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Public Service Commission

February 27, 1998

Ms. Susan D. Cranmer
Assistant Secretary & Treasurer
Gulf Power Company
500 Bayfront Parkway
Pensacola, FL 32520

RE: Docket No. 970643-EI

Dear Ms. Cranmer:

The staff report for Gulf's depreciation study in this docket is provided with this letter. The Company's responses should be provided by April 10, 1998. This schedule anticipates an agenda conference date of June 16, 1998. The Company's cooperation in providing a response is appreciated, and any additional information would be welcome.

Sincerely,

Patricia S. Lee
US/C Engineer Supervisor

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cc: C. A. Panyko
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Division of Auditing & Financial Analysis
Division of Legal Services
Division of Electric and Gas
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FPSC-RECORDS/REPORTING

**STAFF REPORT ON
GULF POWER COMPANY
DOCKET No. 970643-EI**

GENERAL QUESTIONS/COMMENTS

1. Please provide the 1997 end of year actual investment and reserve, as well as the 1997 activity for both plant and reserve.

PRODUCTION PLANT

2. Gulf's work in reviewing the investment associated with power production equipment appears diligent. The resulting data presentation in this study is different from those previously provided, and staff anticipates that it may prove very useful. As staff understands the situation, the analysis is yet being polished, and further refinements may lead to additional insight.

In the following discussion, staff will present several concerns. We would like as much additional information as Gulf can provide in regard to the Company's view(s) on these matters. Our inquiry is not intended to imply that results or proposals in the study are unreasonable. On the contrary, Staff's cursory review to date has produced no contraindications to the Company's proposals for production plant. However, we would like to understand more about the Company's view on each point. Further, we are seeking to better understand the operation and implications involved with use of this model.

Staff recognizes that the purpose of a model is to capture the essential features, dynamics or pattern of a process in such a way that meaningful results can be ascertained. Typically, the model does not purport to treat each and every feature of a process with equal emphasis, but may very well exclude certain effects if they are judged "unimportant".

For each concern listed, the major issue is the extent to which it impacts the results obtained by utilizing the model, and how the Company would justify application of the model under such circumstances. Since each point is a direct observation of the data presented, we would not expect that Gulf would need to state agreement with what is said, except in a case where the company perceives some misunderstanding or misinterpretation on the part of staff. Our goal is a better understanding of the model, and the way Gulf has applied it, through dialogue.

Where an example is used or given, it should be understood as an example of the dynamics as the model captures them, and not as a particular set of numbers

Docket No. 970643-EI
Date: February 27, 1998

to be reconciled in the accounting sense. Any answer given should apply equally to any instance similar to the example used, with particular numbers serving only as illustration.

- a. In the initial review, item 2 for production plant addressed the inclusion of negative plant balances for some vintages in the surviving distributions. Gulf reports finding some 319 such entries, but we do not know the dollar volume involved with these errors. From the Company's reply, staff understands that each negative balance resulted from activity incorrectly applied to a unit or group, and recognizes that at least two incorrect data entries are therefore associated with each of the 319 items identified.

In each case, the identified negative vintage balance reduces the average age calculated for the group. For the other (companion) error(s), the group age is skewed; but the error may be an over or understatement of age, depending on whether the impacted vintage is older or younger than the calculated average age. Please provide an assessment of the impact of these observations, from the Company's viewpoint. What is the support for that assessment?

- b. In using this model, the remaining life for each vintage of surviving investment in the 0-20 year group is calculated as the difference between the age and the 20-year maximum. By this pattern, all 1995 investment in this group for a unit projected to retire in the year 2016 has a remaining life of 17.5 years. Likewise, both 1996 and 1997 investment have a remaining life of 18.5 years. When the age exceeds 20 years, the remaining life becomes zero. Why is this approach used, rather than some other approach, such as moving such items to another group?
 - c. Staff would like to understand what categories of plant items would be included in the 0-20 life group(s). There can be a variation of service lives among the contained items in the group, even if all the items are identical. We are interested to know how the model accommodates these types of items, in Gulf's view.
3. Gulf has reported that overhauls are planned for both Unit 1 and Unit 2 at Plant Smith during the 1998 -- 1999 period. For each unit, projected retirements amount to less than \$400,000. Replacement of the generator rotors and exciters are projected to cost over \$2.5 million for each unit. Please describe the equipment

to be installed, and in layman's terms explain the "how and why" of the replacement cost being more than six times the retiring investment. In particular, the differences in technology, operation, and performance should be described.

