below, the P&A method appropriately reflects the unique attributes and operations of Florida gas utilities, where the residential load or throughput is significantly lower than the CI load and the customers all take service in a much warmer climate with less heating load as compared to northern gas utilities.

III. COST OF SERVICE ALLOCATION METHODOLOGIES

Q. Does FEA witness Collins agree with FCG's class cost of service study ("COSS") allocations for distribution mains?

A. No. FEA witness Collins states throughout his testimony that the allocation of distribution mains in FCG's COSS based on a P&A allocation methodology does not reflect cost causation. Instead, he proposes allocating FCG's distribution mains based on design day demand and number of customers, which is essentially a minimum system allocation. FEA witness Collins states that his proposed allocation "better reflects cost causation" because it allocates distribution mains on a demand and customer basis and not a demand basis alone.

Q. Do you agree that allocating distribution mains based on a design day demand better reflects cost causation?

A. No. FEA witness Collins fails to consider that the P&A method, by definition, allocates costs on both class peak usage (demand component) and class average usage (customer component). For FCG's systems, class average usage is a better indicator of a customer component for capacity costs as it accounts for the relatively small amount of usage per residential customer throughout the year, instead of simply developing an allocator based on number of customers with no weighting. Additionally, FEA witness Collins' proposed method reduces the cost allocations to rate classes containing FEA's CI accounts and reallocates those costs to rate classes with a larger number of customers and much lower per-customer usage and demand, such as the residential class, with no reasonable justification.

Q. Why is an allocation method using design day not appropriate for FCG?

A. On page 9 of his testimony, FEA witness Collins states that FCG designs its system to meet the design day demands (*i.e.*, firm coincident demands) of its customer classes and, therefore, must allocate some of its distribution costs based on design day demand. While design day demand may be a factor in system design, the guidance provided by the NARUC Manual acknowledges that there are other factors to consider when allocating distribution costs that are unique to each gas utility:

> Demand or capacity costs are allocated to customer classes based upon an analysis of system load conditions and on how each customer class affects such costs…. There is a wide variety of alternative formulas for allocating and determining demand costs, each of which has received support from some rate experts. No method is universally accepted, although some definitely have more merit than others.

See NARUC Manual, p. 25.

FEA witness Collins' proposal related to design day could be appropriate for a utility located in a colder climate that builds and operates its system to serve high and extended winter peaks that occur due to increased residential gas heating load. This type of system would be sized to meet a high but intermittent demand. However, to apply this same method to FCG fails to consider that approximately 49% of FCG's customers are located in Miami, Florida, a geographical area with temperatures that are consistently warmer than most other parts of the United States during peak winter months. For example, over the past 20 years, the monthly average temperature for Miami during January, historically the coldest month, has been 68.5 degrees. The three coldest days in the past 20 years all occurred in 2010, with a low temperature of 36 degrees each. However, the average daily low temperature in January over the same period was 61.5 degrees. Thus, FCG's system experiences much less heating load and is not as peak sensitive as a gas utility in a colder climate.

Additionally, FEA witness Collins' allocation method does not account for the actual utilization of the mains by the different classes of customers. Although residential customers make up 93% of the customers on FCG's system, the residential customers flow only 14% of the gas on FCG's system on an annual basis, while CI customers flow 86% of the gas on FCG's system on an annual basis[1] as shown in Exhibit TBD-7. Despite the fact that the CI customers' use of the FCG system is over six times that of the residential customers, FEA witness Collins' cost of service would allocate 70% of

[1] Excluding throughput by KDS customers that are on special contracts and not impacted by the proposed base rate increase.

the total revenue requirements to the residential customers while only 29% would be assigned to the CI classes as shown in Exhibit TBD-8. Clearly, FEA witness Collins' method would inappropriately shift costs away from those customers who use FCG's system the most during the year to the residential customers who use it the least.

Q. What allocation methodology did FCG use for capacity costs including distribution mains?

A. FCG used the P&A allocation methodology for all capacity costs embedded in the COSS model. I note that this allocation methodology is part of the Minimum Filing Requirements Schedule H required by the Florida Public Service Commission ("Commission"). This method, as calculated by FCG, equally weights the highest monthly usage for each rate class (the non-coincident peak demand) with the average usage of each rate class.

Q. Why is FCG's P&A allocation methodology for capacity costs appropriate?

A. The use of the P&A allocation methodology in FCG's COSS assigns 37% of costs to residential customers and 62% to the commercial and industrial classes as shown in Exhibit TBD-8. When considering the actual usage of the system by the residential classes is only 14% and the actual usage of the system by the CI customer classes is 86%, this cost allocation methodology, while not exact, better reflects how customers use FCG's system than a design day approach and is more consistent with cost causation theory.

