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October 12, 2016

VIA ELECTRONIC FILING

Ms. Carlotta Stauffer  
Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

Re: Petition for an increase in rates by Gulf Power Company, Docket No. 160186-EI

Re: Petition for approval of 2016 depreciation and dismantlement studies, approval of proposed depreciation rates and annual dismantlement accruals and Plant Smith Units 1 and 2 regulatory asset amortization by Gulf Power Company, Docket No. 160170-EI

Dear Ms. Stauffer:

Attached is the Direct Testimony and Exhibits of Gulf Power Company  
Witness Jeffrey A. Burleson.

(Document 2 of 29)

Sincerely,

Robert L. McGee, Jr.  
Regulatory & Pricing Manager

**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

**DOCKET NO. 160186-EI**



**Gulf Power**

**TESTIMONY AND EXHIBIT  
OF  
JEFFREY A. BURLESON**

1 GULF POWER COMPANY

2 Before the Florida Public Service Commission  
3 Prepared Direct Testimony of  
4 Jeffrey A. Burleson  
5 Docket No. 160186-EI  
6 Date of Filing: October 12, 2016

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

8 A. My name is Jeff Burleson. My business address is 600 North 18<sup>th</sup> Street,  
9 Birmingham, AL 35203, and I am the Commercial Services and Planning  
10 Vice President for Southern Company Services (SCS).

11 Q. Please summarize your background and professional experience.

12 A. I have more than 35 years of experience in the electric utility industry. I  
13 began my career with Alabama Power Company in 1980 as a cooperative  
14 education student. I graduated from the University of Alabama at  
15 Birmingham in 1984 with a Bachelor of Science degree in Electrical  
16 Engineering, with a specialization in power systems analysis. From 1984 to  
17 1991, I held various staff and managerial positions in the Technical Services  
18 and Power Quality departments at Alabama Power Company. During this  
19 period, I attended Auburn University and earned a Master of Science  
20 degree in Electrical Engineering in 1987, again, with a specialization in  
21 power systems analysis.

22  
23 In 1991, I transferred to SCS in the position of Manager of End Use  
24 Technology Research, where my responsibilities included technology  
25 assessment, various types of load and economic modeling in support of

1 integrated resource planning, and development of certain models used in  
2 integrated resource planning. In 1996, I was named Assistant to the Vice  
3 President of Marketing and New Business Development at SCS. In 1997, I  
4 was named General Manager of Marketing Services, where my  
5 responsibilities included oversight of the SCS analytical services associated  
6 with peak demand and long term energy forecasts, load research, cost of  
7 service studies, and competitive intelligence.

8  
9 In 1999, I transferred to Georgia Power as Manager of Market Planning,  
10 where my responsibilities included the load, energy and revenue forecasts,  
11 economic evaluation of demand-side management programs and  
12 assessment of demand response from certain rate designs. In 2005, I was  
13 appointed Director of Resource Policy and Planning for Georgia Power  
14 where my responsibilities included integrated resource planning, resource  
15 procurement, generation development and administration and oversight of  
16 power purchase agreements (PPAs).

17  
18 In 2011, I was appointed Vice President of System Planning for SCS. In  
19 this role my responsibilities included oversight of the analytical and planning  
20 services provided to the retail operating companies for integrated resource  
21 planning, reliability planning, resource procurement, generation strategy,  
22 generation development, and various economic viability analyses.

23  
24 In 2016, in addition to my System Planning responsibilities I assumed  
25 responsibility for Financial and Contract Services, Southern Wholesale

1 Energy, and Budgeting and Reporting for SCS Operations. As a result, my  
2 title changed to Vice President of Commercial Services and Planning for  
3 SCS.

4  
5 Q. What is the purpose of your testimony?

6 A. The purpose of my testimony is to provide an overview of Gulf Power  
7 Company's (Gulf) resource planning and procurement activities over the  
8 past few decades, including the decision to purchase a 25 percent  
9 ownership interest in Plant Scherer Unit 3 (Scherer 3), the decisions to  
10 invest in the necessary environmental controls for Scherer 3, and how those  
11 investments benefit Gulf's customers.

12  
13 Q. Are you sponsoring any exhibits?

14 A. Yes. Exhibit JAB-1 is a joint exhibit sponsored by myself and Gulf Witness  
15 Deason. Exhibit JAB-1 is a chronology of key planning and regulatory  
16 events regarding Gulf's purchase and ownership interest in Scherer 3.  
17 Exhibit JAB-2 is a composite of three documents relating to the 1976  
18 certification of Gulf's Caryville site under the Florida Electrical Power Plant  
19 Siting Act (PPSA).

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1 **I. GULF'S RESOURCE PLANNING**

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Q. What is the purpose of Gulf's resource planning activities?

A. The objective of Gulf's resource planning activities is to assure the Company's long-term ability to provide reliable and cost-effective electric service to its customers, while accounting for the inherent uncertainty of the future.

Q. Please provide an overview of Gulf's participation in the Southern Company electric system pooling of generation, the associated coordinated planning process, and its relationship to planning for Scherer 3.

A. The operating companies of the Southern Company electric system have entered into an agreement known as the Intercompany Interchange Contract (IIC), thereby agreeing to operate as a single integrated electric system or power pool (the Pool). Under terms of the IIC, the generating resources of all member companies are economically dispatched at actual variable cost to serve the total system load requirements. The IIC and its pooled operation of generating resources on the Southern Company electric system provides for the operating companies to participate in coordinated planning of future generation capacity. The coordination of planning across the retail operating companies assures that the overall electric system remains optimized in terms of reliability and cost and thus assures that each operating company's customers receive benefits as a result of the more reliable and cost effective electric system.

1 Q. What are the benefits to Gulf's customers from the pooling arrangement and  
2 its associated coordinated planning process?

3 A. The benefits received by Gulf's customers include, but are not limited to, the  
4 following:

- 5 1. Economies of scale through coordination of electric operations.
- 6 2. Each operating company retains its lowest variable cost  
7 resources to serve its own customers. Each operating company's  
8 excess energy is then made available at actual variable cost to  
9 the other operating companies to serve their customers if the cost  
10 of the Pool energy is less than the cost of energy from their own  
11 resources.
- 12 3. Reduced requirements for operating reserves.
- 13 4. Marketing of Pool energy and capacity in the shorter-term  
14 wholesale markets, with resulting gross margins shared with all  
15 the operating companies.
- 16 5. Peak-hour load diversity, resulting in a lower target planning  
17 reserve margin requirement for Gulf.
- 18 6. Temporary sharing of surplus/deficit reserve capacity as a result  
19 of coordinated planning.
- 20 7. Ability to cost-effectively install large, efficient generation units.

21

22 These multiple benefits that accrue to Gulf and the other system operating  
23 companies result from the coordinated planning and operation of the power  
24 pool.

25

1 In addition to the above listed benefits, the ability of the operating  
2 companies to rely on SCS for the administration of the pooled economic  
3 dispatch of the system and for certain technical aspects of each operating  
4 company's decision support and planning responsibilities avoids duplication  
5 of personnel in the various operating companies. Access to the shared  
6 resources provided by SCS is valuable since each operating company  
7 would otherwise have to employ additional professional and technical  
8 personnel with specialized expertise who might not be fully utilized on a  
9 continuous basis.

10  
11 Q. Please provide an overview of the coordinated planning process in which  
12 Gulf participates.

13 A. At the most basic level, the Company's planning process yields a load  
14 forecast that drives a schedule of supply-side and demand-side resource  
15 additions that are integrated to accomplish the objectives of providing  
16 reliable and cost-effective electric service to its customers, consistent with  
17 the Company's duties and obligations to the public as a regulated public  
18 utility. The coordinated planning process is consistently utilized by each of  
19 the Southern Company retail operating companies, with the assistance of  
20 their agent SCS. As a part of the coordinated planning process, each retail  
21 operating company develops its own load forecast and demand side plan.  
22 The load forecasts and demand side plans of the operating companies are  
23 aggregated and an optimal mix of new capacity additions is identified to  
24 meet the aggregate load of the retail operating companies. The capacity  
25 need for each future year is allocated to each operating company that is

1 projected to have a capacity need in a given year. The allocation of the  
2 capacity need is proportional to the amount of capacity needed to move  
3 each of the operating companies that have a capacity need in a given year  
4 to the target planning reserve margin based on each operating company's  
5 own load and existing resources. Each operating company then makes its  
6 own decisions about how to best meet the capacity need and the type of  
7 resource to meet that need.

8  
9 A major benefit to the operating companies of the coordinated planning  
10 process and the IIC's reserve sharing mechanism has been the ability to  
11 select the most economical generating unit size when new generation  
12 needs exist on the Southern Company electric system. As an example,  
13 Gulf has been able to completely own or purchase shares of 500 MW and  
14 800 MW state-of-the-art generating units. This capacity has been  
15 purchased or developed at lower cost per kW and is more efficient  
16 generation than would otherwise have been available to a relatively small  
17 company such as Gulf.

18  
19 The operating companies also benefit from the diversity of power needs as  
20 a result of the system providing service to such a large geographical region.  
21 The territories of the system companies have weather, time zone, and  
22 customer mix differences. These differences result in variations in load  
23 patterns because the operating companies loads do not all reach their peak  
24 at the same time. This load diversity has several benefits. It improves  
25 overall system load factor, thereby lowering cost per unit. It also lowers the

1 necessary target planning reserve margin requirement for the system and  
2 for each operating company, thus creating cost savings for customers.

3

4 Q. Is the coordinated planning process you described only applicable to retail  
5 customers?

6 A. No. The objective of the coordinated planning process is to provide a  
7 reliable and cost-effective electric supply for all native load customers.

8

9 Q. Please explain what is meant by the term "native load customers."

10 A. Gulf is a public utility operating in Florida under Chapter 366 of the Florida  
11 Statutes. As such, Gulf's primary focus is on serving the needs of its retail  
12 customers in Northwest Florida. However, just as it does today, during the  
13 time frame when Gulf's existing generation, including Scherer 3, was being  
14 planned and constructed, Gulf also provided requirements wholesale  
15 service to other retail electric providers in Northwest Florida. When  
16 providing requirements wholesale service to other retail electric providers,  
17 Gulf has a contractual obligation to plan for, and to meet, the capacity and  
18 energy growth needs of the requirements wholesale customers for the term  
19 of the wholesale sales contract. The term native load customers is used to  
20 describe the combination of Gulf's retail customers with the requirements  
21 wholesale customers within Northwest Florida.

22

23

24

25

1 Q. How long has Gulf and its customers been benefiting from the decision  
2 support and coordinated planning process you describe?

3 A. The coordinated planning process has been in place and has provided  
4 benefits for Gulf's customers for many decades.

5

6 Q. Are the planning objectives for native load customers any different today  
7 than in previous decades?

8 A. No. The overall objectives of coordinated planning remain unchanged.

9

10 Q. Are the planning processes for native load customers any different today  
11 than in previous decades?

12 A. No. The overall planning process that has served customers well over the  
13 past decades remains unchanged, except for minor refinements to the  
14 processes and improvements to the modeling tools used in the planning  
15 process.

16

17 Q. Please provide an overview of the planning landscape during the 1970's  
18 and 1980's.

19 A. During the late 1960's and early 1970's, electricity demand in Gulf's service  
20 area was growing rapidly, in part due to economic growth but also due to  
21 rapid increases in the penetration of room and central electric air  
22 conditioning systems in homes.

23

24 The federal government enacted the Clean Air Act of 1970 and in that same  
25 year established the U.S. Environmental Protection Agency (EPA). In 1974,

1 EPA issued new rules governing the “prevention of significant deterioration  
2 of air quality” (PSD). A few years later, the federal government enacted the  
3 Clean Air Act amendments of 1977. By the fall of 1977, it became apparent  
4 that all new coal generation whose construction had not already begun  
5 would have to be equipped with emissions controls such as flue gas  
6 desulfurization (FGD).

7  
8 In 1973, an oil embargo was instituted against the U.S. at a time of declining  
9 domestic crude oil production, rising demand, increasing imports, and  
10 decreased OPEC production. The embargo created short-term shortages  
11 and within about six months caused world oil prices to triple to \$12 per  
12 barrel. A second oil crisis began in 1979 and resulted in oil prices rising  
13 from \$14 per barrel at the start of 1979 to \$35 per barrel by January 1981.  
14 In addition to the oil embargo that began in 1973, a stock market crash  
15 occurred in that same year wherein the Dow Jones Industrial Average lost  
16 more than 45 percent of its value between January 1973 and December  
17 1974.

18  
19 During the period November 1973 to November 1982 three U.S. recessions  
20 occurred resulting in rising unemployment, rising inflation, rising interest  
21 rates and stagnating economic growth. These macro-economic events  
22 coupled with a saturating market for electric air conditioning led to sharp  
23 declines in load forecast growth rates across most all of the electric utility  
24 industry.

25

1 Q. Please provide an overview of Gulf's resource planning decisions during the  
2 1970's.

3 A. Gulf completed the construction of Plant Crist Units 6 & 7 in 1970 and 1973,  
4 respectively. In 1973, Gulf projected a need for two additional coal units,  
5 Smith Units 3 & 4, with in service dates of 1979 and 1981, respectively. In  
6 February 1974, the site for the two planned coal units was moved from the  
7 Plant Smith site to the Caryville site, with the planned units then being  
8 referred to as Caryville Units 1 & 2 (Caryville 1 & 2). Caryville 1 & 2 were  
9 being planned as 518 MWs each with the same 1979 and 1981 in service  
10 dates as were originally targeted for Smith Units 3 & 4. By October 1974,  
11 the targeted in service dates for Caryville 1 & 2 were deferred to 1980 and  
12 1981, respectively, as a result of the oil embargo and the slowing of both  
13 economic growth and growth rates of load forecasts. In October 1975, Gulf  
14 planned to purchase an ownership interest in Plant Daniel Units 1 & 2,  
15 which went in service in 1977 and 1981, respectively. At the same time,  
16 Caryville 1 & 2 were deferred to 1982 and 1984, respectively, as a result of  
17 the planned Plant Daniel ownership interest.

18

19 In May 1976, the Caryville site was certified by the Florida Governor and  
20 Cabinet when they approved the January 1976 Department of  
21 Administrative Hearings (DOAH) recommended order to certify the site for  
22 up to six 500 MW units and approved commencement of the development  
23 of the first two units at the site. The DOAH order acknowledged Florida  
24 Public Service Commission (FPSC) participation and all parties agreed on  
25 the need for, and authorization of, Caryville Units 1 & 2. Exhibit JAB-2

1 contains the Governor and Cabinet's order, the DOAH recommended order,  
2 and a copy of the FPSC's report (which was submitted pursuant to the  
3 requirements of the PPSA) concluding that Gulf had a need for additional  
4 generating capacity. Exhibit JAB-2 also includes the FPSC's "Proposed  
5 Findings of Fact, Conclusions of Law, and Recommended Order" submitted  
6 to the DOAH hearing officer in which the Commission stated:

7 As a matter of law, the uncontradicted evidence presented  
8 by the Applicant [Gulf] and the Commission's report requires  
9 the conclusion that the area to be served by the plant is the  
10 entire service area of the Applicant and that there is a need  
11 for electrical generating capacity in that service area which  
12 can be met by the proposed plant. [Proposed Conclusion of  
13 Law No. 4]

14  
15 In 1977, Gulf purchased an ownership interest in Plant Daniel Unit 1 with  
16 the intent of also purchasing an interest in Plant Daniel Unit 2 once it was  
17 completed. The planned, combined interest in Plant Daniel Units 1 & 2 was  
18 in lieu of Plant Caryville Unit 2. This decision to purchase an interest in  
19 Plant Daniel Units 1 & 2 provided cost savings to Gulf's customers since the  
20 Plant Daniel units had started construction prior to the effective date of the  
21 1977 Clean Air Act amendments.

22  
23 In August 1978, Gulf notified the FPSC of the potential opportunity for an  
24 ownership interest in 430 MWs of Plant Scherer, which had also begun  
25 construction prior to the effective date of the 1977 Clean Air Act

1 amendments. As part of the notification, Gulf informed the FPSC that  
2 purchasing an ownership interest in Plant Scherer would enable Caryville  
3 Unit 1 to be cancelled. In late 1978, Caryville Unit 1 was cancelled as a  
4 result of Gulf's planned ownership interest in Plant Scherer, and the FPSC  
5 accounting director issued a letter to Gulf affirming Gulf's request for  
6 accounting treatment of the Caryville cancellation charges but informing  
7 Gulf that action on recovery through rates would have to be addressed in a  
8 later proceeding.

9  
10 Q. Please provide an overview of Gulf's resource planning decisions during the  
11 1980's.

