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October 3, 2022

*VIA ELECTRONIC FILING*

Mr. Adam J. Teitzman  
Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

**Re: Docket No. 20220069-GU**  
**Florida City Gas – Rebuttal Testimony of Ned W. Allis**


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Dear Mr. Teitzman:

Enclosed for filing on behalf of Florida City Gas (“FCG”) in the above-referenced docket is the **Rebuttal Testimony of FCG witness Ned W. Allis**, together with Exhibits NWA-6 through NWA-7.

A copy of this filing is being served in accordance with the attached certificate of service. If you or your staff have any question regarding this filing, please contact me at (561) 691-7144.

Respectfully submitted,

  
\_\_\_\_\_  
Christopher T. Wright  
Authorized House Counsel No. 1007055

Enclosures

Cc: Ken Hoffman

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Florida Power & Light Company  
700 Universe Boulevard, Juno Beach, FL 33408

**CERTIFICATE OF SERVICE**

20220069-GU

**I HEREBY CERTIFY** that a true and correct copy of the foregoing has been furnished by electronic mail this 3rd day of October 2022 to the following parties:

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*s/ Christopher T. Wright*

\_\_\_\_\_  
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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **DOCKET NO. 20220069-GU**

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4 **FLORIDA CITY GAS**

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9 **REBUTTAL TESTIMONY OF**

10 **NED W. ALLIS**

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16 **Topics: Service Life Estimates, Account**  
17 **Specific Discussion**

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25 **Filed: October 3, 2022**

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1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Ned W. Allis. My business address is 207 Senate Avenue, Camp Hill, PA  
4 17011.

5 **Q. Did you previously submit direct testimony?**

6 A. Yes. On May 31, 2022, I submitted written direct testimony on behalf of Pivotal Utility  
7 Holdings, Inc. d/b/a Florida City Gas (“FCG” or the “Company”), together with  
8 Exhibits NWA-1 through NWA-5.

9 **Q. What is the purpose of your rebuttal testimony?**

10 A. My rebuttal testimony responds to the depreciation-related testimony of Office of  
11 Public Counsel (“OPC”) witness David J. Garrett. Specifically, I discuss the seven  
12 plant accounts and subaccounts for which OPC witness Garrett proposes longer service  
13 lives than my recommendations in FCG’s 2022 Depreciation Study submitted with my  
14 direct testimony as Exhibit NWA-1.<sup>1</sup> OPC witness Garrett does not recommend  
15 changes to the net salvage estimates or any other aspects of the depreciation study.  
16 Accordingly, my rebuttal testimony will focus on explaining why the service lives  
17 recommended in the 2022 Depreciation Study are more reasonable than those  
18 recommended by OPC witness Garrett.

19 **Q. Are you sponsoring any exhibits with your rebuttal testimony?**

20 A. Yes. I am sponsoring the following exhibits with my rebuttal testimony:

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<sup>1</sup> Three sets of these accounts and subaccounts were studied together, so OPC witness Garrett and I only differ in our analysis for four distinct service life estimates.

- 1 • Exhibit NWA-6 – Excerpts from FCG’s 2018 Depreciation Study in Docket  
2 No. 20170179-GU; and
- 3 • Exhibit NWA-7 – Excerpts from Mr. Garrett’s testimony provided as Exhibit  
4 TURN-18 in California Application A.21-06-021.

5

6 **II. SERVICE LIFE ESTIMATES**

7 **Q. Please explain the changes from the 2022 Depreciation Study recommended by**  
8 **OPC.**

9 A. OPC witness Garrett recommends changes to seven depreciable groups, which are  
10 summarized in the Table 1 below. Table 1 provides the estimates proposed by FCG  
11 and OPC, as well as the current estimate for each account. Several of these subaccounts  
12 were studied together and both OPC witness Garrett and I have made the same  
13 estimates for subaccounts studied together.<sup>2</sup> As a result, there are four distinct service  
14 life estimates for which OPC’s proposal differs from the Company’s.

---

<sup>2</sup> Specifically, Accounts 376.1 and 376.2 were studied together, Accounts 378 and 379 were studied together, and Accounts 380.1 and 380.2 were studied together. While OPC witness Garrett’s estimates for these accounts differ from mine, he has used the combined analysis for these pairings of accounts and he has recommended the same survivor curves for, as an example, Accounts 376.1 and 376.2. I have done the same.

1

**Table 1: Comparison of FCG and OPC Service Life Estimates**

<b>Account</b>	<b>Current Approved Estimates</b>	<b>FCG Proposed Estimates</b>	<b>OPC Proposed Estimates</b>
376.1, Mains - Steel	55-S3	65-R4	70-R3
376.2, Mains – Plastic	55-S3	65-R4	70-R3
378, M&R Sta. Eq. – General	30-S3	35-S3	45-S3
379, M&R Sta. Eq. – City Gate	35-S4	35-S3	45-S3
380.1, Services – Steel	45-S6	50-R2.5	55-R2.5
380.2, Services – Plastic	54-R2.5	50-R2.5	55-R2.5
383, House Regulators	30-S3	40-R2.5	47-R2

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As the table shows, the recommendations in the 2022 Depreciation Study for these accounts are, in most instances, longer than the current estimates adopted in FCG’s previous depreciation study (the “2018 Depreciation Study”) included with FCG’s last base rate case in Docket No. 20170179-GU. For the largest of these accounts (gas mains and gas services) as well as house regulators, my recommendations are for significantly longer lives than those adopted in the depreciation study that preceded the 2018 Depreciation Study (*i.e.*, the “2014 Depreciation Study” included in Docket No. 20140051-GU). For each of these accounts, OPC witness Garrett proposes to increase the service lives even further than what I have recommended. However, he does so with little support.

1 **Q. What support does OPC witness Garrett provide to support increasing the service**  
2 **lives for these accounts?**

3 A. OPC witness Garrett's support for each account is based on his interpretations of the  
4 Company's historical data. He does not provide any other factors that would support  
5 his longer lives over those I have recommended in the 2022 Depreciation Study.<sup>3</sup>

6 **Q. In your judgment, is FCG's historical service life data sufficient to support OPC**  
7 **witness Garrett's estimates over yours?**

8 A. No. While the Company has sufficient data to provide some degree of service life  
9 indications, the overall data set is available only for a relatively short period of time  
10 and does not provide definitive service life indications for many accounts. For any  
11 depreciation study, considerations other than the historical data should inform the  
12 service life recommendations, because depreciation involves forecasting the future  
13 (*e.g.*, the future service life experience and timing of future retirements) over many  
14 decades. Relying only on historical data implies that the future will be substantially  
15 similar to the past, which is not always a reasonable assumption. This is true even if  
16 there is extensive historical data available that provides fairly definitive indications of  
17 how long assets have survived in the past. If, however, the historical data set is more  
18 limited, which is the case for FCG, then it is even more important to properly consider  
19 other relevant factors.

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<sup>3</sup> As I will discuss later in this testimony, OPC witness Garrett does provide a few general arguments and discussions. However, these have no bearing on FCG's service life estimates, do not provide any basis to support his proposals, and are in many instances incorrect.



1 **Q. Can you further elaborate?**

2 A. Yes. Service life estimates should incorporate factors such as general knowledge of  
3 the property studied, information obtained from site visits and meetings with Company  
4 subject matter experts, and an understanding of estimates used for similar property for  
5 other utilities. However, the degree to which these inform the ultimate service life  
6 estimates depend on the availability of the historical data and the quality of the results  
7 of the analyses of these data, as well as the extent to which other factors are expected  
8 to result in the future being different from the past. For example, if no historical data  
9 is available, then one would have to rely solely on other factors, such as estimates for  
10 similar property for other utilities and information obtained from site visits and  
11 discussions with company personnel familiar with the property. If, instead, there were  
12 extensive historical data that encompassed the full life cycle of the property studied and  
13 the future were expected to be substantially similar to the past, then one could rely  
14 significantly on the statistical analysis of the historical data to develop reasonable  
15 service life estimates. Real-world applications are typically somewhere in between,  
16 with the determination of how much to rely on the historical data a function, at least in  
17 part, of the quality and quantity of available historical data.

18 **Q. To what extent was the historical data relied on in the previous depreciation study**  
19 **(i.e., the 2018 Depreciation Study)?**

20 A. For several accounts (including the largest plant accounts), the actuarial life analysis  
21 was not relied on in the 2018 Depreciation Study due to the length of time for which

1 data were available and the lack of definitive statistical indications.<sup>4</sup> Further, for  
2 several accounts, the service lives were increased in the 2018 Depreciation Study, at  
3 times by 10 years or more. These were fairly significant increases in service lives.