IV. FINAL REVENUE ALLOCATIONS

Q. Does FEA witness Collins agree with FCG's proposed class revenue allocations?

A. No. On page 19 of his testimony, FEA witness Collins asserts that FCG's final class revenue allocations are based solely on its COSS study, which he contends should be rejected because it applied the P&A allocation method. He then recommends a class revenue allocation based on the results of his proposed COSS methodology, which used a methodology that included design day demand and number of customers, to allocate capacity costs. For the reasons explained previously, FEA witness Collins' proposed COSS methodology is not appropriate and should be rejected.

Q. Is FEA witness Collins correct that FCG's final class revenue allocation was based solely on its COSS?

A. No. While the equalized COSS was the starting point for final revenue allocations, other factors were considered, such as the impact of past cost of service allocations, the concept of gradualism in relation to revenue increases, parity by rate class, and the unique competitive concerns of FCG's CI customer classes as explained in my direct testimony.

FCG's approach to final rate design cost allocations is consistent with guidance from the NARUC Manual, which states that "Cost allocation studies should only be utilized as a general guide or starting point for rate design." *See* NARUC Manual, p. 20. The NARUC Manual further explains:

> First it should be recognized that rate design does not occur in a vacuum. The utility likely has an existing rate design which must be considered. Although states prohibit undue discrimination in setting utility rates, the utility's product must compete with

> alternative energy sources in the marketplace. These and other similar factors will likely affect the viewpoint and potential results of the rate designer.

See NARUC Manual, p. 18.

Q. Why are FCG's proposed class revenue allocations appropriate?

A. As described on page 23 of my direct testimony, "FCG has set the proposed revenues by rate class to improve parity among the rate classes to the greatest extent possible, while following the Commission practice of gradualism and considering the competitive nature of the natural gas industry." My direct testimony goes on to describe that the proposed percentage increases were limited to lessen the impacts to customer bills. Additionally, even though large CI customer classes were well below parity, final rate increases were limited to consider these customers' ability to use alternative fuel sources or to bypass or relocate their businesses should gas service become uneconomical.

Q. What factors influence rate design for a natural gas distribution company like FCG?

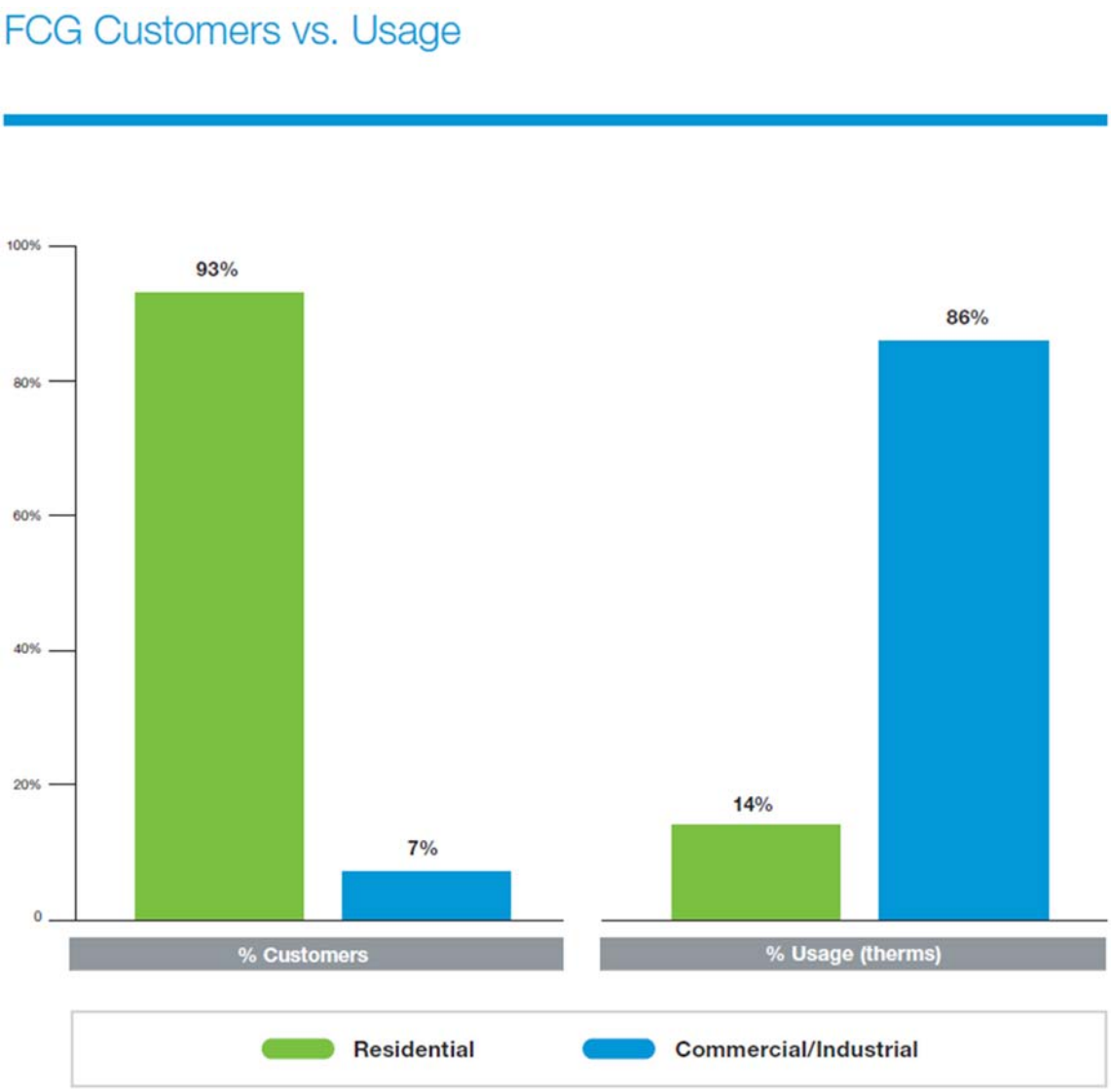
A. As previously stated, rate design is a careful balance of factors, including: cost of service results and parity; current rates and their underlying cost allocations; bill impacts to average customers in each class; and the competitive nature of the gas distribution business concerning customers with the ability to switch fuels or bypass.