12 A. In 1980, the FPSC issued Order No. 9628 in Docket No. 800001-EU  
13 agreeing that a Gulf ownership interest in Plant Scherer would be more  
14 economic than Caryville Unit 1 and authorized Gulf to amortize the Caryville  
15 cancellation charges and include the unamortized balance in rate base as a  
16 result of the planned purchase of an ownership interest in Plant Scherer.  
17 On February 16, 1981, Gulf participated in an informal workshop held by the  
18 Commission concerning the merits of purchasing a 25 percent ownership  
19 interest in Plant Scherer Units 3 & 4. This workshop also addressed Gulf's  
20 plan to enter into long-term off-system sales for the early years of the units  
21 to temporarily relieve native load customers of revenue requirement  
22 responsibility for the units. On February 19, 1981, the initial agreement  
23 between Gulf and Georgia Power Company was entered into for Gulf to  
24 purchase a 25 percent ownership interest in Plant Scherer Units 3 & 4. In  
25 1981, Gulf purchased an ownership interest in the then completed Plant

1 Daniel Unit 2. In December 1983, Gulf confirmed with Georgia Power  
2 Company that Gulf's potential interest in a 25 percent ownership share of  
3 Plant Scherer Unit 3 remained but that Gulf's potential interest in ownership  
4 of Plant Scherer Unit 4 no longer existed. In March 1984, the initial  
5 agreement between Gulf and Georgia Power Company was amended to  
6 reflect that Gulf was committed to a 25 percent ownership interest in only  
7 Scherer 3. In October 1984, the U.S. Securities and Exchange Commission  
8 issued an order authorizing the sale and acquisition of a 25 percent interest  
9 in Scherer 3 between Georgia Power Company and Gulf.

10  
11 In 1982, unit power sales (UPS) agreements were finalized to sell capacity  
12 and energy from Scherer 3 (inclusive of Gulf's ownership) to Florida Power  
13 and Light, Jacksonville Electric Authority and Gulf States Utilities. The UPS  
14 sales were intended to relieve retail customers from the revenue  
15 requirements in the early life of the unit. In 1986, Gulf States Utilities filed a  
16 lawsuit seeking release from its unit power sales obligations. Starting with  
17 the January 1, 1987 commercial operation date of Scherer 3, a portion of its  
18 capacity began serving retail customers and was included in Gulf's  
19 surveillance filings to the FPSC. In 1988, UPS agreements were finalized  
20 with Florida Power and Light and Jacksonville Electric Authority to sell  
21 capacity from Scherer 3 through May 2010, further relieving retail customers  
22 from the revenue requirements. In that same year, a UPS agreement was  
23 finalized with Florida Power Corporation to sell the remaining Scherer 3  
24 capacity through May 2010.

25

1 Q. Please provide an overview of Gulf's key resource planning decisions  
2 during the 1990's.

3 A. In the late 1990's, Gulf secured short-term purchased power for the years  
4 2000 and 2001 to provide needed capacity and issued a request for  
5 proposal (RFP) in 1998 to meet 2002 capacity needs. In 1999, Gulf  
6 requested and received authorization from the FPSC to begin construction  
7 on the Plant Smith Unit 3 combined cycle natural gas generation facility with  
8 a planned commercial operation date of 2002.

9

10 Q. Please provide an overview of Gulf's resource planning decisions during the  
11 2000's and 2010's.

12 A. Plant Smith Unit 3 began commercial operation in 2002. In 2004, new  
13 PPAs were executed with Florida Power and Light, Progress Energy  
14 Florida, and Flint Energies for capacity and energy from Scherer 3  
15 beginning delivery in 2010 with the end of term ranging from December  
16 2015 through December 2019, depending on the contract. While the FPSC  
17 did not need to approve Gulf's role in the PPAs since that is under the  
18 jurisdiction of the Federal Energy Regulatory Commission, it did approve  
19 the capacity purchase commitments made by both Florida Power and Light  
20 and Progress Energy Florida.

21

22 In the mid-2000's, several environmental rules were passed that led to the  
23 installation of new environmental controls on Scherer 3. The EPA published  
24 the final Clean Air Interstate Rule (CAIR) and the Clear Air Mercury Rule  
25 (CAMR) in 2005, and the state of Georgia issued the Georgia Multi-

1 Pollutant Rule (GaMPR) in 2007. The GaMPR required Scherer 3's owners  
2 (Gulf Power and Georgia Power) to install a baghouse on Scherer 3 for  
3 mercury reduction by June 1, 2009, and a selective catalytic reduction  
4 system (SCR) for nitrogen oxide (NO<sub>x</sub>) reduction and a flue gas  
5 desulfurization system (FGD or scrubber) for sulfur dioxide (SO<sub>2</sub>) reduction  
6 on Scherer 3 by July 1, 2011. A 2006 economic analysis showed that  
7 making these environmental investments so that the unit could continue to  
8 operate was in the best interest of customers. Scherer 3's baghouse was  
9 installed in 2009, the SCR in 2010, and the scrubber in 2011.

10  
11 In February 2006, Gulf issued an RFP to fill its capacity need starting in  
12 2009. The RFP resulted in the October 2006 execution of PPAs for almost  
13 500 MWs of capacity and energy from the Dahlberg and Coral Baconton  
14 generation facilities to serve Gulf's native load capacity needs from June 1,  
15 2009 through May 31, 2014. In 2008 Gulf was preparing to issue an RFP  
16 for supply starting in 2014 for resources that would compete against a  
17 potential combined cycle natural gas unit to be constructed at the Plant Crist  
18 site. However, Gulf was approached by Shell Energy North America about  
19 possible interest in an attractively priced PPA for capacity and energy from  
20 the Central Alabama combined cycle natural gas facility. Gulf entered into  
21 the PPA for Central Alabama in March 2009, and the FPSC subsequently  
22 approved the Central Alabama PPA for service to Gulf's retail customers  
23 from November 1, 2009 through May 24, 2023.

1 In addition to the Central Alabama PPA, Gulf has executed energy  
2 purchase agreements with providers of renewable energy generated by  
3 municipal solid waste, solar, and wind facilities.  
4

5 Q. What is the basis for the summary of Gulf's historical generation decision  
6 making that you describe above?

7 A. Mr. Deason and I reviewed a number of historical documents and worked  
8 together on the development of Exhibit JAB-1, which is a chronological  
9 summary of the key planning and regulatory events and decisions  
10 associated with Gulf's 25 percent ownership interest in Scherer 3.  
11 Additionally, I relied on other Company information and knowledge of  
12 general Company, U.S. and world events that transpired over this historical  
13 period.  
14

## 15 16 **II. GULF'S CURRENT GENERATION OUTLOOK** 17

18 Q. Please provide an overview of the resource planning landscape facing Gulf  
19 today.

20 A. As can be observed from the historical events I describe above, long-term  
21 planning has always involved uncertainty. Gulf's current resource planning  
22 landscape is no different. There is uncertainty regarding the long term rate  
23 of U.S. economic growth, the long term rate of Gulf's load growth, future  
24 natural gas price volatility, the timing and amount of natural gas price  
25 increases, and future potential environmental regulations that could impact

1 both natural gas and coal production as well as utilization. Compounding  
2 the planning challenges associated with these uncertainties is the fact that  
3 commitments to dispatchable generation additions are typically required to  
4 be made many years in advance and typically get added as “lumpy”  
5 capacity additions. The long, multi-year lead times are necessary to allow  
6 for engineering, permitting and construction of the generation as well as  
7 development of associated electric transmission infrastructure that is  
8 typically needed. The “lumpiness” of generation additions is a result of the  
9 fact that the major components of dispatchable generation come in discrete  
10 sizes and that the most efficient and economic generation sizes typically do  
11 not match well with any given year’s capacity need.

12  
13 Despite the uncertainties, the long lead times and the “lumpiness”  
14 associated with generation additions, what is certain is Gulf’s obligation to  
15 serve its customers with reliable and economic electric service. From a  
16 planning perspective, this obligation combined with the previously discussed  
17 planning challenges results in commitments to generation additions that  
18 virtually never exactly match the timing or amount of capacity need. This  
19 mismatch between the amount and timing of the need for capacity and the  
20 Scherer 3 rededication to retail service is the case facing Gulf today, just as  
21 it was the case in virtually every dispatchable generation addition that has  
22 been previously made by Gulf and approved by this Commission. Because  
23 of the long lead times associated with dispatchable generation additions  
24 and the uncertainties associated with planning, these mismatches between  
25 the amount and timing of needed capacity versus future generation

1 additions will continue to exist in the future. So, these types of mismatches  
2 existed in the past, they exist today and they will continue to exist in future  
3 generation additions.

4  
5 Q. Despite the mismatch you previously described, how does the rededication  
6 of Scherer 3 to retail service relate to Gulf's future resource plans?

7 A. The rededication of Scherer 3 to native load service complements Gulf's  
8 resource plans by offsetting a portion of the lost fuel diversity associated  
9 with recently retired coal-fired units, serving as a hedge to the volatility of  
10 natural gas prices and avoiding the need for 210 MWs of future capacity  
11 additions that would otherwise be needed.

12  
13 Q. Please describe the change in fuel diversity associated with Gulf's  
14 generation resource changes.

15 A. Since April 2015, Gulf has retired four coal fired generating units at Plant  
16 Scholz and Plant Smith representing almost 450 MWs of generation  
17 capacity. The rededication to retail service now of Scherer 3's 160 MWs of  
18 Powder River Basin (PRB) coal-fired capacity (with rededication of the  
19 remaining 50 MWs by 2020) restores a portion of the lost fuel diversity in  
20 Gulf's energy mix.

21  
22 Diversification is a recommended approach in the financial community to  
23 address uncertainty and volatility of markets. Likewise, diversification of  
24 energy resources is a valuable approach to address uncertainty in natural  
25 gas prices and future environmental requirements. By rededicating energy

1 from the environmentally well-controlled, low variable cost Scherer 3 unit to  
2 Gulf's resource mix, Gulf's customers will continue to be served by a  
3 diverse fuel mix.

4  
5 It is also important to maintain diversification to ensure a high level of  
6 reliability. By diversifying the type of fuel used for electricity generation, the  
7 supply basins from which that fuel is procured and the transportation  
8 providers and infrastructure that move the fuel from the fuel basin to the  
9 generator, the risks of disruption of fuel delivery to the generation fleet are  
10 reduced. If a given fuel supply basin is temporarily unusable due to natural,  
11 regulatory or other reasons, having a diverse source of fuel supply basins  
12 helps minimize fuel supply disruption to the generation fleet. Likewise, if a  
13 given fuel transportation provider or a portion of fuel transportation  
14 infrastructure is temporarily unavailable due to natural, regulatory or other  
15 manmade reasons, having a wide variety of fuel transportation sources is  
16 helpful to ensure fuel is available to provide reliable electric service to  
17 customers.

18  
19 Q. Please describe how Scherer 3's rededication complements Gulf's fuel  
20 hedging activities.

21 A. The reintegration of Scherer 3, with its low price volatility PRB coal fuel,  
22 complements the recent change to Gulf's natural gas fuel hedging program,  
23 which reduced Gulf's target natural gas hedge volume. Scherer 3's  
24 rededication to retail service enables the use of its low variable cost PRB  
25 coal, and allows its dispatchability to serve as an inherent fuel hedge.

1 Maintaining a diverse array of dispatchable resources is a highly-effective  
2 hedge against volatile natural gas prices. A diverse array of dispatchable  
3 resources is more effective as a hedge than either financial natural gas  
4 hedges or 100 percent fixed price renewables, because the utilization of the  
5 dispatchable resource can be varied in direct response to the price of  
6 natural gas. This variation in dispatchable resource utilization can displace  
7 the use of natural gas in periods of high natural gas prices and can be  
8 displaced by the use of natural gas in periods of low gas prices.

9  
10 Q. Please summarize your testimony.

11 A. For many years, Gulf Power has made resource planning decisions in  
12 conjunction with a coordinated planning process to the benefit of its  
13 customers. That process led to the acquisition of a 25 percent ownership  
14 share in Scherer 3 in the early 80's in lieu of the more costly alternative of  
15 building a new unit at Caryville. That process also led to the decision to  
16 invest in environmental controls in 2009-2011 to comply with the  
17 environmental rules in place, which was determined to be the right decision  
18 for Gulf's customers. Additionally, Scherer 3's rededication to retail service  
19 is consistent with its originally planned purpose and is complementary to  
20 Gulf's future resource plans.

21  
22 Q. Does this conclude your testimony?

23 A. Yes.

24

25

AFFIDAVIT

STATE OF ALABAMA        )  
  )  
COUNTY OF JEFFERSON    )

Docket No. 160186-EI

Before me the undersigned authority, personally appeared Jeffrey A. Burleson, who being first duly sworn, deposes, and says that he is the Vice President of Commercial Services and Planning at Southern Company Services, a Georgia Company, and that the foregoing is true and correct to the best of his knowledge, information, and belief. He is personally known to me.



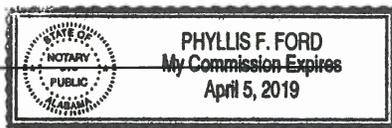
s/ Jeffrey A. Burleson  
Jeffrey A. Burleson  
Vice President of Commercial Services and Planning

Sworn to and subscribed before me this 3rd day of October, 2016.

Phyllis F. Ford  
Notary Public, State of Alabama

Commission No. \_\_\_\_\_

My Commission Expires \_\_\_\_\_



# Exhibit

Chronology of Gulf Power Company's Interest in Scherer 3										
Event					Source Document					
Year	Month	Day	Description	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes	
1970	May		Crist Unit 6 commercial in-service date.							
1973			Alternative site locations are considered for Gulf's next generating unit addition of two 518 MW coal units. These were Oak Grove, Lansing Smith, Scholz, Seminole, and Caryville.			464	351		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1973	August		Crist Unit 7 commercial in-service date. This is the last unit addition before Scherer 3.							
1973	October		Gulf selects Lansing Smith site for the next generating unit additions. Smith Units 3 & 4 (518 MW in 1979 & 1981) are included in the budget and forecast for the first time.			464	351		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1973	October		Start of the first oil crisis (the Arab Oil Embargo).						<a href="http://www.eia.gov/pub/oil_gas/petroleum/analysis_publications/chronology/petroleumchronology2000.htm">http://www.eia.gov/pub/oil_gas/petroleum/analysis_publications/chronology/petroleumchronology2000.htm</a>	
1974	February		Site for Gulf's next generating unit additions in 1979 & 1981 changed from Lansing Smith to Caryville.			464	351		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1974	October		Caryville 1 deferred until 1980. Caryville 2 remains planned for 1981. Deferral is due to the oil embargo, a slow down in the economy, and slower load growth.			464	287, 351		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1975	October		Caryville 1 & 2 deferred until 1982 and 1984 due to Gulf's plan to purchase a 50% share of Daniel 1 & 2 in 1979.			464	351		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1976	January	19	Florida Division of Administrative Hearings recommends granting Gulf's application for certification to construct two 500 MW units at Caryville and subsequent units up to 3,000 MW. The order states that the PSC sponsored a witness in the proceeding; all parties concurred that there is a need for expanded capacity to serve Gulf's customers that can be met by Caryville 1 and 2; and all agencies involved recommended certification.	75-436N					Division of Administrative Hearings Case No. 75-436N, Recommended Order	

Chronology of Gulf Power Company's Interest in Scherer 3									
Year		Event		Source Document					
Month	Day	Description	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes	
1976	February	Gulf's purchase of Daniel deferred from 1979 to 1980.			464	351		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1976	May	4 Florida Governor and Cabinet approve Certification for the first two 500 MW units at Caryville.	75-436N					Division of Administrative Hearings Case No. 75-436N, Final Order	
1977	September	Daniel 1 construction is completed.			456	2		Gulf's Response to Staff's Tenth Set of Interrogatories Item no. 152.	
1977	October	Gulf's purchase of Daniel 1 & 2 (50%) is deferred from 1980 to 1981. Caryville 1 (now 479 MW) is deferred from 1982 to 1985. Caryville 2 is removed from forecast.			464	352		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.	
1977	November	Daniel 2 (currently under construction) is delayed from 1980 to 1981.			456	2		Gulf's Response to Staff's Tenth Set of Interrogatories Item no. 152.	
1978	April	Georgia revises its forecast downward causing Gulf to stop expenditures on Caryville development while it evaluates the option of the operating companies buying portions of Plant Scherer.					RC-97 to 98		
1978	August	4 Gulf, Mississippi and Southern Company Services met with Georgia about a possible ownership interest in Scherer.					RC-98		
1978	August	8 First informal conversation with FPSC Staff about the possibility of an ownership interest in Scherer.					RC-98		
1978	August	25 Letter from Mr. Addison (Gulf President) to David Swafford (FPSC Executive Director) notifying the FPSC of a possible alternate source of capacity (Scherer) and requesting the Commission approve the write-off over a five-year period of the total costs resulting from the cancellation of the present construction plans at the Caryville Plant above the line for ratemaking purposes thus enabling Gulf to negotiate for the purchase of capacity in Georgia.					RC-84 to 85	This letter resulted in the creation of Docket 780714.	