4 **Q. Given these considerations, what is, in your judgment, the most reasonable**  
5 **approach to the current study?**

6 A. The current study has four more years of data than were available for the 2018  
7 Depreciation Study. While this allows for a longer period to be available, the available  
8 data still only encompasses a relatively short 16-year period (2005 through 2020) and,  
9 for many of the accounts at issue, provides relatively limited indications of service life.  
10 As a comparison, I have performed depreciation studies for FCG’s parent company,  
11 Florida Power & Light Company (“FPL”). For the most recent study for FPL, data  
12 were available from 1941 through 2019 – a 79-year period – which is much more  
13 extensive when compared to the 16-year period available for FCG. FPL is also a larger  
14 utility than FCG, which means that there is more data available due to a higher level of  
15 annual activity and a larger asset base. As a result, more reliance could be placed on  
16 FPL’s data for its depreciation studies than would be the case for FCG. While judgment  
17 should still be exercised when estimating service lives for FPL, it is more critical for a  
18 company such as FCG.

19  
20 For these reasons, while I considered the statistical indications resulting from the  
21 actuarial life analysis of FCG’s data, the extent of available data necessitates giving

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<sup>4</sup> See, for example, pp. 32, 34, 36, 38, and 40 of Exhibit DAW-2 in Docket No. 20170179-GU, which is provided as Exhibit NWA-6.

1 other factors, such as those discussed above, more consideration than would be the case  
2 with a utility that had more data. An additional factor is the estimates made and  
3 approved by the Florida Public Service Commission (“Commission”) in prior  
4 depreciation studies for FCG. Given the limited historical data, and the uncertainty  
5 about FCG’s service lives that result, it is also reasonable to incorporate the concept of  
6 gradualism, in which changes in estimates occur gradually rather than all at once. This  
7 is an accepted and understood regulatory and forecasting principle and, indeed, OPC  
8 witness Garrett has recently incorporated the concept of gradualism for estimates he  
9 has made elsewhere.<sup>5</sup>

10  
11 Gradualism should consider estimates in previous studies and the extent to which  
12 service lives have increased. As I discuss later in this rebuttal testimony, particularly  
13 for the larger plant accounts, the service life estimates I recommend already represent  
14 increases when compared to the estimates used prior to the 2018 Depreciation Study.  
15 The further increases proposed by OPC are less gradual and represent significant  
16 changes in the time period between the 2014 Depreciation Study and current study.

17 **Q. Should gradualism only apply to service life estimates?**

18 A. No. If gradualism is applied inconsistently, then depreciation could be either too high  
19 or too low. Thus, the application of gradualism should also consider the net salvage  
20 estimates and be applied consistently because service life and net salvage estimates  
21 often have opposite impacts on depreciation (*e.g.*, longer service lives reduce

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<sup>5</sup> See, for example, page 59 of Mr. Garrett’s testimony provided as Exhibit TURN-18 in California Application A.21-06-021, which is provided as Exhibit NWA-7.

1 depreciation while more negative net salvage increases depreciation). For FCG, the  
2 historical net salvage data could support higher negative net salvage estimates than I  
3 have recommended in the 2022 Depreciation Study. I have applied a degree of  
4 gradualism to the net salvage estimates and have considered changes to service lives in  
5 a similar context.

6  
7 Further, as shown in Figure 1 on page 28 of my direct testimony,<sup>6</sup> the service lives I  
8 have recommended produce a significant reduction in depreciation expense of  
9 approximately \$2.4 million. While the data supports potentially greater changes for  
10 net salvage (and, in turn, a greater increase in depreciation) than I have recommended,  
11 my net salvage recommendations produce a smaller increase of \$1.8 million. Indeed,  
12 my total recommendations for both service lives and net salvage produce a decrease in  
13 depreciation expense of approximately \$600 thousand. While this is more than offset  
14 by the impact of updating the depreciation study to use current plant and accumulated  
15 depreciation balances (*i.e.*, something beyond the control of the depreciation study),  
16 the fact remains that the overall service life and net salvage recommendations result in  
17 a net decrease in depreciation expense.

18  
19 If we were to reconsider the estimates I have made and increase service lives further as  
20 proposed by OPC witness Garrett, I think the fact that the changes in net salvage also  
21 incorporated gradualism needs to be considered. If we are to incorporate less  
22 gradualism than used for my recommendations, then perhaps both longer lives and

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<sup>6</sup> See direct testimony of FCG witness Allis, p. 28.

1 more negative net salvage would be appropriate. In the overall context of gradualism  
 2 and previous depreciation studies, as well as the other factors discussed above, I believe  
 3 my recommendations are more reasonable than those proposed by OPC witness  
 4 Garrett. This is particularly true once we recognize that the service life estimates have  
 5 already increased significantly over the past eight years.

6 **Q. How do the recommendations in this case compare to prior depreciation studies?**

7 A. Table 2 below provides, for the accounts contested by OPC witness Garrett, a  
 8 comparison of the service life estimates approved by the Commission in each of the  
 9 previous two depreciation studies (the 2014 Depreciation study and 2018 Depreciation  
 10 Study), as well as those FCG proposed in the 2018 Depreciation Study, to the estimates  
 11 I have made and those recommended by OPC witness Garrett in this docket.

12 **Table 2: Comparison of Service Life Estimates**

<b>Account</b>	<b>2014 Study Approved</b>	<b>2018 Study Proposed</b>	<b>2018 Study Approved</b>	<b>2022 FCG Proposed</b>	<b>2022 OPC Proposed</b>
376.1/376.2, Mains	42/40	55	55	65	70
378/379, M&R	30	30/35	30/35	35	45
380.1/380.2, Services	35/34	45	45/54	50	55
383, House Regulators	25	30	30	40	47

13

14 **Q. What conclusions do you draw from the analysis shown in Table 2?**

15 A. As Table 2 demonstrates, the recommendations I have made in the 2022 Depreciation  
 16 study are, for several of these accounts, for significantly longer lives than those  
 17 approved in the 2014 Depreciation Study. For example, my recommendations for gas  
 18 mains are for an average service life that is close to 25-years longer than those approved  
 19 in the 2014 Depreciation Study. For gas services, the average service lives I have

1 recommended are about 15 years longer than those approved in the 2014 Depreciation  
2 Study. These are the largest plant accounts, and for both types of assets the increases  
3 in service lives are fairly large given that it has only been eight years between the 2014  
4 Depreciation Study and 2022 Depreciation Study. Keep in mind there has been a  
5 relatively limited amount of historical data available and, as such, there is a relatively  
6 limited statistical basis for increasing these lives.

7 **Q. What support does OPC witness Garrett provide for his recommendations?**

8 A. While OPC witness Garrett provides discussion of legal standards and provides a few  
9 general criticisms of the Company, the only Company-specific information he  
10 discusses is the statistical results. I will respond to his more general arguments and  
11 criticisms and, in particular, will explain that his positions on estimating service lives  
12 is inconsistent with depreciation textbooks and best practices. Further, as discussed  
13 above, because the historical data is relatively limited, it is even more important to  
14 consider additional factors – factors which OPC witness Garrett does not even discuss  
15 in his testimony.

16 **Q. Do any of the general discussions in OPC witness Garrett’s testimony have any  
17 bearing on the specific issue of FCG’s proposed depreciation rates?**

18 A. No. As I have discussed previously and shown in Figure 1 on page 28 of my direct  
19 testimony, there can be no argument that FCG’s proposed depreciation rates are  
20 excessive. The recommended service lives and net salvage actually reduce  
21 depreciation expense from the estimates currently approved by the Commission and,  
22 as a result, should not be considered excessive (since, presumably, the Commission did  
23 not approve excessive depreciation rates in the 2018 Depreciation Study).

1 Further, Mr. Garrett’s discussion is largely identical to the general discussion he  
2 includes in almost every depreciation-related testimony he has submitted over the past  
3 five years in proceedings in which I or my firm have participated. Indeed, as evidence  
4 that his arguments have no specific relevance to FCG, his discussion erroneously refers  
5 to the Company as “Piedmont,” to me as “Mr. Watson,” and cites to the wrong case  
6 and someone else’s testimony to support his unfounded and incorrect allegation that  
7 the basis for my recommendations are that “[Company] employees have simply told  
8 the Company’s independent depreciation expert how long they think the Company’s  
9 assets will survive...”<sup>7</sup> Clearly, the general discussions OPC witness Garrett has  
10 provided are not based on anything specific to FCG and should have no bearing on the  
11 appropriate service life estimates for the Company.