Q. Why is FEA witness Collins' proposed revenue allocation not appropriate for FCG?

A. As stated previously, FCG's residential customers make up 93% of FCG's total customer count, but flow only 14% of the gas on FCG's system on an annual basis, while CI customers flow 86% of the gas on FCG's system on an annual basis (see

Figure 1 below). As shown in Exhibit TBD-9, under FEA witness Collins' final proposed allocations, most residential customer classes would receive an increase of 66.64%, while the CI classes containing FEA's customers would receive only 24.81% increases. By taking a more balanced approach, FCG's final rate allocations propose increases that range from 34% to 55.7% for the residential class and from 44.1% to 53.8% for the CI classes.

Figure 1



V. IDENTIFIED ADJUSTMENTS TO FCG'S REVENUE REQUIREMENTS

Q. Has FCG identified adjustments that should be made to the cost of service or rate design for the 2023 Test Year?

A. Yes. FCG determined that there was a formula error in the calculation of present revenues for the Load Enhancement Service ("LES"), that when corrected resulted in an increase of $155,495 in the present operating revenue forecast as reflected in the COSS. While the present operating revenues were adjusted in the COSS, the associated change in income tax expense was not adjusted. Therefore, the correct impact of the adjustment to present operating net income in the COSS should have been an increase of $116,085. Thus, the net impact of these adjustment to the COSS is a decrease of $39,410 to present net operating income. To reflect the impacts of this correction, FCG filed a Notice of Identified Adjustments on August 16, 2022, which is provided as Exhibit LF-10 to the rebuttal testimony of FCG witness Fuentes.

Subsequently, FCG identified an additional adjustment to present revenues. When forecasting miscellaneous service revenues, FCG inadvertently included $16,071 for forecasted billing adjustments that should be removed from the 2023 Test Year present operating revenues. The impact of this adjustment will be an increase to FCG's calculated revenue deficiency of $11,998 for the 2023 Test Year, which is reflected in FCG's updated 2023 Test Year Recalculated Revenue Requirements provided as Exhibits LF-11 and LF-12 to the rebuttal testimony of FCG witness Fuentes.

Q. Does this conclude your rebuttal testimony?

A. Yes.

(Transcript continues in sequence in Volume 2.)

CERTIFICATE OF REPORTER

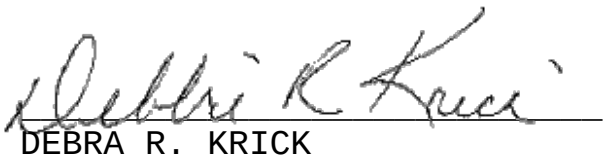
STATE OF FLORIDA)
COUNTY OF LEON)

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
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