Chronology of Gulf Power Company's Interest in Scherer 3									
Event					Source Document				
Year	Month	Day	Description	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes
1978	October		Caryville unit 1 cancelled. Scherer Units 1-4 capacity purchase included in budget. Scherer Units 1-3 (8.9%) 216 MW in-service 1985; Scherer Units 1-3 (4.5%) plus Scherer 4 (13.3%) 216 MW in-service 1987.			464	352		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.
1978	October	9	Informal Workshop: Presentation from Gulf Power Company describing alternatives to the construction of its planned Caryville generating unit being considered by the company, and exploring the possible accounting treatment of cancellation charges associated with pursuing an alternative course.	780714				RC-86 to 152	
1978	December	4	Letter From William Talbott (FPSC Accounting Director) to E.L. Addison (Gulf President) giving instruction on how Gulf should handle the accounting for Caryville cancellation costs. Authorizes booking of cancellation charges but defers action on recovery from ratepayers until a later proceeding.	780714				RC-153 to 154	
1979	January		Construction of Scherer 3 and 4 commences, scheduled to be completed in February 1984 and February 1985 respectively.			456	1		Gulf's Response to Staff's Tenth Set of Interrogatories Item no. 152.
1979	January		Start of the Second Oil Crisis (the "1979 Energy Crisis" or "Iranian Revolution").						<a href="http://www.eia.gov/pub/oil_gas/petroleum/analysis_publications/chronology/petroleumchronology2000.htm">http://www.eia.gov/pub/oil_gas/petroleum/analysis_publications/chronology/petroleumchronology2000.htm</a>
1979	June		Gulf begins amortizing Caryville cancellation costs over a five year period.					RC-161	
1979	August		Decision was made to defer Scherer 3 from 1985 to 1987 and to defer Scherer 4 from 1987 to 1989.			456	8		Gulf's Response to Staff's Tenth Set of Interrogatories Item no. 159.

Chronology of Gulf Power Company's Interest in Scherer 3											
Year		Month		Day		Event Description		Source Document			
Year	Month	Day	Description	Docket	Order	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes
1979	August	14	Letter from R.W. Scherer (Georgia Power President) to E.L. Addison (Gulf Power President) and V.J. Daniel (Mississippi Power President) regarding the desirability of Gulf and Mississippi Power participating in ownership of Plant Scherer, presently under construction.					583	1, 2		
1979	October		Gulf revised its Scherer capacity purchase to 25% of Units 3 & 4 (202 MW each, total of 404 MW) in-service 1987 & 1989.					464	352		Chronological Sequence For Gulf Plans That Included Lansing Smith, Caryville, Daniel, And Scherer Units.
1980	January	22	Letter from E.L. Addison to R.W. Scherer informing him of Gulf's desire to purchase 25% of Plant Scherer Units 3&4.							RC-155	
1980	March	3	Gulf files rate case with an historical test year of 1979.	800001						RC-156, 158	
1980	November	10	Final order in 1979 test year rate case authorizes Gulf to amortize Caryville cancellation charges above the line and include the unamortized balance in rate base because of the economic advantage of purchasing Scherer capacity in lieu of constructing the Caryville unit. Monies held subject to refund pending closing of the Scherer purchase.	800001	9628					RC-161 to 162, RC-164 to 165	
1981	February	16	Informal workshop at which Gulf presents the merits of purchasing an interest in Scherer 3 and 4. Gulf will not have a retail capacity need for six years after the in-service date of Scherer 3 and four years after the in-service date of Scherer 4, but expects to sell the capacity in the wholesale market on an interim basis. Prior to signing purchase agreement, Gulf needs assurance that the delayed need will not be an issue for future cost recovery. Commissioners informally indicate that Scherer purchase is still seen as a good deal for retail customers.							RC-185 to 233	



Chronology of Gulf Power Company's Interest in Scherer 3											
		Event			Source Document						
Year	Month	Day	Description	Docket	Order	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes
1982	May	18	Amendment No. 1 to 2/18/82 Amended and Restated UPS Agreement between FPL and Southern Company Services et al. for sales through May 31, 1995.								
1982	May	19	Amended and Restated UPS Agreement between JEA and Southern Company Services et al. for sales through May 31, 1995.								
1982	June	4	Gulf files rate case with a projected test year of 1983.	820150						RC-295, 298	
1983	January	11	Final Order in 1983 test year rate case continues amortization of Caryville cancellation charges and contains prudency language identical to that in the prior rate order. With respect to the UPS contracts for Plant Daniel, the Commission found that so long as the proper amounts of investment, operating expenses, and revenues are allocated to UPS customers, retail ratepayers will not only not subsidize UPS customers, but on the contrary, they will benefit handsomely from the sales, in the sense that they will not have to support the capacity sold in a UPS transaction for the life of the contract but the capacity will be available to serve them when they need it in the future, at a relatively reduced price when compared to the cost of future construction.	820150	11498					RC-313	
1983	December	9	Letter from Doug McCrary (Gulf President) to R.W. Scherer (GA President) stating that Gulf has decided to limit its participation in Plant Scherer to 25% of Unit 3 only (canceling Gulf's participation in Scherer Unit 4).							RC-357 to 358	
1983	December	13	Letter from R.W. Scherer (GA President) to Doug McCrary (Gulf President) in reply, agreeing to modify Georgia Power's contract with Gulf Power to provide for the purchase by Gulf of 25% of Plant Scherer Unit number 3 only (canceling Gulf's participation in Scherer Unit 4).							RC-359	

Chronology of Gulf Power Company's Interest in Scherer 3									
Event					Source Document				
Year	Month	Day	Description	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes
1983	December	13	Gulf notifies the FPSC that an agreement has been reached between the parties whereby Gulf's ownership interest in Plant Scherer will be limited to a 25% interest in Unit #3.	810136 & 820150		464	209-211		
1984	March	1	Scherer 3 Purchase and Ownership Participation Agreement and Operating Agreement (between Georgia and Gulf) is effective.						
1984	April	27	Gulf files rate case with a projected test year of 1984.	840086			2, 4		
1984	October	10	SEC issues an Order authorizing sale and acquisition of Scherer 3 between Georgia Power and Gulf Power. Includes this note #23: "Georgia and Gulf have already contracted to sell about 88% of the capacity of Unit 3 to non-affiliates through 1992, with sales phasing out over the following three years. The effect is to postpone the availability of the generation to Gulf until needed." Also includes a discussion of the position of the intervenor Ratewatch.	SEC 621	35-23448			RC-360 to 365	
1984	October	18	Gulf closed on the purchase of 25% interest in Scherer Plant Unit No. 3.			583	251		
1987	January	1	Scherer Unit 3 construction is completed and unit begins commercial operation.			Gulf's post-hearing brief	33,34		
1987	December	31	The portion of Scherer Unit 3 not sold through long-term off-system sales is in Gulf Power's surveillance filing for the entire year of 1987.						
1988	July	1	Gulf Power suspended its contract with Gulf States Utilities (GSU) in mid-1988 after GSU defaulted on its 44 MW UPS purchase obligation from Scherer 3.			Gulf's post-hearing brief	38		

Chronology of Gulf Power Company's Interest in Scherer 3											
Event				Source Document							
Year	Month	Day	Description	Docket	Order	Exhibit	Pages	Ref. Compendium	Docket	Order	Notes
1988	July	19	Gulf enters into 1988 UPS Agreement with <b>FPC</b> in effect through May 31, 2010.								
1988	July	20	Gulf enters into 1988 UPS Agreement with <b>FPL</b> in effect through May 31, 2010.								
1988	August	17	Gulf enters into 1988 UPS Agreement with <b>JEA</b> in effect through May 31, 2010.								
1988	December	31	The portion of Scherer Unit 3 not sold through long-term off-system sales is in Gulf Power's surveillance filing for the entire year of 1988.								
1989	December	15	Gulf files rate case with a projected test year of 1990.	891345							RC-2, 7
1989	December	31	The portion of Scherer Unit 3 not sold through long-term off-system sales is in Gulf Power's surveillance filing for the entire year of 1989.								
1990	September	27	Final order on Gulf's Petition for approval of "Tax Savings" refund for 1988 allows inclusion in retail rate base of 19 MW of Scherer 3 that has never been subject to a wholesale contract.	890324	23536		2-4		890324	23536	
1990	October	3	Final Order in 1990 test year rate case disallows 64 MW of Scherer 3 from retail rate base on the grounds that Gulf is scheduled to sell increasing amounts of Scherer 3 under UPS agreements starting in 1992 such that by 1995 none of Scherer 3 will be available to serve Gulf's territorial customers until 2010.	891345	23573						RC-12
1999	March	15	Gulf filed petition to determine need for electrical power plant, Smith Unit 3, to be on-line in 2002. Scherer is listed in the description of existing facilities in the Need Study filed with the petition.	990325			1, 2		990325	99-1478	
1999	August	2	FPC issues an Order granting Gulf's Petition to determine need for electrical power plant, Smith Unit 3, to be on-line in 2002.	990325	99-1478		7		990325	99-1478	

Chronology of Gulf Power Company's Interest in Scherer 3											
Event			Source Document								
Year	Month	Day	Description	Docket	Order	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes
2002	April		Smith Unit 3 commercial in-service date.								
2004	August	11	Gulf signs PPA contract with <b>FPL</b> to deliver Scherer 3 capacity and energy from June 1, 2010 through December 31, 2015.								
2004	August	26	Southern Company Services on behalf of Gulf signs PPA contract with <b>Flint EMC</b> to deliver Scherer 3 capacity and energy from June 1, 2010 through December 31, 2019.								
2004	November	24	Gulf signs PPA contract with <b>Progress (FPC)</b> to deliver Scherer 3 capacity and energy from June 1, 2010 through December 31, 2015.								
2005	January	24	Commission approves FPL contract for cost recovery purposes and discusses benefits of transaction.	050001	05-0084					RC-366 to 371	
2005	March	14	Commission approves Progress contract for cost recovery purposes and discusses benefits of transaction.	041393	05-0272					RC-372 to 377	
2006	October		Gulf signs PPA contract to purchase 487 MW of capacity and energy from Plants Coral Baconton and Dahlberg for the period June 1, 2009 through May 31, 2014.						2		
2006	October	30	Gulf signs PPA contract with <b>Progress (FPC)</b> for Scherer 3 capacity and energy from January 1, 2016 through May 31, 2016.								
2007			State of Georgia issues the Georgia Multi-Pollutant Rule which requires Scherer 3 to have a baghouse by 2009 and an SCR and scrubber by 2011.								
2007	November	16	FPL is allowed EGRC recovery for environmental projects at Scherer 4, a sister unit of Scherer 3.	070007	07-0922						

### Chronology of Gulf Power Company's Interest in Scherer 3

Event				Source Document					
Year	Month	Day	Description	Docket	Order	Exhibit	Pages	Ref. Compendium	Notes
2008	September		Gulf postponed issuance of an RFP for a 2014 generation need of 976MW in order to pursue the Shell PPA.				2		
2009	February	26	Scherer 3 Baghouse placed in service.						
2009	March	16	Gulf signs a purchase power agreement with Shell Energy North America for 885MW for the period August 2009 through May 24, 2023.				1		
2009	April	6	Gulf files a Petition with the FPSC requesting approval of Purchased Power Contract with Shell Energy North America.				1		
2009	May	12	In Gulf's response to Item 8 of Staff's First Data Request in the Shell PPA Docket, pages 4 through 7 of 25, Gulf includes Scherer Unit 3 in the Reserve Margin Analysis.	090169					
2010	December	14	Scherer 3 SCR placed in service.						
2011	March	23	Scherer 3 Scrubber placed in service.						
2015	April	1	Scholz Unit 1 and Unit 2 coal generators are retired (~90MW).						
2015	December	31	Expiration of Scherer 3 PPA sales to <b>FPL</b> .						
2016	March	31	Smith Unit 1 and Unit 2 coal generators are retired (~350MW).						
2016	May	31	Expiration of Scherer 3 PPA sales to <b>Progress/FPC (Duke)</b> .						
2019	December	31	Expiration of Scherer 3 PPA sales to <b>Flint EMC</b> .						

**Document No. 1**  
**Order of the Governor and Cabinet, dated**  
**May 7, 1976**

BEFORE THE GOVERNOR AND CABINET  
OF THE STATE OF FLORIDA

In re: Application of GULF POWER )  
COMPANY for Power Plant Site Certi-) Division of  
fication, Caryville Steam Plant, ) Administrative  
Holmes/Washington County, Florida ) Hearings  
 ) Case No. 75-436N  
 ) Application No. PS 75-07  
 )

The following persons were present and participated in  
the disposition of this matter:

Honorable Reubin O'D. Askew  
Governor

Honorable Bruce A. Smathers  
Secretary of State

Honorable Robert L. Shevin  
Attorney General

Honorable Philip F. Ashler  
Treasurer and Insurance Commissioner

Honorable Gerald A. Lewis  
Comptroller

Honorable Doyle Conner  
Commissioner of Agriculture

Honorable Ralph D. Turlington  
Commissioner of Education

ORDER

THIS MATTER having come on to be heard by the Governor and  
the Florida Cabinet in exercising their functions under Sections  
403.501 through 403.515, Florida Statutes, pursuant to Chapter  
75-22, Laws of Florida, the Recommended Orders of the hearing  
officer, and the Stipulations between the Applicant and the  
Department having been considered and the parties and the public  
having been offered an opportunity to make comment and present  
arguments, it is therefore,

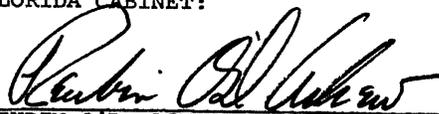
ORDERED, by the Governor and the Florida Cabinet that the  
Recommended Orders of the hearing officer (Exhibits I, II, and  
III) are approved and adopted except that they are hereby  
modified to be consistent with and to include, in the Conditions

of Certification (Exhibits IV and V), the language indicated in the Stipulations between the Department and the Applicant (Exhibits VI and VII). Accordingly, Certification for the first two (2) five hundred (500) megawatt units of the proposed facility is hereby issued in accordance with said Recommended Orders as modified herein.

DONE the 4th day of May, 1976.

ENTERED this 7th day of May, 1976, at Tallahassee, Florida.

FOR THE GOVERNOR AND  
FLORIDA CABINET:



REUBIN O'D. ASKEW  
Governor

VOTE:

FOR:

Honorable Reubin O'D. Askew  
Honorable Bruce A. Smathers  
Honorable Robert L. Shevin  
Honorable Philip F. Ashler  
Honorable Gerald A. Lewis  
Honorable Doyle Conner  
Honorable Ralph D. Turlington

AGAINST:

Copies furnished to:

William P. White, Jr.  
DEPARTMENT OF ENVIRONMENTAL REGULATION

Barrett G. Johnson  
FLORIDA PUBLIC SERVICE COMMISSION

Louis F. Hubener  
DIVISION OF STATE PLANNING

G. Miles Davis  
GULF POWER COMPANY

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

In re: Application of GULF POWER )  
COMPANY for Power Plant Site Certi- )  
fication, Caryville Steam Plant, )  
Holmes/Washington County, Florida )  
 )  
 )  
 )

CASE NO. 75-436N

Pursuant to notice, the Division of Administrative Hearings, by its duly designated hearing officer, K. N. Ayers, held a public hearing in the above styled cause on December 3 and 4, 1975 at Caryville, Florida.

APPEARANCES:

G. Miles Davis, Esquire, Beggs & Lane, P. O. Box 12950, Pensacola, Florida 32576, representing Gulf Power Company

Barrett G. Johnson, Esquire, 700 South Adams Street, Tallahassee, Florida 32304, representing the Florida Public Service Commission and Division of State Planning

William P. White, Jr., Esquire, 2562 Executive Center Circle East, Montgomery Building, Tallahassee, Florida 32301, representing the Department of Environmental Regulation.

RECOMMENDED ORDER

By this Application, Gulf Power Company (Applicant or Gulf), who is duly authorized to serve customers in the panhandle portion of Florida west of the Apalachicola River, seeks certification as required by §403.501 et seq. F. S. to construct and operate an electrical power plant in the vicinity of Caryville, Florida. Gulf proposes to construct a steam plant capable of generating 3,000 megawatts (mw) of electricity commencing with an initial capacity of 500mw coming on line in 1980 and a second 500mw in 1981. Thereafter the additional capacity up to 3,000mw will be added incrementally as required to meet demand. Cooling water will be drawn from the Choctawhatchee River and after passing through condensers and heat exchangers pumped into 450 foot high cooling tanks where evaporation cooling will occur. Coal will be delivered by rail, unloaded from hopper cars at an unloading trestle and transported to the furnaces by a conveyer. Exhaust from furnaces will be transmitted to the atmosphere through a 700 foot high stack fitted with appropriate equipment to insure the discharge meets environmental standards.

At an original hearing held on June 23, 1975, evidence pertaining to existing land use plans and zoning was presented and on July 22, 1975 a Recommended Order was submitted in which the proposed site was found to conform with existing land use plans and zoning ordinances.