12  
13 Further, OPC witness Garrett’s general discussions and criticisms are both incorrect  
14 and irrelevant to the issue of selecting the most reasonable service lives. A review of  
15 his testimony makes it clear that OPC witness Garrett has given little, if any,  
16 consideration to any Company-specific information or other factors that impact the  
17 Company’s service lives, with the exception of the statistical analysis of sixteen years  
18 of data. For example, OPC witness Garrett makes the following statement:

19 Generally, for the accounts in which I propose a longer service life,  
20 that proposal is based on the objective approach of choosing an Iowa  
21 curve that provides a better mathematical fit to the observed  
22 historical retirement pattern derived from the Company’s plant  
23 data.<sup>8</sup>

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<sup>7</sup> See direct testimony of OPC witness Garrett filed on August 26, 2022, pp. 89-90.

<sup>8</sup> See direct testimony of OPC witness Garrett, p. 88, lines 15-18.

1 There are several issues with this. First, OPC witness Garrett’s statement is not actually  
2 true with respect to FCG. For the largest account (gas mains), OPC witness Garrett’s  
3 estimate is not a better mathematical fit than my recommendation and so a consistent  
4 use of the “objective” approach espoused by OPC witness Garrett would result in my  
5 estimate rather than his.<sup>9</sup> Second, given the extent of the available historical data,  
6 additional support is needed and additional information should be considered –  
7 particularly given that my recommendations already represent significantly longer lives  
8 than were used only eight years ago. Finally, his overall approach is incorrect.  
9 Estimating service lives is not, and cannot be, a purely “objective” process.

10

11 Consider, as an example, the following statement from OPC witness Garrett’s  
12 testimony in which he describes his approach. He is asked if he always selects the  
13 “mathematically best-fitting curve.” While OPC witness Garrett claims that he does  
14 not always do so, he states the following:

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

24 OPC witness Garrett’s testimony gives the impression that mathematical results should  
25 generally be accepted and instances in which the proper service life estimate is not a

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<sup>9</sup> For example, for the full range of data points in the original life table, the residual measure for the Company’s proposed 65-R4 curve is 1.73, as compared to a residual measure of 2.04 for OPC witness Garrett’s proposed 70-R3.



1 best “mathematical fit” would be a relatively unusual exception (such as if there is  
2 insufficient data). His reasoning for reliance on mathematical results is that doing so  
3 promotes “objectivity.” While I recognize the intuitive appeal of objective results,  
4 presumably to remove uncertainty and make the job of estimating service lives easier,  
5 the objectivity sought by OPC witness Garrett is neither realistic nor desirable in the  
6 development of a reasonable forecast of the future. It will, and does, produce  
7 unrealistic and unreasonable results, particularly in situations where the available  
8 historic data is limited, which is the case for FCG as explained above.

9 **Q. Do authoritative sources such as the National Association of Regulatory Utility  
10 Commissioners (“NARUC”) explain the importance of a subjective component to  
11 estimating service lives?**

12 A. Yes. NARUC explains that there must be a subjective component to estimating service  
13 lives. Chapter XIII of NARUC’s publication *Public Utility Depreciation Practices*,  
14 entitled “Actuarial Life Analysis” discusses and emphasizes the subjective nature of  
15 the process of estimating service lives. NARUC starts this chapter by explaining that  
16 the analysis of historical data is only one part of the process of estimating service lives:

17 Actuarial analysis objectively measures how the company has  
18 retired its investment. The analyst must then judge whether this  
19 historical view depicts the future life of the property in service. The  
20 analyst takes into consideration various factors, such as changes in  
21 technology, services provided, or capital budgets.<sup>10</sup>

22 NARUC also explains that the process of estimating service lives must go beyond any  
23 objective measurement of the past. In describing the determination of a survivor curve  
24 estimate (referred to as the “projection life” in this passage), NARUC states:

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<sup>10</sup> NARUC, *Public Utility Depreciation Practices*, (1996), p. 111.

1 The projection life is a projection, or forecast, of the future of the  
2 property. Historical indications may be useful in estimating a  
3 projection life curve. Certainly, the observations based on the  
4 property's history are a starting point. Trends in life or retirement  
5 dispersion can often be expected to continue. Likewise, unless there  
6 is some reason to expect otherwise, stability in life or retirement  
7 dispersion can be expected to continue, at least in the near term.

8 Depreciation analysts should avoid becoming ensnared in the  
9 mechanics of the historical life study and relying solely on  
10 mathematical solutions. The reason for making an historical life  
11 analysis is to develop a sufficient understanding of history in order  
12 to evaluate whether it is a reasonable predictor of the future. The  
13 importance of being aware of circumstances having direct bearing  
14 on the reason for making an historical life analysis cannot be  
15 understated. These circumstances, when factored into the analysis,  
16 determine the application and limitations of an historical life  
17 analysis.<sup>11</sup>

18 Thus, NARUC strongly advises against the approach used by OPC witness Garrett,  
19 stating clearly that “relying solely on mathematical solutions” should be avoided.  
20 NARUC further elaborates on the need for a subjective component to forecasting  
21 service lives:

22 A depreciation study is commonly described as having three periods  
23 of analysis: the past, present, and future. The past and present can  
24 usually be analyzed with great accuracy using many currently  
25 available analytical tools. The future still must be predicted and  
26 must largely include some subjective analysis. Informed judgment  
27 is a term used to define the subjective portion of the depreciation  
28 study process. It is based on a combination of general experience,  
29 knowledge of the properties and a physical inspection, information  
30 gathered throughout the industry, and other factors which assist the  
31 analyst in making a knowledgeable estimate.

32 The use of informed judgment can be a major factor in forecasting.  
33 A logical process of examining and prioritizing the usefulness of  
34 information must be employed, since there are many sources of data  
35 that must be considered and weighed by importance. For example,  
36 the following forces of retirement need to be considered: Do the past  
37 and current service life dispersions represent the future? Will scrap  
38 prices rise or fall? What will be the impact of future technological

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<sup>11</sup> NARUC, *Public Utility Depreciation Practices*, (1996), p. 126 (emphasis added).

1           obsolescence? Will the company be in existence in the future? The  
2 analyst must rank the factors and decide the relative weight to apply  
3 to each. The final estimate might not resemble any one of the  
4 specific factors; however, the result would be a decision based upon  
5 a combination of the components.<sup>12</sup>

6           NARUC also explains:

7           The use of informed judgment sometimes becomes a point of  
8 controversy in the regulatory setting because some of the analyst's  
9 opinions cannot be quantified or easily supported. It is sometimes  
10 impossible to pinpoint the reasons for making a decision that  
11 diverges from a company's historical data or standard reference  
12 material. For instance, limited retirement data show that a new  
13 transformer design appears to have significantly shorter service life;  
14 this would result in a significantly higher depreciation rate. Since  
15 this is a new design, there is no field experience to apply to the  
16 estimate, other than the scant data. Should the rate be based solely  
17 on the data? In the other extreme, should this preliminary data be  
18 given little weight and should the rate be based upon other types of  
19 transformers as reasonable indicators of the life of this new design?  
20 It is the analyst's responsibility to apply any additional known  
21 factors that would produce the best estimate of service life. The  
22 analyst's judgment, comprised of a combination of experience and  
23 knowledge, will determine the most reasonable estimate.

24           In summary, several factors should be considered in estimating  
25 property life. Some of these factors are:

- 26           1) Observable trends reflected in historical data;
- 27           2) Potential changes in the type of property installed;
- 28           3) Changes in the physical environment;
- 29           4) Changes in management requirements;
- 30           5) Changes in government requirements; and
- 31           6) Obsolescence due to the introduction of new technologies.<sup>13</sup>

32   **Q.       Have you incorporated the various factors discussed by NARUC into your**  
33   **estimates?**

34   A.       Yes. I conducted a site visit earlier this year and had discussions with Company  
35   subject matter experts to familiarize myself with the Company's assets. The

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<sup>12</sup> NARUC, *Public Utility Depreciation Practices*, (1996), p. 128.

<sup>13</sup> NARUC, *Public Utility Depreciation Practices*, (1996), p. 129.

1 information and notes I obtained were included in my workpapers produced in FCG's  
2 response to OPC's First Request for Production of Documents, Request No. 7, and a  
3 discussion on each account is included in Part X of my 2022 Depreciation Study. In  
4 addition, throughout my career, I have participated in over a hundred depreciation  
5 studies for utilities throughout the country. The information obtained from this  
6 experience has also been incorporated into my recommendations.

7 **Q. Has OPC incorporated these factors into their recommendations?**

8 A. No. Not only does OPC witness Garrett not discuss these factors in his testimony  
9 related to his service life estimates, his proposal to increase the lives for gas  
10 distribution assets beyond the Company's recommendation makes clear these factors  
11 have not been given due consideration.