4. The following questions relate to Gulf's 7-year life extension for Units 1, 2, & 3 at Plant Crist. The Company states that the mechanical condition of the units warrants the extension, and mentions the last inspection report, number of operating hours since the last inspection, performance of the unit in operation, and equipment condition observed during maintenance. Please amplify these responses, and include particular information as follows, at a minimum:

- a. What are the major factors or points which are evaluated in assessing mechanical condition?
- b. Please address the number of start-ups and number of run hours, as compared to projections, since the previous inspection.
- c. Please comment more specifically about the equipment condition(s) which correlate with the extended service, as compared to conditions which would have been associated with a "status quo" assessment and period in service.

5. In the initial review, item 3, the question of maintaining depreciation rates by unit within the plant site is addressed. The rationale for subcategorization is to provide more homogeneous categories thereby providing more accurate rates of recovery, not a proliferation of record-keeping. It goes without saying that if homogeneity exists at a site level, then further subcategorization would perhaps be unnecessary. While Gulf has provided details at an account by unit level, it has nevertheless proposed rates continue to be maintained at a site level. The argument presented in response to staff's initial review is that rates by unit by site are not justified or necessary since application of a composite rate for each site results in approximately the same total accruals as if rates were applied on a unit basis. To the extent there are homogeneous groups within the plant site or unit that consist of substantial portions of investment expected to have inherently different life patterns than the group average, those homogeneous groups should be given a separate depreciation rate. If not recovery will be achieved over a shorter or longer period of time depending on the group average life. The matching of expenses to consumption will no longer be accomplished and any inherent reserve deficiencies will not be recovered until the demise of the associated group.

TRANSMISSION, DISTRIBUTION & GENERAL PLANT

6. Station Equipment and Structures for Transmission and Distribution Functions, Accounts 352, 353, 361, and 362.

The accounts for station equipment and for structures, in the transmission and distribution functions, will be reviewed together, in order to incorporate the relationships between the life patterns of these accounts. It has generally been said that the transmission station equipment and the distribution station equipment were very similar, and the same life pattern was used for the two accounts. In the present study, Gulf is describing some specific differences in the life patterns associated with the equipment in the two accounts.

The distribution equipment is subject to more frequent retirement to accommodate growth and changing customer needs, according to the Company. The retirement of all 12/4KV distribution substations in recent years is cited as an example. The retirements for Account 362, for the years 1993 through 1996, total approximately \$3.2M.

- a. What portion of these retirements were associated with the 12/4KV substations mentioned?

From the Company activity for the years 1993 thru 1996, it appears that station equipment additions are frequently installed in existing structures. Both the transmission and distribution functions show (annual) additions in the equipment accounts when there were minimal corresponding additions to the structures accounts in those years. There is a qualitative implication in this fact: the service life (area under percentage surviving curve) must be longer for each structure account than for the corresponding equipment account. However, the difference might, or might not, be negligible.

Based on the observations enumerated above for these four accounts, staff would expect the Distribution Station Equipment Account 362 to be assigned the shortest service life, and the Transmission Structures Account 352 to be assigned the longest service life. For each function, the average service life of the structures should not be less than the average service life for the equipment.

The Company proposes to retain the R2-38 life pattern for the Distribution Station Equipment, and proposes a decrease in remaining life from 29 years to 27 years. The reported activity for this account since the last study indicates a growing investment. For the years 1993 through 1996, the additions amount to

Docket No. 970643-EI
Date: February 27, 1998

more than \$13 M, while retirements are less than \$3 M. Such activity would be expected to decrease the account average age, and the remaining life would increase if the expected life pattern (such as R2-38) is a constant.

- b. What average age is associated with the investment in this study, and how does that compare with the age in the last study?
- c. Does the Company keep the records for Distribution Station Equipment as a mass property account, or can each individual retirement unit of installed physical plant be identified?
- d. Please explain how the proposed decrease in remaining life has come about, given these observations.
- e. Also, please provide the theoretical reserve percentage along with the calculation by which it was determined. There is a small discrepancy of approximately \$0.5 M between staff's calculation and the theoretical reserve in the study.

For the Transmission Station Equipment account, the proposal is to retain the R2 curve and increase the average service life to 45 years. The proposed remaining life is 32 years, increasing from the current remaining life of 26 years. Again, growth in the account would produce a decrease in average age, which would tend to increase remaining life. However, the proposed increase may be too great.

While the Company's experience appears to indicate that average life for transmission station equipment will be longer than the average life for station equipment in the distribution function, a decrease for distribution equipment could theoretically maintain that relationship. The proposed increase for transmission station equipment is beyond the expectations of other Florida companies. When there is a shift of the magnitude proposed, and beyond the experience of others in the industry, it is often tied to a different technology or a difference in Company policy.

- f. Please elaborate on the Company's specific experience as it relates to the proposed increase in average service life.
- g. What is the current average age for this investment, and what was the average age at the last study?