At the instant hearing, conducted pursuant to § 403.508(3) Florida Statutes and Chapter 17-17.11 FAC, evidence was received pertaining to the necessity for the expanded electrical generation, the expected environmental impact of the proposed power plant, the operational safeguards that should be required as a condition to certification, and other public interests to be considered in carrying out the legislative intent of the Florida Electrical Power Plant Siting Law. Detailed studies required by §403.507 F.S. were completed and reports of these studies were received into evidence at this hearing.

Six witnesses testified on behalf of Gulf, one witness testified on behalf of the Public Service Commission (PSC), two witnesses testified on behalf of the Department of Environmental

Regulations (DER) and twenty-three exhibits were admitted into evidence. There were no witnesses or intervenors from the general public or from municipal or county agencies.

#### FINDINGS OF FACT

All parties involved concurred that there is a necessity for expanded generating capacity to serve Gulf's customers and that the two initial units of 500mw each can meet this requirement.

The parties stipulated that the power plant site certification application submitted by Gulf (Exhibit 1) deals sufficiently with the issue of operational safeguards and further that DER's proposed conditions of certification contain a condition that adequately addresses that issue.

All agencies involved recommended certification; however, DER's recommendation was predicated upon Gulf complying with the general and special conditions or certifications contained in Exhibits 4 and 5. Gulf agreed to all those conditions but three, viz: 1. That the water intake and return lines to the river cross the wetlands on a trestle instead of the causeway proposed by Gulf; 2. A more extensive monitoring program and without termination date than the fixed period monitoring program proposed by Gulf; and 3. Restrictions upon use of herbicides to clear transmission line corridors in excess of those placed by federal and state authorities. In addition DER proposed in general conditions of certification 11(a) and (b) to modify in the future the conditions of certification by any new or more stringent department rule enacted pursuant to Chapter 120 F.S. Gulf objected to this condition of certification and submitted a brief in opposition thereto.

#### I

With respect to Item #1 above the proposed causeway will occupy some 8 acres of wetlands. It is proposed to commence the causeway at elevation + 58 feet (above MSL), which is the 25 year predicted high water flood level in the Choctawhatchee River flood plain, and continue the causeway some 2400 feet at this elevation to the river bank. The base of the proposed causeway will have a maximum width of 130 feet at a point near the river's edge where the causeway height will be 23 feet (T91). The top width is roughly 60 feet (T90) of which 18 feet will be paved surface. To the north of the access road will be a buried electrical service to carry electricity to the pumps. In the causeway to the south of the access road will be buried two intake lines of 30 inch diameter and one water discharge line. Near the river end of the causeway a vehicle turn-around area will be provided.

The causeway across the wetlands will run in a southwesterly direction from plant site parallel to the principal direction of flood water flow when the river is out of its banks. Five oval-shaped culverts will be placed in the causeway at the lowest points of natural contour and permit water to pass through the causeway to equalize levels on both sides of the causeway. These culverts will be 6 feet wide by 3 feet 8 inches high. During the wet season water will be standing in most of these culverts.

If the causeway were built in the same location, but without culverts, so as to block any flow normal to the causeway, the build up of water on the north side of the causeway would be only 1 or 2 inches at full flood stage of 57 feet (T146)\*. Accordingly the causeway would have little, if any, effect on the water flow in the wetlands over which this causeway passes; and, but for the 8 acres of wetlands eliminated by the construction of the causeway, the ecological function of these wetlands will be virtually unimpaired. As a collector of

\*Although the witness said 60 feet this height would exceed the elevation of the causeway and no build up could result.

sediment from the flood waters the flood plain would also be unimpaired by the construction of the causeway (T154). The cost of constructing the causeway as proposed is \$216,000.

As a condition of certification (Ex 5 D 1 b) DER prescribed "a trestle shall be used for access to the platform for all areas west of station 14 + 00." This includes the access across the wetlands and presumably it is DER's position that the intake and discharge pipes from the Choctawhatchee River shall be placed upon a trestle structure rather than upon a causeway. The only evidence presented with respect to the cost of the trestle structure was presented by Gulf that a concrete pile trestle to support the pipes and access road would cost some \$900,000. A creosoted pile trestle to perform the same function would cost approximately \$600,000 and to provide fire protection for the piling would cost another \$250,000, which would place the cost of either type trestle some four times the cost of the causeway. No maintenance costs or useful life comparisons of the trestle and causeway were presented. Both trestle and causeway would require the same corridor to be cleared thus the construction of either would result in the same ecological damage. Thereafter, however, the vegetation and other indicia of wetlands could return under the trestle. While evidence was presented that the causeway would occupy 8 acres of former wetlands no evidence was presented of the area occupied by the piling of the trestle. It is obvious that this would be a small fraction of the area occupied by the causeway, but not necessarily insignificant.

Gulf opposed the trestle concept for two additional reasons. The exposed pipe on the trestle, if of steel, would require painting and would conduct heat from the sun to the water passing through the pipe.

Testimony was presented that ecologists not present had evaluated wetlands in general as having an ecological value of between \$1,000 and \$20,000 per acre per year. If these figures have economic reality all wetland should have a market value of at least \$10,000 per acre. Regardless of this if we assume the values presented are real and the cost for the access corridors are correct, the following economic comparisons can be made. The difference in the cost of the causeway and trestle is approximately \$700,000. If this money is borrowed by Gulf at 8 1/2% interest the interest cost is almost \$60,000 per year. Since this would be a valid capital expense this interest cost will be reflected in the rates of Gulf's customers. If the wetlands are ecologically worth \$7,500 per acre per year the 8 acres here involved would also have a value of \$60,000 per year.

In this connection it should be noted that DER's condition of certification specifying trestle across wetlands was based solely on ecological factors and cost was not considered. (T308).

During the course of the hearing considerable evidence was presented regarding a third alternative for piping water to and from the river, *viz.* in pipes buried across the wetlands. This evidence was insufficient in numerous aspects to give it viability; however, several aspects of this proposal are worthy of note.

Any pipe that is used to carry cooling water requires some degree of slope to permit the pipe to be drained. From a position near SR 179 (where if underground pipes are used the pumps would have to be placed to provide access for maintenance) the pipe could be buried; but, at some point in the flood plain, the pipe would have to be placed upon a trestle to maintain slope to the river's edge (T287).

Burying pipes across the wetlands would have the least ecological impact upon the wetlands. Once the pipe path was trenched, suitable bearing material placed in the trench to support the pipe, the pipe laid and the trench back filled the wetlands would return to natural state and the area involved resume most of the characteristics of wetlands.

Problems associated with this proposal include providing all-

weather access to the inside of the pipe; obtaining suction on pumps located 2400 feet laterally and 12 + feet above the level of the water to be pumped; long periods of shutdown in case a section of pipe required replacement; and routine engineering problems in obtaining a constant slope upon installation.

Regardless of the path taken by these pipes some difficulties with corbicula clams are expected. These creatures are endemic to the Choctawhatchee River and will be entrained in the pipe. There they will attach themselves and as they grow restrict the flow in the pipes. Although chlorination at the inlet is expected to help control this problem periodic cleaning of the intake pipes may be required. Accordingly access to these pipes at all stages of the water level in the flood plain is an important concern.

While testimony was presented that it was possible to obtain suction with pumps located 2400 feet laterally and 12 + feet higher than the level of the water to be pumped, it was also acknowledged that this 2400 feet of 30 inch pipe would "probably" have to be primed before the pumps could pick up suction. (T305-306). Cost and feasibility of providing all weather access to the buried pipes, and of providing capability to prime the remote pumps was not presented. Furthermore the cost associated with burying the pipes across the wetlands was not presented. Accordingly this concept should not be further considered.

## II

With respect to the biological monitoring program to be carried out by Gulf to determine the effects of the power plant on river organisms, DER, as a condition of certification, proposes a program that will continue for the life of the plant regardless of the conclusions reached from such monitoring. Gulf, on the other hand, proposes a monitoring program to commence prior to the operation of Unit I to determine the base line conditions and continue for one year after commencement of operations of Unit I. Thereafter when Unit II comes on line the monitoring program would be re-instituted and continue for one more year. Since Unit II is scheduled to come on line one year after Unit I the monitoring program proposed by Gulf would actually be continuous for about 2 1/2 years.

All parties generally agreed that monitoring is required to ascertain the ecological effects of the plant on the aquatic life in the river. One type monitoring is needed to determine the effect of impingement and entrainment at the intake. The intake structure is designed so the plane of the intake screen is parallel to the current flow. This largely eliminates impingement of fish and other aquatic life on the intake screen as the current flow would tend to wash aquatic life off the screen. Since water is drawn into the intake at a speed of 1/2 foot per second those aquatic life in the volume of water entering which are small enough to pass through the screens will be entrained and killed in the filters. It is to determine the quantity and composition of the aquatic life so destroyed that this part of the monitoring program is intended. The second part of the monitoring program involves ascertaining the aquatic life in the river above the plant and below the point of discharge of the returned cooling water in order to ascertain the effect of the discharged water on the aquatic organisms.

With respect to the entrainment monitoring there was considerable confusion in the testimony regarding anticipated findings. Gulf's witness stated that at low river and low flow conditions the greatest number of organisms would be entrained. While it is obvious that the greatest percentage of available water will be removed from the river during low flow conditions (since the same quantity or volume of water will be withdrawn as at high flow conditions) it is not obvious that there will be a higher density of aquatic organisms

in the river at this same time; and no one so testified. In fact the testimony was that various organisms in the water may change radically (of a magnitude of 1,000 to 1) at various times throughout the year. It would appear that whatever concentration of aquatic organisms that exist in the thalweg of the river would exist in the water withdrawn through the intake pipes and be entrained. Those organisms that exist in slack water portions of the river, swim or otherwise remain out of the current passing near the intake would not be entrained. Thus a sampling point in the current near the intake would provide adequate information on the effects of entrainment. The program proposed by Gulf and contained in Exhibit 21 appears adequate for this determination.

With respect to the monitoring required to ascertain the effects of the plant operation on the river eco-systems Gulf proposed sampling only periphyton while DER's condition of certification (Exhibit 5) provides for a sampling to include phytoplankton, zoo plankton, ichthyoplankton, nutrient analysis, benthos and fish. These samples would be taken at points above and below the plant intake and discharge for the obvious determination of the effects on the river ecological system resulting from the discharge of the used cooling water back into the system. In this regard it should be pointed out that the water to be discharged will be treated to remove heat, solids, and other concentrations that would affect compliance with the EPA standards.

No valid cost estimates for the monitoring program proposed by either Gulf or DER was presented. One witness upon cross examination gave a ball park "guesstimate" of \$50,000 per year for Gulf's proposed program and \$100,000 per year for DER's program. The witness expressly disallowed any credit for the accuracy of these figures and accordingly they are disregarded. They are inserted here simply because cost of the end product, electricity, is a factor to be considered in determining under what conditions this certification should be granted.

As noted above Gulf proposes to continue the monitoring program for approximately 30 months (until one year after Unit II has come on line) while DER proposes a monitoring program that will continue for the life of the plant. The biological community sampling program contained in Exhibit 5, part II C should be followed. The time during which these programs should be continued will be discussed under Conclusions.

### III

All parties generally agreed that the use of herbicides was required to clear vegetation from transmission line corridors in wet areas where mechanical equipment cannot operate. Gulf proposes to use Kuron, a herbicide approved by both state and federal authorities. It will be used in wet areas only at a frequency not to exceed once per year and in accordance with manufacturer's instructions admitted into evidence as Exhibit 22. At the hearing DER appeared to take the position that approval by DER should be obtained prior to each time the herbicide is used. The evidence presented clearly shows that Kuron is a safe non-persistent herbicide which, when applied in accordance with instructions, will cause no harm to untargeted vegetation. All of the transmission line routes were not finalized at the time of the hearing but when the remainder of these corridors are finalized there appears to be no reason that Gulf should not provide DER with a map of these corridors indicating thereon those areas in which herbicides will be used.

### IV

No factual evidence regarding general conditions of certi-

fication 11(a) and (b) was presented. Accordingly these will be treated solely as a matter of law.

CONCLUSIONS OF LAW

In part II of Chapter 403 Florida Statutes the legislative intent of the Florida Electrical Power Plant Siting Law provides in Section 403.502 in pertinent part:

"...the state shall insure through available and reasonable methods that the location and operation of electrical power plants will produce minimal adverse effects on human health, the environment, the ecology of the land and its wildlife, and the ecology of state waters and their aquatic life. It is the intent to seek courses of action that will fully balance the increasing demands for electrical power plant location and operation with the broad interest of the public. Such action will be based on these premises:

(1) To assure the citizens of Florida that operation safeguards are technically sufficient for their welfare and protection.

(2) To effect a reasonable balance between the need for the facility and the environmental impact resulting from construction and operation of the facility, including air and water quality, fish and wildlife, and the water resources and other natural resources of the state.

(3) To provide abundant, low cost electrical energy."

Since there is no question of the need for the proposed facility the primary interest that must be balanced are the environmental impact of various courses of action and the cost of these various options.

The first area where such balance must be applied is in the water intake and return corridor between the plant and the river. Although trestle-like structures have been required across other wetlands where power plant sitings were involved, here the only evidence of ecological damage is that resulting from the loss of wetlands area due to the construction of the causeway. The only evidence of cost differential between causeway and trestle was that the trestle would cost some \$700,000 more than the causeway. It is the balance of this cost against the loss of 8 acres of wetland that must be made. Based upon findings noted earlier, it is concluded that the causeway construction should be approved.

The principal issue regarding biological monitoring of the water of the Choctawhatchee River is the duration of the program. Insufficient evidence was presented to support DER's position that such monitoring should continue for the life of the plant. On the other hand insufficient evidence was presented regarding the cost of the programs proposed from which a cost benefit analysis and determination can be made. It is therefore concluded that this issue should be reconsidered at a future date.

Whether or not general conditions of certification 11(a) and (b) should be approved presents a serious question of law. These sections provide:

"(a) upon the adoption by the department of a rule pursuant to Chapter 120, Florida Statutes, containing limitations or requirements applicable to any then continuing or future activities under this certification,

which rule provisions are new or more stringent than the requirements contained herein, the conditions of this certification shall be automatically modified consistent with such rule.

(b) After review of such information as the department deems appropriate, the department may, by order of the Secretary or his designee, modify the conditions of this certification as it deems necessary to attain the objectives of Chapter 403, Florida Statutes. The department shall provide notice and an opportunity for hearing in accordance with Chapter 403 and Chapter 120, Florida Statutes, and rules and regulations adopted pursuant thereto."

Section 403.511(1), Florida Statutes provides:

"The certification agreement shall authorize the electric utility named therein to construct and operate the proposed electrical power plant subject only to the conditions set forth in such certification." (underlining added).

If conditions 11(a) and (b) are included in the certificate this would have the effect of removing all finality from the certification agreement and thereby make it subject to future conditions imposed by an agency. This appears to be in direct conflict with the provisions of the statute above quoted and therefore an unauthorized condition. This is not to say the legislature cannot, at any future date, impose more onerous conditions of operation or restrictions upon Gulf; only that the law now extant militates strongly against an agency retaining such powers as a condition to site certification. Other reasons these conditions should be stricken were submitted by Gulf in its brief in opposition to these conditions. Since I consider the above to be dispositive of the issue those reasons advanced by Gulf are not reached.

From the foregoing it is concluded that Gulf Power Company should be issued a certificate to construct and operate an electrical power plant in Holmes and Washington counties as proposed in its application (Exhibit 1). It is further concluded that the conditions of certification (Exhibits 4 and 5) are valid conditions and should be made a condition of certification except for those conditions requiring trestle across wetlands, water monitoring for the life of the plant, prior approval before using Kuron in transmission line corridors and special conditions 11(a) and (b).

#### RECOMMENDATIONS

It is RECOMMENDED that the application of Gulf Power Company for a power plant site certificate be granted so as to authorize the construction and operation of a coal-fired steam generating electrical power plant near Caryville, Florida in accordance with Exhibit 1. It is further

RECOMMENDED that this approval be conditioned upon compliance by Gulf with the conditions of certification contained in Exhibits 4 and 5 except conditions II D 1 (b) (Exhibit 5), general conditions 11(a) and (b), (Exhibit 4), and that condition II C (Exhibit 5) be modified to provide such monitoring shall commence not less than six months prior to completion of Unit I and continue for a period of three years after completion of Unit II. At this time Gulf may petition DER for authority to discontinue said monitoring or to modify same and if such request is not approved Gulf shall be entitled to a hearing at which evidence shall be presented from

which a determination can be made whether the benefits of said monitoring program justify the costs involved.

DONE and ENTERED this 19th day of January, 1976, in Tallahassee, Florida.