12  
13 Further, OPC witness Garrett describes his differences from my proposals as follows:

14 Generally, for the accounts in which I propose a longer service life,  
15 that proposal is based on the objective approach of choosing an Iowa  
16 curve that provides a better mathematical fit to the observed  
17 historical retirement pattern derived from the Company's plant  
18 data.<sup>14</sup>

19 Again, estimating service lives is not and should not be a purely mathematical exercise  
20 and must incorporate some degree of subjectivity. OPC witness Garrett's process for  
21 estimating service lives, as described in his testimony, does not follow the proper  
22 approach of incorporating informed judgment. It is particularly important for FCG's  
23 current case, due to the extent of the available data.

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<sup>14</sup> See direct testimony of OPC witness Garrett, p. 88, lines 15-18.

1 **Q. How does one determine which data points should be excluded or given less**  
2 **emphasis in the analysis?**

3 A. Informed judgment is required to make such a determination, but several factors should  
4 be considered. One factor is the dollar level of exposures for later ages. As OPC  
5 witness Garrett points out in his testimony, later ages are normally given less weight in  
6 the analysis when there are far fewer exposures available than for earlier parts of the  
7 curve.<sup>15</sup> Often, once exposures hit 1% or less of the exposures at age 0, the data  
8 becomes less reliable than data from earlier ages. However, the 1% cutoff is a general  
9 guideline that can be explored and analyzed by the analyst when deciding where to  
10 make a T-Cut of the Original Life Table (“OLT”) curve. There are often instances  
11 when this guideline is not as reasonable, such as when it eliminates data points that  
12 provide important information about the survivor characteristics for the account.

13  
14 Another factor to consider is the ages where the percent surviving ranges from 80% to  
15 20%. These data points are considered to provide the most significant retirement  
16 activity and the most representative of the survivor characteristics for a life table. This  
17 is because the middle portion of the curve is where the majority of retirements occur.  
18 There are relatively few retirements at the “head” of the curve, and relatively few  
19 retirements at the “tail”. In the development of survivor curves for Bulletin 125 of the  
20 Iowa Engineering Experiment Station, Robley Winfrey (who developed the Iowa  
21 Survivor curves) provides analysis showing that when performing curve fitting, the

---

<sup>15</sup> See direct testimony of OPC witness Garrett, p. 87, lines 20-21.

1 emphasis should be placed not on the first 20% of the curve or the last 20%, but rather  
2 on the information in the middle years. Mr. Winfrey's analysis is based on the probable  
3 error involved in fitting a smooth survivor curve to an observed life table with varying  
4 percentages surviving. He concludes:

5           When survivor curves are to be classified according to the 18 types  
6           and the probable average life to be determined, it is recommended  
7           that more weight be given to the middle portion of the survivor  
8           curve, say that between 80 and 20 percent surviving, then to the  
9           forepart or extreme lower end of the curve. The inner section is the  
10          result of greater numbers of retirements and also it covers the period  
11          most likely the normal operation of the property.<sup>16</sup>

12 In summary, there are a number of factors to be considered and these should be  
13 reviewed based on the specifics of each account. Additionally, visual curve matching  
14 can allow one to give more or less consideration to some ranges of data points, even if  
15 these points are not excluded from the analysis. I will discuss these considerations for  
16 each account at issue in the next section.

17 **Q. How do these factors inform the analysis for FCG?**

18 A. In many instances, the original life tables resulting from FCG's data either only decline  
19 slightly below 80% surviving (*e.g.*, to around 70% surviving) or do not decline below  
20 80% surviving at all. As a result, there is limited data for the middle portion of the  
21 curve (*i.e.*, between 80% and 20% surviving). This means both that the statistical  
22 analysis provides limited indications of service life and that excluding later data points  
23 (*e.g.*, those beyond the 1% threshold) may effectively eliminate the middle portion of  
24 the curve. These factors provide further reason that additional factors and judgment  
25 must be incorporated into the service life estimates.

---

<sup>16</sup> Bulletin 125, Iowa Engineering Experience, Winfrey, Robley, 1935, page 91.

1 **III. ACCOUNT-SPECIFIC DISCUSSION**

2 **Q. Please discuss Accounts 376.1, Mains – Steel and 376.2, Mains – Plastic.**

3 A. These two subaccounts were studied together and both OPC witness Garrett and I  
4 recommend that both subaccounts use the same service life estimate. My  
5 recommendation is the 65-R4 survivor curve, which is an increase in average service  
6 life of 10 years when compared to the current estimate and an increase of 23 years for  
7 steel mains and 25 years for plastic mains when compared to the estimates adopted in  
8 FCG’s 2014 Depreciation Study. OPC witness Garrett’s proposal to use the 70-R3 and  
9 increase the life further appears to only be based on his review of the statistical results.  
10 However, my recommended 65-R4 survivor curve for this account is a better  
11 mathematical fit than his recommendation.<sup>17</sup> Thus, OPC witness Garrett has provided  
12 no basis to support the conclusion that his estimate is more appropriate than mine.

13  
14 OPC witness Garrett is also incorrect to emphasize the “upper and middle portions of  
15 the OLT curve”<sup>18</sup> and his discussions on this point are inconsistent with accepted  
16 depreciation practices. First, he has not actually emphasized the middle portion of the  
17 curve, which, as discussed above, is generally understood to be the portion in more of  
18 the 80% to 20% surviving range. Contrary to this understanding, the portion of the  
19 curve OPC witness Garrett emphasizes does not decline below 80% surviving. Indeed,  
20 there is barely any middle portion of the curve at all, as few data points decline below

---

<sup>17</sup> The residual measure of the Company’s proposed 65-R4 curve is 1.73, as compared to a residual measure of 2.04 for OPC witness Garrett’s proposed 70-R3 against the overall curve. At the 1% threshold, the residual measure of the Company’s curve is 1.65, as compared to OPC witness Garrett’s 1.90 curve.

<sup>18</sup> See direct testimony of OPC witness Garrett, p. 91, lines 7-10.

1 80% surviving.<sup>19</sup> Second, by focusing more on the points before age 50, OPC witness  
2 Garrett gives little consideration to the only points that do fall within the 80% to 20%  
3 range. Finally, the fact that so few data points decline into this range means that we  
4 need to consider the information provided by the handful of points that do decline to  
5 this range. These data points show a sharper decline in the survivor curve than  
6 incorporated into OPC witness Garrett's estimate.

7  
8 In summary, all of this information supports my recommended 65-R4 survivor curve  
9 over OPC witness Garrett's proposed 70-R3 survivor curve estimate. Again, the 65-  
10 R4 survivor curve is the better mathematical fit of the data and is more reasonable  
11 because OPC witness Garrett's proposal would represent a 30-year increase in average  
12 service life from the estimates adopted in the 2014 Depreciation Study.

13 **Q. Please discuss Account 378, Measuring and Regulating Station Equipment –**  
14 **General and Account 379, Measuring and Regulating Station Equipment – City**  
15 **Gate.**

16 A. For these accounts, there have been few recorded retirements over the period of  
17 historical data available. The statistical life analysis provides limited information as a  
18 result. Absent more definitive data, I think it is more reasonable to not make very  
19 significant changes to the service lives. The current estimates are within the range of  
20 other utilities in the gas industry. Further, given the location, climate, and configuration  
21 of FCG's assets in these accounts, in my judgment we should expect the service lives

---

<sup>19</sup> I note that this is not uncommon for gas companies, and particularly newer gas companies. Plastic mains as a technology are only about fifty years old – less than the average service life typically estimated for most gas utilities. As a result, there is little, if any, historical experience plastic mains that decline into the 80% to 20% surviving portion of the curve.



1 for these accounts to be closer to the lower end of the industry range. In particular,  
2 FCG's measuring and regulating stations are typically outdoors, above ground, and  
3 exposed to the fairly harsh operating conditions in Florida (particularly in terms of  
4 precipitation and proximity to the ocean). In my experience, other above-ground assets  
5 for Florida utilities have typically experienced lives closer to the shorter end of the  
6 typical industry range. I think this provides a more reasonable basis for FCG's  
7 estimates until more extensive data is available. Accordingly, OPC witness Garrett's  
8 proposal to increase the average service lives an additional ten years is not appropriate  
9 at this time.

10 **Q. Please discuss Account 380.1, Services – Steel and Account 380.2 – Services –**  
11 **Plastic.**

12 A. As with the previous two accounts, the historical data does not provide definitive  
13 indications of service life. The data does not decline below 70% surviving and most  
14 of the significant data points in terms of exposures remain above 80% surviving. My  
15 estimate is a five-year increase over the recommendation in the 2018 Depreciation  
16 Study. It is also a 15-year increase in average service life for steel services and a 16-  
17 year increase for plastic services when compared to the estimates adopted in the 2014  
18 Depreciation Study. In my judgment, it is unreasonable to increase the service life  
19 further, and a more gradual approach is most reasonable until more data is available.

20 **Q. Please discuss Account 383, House Regulators.**

21 A. For this account, I recommend the 40-R2.5 survivor curve, which is an increase in the  
22 average service life of ten years when compared to the current estimate and an increase  
23 of 15-years when compared with the estimate adopted in the 2014 Depreciation Study.