Docket No. 970643-EI
Date: February 27, 1998

- h. Are records maintained by vintage and location for each retirement unit in this account?
- I. What information supports the selection of the 45-year service life, as compared to 40, 43, or 46 years for example?
- j. Also, please provide the theoretical reserve percentage along with the calculation by which it was determined.

The Company proposes to retain the S3-40 life pattern for the Structures account in the distribution function. Annually there have been retirements to the account, but the magnitude is infinitesimal. The magnitude of annual additions is small, but typically the additions amount to about three times the total retirements.

- k. Staff would like clarification as to the use of the structures in this account: do these structures serve to house anything in addition to the distribution station equipment?
- l. Are records for this account kept as mass property records?
- m. What average age is currently associated with the account, and is it an actuarial or synthesized age?

The proposal for remaining life, along with the underlying curve and service life, appear reasonable for this account. The salvage proposal of negative 10% reflects anticipated cost of removal, and appears to be associated with very small retirements. In view of staff, the proposed (10%) may not be typical of the greater portion of the investment in this account. The other Florida Companies do not anticipate that cost of removal will push salvage more negative than 5%. At this time, staff would anticipate maintaining (5%) for net salvage.

For the transmission Structures account, the Company proposes to move from an S3-40 to an R4-45 life pattern. As discussed above, this account will have the greatest service life of the four related accounts. The proposed change does not meet that expectation. One illustration of this concern is a comparison with the associated station equipment in the advanced age ranges. Only about 11% of the structure survives at age 55, but almost 30% of the station equipment yet survives at that age. Without truncation, the R2-45 pattern (proposed for station equipment) has about 5% of investment surviving to age 70 years, but the R4-45 drops to zero

Docket No. 970643-EI
Date: February 27, 1998

survivors a few years earlier than age 70. At this juncture, staff would not find the proposed change acceptable.

In considering the transmission Station Equipment and Structures accounts and the relationship between them, Staff would be inclined to a more conservative increase for Account 353, perhaps to an R2-40 life pattern, accompanied by an S3-42 for the Structure Account 352.

7. Towers and Fixtures, Account 354

The proposed change to an R5-45 appears to be in line with Gulf's experience for this account, as well as being in line with industry thinking. The continuation of a negative 20% net salvage is acceptable. It appears reasonable as an estimate for removal by Company personnel and it is in the accepted range of industry practice.

8. Transmission Poles and Fixtures, Account 355

This is an extremely stable account, with small increments of investment having an age in the range of 70 years. With the activity reported since the last study, the average age of the account is increasing quite slowly. The S1-37 curve is typical of the industry and in line with Company's experience. The proposal to go from a net salvage of negative 35% to negative 45% is derived from Gulf's experience, but there has been a wide variance in annual retirement levels and cost of removal. In the year experiencing the largest retirements, amounting to a retirement rate of 5%, the cost of removal was less than 5%. There is a question whether or not the entire account is subject to the high cost of removal, or whether it happens under difficult but limited circumstances. The proposed increase is beyond the expectation of others in the industry, and staff is inclined to retain the 35% negative net salvage.

9. Transmission Overhead Conductors and Devices, Account 356

This equipment, which is supported by the equipment in Account 355, also shows stability, but with a slight growth trend represented by about 1% increase in investment since the last study. In addition, a small percentage of equipment, such as insulators, may be subject to reuse following retirement. While the investment shows a very low average annual percentage retiring currently, staff cannot justify going beyond the 37-year life for the poles upon which this equipment rests. The

Docket No. 970643-EI
Date: February 27, 1998

Company's proposal to maintain the current negative 20% net salvage is reasonable.

10. **Underground Conductors, Transmission, Account 358**

No additions or retirements for this type of equipment are shown in the activity for the years 1993-1996. The Company notes that "the majority of the investment was added in 1993 and 1989."

- a. Perhaps there is a typographical error in the statement? If so, please advise staff of any correction which is required.

We acknowledge that continuation of the 40-year service life and square curve form appear reasonable under the circumstances, as far as can be ascertained. A negative 5% net salvage is also reasonable, with the same caveat.

11. **Roads and Trails, Account 359**

The proposal is to retain the square curve and reduce the service life to 40 years in conformance with APB #17, Accounting for Intangible Assets. Staff accepts the proposal. The appropriate net salvage is 0%.

12. **Underground Conduit, Account 366**

What is the age of the oldest surviving investment in this account? Please provide a generation arrangement for all of the surviving investment.

13. **Line Transformers, Account 368**

Please explain Gulf's reasoning for selecting the S0-29 life pattern, which was number 2 in the curve fit ranking for this account. Also, please provide a generation arrangement for survivors. Staff will recognize a net salvage of 5%, reflecting gross salvage realized consistently. In accord with instructions for this account in the Code of Federal Regulations, removal costs for transformers are not to be reflected in the account reserve.