  
K. N. AYERS  
Hearing Officer  
Division of Administrative  
Hearings  
Room 530, Carlton Building  
Tallahassee, Florida

Copy furnished:

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*Caryville*

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: Application by Gulf Power Company )  
for Power Plant Site Certification )  
Caryville Steam Plant, Holmes/ ) CASE NO. 75-436N  
Washington County, Florida )  
)

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Pursuant to notice, the Division of Administrative Hearings by its duly designated hearing officer, K. N. Ayers, held a public hearing in the above style cause on June 23, 1975 at Caryville, Florida.

APPEARANCES: G. Miles Davis, P. O. Box 12950, Pensacola, Florida representing the applicant.

Vance W. Kidder, 2562 Executive Center Circle, Tallahassee, Florida, representing the Department of Pollution Control.

RECOMMENDED ORDER

By this application Gulf Power Company (hereinafter referred to as Gulf Power or Applicant) seeks a power plant siting certification in accordance with Section 403.506 et seq. Florida Statutes. The purpose of the hearing, which was conducted pursuant to Section 403.508 Florida Statutes, was to determine whether or not the proposed site is consistent, and in compliance with, existing land use plans and zoning ordinances.

Four witnesses testified in behalf of the application and six exhibits were admitted into evidence. There were no protestants.

The proposed site consists of approximately 1500 acres. It is proposed to construct a coal fired plant consisting of one 500 megawatt unit to put into operation by June 1, 1980. A second 500 megawatt generator is planned for completion no later than June 1, 1981. To meet future power needs, Gulf Power is planning the site to allow potential expansion to a generating capacity of 3,000 megawatts. The intake and discharge will be into the Choctawhatchee River.

Exhibit 1, a plat plan of the site, Exhibit 2, Notices of Publication, Exhibit 3, News release dated June 12, 1975, Exhibit 4, Resolution of Board of County Commissioners of Holmes County, Exhibit 5, Resolution of Board of County Commissioners of Washington County, and Exhibit 6, Resolution of the City of Caryville, were admitted into evidence. The proposed site is partly in the city of Caryville and part of it is in Holmes County, and part in Washington County. By resolution of the Board of County Commissioners of Holmes County (Exhibit 4) the Board of County Commissioners approved the proposed site. That site is consistent with the planning requirements of Holmes County. By resolution of the Board of County Commissioners of Washington County, (Exhibit 5) those county commissioners also approved the proposed site and the resolution stated that the use of the proposed site is in accord with zoning and land use requirements of Washington County. They do not have any zoning laws for the unincorporated area of the county. By resolution of the city of Caryville (Exhibit 6) the city of Caryville approved the proposed use of the site. Caryville does not have any zoning requirements for that part of the land in question which is within the city limits of Caryville.

In view of the absence of protest, the evidence need not be further delineated except to say that the proposed site conforms with existing land use plans and zoning ordinances in effect as of the date of the application. From the foregoing it is concluded that the

granting of the application will not be inconsistent with the land use plans and zoning ordinances for the proposed site. It is therefore,

RECOMMENDED that the application of Gulf Power Company for a land use siting certificate be approved so as to authorize the use of a 1500 acre tract of land in Holmes/Washington counties and City of Caryville for a proposed power plant site.

DONE and ENTERED this *22nd* day of July, 1975 in Tallahassee, Florida.

  
K. N. AYERS  
Hearing Officer  
Division of Administrative  
Hearings  
Room 530, Carlton Building  
Tallahassee, Florida

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

In re: Application by Gulf Power Company )  
for Power Plant Site Certification )  
Caryville Steam Plant, Holmes/ )  
Washington County, Florida )

CASE NO. 75-436N

AMENDED RECOMMENDED ORDER

By stipulation entered at the final hearing on Gulf Power Company application for certification of the proposed Caryville Steam Plant on December 3, 1975, the applicant, Gulf Power Company and the Division of Environmental Regulations, requested the Hearing Officer modify the initial Recommended Order in this case filed July 22, 1975. At the land use portion of the hearing held on June 23, 1975 the legal description of the site and plats of the area involved were not presented. All parties to this proceeding concur that the plat plan of the site and the legal description of the site should be included in the record in this case. The stipulation and five plat plans having been received by the hearing officer on December 3, 1975, such stipulation is accepted and the hearing officer concurs that the record in this case will be more complete and accurate if the Recommended Order dated July 22, 1975 is amended to reflect the legal description of the site. It is therefore,

ORDERED that the Recommended Order entered July 22, 1975 be amended to reflect the area of the site to be approximately 1900 acres described in accordance with the legal description included on Gulf Power Company Plats B-3877 dated January 27, 1975; B-3878 dated January 14, 1975; C-3863 dated October 26, 1974; E-2744 dated May 18, 1961; and E-3879 dated January 13, 1975 which are attached hereto and incorporated herein.

DONE and ORDERED this 5th day of December, 1975, in Tallahassee, Florida.

  
K. N. AYERS  
Hearing Officer  
Division of Administrative  
Hearings  
Room 530, Carlton Building  
Tallahassee, Florida

Copy furnished:

William P. White, Jr., Esq.  
G. Miles Davis, Esq.  
Barrett G. Johnson, Esq.

EXHIBIT III

Docket No. 160186-EI  
Exhibit JAB-2, Page 14 of 69

State of Florida Department of Environmental Regulation  
Gulf Power Company  
R. F. Ellis, Jr. Generating Station (Caryville Steam Plant)  
Case No. PA-76-07  
CONDITIONS OF CERTIFICATION

GENERAL (Proposed 11-25-75)

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1. Change in Discharges or Emissions

- a. All discharges or emissions which result from the construction or operation of the proposed electrical power plant shall be consistent with the terms of this certification when any operation or construction activity is not specifically described in the certification or regulated by the laws or regulations of the State of Florida, the description in the application shall govern.
- b. Causation, in connection with construction or operation, of pollution, as defined in Section 403.031, Florida Statutes, which is not specified in the application or which is more frequent or at levels or in amounts in excess of that authorized herein shall constitute a violation of the certification.
- c. Any facility expansions or production increases must be approved, after submission of a supplemental application, prior to any such expansions or increases. Prior to any process modification which will result in new or increased discharges or emissions, the permittee shall obtain appropriate modification of the conditions of certification.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any condition specified in this certification, the permittee shall notify the appropriate District Manager or District Office of the Department by telephone as soon as it becomes aware that such noncompliance may be anticipated or that it has occurred. The permittee shall confirm such notification in writing as soon as possible but not more than five (5) days after becoming aware of the actual or anticipated noncompliance.

The permittee shall provide, in both instances, the following information:

- a. A description of the noncompliance, its cause and effect; and,
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps

being taken to reduce, eliminate and prevent recurrence of the noncompliance and any impact that might have occurred or may occur from such noncompliance.

3. Facilities Operation

The permittee shall at all times take all actions, deemed necessary by the Department, necessary to maintain in good working order and to operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this certification.

4. Adverse Impact

The permittee shall take all actions deemed necessary by the Department necessary to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification.

5. Right of Entry

The permittee shall immediately allow any authorized representative of the Department, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which records are required to be kept under the terms and conditions of this certification; and,
- b. To have access to and to copy any records required to be kept under the conditions of this certification or any records or documents relating to or documenting any activity which is controlled by this certification; and,
- c. To inspect any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants.

6. Revocation or Suspension.

This certification may be suspended or revoked in whole or in part pursuant to Section 403.512 and Chapter 120, Florida Statutes, and any rules or regulations adopted pursuant thereto.

7. Civil and Criminal Liability

Nothing in this certification shall be construed to relieve the permittee from civil or criminal liability for noncompliance with any condition of this certification, applicable rules or regulations of the Department or Chapter 403, Florida Statutes, except for variance granted.

Nothing in this certification shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statutes, or regulations not superceded by the Florida Electrical Power Plant Siting Act.

8. Property Rights

The issuance of this certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. The applicant shall obtain necessary authorization from the appropriate agency of the State of Florida to use any state-owned lands occupied by the intake and discharge structures and river access corridors, or any other portion of the electrical power plant, specifically including transmission line facilities.

9. Severability

The provisions of this certification are severable, and if any provision of this certification or the application of any provision of this certification to any circumstances, is held invalid, the application of such provision to other circumstances and the remainder of the certification shall not be affected thereby.

10. Review of Site Certification

- a. This certification shall be final unless modified, revoked or suspended pursuant to law. Five years from the date of issuance, the Department shall initiate a review of all monitoring data that has been submitted to it, and any other data which the Department determines to be advisable, for the purpose of determining the extent of the permittee's compliance with the conditions of this certification and the environmental impact of this facility. The Department shall submit the results of its review and recommendations

to the permittee. Such review shall be repeated every five years thereafter. This in no way prohibits the Department's undertaking a review of the certification and the permittee's compliance therewith at any other time.

- b. One year after commencement of operation of the two 500 KW units certified herein, the Department shall review the monitoring program to determine the necessity for its continuance, supplementation or alteration, if any.

11. Modification of Conditions

The conditions of this certification may be modified in the following manner:

- a. Upon the adoption by the Department of a rule pursuant to Chapter 120, Florida Statutes, containing limitations or requirements applicable to any then continuing or future activities under this certification, which rule provisions are new or more stringent than the requirements contained herein, the conditions of this certification shall be automatically modified consistent with such rule.
- b. After review of such information as the Department deems appropriate, the Department may, by order of the Secretary or his designee, modify the conditions of this certification as it deems necessary to attain the objectives of Chapter 403, Florida Statutes. The Department shall provide notice and an opportunity for hearing in accordance with Chapter 403 and Chapter 120, Florida Statutes and rules or regulations adopted pursuant thereto.

12. Definitions

The meaning of terms used herein shall be governed by the definitions contained in Chapter 403, Florida Statutes and any regulations adopted pursuant thereto. In the event of any dispute over the meaning of a term used herein which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other statute or regulation or, in the alternate, by the use of the commonly accepted meaning as determined by the Department.

13. Site Certification

These General Conditions and the succeeding Special Conditions apply to Units No. 1 and 2 of 500 MW each of the proposed R. F. Ellis, Jr. Generating Station. Although the site is certified as suitable for an ultimate capacity of 3000 MW, the General and Special Conditions shall be reconsidered and may be modified upon approval of supplemental applications.

State of Florida Department of Environmental Regulation  
Gulf Power Company  
R. F. Ellis, Jr. Generating Station (Caryville Steam Plant)  
Case No. FA 75-07  
CONDITIONS OF CERTIFICATION (Proposed 11-26-75)

SPECIAL

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State of Florida Department of Environmental Regulation  
Gulf Power Company  
R. F. Ellis, Jr. Generating Station (Caryville Steam Plant)  
Case No. PA-75-07  
CONDITIONS OF CERTIFICATION (Proposed 11-26-75)

SPECIAL

I. Air

The construction and operation of the R. F. Ellis, Jr., Generating Station shall be in accordance with all applicable provisions of Chapters 17-2, 17-5, and 17-7, Florida Administrative Code. The permittee shall comply with the following specific conditions of certification:

A. Emission Limitations

1. Stack emissions shall not exceed those specified in Chapter 17-2.04(6)(e)1., FAC.
2. The permittee shall not burn a fuel containing more than an average of 0.7% sulfur unless it can be demonstrated that either, a) heat efficiency is such as to insure compliance with above emission limitations or, b) that a flue gas desulfurization unit is installed that will insure compliance with the above emission limitations.
3. The height of the boiler exhaust stack for Units 1 and 2 shall not be less than 700 feet above grade. The height of stacks for future units shall be determined after review of supplemental applications.
4. The permittee shall provide proof of a contract for low sulfur coal or provide proof of a contract for purchase of a flue gas desulfurization system to meet the above limitations for sulfur dioxide emissions not less than 42 months prior to startup of the power boilers.

D. Air Monitoring Program

1. The permittee shall install and operate continuously monitoring devices for each boiler exhaust for sulfur dioxide, nitrogen dioxide and opacity. The monitoring devices shall meet the applicable requirements of 40 CFR, Part 60, as published in the Federal Register of October 6, 1975. Calculation of SO<sub>2</sub> emissions in accordance with Section 60.45 of 40 CFR, Part 60, may be utilized in lieu of SO<sub>2</sub> exhaust monitoring.
2. The permittee shall provide two continuous ambient monitoring devices for SO<sub>2</sub>, one continuous ambient monitoring device for nitrogen oxides, and two ambient monitoring devices for suspended particulates. These devices shall be as described in Table 1-1 and located as shown on Figure 1-1 of these conditions unless the Department and permittee should agree otherwise.
3. The permittee shall maintain a log of fuels used and copies of fuel analyses containing information of sulfur content, ash content and heating values to facilitate calculations of emissions.
4. The permittee shall maintain and operate the meteorological monitoring system described in Table 1-1 of these conditions unless the Department and permittee should agree otherwise.
5. The permittee shall provide sampling ports into each stack and shall provide access to the sampling ports in order that stack sampling may be accomplished. The Department shall approve the location and configuration of the stack sampling ports.
6. The ambient monitoring program shall be reviewed annually by the Department and permittee beginning two years after start-up of Unit No. 1. The monitoring program may be modified by mutual consent of permittee and the Department.

C. Reporting

1. Stack monitoring, fuel usage and fuel analysis data shall be furnished to the Department on a quarterly basis in accordance with 40 CFR, Part 60, Section 60.7.
2. Ambient air monitoring data shall be reported to the Department quarterly by the last day of the month following the quarterly reporting period utilizing the SAROAD or mutually acceptable format. The reporting schedule may be revised upon mutual consent of the permittee and the Department.

II. Water

Discharges during construction and operation of the R. F. Ellis Generating Station shall be in compliance with all applicable provisions of Chapter 17-3, Florida Administrative Code and 40 CFR 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category. Also the permittee shall comply with the following conditions of certification:

A. Effluent Limitations

1. The zone of reasonable mixing for cooling tower blowdown shall not exceed that area within the 5°F. isotherm produced by a discharge of 19,941 gpm at a daily average temperature of 96°F. at the POD (Monitoring point 002).
2. The blowdown from the cooling towers shall be withdrawn at the point of lowest temperature of the recirculating cooling water prior to the addition of make-up water. Free chlorine and chlorine residual shall be monitored at monitoring point 003 as shown on figure 3.5-7, as attached.
3. Sanitary wastewater shall be collected and treated in an appropriately designed wastewater treatment system that will comply with the applicable sections of Chapter 17-3, Florida Administrative Code. The plant shall be so designed as to provide proper treatment efficiency. Gulf Power Company shall provide the Northwest Florida District Manager of the Department of Environmental Regulation with detailed plans and specifications of the sanitary wastewater treatment system prior to construction of that system. The District Manager shall indicate his approval or disapproval thereof within 60 days of receipt. Gulf Power shall not construct a sanitary wastewater treatment plant until approval has been granted by the Department.
4. Low Volume Waste Sources - (Including but not limited to wastewaters from wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, blowdown from recirculating house service water systems) shall not discharge water containing more than the following concentrations of contaminants:

Contaminants	Daily Maximum	30-Day Average
Total Suspended Solids	100 mg/l	30 mg/l
Oil and Grease	20 mg/l	15 mg/l

These sources shall be monitored at the discharge from the wastewater basin prior to the juncture with the cooling tower blowdown line as shown in Figure 3.5-7 as monitoring point 007.

5. Ash Transport Water

The quantity of Total Suspended Solids (TSS) and Oil and Grease discharged in water bleed-off from the bottom ash disposal pond and the fly ash disposal pond shall not exceed the quantity calculated by multiplying the flow of water in the bottom ash transport system times the following factors and dividing the product by 20:

Contaminants	Daily Maximum	30-Day Average
TSS	100 mg/l	30 mg/l
Oil and Grease	20 mg/l	15 mg/l

These contaminants shall be monitored at monitoring point 006 as shown on attached Figure 3.5-7.

6. Boiler Blowdown

The quantity of contaminants discharged in boiler blowdown shall not exceed the following concentrations:

Contaminants	Daily Maximum	30-Day average
Copper	1.0 mg/l	1.0 mg/l
Iron	1.0 mg/l	1.0 mg/l

Iron and copper shall be monitored prior to discharge into the wastewater basin as shown on Figure 3.5-7 at monitoring point 004.

7. Metal Cleaning Wastes

The quantity of contaminants discharged in metal cleaning wastes including preoperational cleaning wastes shall not exceed the following concentrations:

Contaminants	Daily Maximum	30-Day Average
Total Suspended Solids	100 mg/l	30 mg/l
Oil and Grease	20 mg/l	15 mg/l
Copper	1.0 mg/l	1.0 mg/l
Iron	1.0 mg/l	1.0 mg/l
Phosphate	1.0 mg/l	1.0 mg/l

These wastes shall be monitored prior to discharge into the wastewater basin as shown on Figure 3.5-7 and monitoring point 005.

8. Chlorine

The quantity of free available chlorine discharged in the blowdown from the cooling towers shall not exceed 0.5 mg/l at any one time and shall not exceed 0.2 mg/l as an average daily concentration for any thirty consecutive days. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge chlorine at any one time, unless it can be demonstrated to the Department that the units at this plant cannot operate under the restriction of this condition.