1 I believe these are already fairly significant increases in service life over a relatively  
2 short period of time. Further, house regulators and other property at customer locations  
3 are often replaced when a meter is replaced (although this does not always occur every  
4 time a meter is replaced). House regulators are also often replaced when services are  
5 replaced. The 40-R2.5 survivor curve I have recommended has twice the average  
6 service life as gas meters and an average service that is ten years less than gas services.  
7 This is, in my judgment, an overall reasonable approach. In contrast, OPC witness  
8 Garrett's proposal is considerably more than twice the average service life for meters.  
9 It is also longer than his estimate for Account 384, House Regulator Installations, an  
10 account for which I would expect a similar service life to house regulators. For these  
11 reasons, I do not believe his recommendations are as reasonable as mine.

12 **Q. Does this conclude your rebuttal testimony?**

13 A. Yes.

**FLORIDA CITY GAS COMPANY**  
**GAS UTILITY PLANT**  
**DEPRECIATION RATE STUDY**  
**AT JULY 31, 2018**



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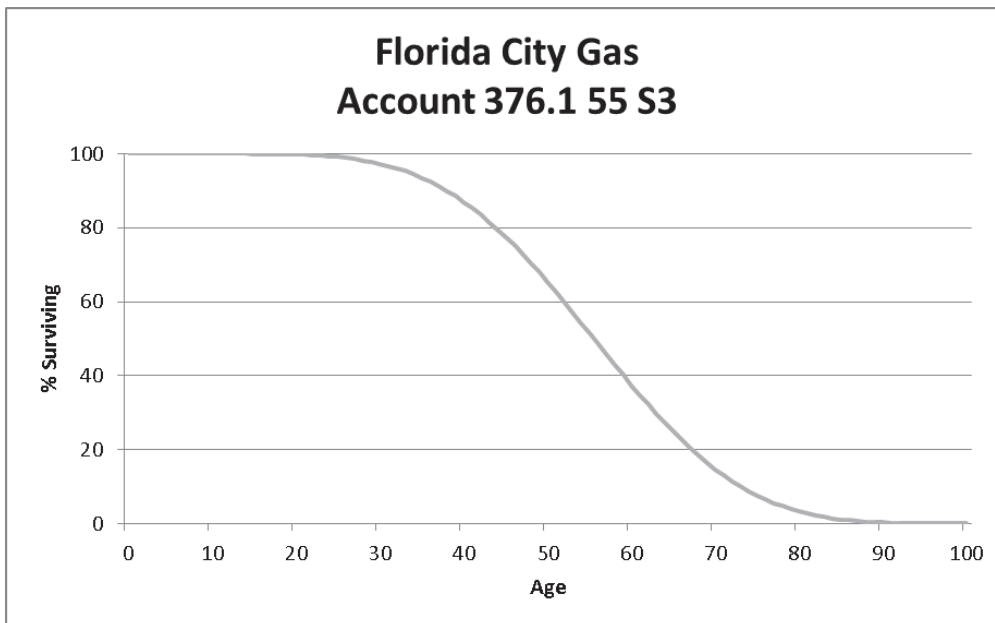
**FERC Account 376.1 Distribution Mains- Non Plastic**

ANALYSIS RESULTS			
Depreciable Property			
Account 376.1			
Distribution Mains Non Plastic			
Item	FPSC Approved	7/31/2018	Change
Investment	\$93,645,336	109,201,912	\$15,556,576
Iowa Curve	S3	S3	
Average Service Life	42	55	13
Theoretical Reserve	\$58,060,108	\$62,417,727	\$4,357,619
Book Reserve	\$58,376,553	70,680,741	12,304,188
Reserve Variance	\$316,445	\$8,263,014	\$7,946,569
Reserve Ratio	62.34%	64.72%	2.39%
Gross Salvage	0%	0%	0%
Removal Cost	25%	50%	25%
Net Salvage	-25%	-50%	-25%
Avg Whole Life Rate	3.0%	2.7%	-0.3%
AWL Expense (7/31/2018)	\$2,787,064	\$2,948,452	\$161,388
Average Remaining Life	18.7	34.0	15.3
ARL Rate	3.0%	2.5%	-0.5%
ARL Expense (7/31/2018)	\$2,809,360	\$2,730,048	(\$79,312)

**Life (55 S3)**

This grouping contains facilities, such as non-plastic (steel) distribution mains and associated equipment. The balance at July 31, 2018 is approximately \$109.0 million in this account. The approved life and curve is 42 S3. The prior study indications of significant changes continue. Plant investment increased by \$15.4 million or 16%. With a small experience band of 2005-2016, there is insufficient data for actuarial analysis. Company personnel report that a Safe Program is in place where the Company removes/replaces mains from the back of houses and put in front of houses. The Company will retire/replace services at the same time. The Safe Program began in 2015 and the Company's goal is to remove 25 miles per year of rear easement mains (mostly steel). Company personnel expect steel main to last longer than 40 years. Company personnel feel that the system is well maintained and mains have a better coating which will increase the life as a consequence. The design life is at least 50 years for steel and plastic mains. Company personnel indicated a life of 55 years is reasonable for this account. Based on the

information provided by Company personnel, the type of assets in this account, and judgment, this Study recommends increasing the life to 55 years and retaining the 5% dispersion. A graph of the proposed curve is shown below.



**Net Salvage (-50%)**

This grouping contains any salvage and removal cost of non-plastic distribution mains and associated equipment. The current authorized net salvage for this account is negative 25 percent. The prior study noted that the five year average was a negative 123 percent and the last 11 years were a negative 138 percent. However, to promote a smoother rate transition selections were moderated. In this study, the most recent experience with five-year and 10-year bands are negative 337 and negative 248 percent net salvage, respectively. Analysis indicates cost of removal does exceed salvage and is expected to continue. Similar to the prior study, the recommendation is to move toward the direction of this trend in removal cost, but again moderate the change. This Study recommends moving from a negative 25 percent to a negative 50 percent net salvage. The Company's next depreciation study will examine future trends in this account.

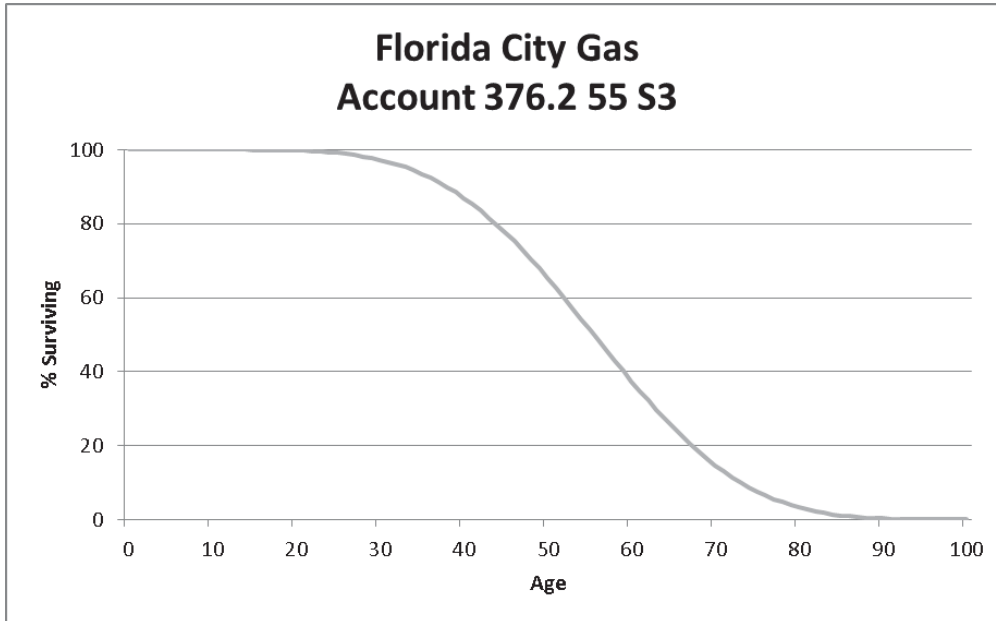
**FERC Account 376.2 Distribution Mains- Plastic**