14. **Overhead Services, Account 369.1**

Please provide generation arrangements for the surviving investment in this account, based on both the S1-27 and L2-29 life patterns. The gross salvage recorded has been sporadic -- zero at times, a few percent at other times. Does this reflect difference in timing and the salvage market, or is the difference due to changes in technology? For this account, Staff's recommendation will depend on

the response to this inquiry.

15. Structures and Improvements, Account 390

The Company has proposed an R4 curve and continuation of the 43-year service life. The proposed remaining life is a decrease of 4 years from the current approved remaining life of 34 years. The reasoning given is that, absent other changes, "an adjustment of 4 years in the remaining life is appropriate." Staff is concerned with this reasoning, whether or not there is a great impact on this account at this time. Specifically, there have been consistent annual additions and retirements in this account over the four years past. At January 1, 1998, the average age of the "new" investment (added since the last reprscription) is almost exactly two years, and this amounts to a little under 5% of the account. As a result of this activity, average age increases by about 3 years, rather than 4, which would bring the remaining life into the range of 31 to 32 years -- in contrast to the Company's proposed 30 years. While this difference is within reason for our estimating procedures, we take this opportunity to review the importance of including activity in the estimating procedure. The effect of activity must be factored into the determination of remaining life, or there cannot be confidence in the result.

In addition, there can be an impact due to the life pattern curve; some curves vary greatly from a straight line, in some ranges. Looking at the R4 curve for a 43-year service life, at the age of 30.5 years the remaining life is 14.4 years; at the age of 34.5 years the remaining life is 11.5 years (not 10.4 years). If four years have passed, but the age has increased by only one or two years as a result of activity, the remaining life can be in the 12 or 13-year range. Remaining life does not necessarily decrease directly, year-for-year, with the passing of time.

The above concerns notwithstanding, the Company's proposals are acceptable.

16. Automobiles, Account 392.1

In accord with retirement of all investment in this account prior to January 1, 1998, no provision is needed for additional capital recovery. Staff will recommend transfer of the remaining reserve balance to another account.

17. Heavy Trucks, Account 392.3

Additions have been greater than retirements in this account, so that the account balance has grown by more than 30% since the last reprscription. Please compare the new equipment with the retiring equipment; are there any differences in the life pattern expected for the newer trucks? Please provide the generation

arrangement for current survivors.

18. Stores Equipment, Account 393; Tools, Shop & Garage Equipment, Account 394; and Laboratory Equipment, Account 395

Gulf is requesting that all investment in these accounts be amortized. Up to the present time, investment in each account has been divided into a depreciable portion and an amortizable portion. At this time, staff is not inclined to object to the idea of converting capital recovery for investment in each of these accounts to an amortization methodology.

- a. Please provide an example showing how the amortization expense amount would be determined for one of these accounts. Does your example show typical procedure or method used for all amortizations? If there are exceptions to the methodology illustrated, please identify and explain the exceptions.

19. Power Operated Equipment, Account 396 and Communication Equipment, Account 397

The Company has not provided sufficient information for staff to agree or disagree with the proposals. In Account 397, Gulf proposes a change of curve and a major decrease in service life, based on an increase in retirement activity and information from the engineers.

- a. Please share with staff some description of the expectations which are held by the engineering group.
- b. Does Gulf maintain actuarial records for the investment in these accounts?
- c. Please provide generation arrangements for the surviving investment in these accounts. If the actuarial data is not available, please provide the arrangements based on current and proposed life patterns.

20. Net Salvage or Net Cost of Removal - Various Accounts

For several accounts, Gulf proposes a change in net salvage or cost of removal, based on its activity over the last five years or so. Staff is cautious about such increases at this stage, due primarily to the relative dollar amount of retirements on which the change is based. Typically, the activity reflects retirements of small dollar volume. The critical question in this dynamic is: "What pattern can

Docket No. 970643-EI
Date: February 27, 1998

be expected for the majority of investment and equipment in an account?" If annual retirements are small, the service life becomes excessively long, except for the event which would bring about a major retirement. It becomes evident that major retirements, not the retirement of small portions of equipment and investment, are the expected pattern for the majority of the investment. Frequently, higher rates showing up in a "typical year" reflect inflation of labor costs, the extra effort to remove a piece of equipment while leaving the surrounding equipment intact, etc. Staff would estimate that such an elevated factor of removal cost is appropriate for 20% to 35% of the investment. For the following accounts, we are inclined to recommend that the current net salvage be retained:

<u>ACCOUNT</u>	<u>NET SALVAGE</u>
355 Transmission Poles and Fixtures	(35%)
361 Distribution Structures	(5%)
362 Distribution Station Equipment	(5%)
364 Poles, Towers and Fixtures	(50%)
369.2 Overhead Services	(10%)