9. Combined Discharges

Since the waste streams from the various sources are to be combined prior to discharge, the quantity of each contaminant listed in paragraphs II.A.4 thru II.A.7 of this section attributable to each waste source shall not exceed the specific limitation for that waste source.

10. Leachate

Leachate from coal storage piles and ash disposal ponds shall not contaminate the waters of the State (including both surface and groundwaters) in excess of the limitations of Chapter 17-3.

11. Temperature

The maximum 24-hour average temperature of the cooling tower blowdown shall not exceed 96°F. at the end of the discharge pipe at monitoring point 002.

12. Polychlorinated Biphenyl Compounds

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

13. Ash Pond Collector Wells

The effluent from wells utilized to intercept ash pond leachate shall be returned to the ash sluicing systems as makeup water and shall not be discharged without meeting the limitations of Chapter 17-3, FAC, or condition II.A.5.

B. Water Consumption

1. River Water

The amount of water withdrawn from the Choctawhatchee River shall not exceed 45,000 gallons per minute (gpm) or 7500 gpm per unit for Units No. 1 and 2.

2. Well Water

The amount of water withdrawn from wells shall not exceed 3000 gallons per minute except in case of fire.

C. Water Monitoring and Reporting

The permittee shall monitor and report to the Department the listed parameters on the basis specified. The methods and procedures utilized in the monitoring program shall be approved by the Department. The Department will review the monitoring program annually and determine the necessity and extent of any necessary continuation of the monitoring program.

1. Surface Water

a. The permittee shall monitor and report to the Department on a quarterly basis the following parameters from the following sources during plant operation:

<u>Parameters</u>	<u>Sampling Location</u>	<u>Sample Type</u>	<u>Frequency of Samplers</u>
Flow	Intake/002	Recorder or Pump log	Continuous
Temperature	Intake/002	Recorder	Continuous
pH	" 002	Multiple grabs	1/week
TDS	" 002	grab	1/week
Dissolved Oxygen	002	grab	1/week
Conductivity	002	recorder	Continuous
Free Chlorine Residual	003/008	Multiple grabs	1/week
Total Chlorine Residual	003	Multiple grabs	1/week
Copper	004, 005	grab	1/month
Iron	004, 005	grab	1/month
Arsenic	006	grab	1/month
Chromium	006	grab	1/month
Lead	006	grab	1/month
Oil and Grease	001, 006, 007	grab	1/week
Mercury	006	grab	1/month
Total Phosphorus as PO <sub>4</sub>	005	grab	during discharge

b. Ambient Water Monitoring

The permittee shall conduct an ambient water monitoring program for one year after start of operation of each unit. The ambient water monitoring program shall include both surface and ground water and shall include both quality and quantity. The results of the water monitoring program will be submitted to the Department quarterly.

c. Biological Monitoring

1. Entrainment and Impingement

Entrainment and impingement of aquatic organisms and effects due to the cooling water intake system will be monitored and reported. Samples will be collected from the intake screens and water filters at two month intervals to identify species involved and to quantify how many of each species is affected. At the end of each year's collection of data, a report will be prepared in which the significance of the information will be evaluated. Pre-operational background studies may be utilized to estimate the proportion of the total available organisms subjected to impingement and/or entrainment.

2. Methodology

The extent of impingement or entrainment of aquatic organisms will be determined as follows:

- a) The screen or filter will be examined for a consecutive 24-hour period once every two months. The collection obtained will be analyzed for:
  - 1) Species present;
  - 2) Number of each individual species caught;
  - 3) Total biomass of each species; and
  - 4) Average size of the individuals caught.
- b) Semi-annual Analysis - A qualified biologist will analyze these figures (a, above) every six months to determine the significance in terms of:

- 1) Stage of development of the organisms;
- 2) Percent reduction this represents when compared to the total population of the area as determined from background data; and
- 3) Protection and propagation of the species of the area.

### 3. Biological Communities

Changes in the aquatic biological communities due to plant operation will be detected by continuation of the biological program. The background biological program that has been conducted for the environmental report will form the basis of this program, with modifications as outlined:

#### a) Field Sampling

Sampling at different levels of biological organismal complexity will be performed according to the following schedule:

<u>Community</u>	<u>Sampling Frequency</u>
Phytoplankton	Every four months
Zoo plankton	" " "
Ichthyoplankton	" " "
Nutrient Analysis	Every two months
Benthos	" " "
Fish	" " "

#### b) Cataloging

A cataloging of other developments in the area will be performed. Changes in the area since the background data were collected may influence any biological alternatives, noted.

#### c) Report

A report will be prepared at the end of each year. It will include a bibliography of literature pertinent to effects of specific chemical and/or physical stresses on species indigenous to the region. Any significant change from the background levels noted in the communities sampled should be detected by the above program. Conclusions will be drawn as to whether or not any changes observed are the result of operation of the power plant.

2. Ground Water Monitoring

a. General

The permittee shall implement and continue after commencement of plant operation of Unit 1, a groundwater monitoring program, as described in Section 6.4 of the application. A ground water monitoring program shall be reviewed annually by the Department, the Northwest Florida Water Management District and Gulf Power Company. The Department will determine the necessity and extent of continuation of the monitoring program, after the first year. The Department may require periodic monitoring as each new unit is placed in operation to assess the impact of the new units.

Quarterly reports on the quality of water in samples collected from the monitoring wells, the ash pond and interceptor wells shall be provided to the Department and the Northwest Florida Water Management District.

b. Ash Pond Monitoring

- i. The permittee shall locate the two initial portions of ash pond "A" and the monitoring/interceptor wells where the overburden is hydrologically distinct from the underlying limestone foundation.
- ii. If the monthly reports on the monitoring wells indicate significant contamination of the shallow or Floridan aquifer system, then the initial ash disposal ponds shall be sealed, relocated or closed, or the operation of these ash disposal ponds shall be altered in such a manner as to assure the Department that no significant contamination of groundwater will occur. Expansion of ash pond "A" to its ultimate size shall be constructed and/or operated to assure the Department that no significant contamination of ground water will occur.
- iii. Gulf Power shall notify the Department and Water Management District of the number and location of interceptor wells to be located around the ash pond areas.

c. Supply Wells

- i. Gulf Power Company shall include the Water Management District at the testing and logging of the first production well. Testing for timelevel and distance-drawdown at this first well should be conducted for at least a 36-hour time frame.
- ii. Gulf Power shall supply the District with pertinent data on transmissivity and storage values for the shallow aquifer and the Floridan aquifer system when available.

D. Control Measures During Construction

1. River Intake Access Corridor

The river intake access corridor shall be constructed in such a manner as to minimize the environmental impact in the following manner:

- a. The access corridor shall be the minimum width necessary to construct the intake/discharge systems.
- b. In order to minimize alteration to the natural drainage characteristics, sedimentation patterns, flushing characteristics, and current patterns of the wetlands affected, culverts shall be utilized upland of station 14+00 on the topographic survey. A trestle shall be utilized for access to the platform for all areas west of station 14+00.
- c. In excavating for the intake pipes or causeway any material excavated and permanently moved during construction may be utilized as backfill, causeway fill or shall be deposited on an upland area. A peripheral dike berm or other control device shall be constructed, as warranted, around all construction and spoil areas to insure against spillage or discharge of excavated material that may cause turbidity in excess of 50 Jackson Turbidity Units above back-ground in waters of the State.
- d. The number, size and specific placement of the culverts along the corride shall be mutually agreed upon by the DER staff and the permittee.
- e. Turbidity Control - Turbidity control devices shall be installed as warranted prior to construction or maintenance dredging to insure that turbidity of State waters is not increased more than 50 Jackson Turbidity Units.

2. Stormwater Runoff

During construction and plant operation, necessary measures shall be employed to settle, filter, treat or absorb silt containing or pollutant loaded stormwater runoff to prevent contamination of waters of the State during periods not exceeding a 10 year, 24 hour rainfall event. Such measures may include sediment traps, barriers and use of berms and vegetation. Exposed or disturbed soil shall be protected as soon as possible to minimize silt and sediment runoff into waters of the State. The effluent from detention pond "B" shall be monitored at monitoring point 001 as shown on Figure 3.5-7, as attached, to determine concentrations of suspended solids, oil and grease and that effluent shall not contain suspended solids in excess of 50 mg/l nor shall the pH exceed the range of 6.0 to 8.5 standard units.

3. pH

Chemical releases will be treated if necessary prior to discharge to waters of the State to prevent violations of pH water quality standards.

4. Environmental Control Program

The permittee shall designate a person to implement an environmental control program. A control program shall be established to provide for a periodic review of all construction activities to assure those activities conform to the environmental conditions set forth in the conditions of certification. If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, the applicant shall provide to the Department an analysis of the problem and a plan for action to eliminate or significantly reduce the harmful effects or damage.

III. Operation Safeguards

The overall design and layout of the plant must be such as to minimize hazards to humans and the environment. Security control measures will be utilized to prevent public exposure to hazardous conditions. OSHA standards will be complied with to protect employees and the public.

IV. Solid Wastes

Solid wastes generated by the construction or operation of the certified facility shall be handled and disposed of in accordance with all applicable regulations of Chapters 17-5 and 17-7, Florida Administrative Code. If open burning of refuse or construction wastes is performed in accordance with Chapter

17-5, FAC, no additional permits are required, but the District Forester of the Florida Department of Agriculture and Consumer Services shall be notified. Open burning shall not occur if the Division of Forestry has issued a ban on burning due to fire hazard conditions.

V. Vegetative Screening

The permittee is encouraged to utilize existing vegetation or plantings of indigenous vegetation to screen the coal pile, ash pond and river intake from public view.

VI. Ash Disposal Pond B

The permittee shall continue groundwater hydrologic investigations of the area in which ash disposal pond "B" is located. Prior to construction of ash pond "B", the permittee shall provide evidence to the Department and NWFWMMD that said pond is located where the overburden is hydrologically distinct from the underlying limestone formation, or that said pond will be sealed with impervious materials to prevent contamination of the Floridan aquifer from ash pond leachate, or that said ash disposal pond can be operated so as to preclude significant contamination of groundwater.

VII. Potable Water Supply System

The potable water supply system shall be designated and operated in conformance with Chapter 17-22, FAC. Information as required in 17-22.05 shall be submitted to the Department prior to construction and operation. The operator of the potable water supply system shall be certified in accordance with Chapter 17-23, FAC.

VIII. Sanitary Wastewater Disposal System

The sanitary wastewater disposal system shall be operated in conformance with Chapters 17-3, 17-16, and 17-19, FAC.

IX. Disposal of Sanitary Wastes During Construction

Disposal of sanitary wastes from portable chemical toilets during construction shall be handled in conformance with applicable regulations of the Department of Environmental Regulation and with the consent and approval of the appropriate County Health Department. Such wastes may be disposed of in an approved sewage treatment plant or as approved by the Northwest District Manager or the local county health Department.

X. Applicability of Conditions

The preceding special conditions shall apply to Units 1 and 2 at the Ellis Steam Plant. The applicability of the above conditions to future units at this site will be dependent on review of the supplemental application material and the applicable rules of the Department at the time of application.

XI. Roadway Connections and Crossings

The permittee shall contact and provide details of all connections to or crossings of State and Federal roadways to Mr. E. W. Lee, District Engineer of the Florida Department of Transportation, in the Chipley District office prior to initiation of construction.

XII. Biocides and Herbicides

The use of biocides or herbicides in the cooling towers or on transmission line right-of-ways shall be minimized to the greatest extent practicable. Before any herbicide or biocide not specified in the application is used, the permittee shall notify the Department of the type of chemical compound, location and frequency of use, and concentration to be used. The Department shall indicate approval or disapproval of such biocide or herbicide in writing within 30 days of such notification.

TABLE 1-1

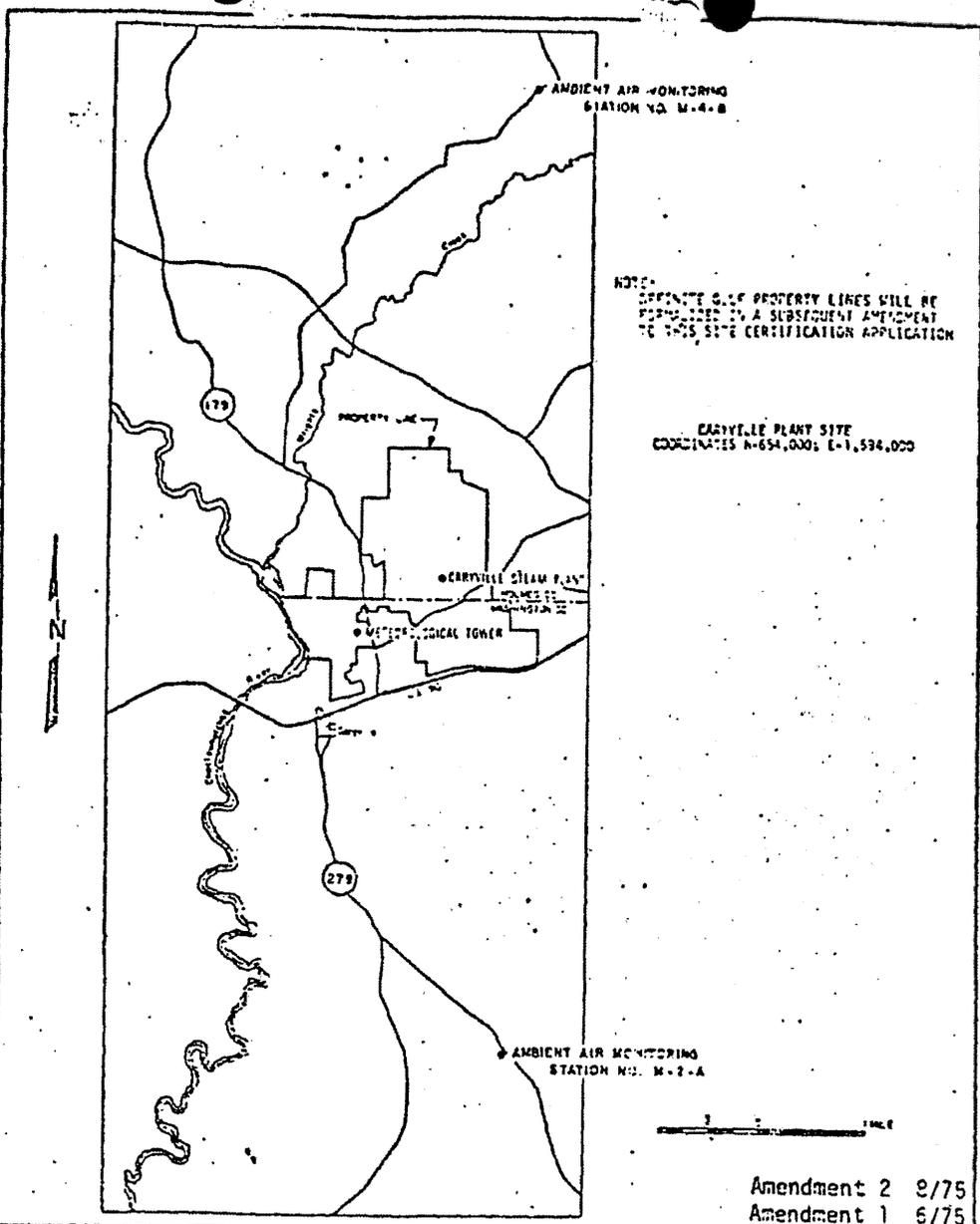
METEOROLOGICAL INSTRUMENTATION AT CARYVILLE SITE

<u>Measured Parameter</u>	<u>Approximate Height Above Tower Base</u>	<u>Range</u>	<u>Accuracy</u>
Wind Speed	195 feet & 33 feet	0-25, 50, 100 mph	+1 percent
Horizontal Wind Direction	195 feet & 33 feet	0 to 540°	+3°
Vertical Wind Direction	195 feet	+60°	+3°
Ambient Air Temperature	33 feet	-5 to +45°C	+0.5°C
Temperature Gradient	195 feet & 33 feet	-5 to +10°C	+0.1°C
Dewpoint Temperature	33 feet	-5 to +45°C	+0.3°C
Wind Direction Sigma	195 feet	0 to 40°C	+1.2°C
Precipitation	Ground	0 to 1"	+0.01"
Solar Radiation	Ground	0 to 2gm-cal/cm <sup>2</sup> /min	+1.5 percent
Barometric Pressure	Ground	28.0 to 32.0" Hg	+0.5 percent

Gulf has installed equipment for onsite measurements in a cleared area west of the plant location as shown in figure 1-1. Sensors for monitoring wind characteristics including wind speed and direction, temperature, and dew point are mounted on a 199-foot tower located near the center of the cleared area. There are no large structures near the tower that could affect meteorological measurements. Equipment for monitoring precipitation, solar radiation, and barometric pressure is located at ground level near the tower. The meteorological instrumentation is described in detail in Table 1-1.