ANALYSIS RESULTS			
Depreciable Property			
Account 376.2			
Distribution Mains Plastic			
Item	FPSC Approved	7/31/2018	Change
Investment	\$76,531,571	150,016,423	73,484,852
Iowa Curve	S3	S3	
Average Service Life	40	55	15
Theoretical Reserve	\$29,847,313	36,533,288	6,685,975
Book Reserve	\$28,006,786	40,242,440	12,235,654
Reserve Variance	(\$1,840,527)	\$3,709,152	\$5,549,679
Reserve Ratio	36.60%	26.83%	-9.77%
Gross Salvage	0%	0%	0%
Removal Cost	20%	40%	20%
Net Salvage	-20%	-40%	-20%
Avg Whole Life Rate	3.0%	2.5%	-0.5%
AWL Expense (7/31/2018)	\$2,295,947	\$3,750,411	\$1,454,463
Average Remaining Life	27.1	45.4	18.3
ARL Rate	3.1%	2.5%	-0.6%
ARL Expense (7/31/2018)	\$2,372,479	\$3,750,411	\$1,377,932

**Life (55 S3)**

This grouping contains plastic distribution mains and associated equipment. The projected balance at July 31, 2018 is approximately \$161.5 million in this account. The existing approved life is 40 years with an S3 dispersion curve. With a small experience band of 2005-2016, there is insufficient data for actuarial analysis. Company personnel report that Distribution Integrity Management Programs (DIMP) is reviewing replacement of early vintage plastic pipe, which incorporate 10% to 15% of the assets in those account. Company personnel feel that resins and installation practices (e.g. backfill) in the early years of plastic installation would produce a shorter life for earlier vintages. Company personnel see no indications of substandard installation practices and have identified no issues with the newer resins. Company personnel recommend moving to a longer life. They estimate that older vintage pipe which is 15% of the asset base would have a 35 year life and pipe of newer vintages which is 85% of the assets would have a 60 year life. This produces a composite estimate of 55-56 years. Based on the type of assets, the

recommendation of Account 3761, and Company input, this Study recommends moving to a life of 55 years with the S3 dispersion curve. A graph of the proposed curve is shown below.



**Net Salvage (-40%)**

This grouping contains any salvage and removal cost related to plastic distribution mains and associated equipment. The current authorized net salvage for this account is negative 20 percent. The most recent experience with five-year and 10-year bands are negative 141 and negative 83 percent net salvage, respectively. To move in the direction of this trend but moderate the change for a smooth rate transition, the Study recommends a change to negative 40 percent net salvage. The Company's next depreciation study will further examine future trends in this account.

**FERC Account 378 M & R Equipment- General**

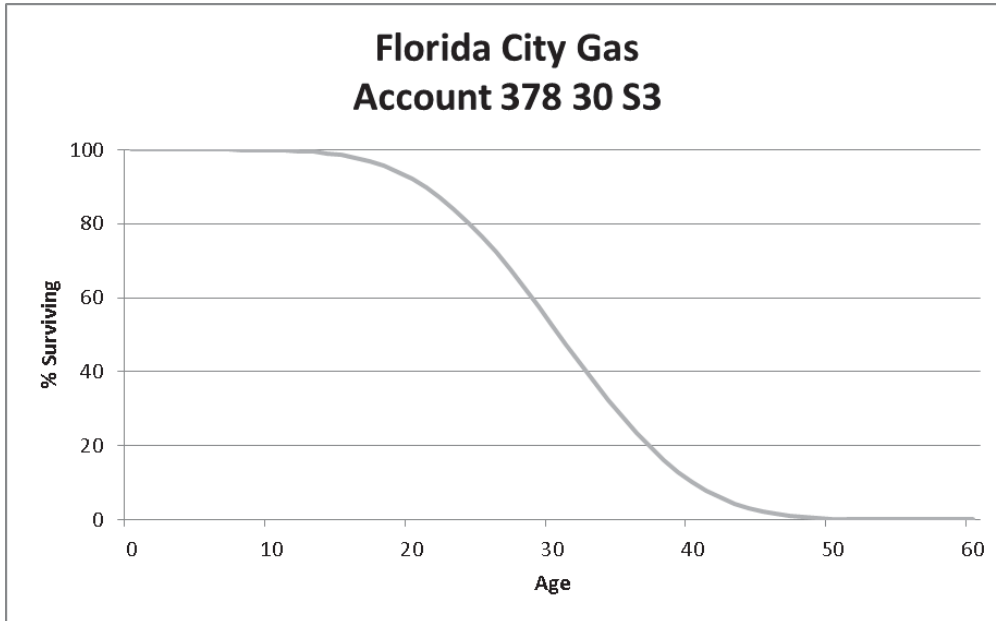
ANALYSIS RESULTS			
Depreciable Property			
Account 378			
M & R Equipment- General			
Item	FPSC Approved	7/31/2018	Change
Investment	\$158,524	3,009,723	2,851,199
Iowa Curve	S3	S3	
Average Service Life	30	30	0
Theoretical Reserve	\$12,048	\$179,100	167,052
Book Reserve	\$30,320	146,541	116,221
Reserve Variance	\$18,272	(\$32,558)	(\$50,830)
Reserve Ratio	19.13%	4.87%	-14.26%
Gross Salvage	0%	0%	0%
Removal Cost	0%	5%	5%
Net Salvage	0%	-5%	-5%
Avg Whole Life Rate	3.3%	3.5%	0.2%
AWL Expense (7/31/2018)	\$5,284	\$105,340	\$100,056
Average Remaining Life	27.5	28.3	0.8
ARL Rate	3.3%	3.5%	0.2%
ARL Expense (7/31/2018)	\$5,231	\$105,340	\$100,109

**Life (30 S3)**

This account contains M&R station piping, regulators, controls, odorizers and other equipment used in distribution measuring and regulating stations. The projected balance at July 31, 2018 is approximately \$1.2 million in this account. The approved life is 30 years with an S3 dispersion pattern. There have been no retirements recorded from 2004-2016. Company personnel report that the life of assets in some areas such as Brevard County is much shorter due to corrosion. Assets closer to the coast would have more corrosion problems than city gates. Company personnel anticipate a shorter life for equipment in this account in the 20-30 year range. Several assets at NASA were replaced at 25 years, and some assets have or will be relocated due to road widening or further development. There appears to be more physical retirements over the last 10 years than is reflected in the Company's Continuing Property Record. Operations stated the company is replacing district regulator stations every year. Company personnel recommend retaining the current



30 year life. Based on Company input, the type and mix of assets in this account, and judgment, this Study recommends retaining the existing 30-year life with the S3 dispersion. A graph of the proposed curve is shown below.



### Net Salvage (-5%)

This account contains any salvage and removal cost related to M&R station piping, regulators, controls, odorizers and other equipment used in distribution measuring and regulating stations. The current authorized net salvage for this account is 0 percent. There are no retirements during the period 2004-2016, thus insufficient Company data exists. A small amount of removal cost is usually produced when assets in this account are retired. To model this in the future, the Study recommends moving to negative 5 percent net salvage. The Company's next depreciation study will further examine future trends in this account.

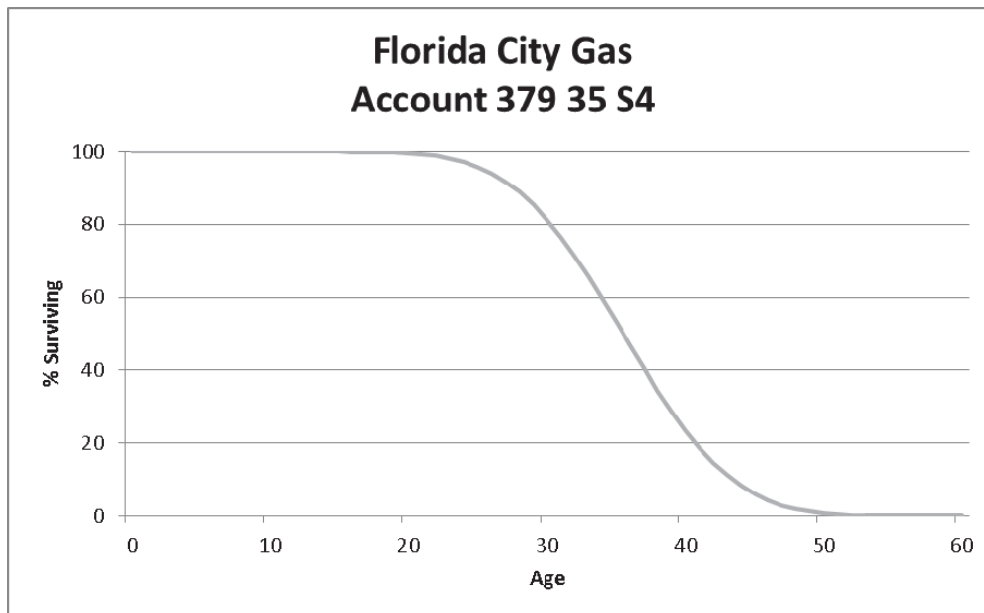
**FERC Account 379 M & R Equipment – City Gate**

ANALYSIS RESULTS			
Depreciable Property			
Account 379			
M & R Equipment- City Gate			
Item	FPSC Approved	7/31/2018	Change
Investment	\$6,326,025	10,001,911	3,675,886
Iowa Curve	S4	S4	
Average Service Life	30	35	5
Theoretical Reserve	\$3,549,532	\$4,070,101	520,569
Book Reserve	\$3,549,532	4,685,120	1,135,588
Reserve Variance	\$0	\$615,018	\$615,018
Reserve Ratio	56.11%	46.84%	-9.27%
Gross Salvage	0%	0%	0%
Removal Cost	0%	5%	5%
Net Salvage	0%	-5%	-5%
Avg Whole Life Rate	3.3%	3.0%	-0.3%
AWL Expense (7/31/2018)	\$210,867	\$300,057	\$89,190
Average Remaining Life	13.2	21.4	8.2
ARL Rate	3.3%	2.7%	-0.6%
ARL Expense (7/31/2018)	\$208,759	\$270,052	\$61,293

**Life (35 S4)**

This account consists of M&R station piping, regulators, controls, odorizers and other equipment used in city gate distribution measuring and regulating stations. The projected at July 31, 2018 is approximately \$10.0 million in this account. The approved life is 30 years with the S4 dispersion curve. There are too few retirements to make actuarial analysis effective. As mentioned in Account 378, there appears to be more recent physical retirements than is reflected in the Company's Continuing Property Record. Company personnel report that the NW Hialeah station has been completely rebuilt over the last few years, and Port St. Lucie was replaced in 2015 (29 years old at retirement). Some stations may have been renewed and rebuilt (under capital). A very small proportion of the account (only \$300K) is over 30 years old. Some modernization is planned but not necessarily full replacement soon. Company personnel feel that 35 years is a reasonable estimate for this account. Based on the analysis, Company input, the type of assets in this account, and

judgment, this Study recommends retention of the 35 year life with a S4 dispersion graph of the proposed curve is shown below.



**Net Salvage (-5%)**

This account consists of any salvage and removal cost related to M&R station piping, regulators, controls, odorizers and other equipment used in city gate distribution measuring and regulating stations. The current authorized net salvage for this account is 0 percent. The current authorized net salvage for this account is 0 percent. There are is only one year showing retirement during the period 2005-2016, thus insufficient Company data exists. A small amount of removal cost is usually produced when assets in this account are retired. To model this in the future, the Study recommends moving to negative 5 percent net salvage. The Company's next depreciation study will further examine future trends in this account.

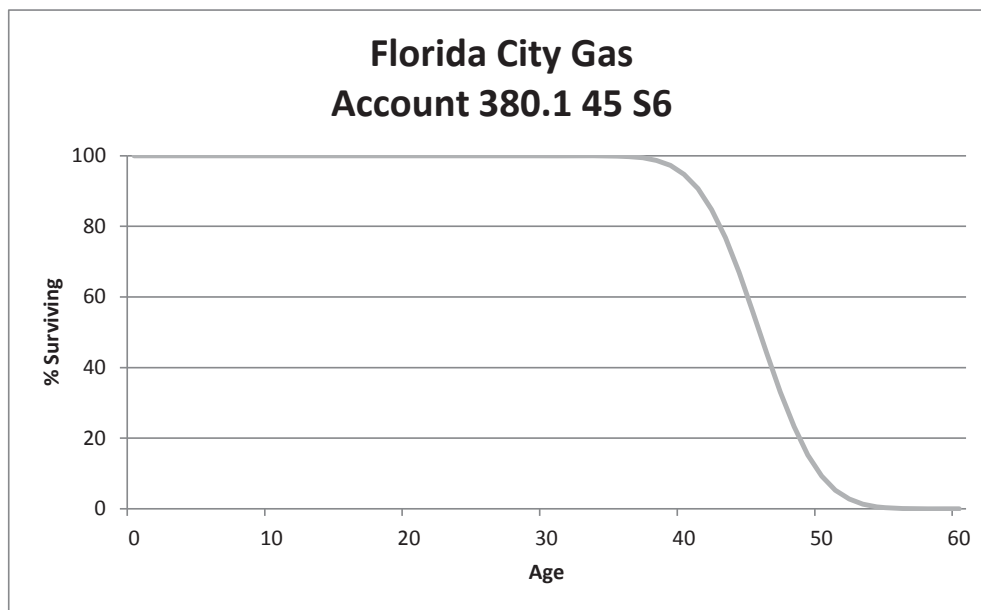
**FERC Account 380.1 Services- Non Plastic**

ANALYSIS RESULTS			
Depreciable Property			
Account 380.1			
Services - Non Plastic			
Item	FPSC Approved	7/31/2018	Change
Investment	\$14,834,212	14,597,872	(236,341)
Iowa Curve	S6	S6	
Average Service Life	35	45	10
Theoretical Reserve	\$21,708,386	\$18,378,355	(3,330,031)
Book Reserve	\$20,314,340	22,559,287	2,244,947
Reserve Variance	(\$1,394,046)	\$4,180,933	\$5,574,979
Reserve Ratio	136.94%	154.54%	17.60%
Gross Salvage	0%	0%	0%
Removal Cost	80%	100%	20%
Net Salvage	-80%	-100%	-20%
Avg Whole Life Rate	5.1%	4.4%	-0.7%
AWL Expense (7/31/2018)	\$762,902	\$642,306	(\$120,596)
Average Remaining Life	5.6	16.7	11.1
ARL Rate	6.5%	2.7%	-3.8%
ARL Expense (7/31/2018)	\$964,224	\$394,143	(\$570,081)

**Life (45 S6)**

This account consists of non-plastic distribution services which run from the distribution main to the customer. The projected balance at July 31, 2018 is approximately \$14.6 million in this account. The approved life is 35 years with an S6 dispersion pattern. As is the case in many of the Company's long-lived accounts, there is insufficient data for actuarial analysis. Company personnel report that prior to 2013, Florida required services to be removed (both steel and plastic) if the service was inactive for 5 years. Since 2013, the requirement was moved from 5 years to 10 years inactive but the company had to catch up on all earlier removal obligations. The 5 year rule still applies to galvanized or bare services. This higher level of retirement is not expected in the future. Also, the retirement of many services without replacement will drive up the removal cost temporarily. Last three years have been a "catch-up" period on service line retirements. Company personnel expect that to continue this year but this is not representative of the future. Company

Company personnel expect a lower, but not significantly different life for portions of services than mains. Some riser replacements have occurred due to corrosion but these are less now that service lines are wrapped. Other factors influencing the life of this account are the Company's policy to replace steel services with plastic if a main changes from steel to plastic as well as the Safe Program having retired some services prematurely (both steel and plastic). Based on input from Company personnel, the type of assets in this account, and judgment, this Study recommends increasing to a 45-year life and retaining the S6 dispersion. A graph of the proposed curve is shown below.



#### **Net Salvage (-100%)**

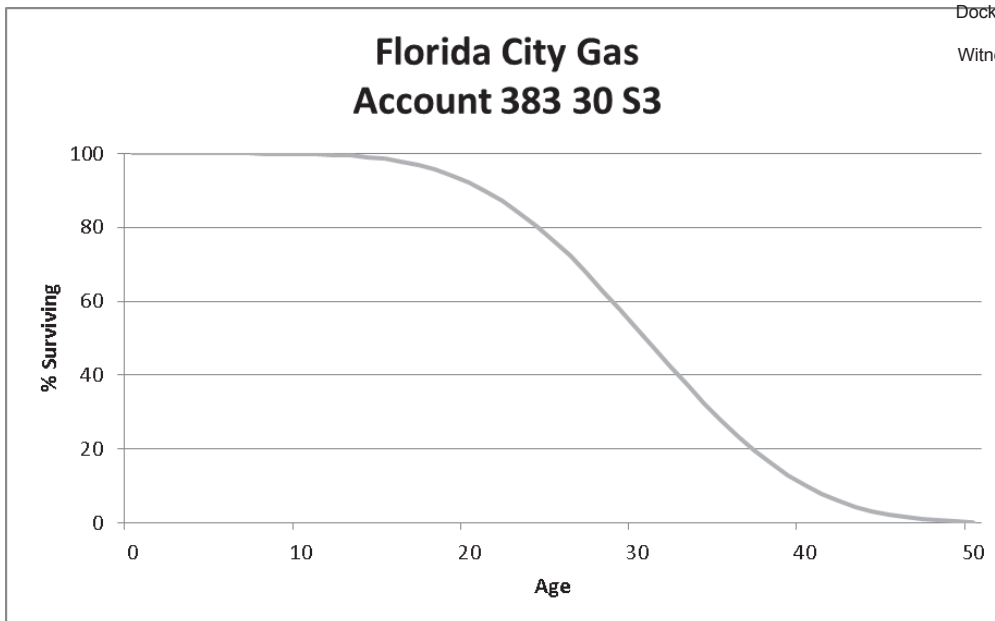
This account consists of any salvage and removal cost non-plastic distribution services which run from the distribution main to the customer. The current authorized net salvage for this account is negative 80 percent. In the most recent bands, the five-year and 10-year averages are negative 328 and negative 264 percent net salvage, respectively. To move conservatively in the direction of this trend and to promote a smooth rate transition, this Study recommends moving to negative 100 percent net salvage for this account. FCG's next depreciation study will examine future trends in this account.