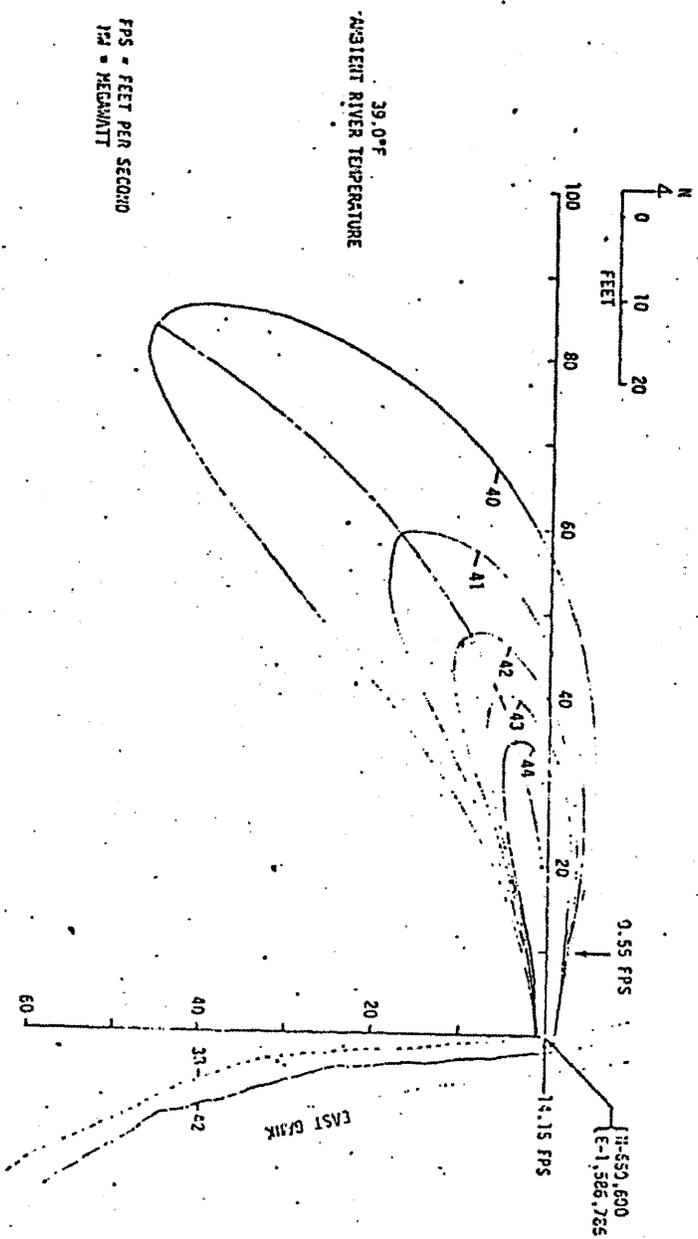
The system that will be used to monitor air quality in the vicinity of the plant is in the final stages of installation, and consists of two ambient air monitoring stations located north and south of the plant as shown in figure 1-1. Ambient air monitoring station No. M-4-B contains a Meloy SA-185-2 sulfur dioxide analyzer, a high-vol particulate sampler, and support equipment. Ambient air monitoring station No. M-2-A contains a Meloy SA-185-2 sulfur dioxide analyzer, a Thermo Electron 14D oxides-of-nitrogen analyzer, a high-vol particulate sampler, and support equipment.

Wind Spd  
 Horizontal  
 Vertical  
 Ambient  
 Section  
 Facility  
 Mine  
 Road  
 Railroad  
 River

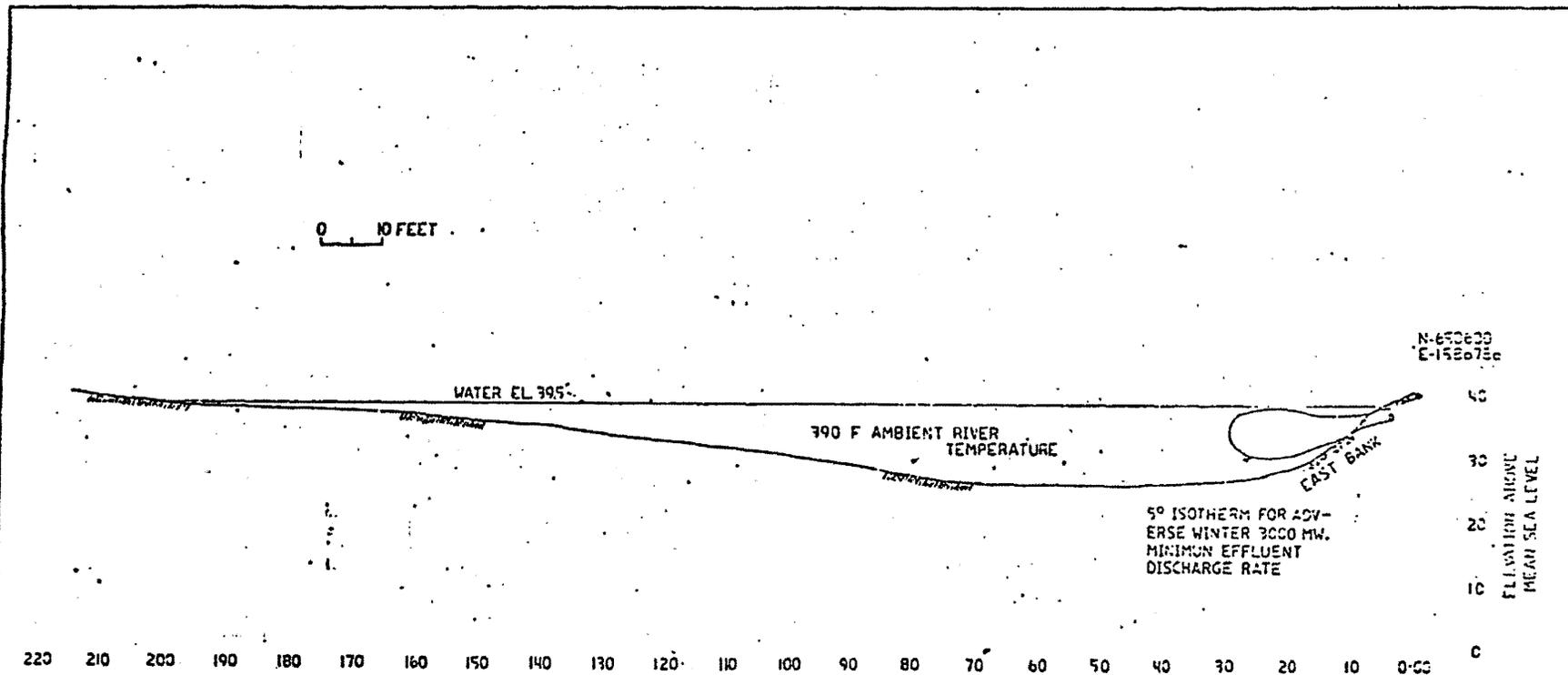


Amendment 2 8/75  
 Amendment 1 6/75

	GULF POWER CO CERYVILLE STEAM PLANT	LOCATION OF METEOROLOGICAL AND AIR QUALITY MEASUREMENT STATIONS
	FIGURE 6-5 (1)	



501 P.O. BOX 2001 WASHINGTON, D.C. 20002	5/7/75
HYDRAULIC MODELING & DESIGN FOR CHANNELS, WEIRS, AND FLOODWALLS. P.O. BOX 11111 WASHINGTON, D.C. 20036	2-1



RIVER CROSS SECTION AT THE DISCHARGE STRUCTURE

Appendix 3 2/75

	STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
	TRANSVERSE RIVER CROSS SECTION AT THE DISCHARGE STRUCTURE
FIGURE 2-1	



BEFORE THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

In re: Application of GULF POWER )  
COMPANY for Power Plant Site Certi-) )  
fication, Caryville Steam Plant, ) )  
Holmes/Washington County, Florida ) )  
 ) )  
 ) )  
 ) )

Division of  
Administrative  
Hearings  
Case No. 75-436N  
Application No. PA 75-07

STIPULATION OF APPLICANT AND DEPARTMENT

COMES NOW, the State of Florida Department of Environmental Regulation and the Applicant, Gulf Power Company, and hereby show that they are in agreement as to the appropriate resolution of three of the issues dealt with at the final hearing before the hearing officer in this matter, to wit: the use of herbicides along transmission line corridors, biological monitoring of the effects of the intake from and discharge into the Choctawhatchee River and modification of certification conditions.

WHEREFORE, the Department and the Applicant agree and hereby request that the conditions and certification contained in Exhibits 4 and 5 entered at the final hearing should be as set forth below:

I. Condition II.C.l.c. of Exhibit 5 (Special Conditions) should be amended to read:

c. Biological Monitoring

1. Entrainment

Entrainment of aquatic organisms and effects of the cooling intake system shall be monitored and reported.

a) Methodology

A composite sample of Choctawhatchee River water shall be collected over a 24 hour period near the intake structure. Mid-depth samples shall

be collected every six hours. These aliquots shall form the complete 24 hour composite.

Composite samples shall be collected not less than once every two months beginning at least one year prior to startup of the first 500 MW unit.

b) Sample Analysis

(1) Sample analysis shall include: population enumeration; species identification to the lowest practical taxon; biomass estimates; stage of development of fish and macroinvertebrates.

(2) A qualified biologist shall analyze the collected data to determine their significance in terms of: stage of development of the organisms; percent reduction represented when compared to total population of the area as determined from background data; protection and propagation of species in the area.

c) Report

The Applicant shall submit a written report to the department within 45 days of the end of each yearly period of entrainment sampling. Such reports shall include the data derived from the sampling and the analysis of such data.

2. Biological Communities

Changes in the aquatic biological communities due to plant operation shall be monitored and reported.

a) Methodology

The biological program conducted by the Applicant for the environmental report which forms a part of its application shall be utilized for the purpose of supplementing baseline data. Additional

pre-operational and post-operational data shall be acquired by procedures set forth below:

(1) Field Sampling

Two sampling stations shall be established, the first upstream of the intake structure, the second downstream from the discharge point. Such stations shall be located so as to reflect, as nearly as practicable, whole river conditions prior to intake and subsequent to discharge respectively.

Sampling at different levels of biological complexity shall, commencing at least one year prior to startup of the first 500 MW unit, be performed for the communities listed below at, at least, the sampling frequencies specified.

<u>Community</u>	<u>Sampling Frequency</u>
Phytoplankton	Every four months
Zooplankton	Every four months
Ichthyoplankton	Every four months
Nutrient Analysis	Every two months
Benthos (including Periphyton)	Every two months
Fish	Every two months

(2) Cataloging

The Applicant shall catalog other developments in the area affecting the Choctawhatchee River's biological communities which may influence the biological data acquired by sampling.

b) Report

The Applicant shall submit a written report to the department at the end of each year of

biological community monitoring. Such reports, prepared by a qualified biologist, shall be submitted within 45 days of the completion of each monitoring period and shall contain: a tabulation of data derived from sampling; an analysis of the data; conclusions as to whether detected changes are the result of operation of the power plant; and, a bibliography of literature pertinent to the effects of specific chemical and/or physical stresses on species naturally occurring in the area sampled which relate or may relate to the Applicant's activities.

II. Conditions 10.b. and c. of Exhibit 4 (General Conditions) should be amended to read:

- b. One year after commencement of operation of each unit certified herein, and every three years thereafter, the department shall review the monitoring programs required to be conducted by the Applicant to determine the necessity for their continuance, supplementation or alteration, if any.
- c. The monitoring requirements of condition II.C.1.c. of Exhibit 5 (Special Conditions) shall continue for a period of at least one year after startup of Unit II. At any time after one year of operation of Unit I, the Applicant may petition the department for authority to discontinue said monitoring or to modify same and if such request is not approved Applicant shall be entitled to a hearing at which evidence shall be presented from which a determination can be made whether the benefits of said monitoring program justify the costs involved. Submission and response to such a request shall be subject to the provisions of Chapters 403 and 120, Florida

Statutes, and the rules and regulations adopted pursuant thereto.

III. Condition XII. of Exhibit 5 (Special Conditions) should be altered to read:

XII. Biocides and Herbicides

- A. The use of biocides or herbicides in the cooling towers or on transmission line right-of-ways shall be minimized to the greatest extent practicable.
- B. Application of the herbicide "Kuron" in transmission line corridors shall be used only upon the following conditions:
  - 1. Application shall be made only at wind speeds of 5 miles per hour or less;
  - 2. Application shall be made only in marsh or other areas not susceptible to mechanical clearing;
  - 3. Application in any given location shall not be made more frequently than once per year; and,
  - 4. Application shall be made only in areas previously identified on maps provided to the department.

IV. Condition 11 of Exhibit 4 (General Conditions) should be amended to read:

11. Modification of Conditions

The conditions of this certification may be modified in the following manner:

- A. Upon the adoption by the Department of a rule pursuant to Chapter 120, Florida Statutes, containing limitations or requirements applicable to any then continuing or future activities under this certification, which rule provisions are new or more stringent than the requirements contained

herein, the conditions of this certification shall be automatically modified consistent with such rule. If such requirements are less stringent than the requirements contained herein, the conditions of this certification which are <sup>not</sup> referred to by reference to the Florida Administrative Code <sup>made site specific</sup> shall be automatically modified consistent with such rule. In the application of such later adopted rule, this paragraph shall not be construed to mean that the R. F. Ellis, Jr. plant is a new source if a distinction between new and existing sources is made within the later adopted rule.

- B. On its own motion or on petition of the applicant and, after review of such information as the Department deems appropriate, the Department may, by order of the Secretary or his designee, modify the conditions of this certification as it deems necessary to attain the objectives of Chapter 403, Florida Statutes. The Department shall provide notice and an opportunity for hearing in accordance with Chapter 403 and Chapter 120, Florida Statutes and rules or regulations adopted pursuant thereto.

STIPULATED to on behalf of the Department and Gulf Power Company this 28<sup>th</sup> day of April, 1976.

*A. Miles Davis*  
Attorney for Gulf Power Company

*William J. White Jr.*  
Attorney for the Department

BEFORE THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

In re: Application of GULF POWER )  
COMPANY for Power Plant Site Certi- )  
fication, Caryville Steam Plant, )  
Holmes/Washington Counties, Florida )

Division of  
Administrative  
Hearings Case No. 75-436N  
Application No. PA 75-07

STIPULATION OF DEPARTMENT AND APPLICANT

COME NOW the State of Florida Department of Environmental Regulation and the Applicant, Gulf Power Company, and hereby show that they are in agreement as to the appropriate resolution of one of the issues dealt with at the final hearing before the hearing officer in this matter, to wit: the method of construction to be utilized in the corridor of the cooling water intake and discharge lines.

WHEREFORE, the Department and the Applicant agree and hereby request that the conditions of certification contained in Exhibit 5 entered at the hearing should be as set forth below:

I. Condition II.D.1.b. of Exhibit 5 (Special Conditions) should be amended to read:

b. In order to minimize alteration of the natural drainage characteristics, sedimentation patterns, flushing characteristics, and current patterns of the wetlands affected, culverts shall be utilized.

II. A new subpart "f." should be added to Condition II.D.1. after the existing subpart "e." which should read as follows:

f. The causeway side slopes shall be vegetated to prevent erosion. Riprap shall be placed on areas of the causeway which will be subjected to water velocities greater than three (3) feet per second. If severe erosion of the causeway results from water velocities less than

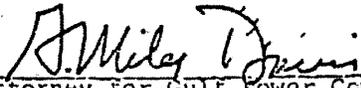
EXHIBIT III

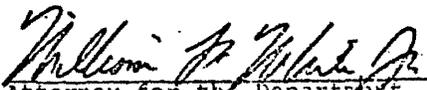
u1

Docket No. 160186-EI  
Exhibit JAB-2, Page 46 of 69

three feet per second, riprap shall be put in place  
to prevent future erosion.

STIPULATED to on behalf of the Department and Gulf  
Power Company this 29th day of April, 1976.

  
Attorney for Gulf Power Company

  
Attorney for the Department

498

**Document No. 2**  
**Appendix A to the FDER Staff Report dated**  
**November 25, 1975**

Received DER

NOV 20 1975

WITNESS: JENKINS  
CASE NO. 75-07

P P S

APPLICATION FOR SITE CERTIFICATION  
GULF POWER COMPANY  
CAREYVILLE PLANT SITE  
R. F. ELLIS ELECTRICAL GENERATING STATION

UPDATE OF  
EVALUATION OF ELECTRICAL NEED FOR  
R. F. ELLIS UNITS NO. 1 and NO. 2

FLORIDA PUBLIC SERVICE COMMISSION

November 10, 1975

Appendix A

(4)

GENERAL

By letter dated July 16, 1975, in compliance with 403.507 F.S., the Florida Public Service Commission provided the Department of Environmental Regulation with the results of our analysis of electrical need for 2-500 megawatt (MW) generating units at the Careyville Plant Site. The actual rating is 518 MW.