**FERC Account 383 House Regulators**

ANALYSIS RESULTS			
Depreciable Property			
Account 383			
House Regulators			
Item	FPSC Approved	7/31/2018	Change
Investment	\$3,940,190	5,883,812.60	\$1,943,623
Iowa Curve	S3	S3	
Average Service Life	25	30	5
Theoretical Reserve	\$1,948,030	\$2,106,345	\$280,873
Book Reserve	\$1,558,856	2,643,920.86	\$1,274,056
Reserve Variance	(\$389,174)	\$537,576	\$926,750
Reserve Ratio	39.56%	44.94%	5.37%
Gross Salvage	0%	0%	0%
Removal Cost	3%	5%	2%
Net Salvage	-3%	-5%	-2%
Avg Whole Life Rate	4.1%	3.5%	-0.6%
AWL Expense (7/31/2018)	\$162,336	\$205,933	\$43,598
Average Remaining Life	12.9	19.8	6.9
ARL Rate	4.9%	3.0%	-1.9%
ARL Expense (7/31/2018)	\$193,069	\$176,514	(\$16,555)

**Life (30 S3)**

This account includes all distribution house regulators. The projected balance at July 31, 2018 is approximately \$5.9 million. The current approved life is 25 years with an S3 dispersion curve. Discussions with Company personnel indicated when a loop is replaced they will also generally replace the regulator. The expectation is that the regulator would have the same life as the meter loop. Based on the analysis, the type of assets, Company input, and judgment, the Study recommendation is to increase the approved life to 30 years but retain the S3 dispersion curve. A graph of the proposed curve is shown below.



#### **Net Salvage (-5%)**

This account consists of any salvage and removal cost for house regulators. The current authorized net salvage for this account is negative 3 percent. In the most recent bands, the five and 10-year averages are negative 36.7 and negative 7.54 percent, respectively. The analysis indicates net salvage is more negative when compared to the existing. Based on the analysis and judgment this study proposes a negative 5 percent net salvage for this account. Trends in net salvage for this account will be monitored in the Company's next depreciation study.



**CPUC Docket:** A.21-06-021  
**Exhibit Number:** TURN-18  
**Witness:** David Garrett and  
Robert Finkelstein

**PREPARED TESTIMONY OF**  
**DAVID J. GARRETT AND ROBERT FINKELSTEIN**  
**ON DEPRECIATION-RELATED ISSUES**

**Submitted on Behalf of**

**THE UTILITY REFORM NETWORK**

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**June 13, 2022**



1 an average service life of 10 years for the Company's software accounts. The remaining  
2 life and depreciation rate calculations are presented in my exhibits.<sup>60</sup> Increasing the  
3 Company's proposed service life to 10 years for the three accounts at issue would reduce  
4 PG&E's proposed depreciation accrual by \$105 million.<sup>61</sup>

## VI. NET SALVAGE ANALYSIS

5 **Q. Describe the concept of net salvage.**

6 A. If an asset has any value left when it is retired from service, a utility might decide to sell  
7 the asset. The proceeds from this transaction are called "gross salvage." The  
8 corresponding expense associated with the removal of the asset from service is called the  
9 "cost of removal." The term "net salvage" equates to gross salvage less the cost of removal.  
10 Often, the net salvage for utility assets is a negative number (or percentage) because the  
11 cost of removing the assets from service exceeds any proceeds received from selling the  
12 assets. When a negative net salvage rate is applied to an account to calculate the  
13 depreciation rate, it results in increasing the total depreciable base to be recovered over a  
14 particular period of time and increases the depreciation rate. Therefore, a greater negative  
15 net salvage rate equates to a higher depreciation rate and expense, all else held constant.

16 **Q. Has there been a trend in increasing negative net salvage in the utility industry?**

17 A. Yes. As discussed above, negative net salvage rates occur when the cost of removal  
18 exceeds the gross salvage of an asset when it is removed from service. Net salvage rates

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<sup>60</sup> See Exhibits DJG-19 – DJG-21.

<sup>61</sup> Exhibit DJG-2.

1 are calculated by considering gross salvage and removal costs as a percent of the original  
2 cost of the assets retired. In other words, salvage and removal costs are based on current  
3 dollars, while retirements are based on historical dollars. Increasing labor costs associated  
4 with asset removal combined with the fact that original costs remain the same have  
5 contributed to increasing negative net salvage over time.

6 **Q. Has the Commission expressed concern over increasing negative net salvage rates?**

7 A. Yes. In PG&E's 2014 GRC, the Commission made it clear: "We remain concerned with  
8 the growing cost burden associated with increasing cost trends for negative net salvage."<sup>62</sup>

9 The Commission also expressed an interest in the ratemaking concept of gradualism.

10 According to the Commission:

11 In evaluating whether a proposed increase reflects gradualism, however, we  
12 believe the more appropriate measure is how the change affects customers'  
13 retail rates. The fact that PG&E previously proposed higher removal costs  
14 than adopted has no bearing on how a proposed change would impact  
15 current ratepayers. Accordingly, we apply the principle of gradualism based  
16 on how a proposed change in estimate compares to adopted costs reflected  
17 in current rates, irrespective of what PG&E may have forecasted in an  
18 earlier depreciation study.<sup>63</sup>

19 In PG&E's 2014 GRC, the Office of Ratepayer Advocates proposed a 25% cap on  
20 increased net salvage rates to mitigate sudden increases in net salvage and instead provide  
21 for more gradual levels of increases.<sup>64</sup> The Commission ultimately found: "As a general  
22 approach, we adopt no more than 25% of PG&E's estimated increases in the accrual

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<sup>62</sup> Decision Authorizing Pacific Gas and Electric Company's General Rate Case Revenue Requirement for 2014-2016, D.14-08-032, p. 597

<sup>63</sup> *Id.* at 598.

<sup>64</sup> *Id.* at 592-93.

1 provision for removal costs. This limitation tempers the impacts on current ratepayers. . .

2 .<sup>65</sup>

3 **Q. Did you consider the Commission's concern for the growing cost burden associated**  
4 **with increasing negative net salvage when conducting your analysis?**

5 A. Yes, and I agree with the Commission's 25% benchmark on net salvage increases.  
6 However, I did not apply a strict limit of 25% to the Company's proposed net salvage  
7 increases for every account – the main reason being that some of the net salvage  
8 adjustments called for under a strict 25% cap would be immaterial.

9 **Q. Please summarize your proposed net salvage adjustments.**

10 A. In total, I am proposing net salvage adjustments to twelve of PG&E's accounts based on  
11 the Commission's benchmark of limiting net salvage increases to 25%. Thus, I would  
12 agree with the Company that the negative net salvage rates for the accounts at issue should  
13 increase (i.e., become more negative). However, my proposed net salvage rates limit the  
14 proposed increase by 25% of the amount of increase proposed by PG&E. The follow table  
15 shows the current and proposed net salvage rates for these accounts.

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<sup>65</sup> *Id.* at 602.

**Table 4:  
 Net Salvage Adjustment Summary**

Account No.	Description	Current	PGE Proposed	TURN Proposed
<b><u>ELECTRIC PLANT</u></b>				
362.00	STATION EQUIPMENT	-40%	-60%	-45%
364.00	POLES, TOWERS AND FIXTURES	-150%	-175%	-156%
367.00	UG CONDUCTORS AND DEVICES	-65%	-80%	-69%
368.01	LINE TRANSFORMERS - OH	-30%	-45%	-34%
368.02	LINE TRANSFORMERS - UG	-25%	-35%	-28%
<b><u>GAS PLANT</u></b>				
352.00	WELLS	-15%	-25%	-18%
353.00	LINES	-35%	-50%	-39%
367.00	MAINS	-54%	-75%	-59%
367.00	MAINS - STANPAC	-54%	-75%	-59%
376.00	DISTRIBUTION MAINS	-55%	-75%	-60%
378.00	M&R STATION EQUIPMENT	-40%	-50%	-43%
380.00	SERVICES	-81%	-100%	-86%

1           Adopting my proposed net salvage rates would reduce the Company’s proposed  
 2           depreciation accrual by \$136 million.<sup>66</sup>

3   **Q.   Does this conclude your testimony?**

4   A.   Yes.

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<sup>66</sup> Exhibit DJG-2.