As explained in said letter, that report was originally submitted on May 2, 1974.

Four months have passed since our re-submittal and nineteen months have passed since the report was originally prepared. During that time the Commission has reviewed revised growth rate of both Gulf Power Company and its parent, the Southern Company. Although the latest growth rates are significantly lower than historical trends, it is still the conclusion of this Commission that additional generating capacity is needed to supply the projected electrical demands of Gulf Power Company's customers.

CONSIDERATION OF RECENT YEARS

In 1974, an abrupt change in the rate of growth in electrical power demands occurred nationwide as well as in Gulf Power Company's territory. Peak power demands generally did not increase in 1975. It is believed that the reduced rate of growth in electric energy consumption is a result of increased costs and the economic slowdown.

The following table clearly indicates the degree of difference between the historical growth rate for the ten-year period ending 1973, and the growth rates for 1974 and 1975:

	<u>GULF POWER COMPANY</u> <u>COMPOUND ANNUAL GROWTH RATES</u>		
	<u>1964-1974</u> <u>10 yr.</u> <u>Average</u>	<u>1973-74</u>	<u>12 mos. ending</u> <u>Sept. 1975 over</u> <u>Sept. 1974</u>
Total Area KWH	9.71%	0.59%	2.07%
Peak Summer Demand MW	9.78%	6.6%	-0.28%
No. Residential Customers	4.42%	5.49%	3.21%

SOURCE: COMPUTED FROM TEN YEAR PLANS AND DATA  
FURNISHED BY GULF POWER COMPANY

These figures tell an interesting story with conflicting conclusions. First, the growth in energy consumption was virtually nil in 1974 and increased slightly in 1975. Second, although the kilowatt-hour consumption growth rate did increase in 1975, peak megawatt demands showed a slight decrease. However the customer growth appears to be continuing, although at a rate some 25 to 30 percent less than the historical rate. Thus, should economic conditions improve to the point that average customer use returns to historical levels, there will potentially be enough customers to cause a substantial increase in peak power demands.

It should be noted that wide fluctuations and reductions in peak power demands from year to year is not as anomalous as is commonly believed. In this regard, a tabulation of the percent change in peak power demands over the previous year for the four members of the Southern Company is presented on the next page:

CE

HISTORICAL  
MW PEAK DEMAND PERCENT  
CHANGE OVER PREVIOUS YEAR

	<u>ALABAMA</u> <u>POWER</u> <u>COMPANY</u>	<u>GEORGIA</u> <u>POWER</u> <u>COMPANY</u>	<u>GULF</u> <u>POWER</u> <u>COMPANY</u>	<u>MISSISSIPPI</u> <u>POWER</u> <u>COMPANY</u>
1965	9.14%	10.62%	6.12%	11.46%
1966	9.84	15.58	10.20	12.89
1967	(1.39)	2.41	5.23	10.03
1968	15.7	26.40	18.55	12.34
1969	8.87	7.53	14.68	18.23
1970	(2.15)	13.00	8.86	(0.42)
1971	5.98	2.26	8.79	2.44
1972	9.56	17.00	13.54	10.77
1973	7.90	7.14	6.07	4.67
1974	4.83	6.71	6.61	3.04
1975	3.45	(0.29)	(0.19)	0.69

(1) denotes negative ( )

(2) Source: Computed from data furnished by Gulf Power Company

Note that in 1968, Alabama and Georgia Power experienced a 15.7 and 26.4 percent increase in peak power demands respectively after a 1.39 percent decrease and a 2.41 percent increase was experienced the prior year. Marked increases were also experienced in 1968 and 1972 by all four companies, while significantly lower increases were experienced in 1967, 1970-71 and 1975. The apparent uniformity in year to year peak power demand increases between each of the companies suggests that underlying factors such as the economy and/or temperature are having a large affect.

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The above tabulation also indicates that if generating units were built to meet peak power projections based on one or two years experience; deficiencies or excesses will result depending on which two years the projection was based. It should be emphasized, that within reasonable limits, a greater economic penalty is incurred from generating capacity deficiencies than from excesses.

CONSIDERATION OF GENERATION PLANNING

The question is raised, what significance should be attached to recent events that are contrary to historical trends. The answer involves an understanding of the electrical generation planning process and the characteristics of energy use.

The addition of generating plant is a long lead time process: for combustion turbines, 2-3 years are required; for conventional fossil plants, 4-6 years; for nuclear plants, 10 years is the average planning and construction period. Obviously, generation planning cannot react quickly to sudden changes in usage patterns. The need for increases in generating capability must therefore be based on reasonable forecasts with the realization that undue conservatism will result in shortages that cannot be readily compensated for while ultra liberal forecasts will result in uneconomic excesses. Faced with the inability of generation planning to respond quickly to changing economic patterns due to long lead time requirements, generating capability must be sufficient to meet the most probable peak power growth rate without either jeopardizing the reliability level or causing an unsupportable excess of generating plant.

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RESERVE GENERATING MARGINS

Physical limitations on the ability to store appreciable amounts of electricity requires electric utilities to build generating plants to meet forecasted peak power demands with some reserve capability in case of malfunction.

The adequacy of a system's generating capability to provide service is the difference between the generating capability and the peak power demand, ususally expressed as a percent reserve margin. While an adequate reserve margin must be determined on a system by system basis, taking into account individual generating unit sizes, load factor, unit maturities, and forced outage rates, a 15 to 25 percent reserve margin has generally been found by the Federal Power Commission to be adequate for large systems. The desired reserve margin for any system changes as new units are added to the system and as older units are retired. Thus there is no magical number for a percent reserve margin which can be applied uniformly to each electric utility or even to the same electric utility each year.

Percent reserve margins also tend to increase as system size decreases because the outage of any one unit on a small system usually represents a larger percentage of its generating capability. For example, if the 15 to 25 reserve margin criteria were applied to Gulf Power's 1975 peak power demand of 1078 Megawatts, a 162 to 270 Megawatt generating reserve margin would result. However the customers of Gulf Power would be experiencing blackouts every time Crist Unit No. 6, 369.75 megawatts, or Unit No. 7, 578.00 megawatts, tripped off line during the summer months when peak or near peak power demands are experienced. It is common for generating units, particularly new units, to be forced out of service for extended periods. Thus smaller peak power systems such

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as Gulf Power, often have 50 percent or higher reserve generating margins.

GROWTH RATES IN PEAK POWER DEMANDS

A. Gulf Power Company

Gulf Power, in response to the decreased growth rates in all categories and their general economic outlook for the future, has reduced its projected rate of growth in peak power demands as follows;

	<u>COMPOUND PEAK POWER GROWTH RATE PROJECTIONS</u>
April, 1974 Ten-Year Site Plan	10.92%
April, 1975 Ten-Year Site Plan	9.67%
Recent Revision	8.45%

The latest 8.45% growth rate projection is a 22% reduction of the April, 1974 projection. However, even this reduction in the projected growth rate does not change the need for additional generating capability as indicated on the following page;

FALL 1975

## GULF POWER COMPANY, MEGAWATT DEMAND, CAPACITY, AND RESERVE MARGIN PROJECTIONS

Year	Installed Capacity	Revised Peak Power Demands	Reserve Capacity		Reserve without Ellis Units #1 & #2	
	MW	MW	MW	%	MW	%
1975	1567.9	1078 <sup>(1)</sup>	489.9	45	489.9	45
1976	"	1185	382.9	32	382.9	32
1977	"	1297	270.9	21	270.9	21
1978	"	1419	148.9	10	148.9	10
1979	"	1553	14.9	00.9	14.9	00.9
1980	2086.3	1699	387.3	23	-130.7	-6.8
1981	2604.7	1859	745.7	40	-290.3	-13.8
1982	"	2033	571.7	28	-464.3	-20.2
1983	"	2226	378.7	17	-657.3	-26.3
1984	"	2434	170.7	07	-865.3	-31.8

(1) Actual

(2) Source: Gulf Power Company

Based on Gulf Power's current territorial load projections, reserve generating margins are anticipated to go negative in 1980 without the addition of R. F. Ellis Units No. 1 and No. 2.

B. Southern Company

Gulf Power Company is a wholly owned subsidiary of the Southern Company and is closely interconnected with the other subsidiaries - Alabama Power Company, Georgia Power Company and Mississippi Power Company in an integrated energy grid. Because of the physical integration of the facilities of all of these companies, consideration must also be given to the needs of the entire Southern Company system in the planning of additional generating capacity of any one member.

Southern Company is currently projecting a peak power growth rate of 7.96%.

The corresponding projected peak power demand, generating capacity, and reserve generating margins with and without Ellis Units No. 1 and No. 2 are shown on the following page:

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FALL 1975

## SOUTHERN COMPANY, MEGAWATT DEMAND, CAPACITY, AND RESERVE MARGIN PROJECTIONS

Year	Installed Capacity	Peak Power Demands	Reserve Capacity		Reserve Without Ellis Units #1 & #2	
	MW	MW	MW	%	MW	%
1976	22003	17630	4373	24.8	4373	24.8
1977	23320	19120	4200	22.0	4200	22.0
1978	25182	20600	4582	22.2	4582	22.0
1979	27588	22350	5238	23.4	5238	23.4
1980	29475	24260	5215	21.5	4692	19.4
1981	31873	26130	5743	22.0	4707	18.0
1982	33564	28080	5484	19.5	4428	15.8
1983	35696	30210	5486	18.2	4430	14.7
1984	38129	32630	5499	16.8	4443	13.6
1985	40612	35150	5462	15.5	4406	12.5

(1) 1976 - 1985 compound growth rate equals 7.96%

(2) Source: Gulf Power Company

It should be emphasized that, because of construction delays and new-unit break-in difficulties, planned reserve margins seldom materialize. The required reserve generating margin for the Southern Company is also expected to increase as a result of adding sulfur dioxide scrubbers to an electrical generating unit, which like any major device is subject to malfunction.

C. Need in the Area to be Served

The Plant Siting Act requires the Public Service Commission to report on the need for electrical generating capacity in the area to be served. The Commission has been guided in its consideration of area to be served by its familiarity with the process of generation and transmission and the economics associated with them. Rather than adopting a general definition we have chosen to consider the merits of each case.

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Several factors are considered; these include, but are not limited to, (1) the service area of the utility as specifically defined in a legal description or specified by law or as delineated by historical precedent, (2) whether the utility's area is indirectly defined by territorial agreements with neighboring utilities, (3) whether the plant is electrically isolated or integrated within the system of the utility, (4) the extent of interconnection with other utilities, (5) the responsibility for service as defined by statute, ordinance or related documents and (6) the responsibility of the utility in accordance with the intent of Laws of Florida, Chapter 74-196, the "grid bill". With regard to the "grid bill", the Florida Public Service Commission is prevented from abridging Gulf Power Company's relationship with the Southern Company. Indeed there appears to be no electrical justification for doing so.

After considering the previously mentioned factors, it is our judgement that the area to be served should be defined as Gulf Power Company's service area. This area is generally panhandle Florida, west of the Apalachicola River. Gulf Power has the responsibility to provide for the future power needs of its customers and defining the area to be served as Gulf's service area is consistent with this responsibility.

While it is the opinion of the Commission that additional generating capacity is needed in area to be served, the question arises as to just how this need should be satisfied - build R. F. Ellis Units No. 1 and No. 2 or purchase from the Southern Company. Because of its relationship to the Southern Company, Gulf has been able to delay construction of new generating units longer than if Gulf were an isolated system. Additionally, there do not appear to be any

large blocks of firm power which can be purchased from Southern in lieu of these units.

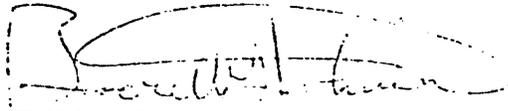
CONCLUSIONS AND RECOMMENDATIONS

After due consideration of the factors previously discussed it is our conclusion that additional capacity is needed for the Gulf system. Just as recent trends cannot be ignored, neither can we ignore the historical trends. The continuation of customer growth provides the potential for increased peak demands to continue but at a lower rate of growth. To ignore this potential in light of the slow response of generation construction to changing patterns would seriously jeopardize the ability of the company to provide reliable service. To assume that recent trends are totally indicative of future trends would also require the additional assumptions that the economy will not recover and that people will significantly change their living habits and lose their incentive for improving their material well being.

While it is our conclusion that, based on the information available to us at this time, additional generating capacity is needed to provided for the future needs of Gulf Power's customers, it is our recommendation that Gulf should continue to explore and take advantage of all options for supplying the future power needs of its service area.

CERTIFICATE OF SERVICE

I DO HEREBY CERTIFY that the attached Update of Evaluation of Electrical Need for R. F. Ellis Units No. 1 and 2 was sent to Mr. William White, Department of Environmental Regulation, Koger Office Center, Tallahassee 32303; Mr. Tom Krilowicz, Division of State Planning, 660 Apalachee Parkway, Tallahassee 32304; Mr. Miles Davis, Attorney at Law, Beggs, Lane, Daniel, Gaines and Davis, Post Office Box 12950, Pensacola 32576; and, Mr. Fred T. Dummnan, Route One, Box 23A, Caryville 32427, on November 14th, 1975.



BARRETT G. JOENSON  
Office of General Counsel  
Florida Public Service Commission  
700 South Adams Street  
Tallahassee, Florida 32304

Attorney for the Commission

FLORIDA



PUBLIC SERVICE COMMISSION

COMMISSIONERS

WILLIAM T. MAYO, CHAIRMAN  
BILL BEVIS  
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700 SOUTH ADAMS STREET  
TALLAHASSEE 32304  
TELEPHONE 904-488-1001

July 16, 1975

RECEIVED

JUL 16 1975

Mr. Hamilton S. Oven, Jr.  
Administrator,  
Power Plant Siting  
Department of Environmental Regulation  
2562 Executive Center Circle, East  
Montgomery Building  
Tallahassee, Florida 32301

Dear Mr. Oven:

As you are aware, Gulf Power Company filed a "preliminary application" for certification of the Careyville site on January 22, 1974. Pursuant to your notification of February 7, 1974 and in compliance with Chapter 403.507(1) F.S., the Commission provided a report and recommendation with regard to the site on May 2, 1974.

This office received notice of Gulf Power Company's revised application for certification of the above site on April 22, 1975. This will advise that at this point we have not modified our original assessment of the need for additional generating capacity in the area to be served by the proposed facility. Therefore, we are resubmitting the recommendation of May 2, 1974. However, we have, since receiving the revised application, requested Gulf Power to provide additional and more current data, which requests have not yet been met. As in previous applications, we will update or supplement our recommendation if our review of such additional information indicates that a modification of our report is warranted.

Very truly yours,

FRANCIS SEIDMAN  
Senior Electrical Engineer  
Engineering Department

FS/cd

CC: Commissioners  
Executive Director

Appendix A

May 2, 1974

Mr. Hamilton S. Owen, Jr.  
Deputy Executive Director  
Department of Pollution Control  
2562 Executive Center Circle, East  
Montgomery Building  
Tallahassee, Florida 32301

Re: Application for Site Certification  
Gulf Power Company - Caryville Site

Dear Mr. Owen:

Pursuant to 403.507 F.S., the Florida Public Service Commission has analyzed the above referenced application. According to the cover letter of this application, Gulf Power Company initially contemplates the construction of 2-500 MW plants at the Caryville site. The long range potential capacity of the site is estimated to be 3,000 MWe. The first two units fall within the time frame of the initial ten year site plan and our comments are limited to these units.

It is our conclusion that there is justification for the addition of the 2-500 MW units, as planned. The first unit is expected to be on line to meet the 1979 summer peak. The second unit is expected to be on line to meet the 1981 summer peak.

In evaluating the need for the plants considered herein, consideration is given to the fact that Gulf Power Company operates under formal contractual arrangements as a part of the Southern Companies Power Pool. The purpose of this pool is to achieve economies for the customers of the respective companies through common planning, development and coordination of their operations. One of the advantages of this arrangement is the ability of the companies to stagger construction of the generating facilities necessary to serve their territorial loads so as to attain optimum sizing and the resulting economies of scale.

For the time frame under consideration in this application, the 2-500 MW units proposed to be built by Gulf Power Company will provide sufficient capacity within the system to meet the seasonal peak loads. It will, however, still be necessary for the company to purchase additional power through the pool to provide sufficient margin to maintain an adequate index of reliability. This relationship is illustrated by the following tabulations:

LOAD AND CAPABILITY DATA  
 (Megawatts)

<u>Period</u>	<u>Peak Load</u>	<u>Gulf Power Company Generating Capability</u>	<u>Purchased Power</u>	<u>Total Capability</u>	<u>MW</u>	<u>Reserve % of Peak</u>
1978	1748 <sup>1917</sup> <sub>193</sub>					
1979 Summer	1933	2114.0 (1)	206.3	2320.3	387.3	20.0
1980 Summer	2140 <sup>2068</sup> <sub>1917</sub>	2114	450.5	2564.5	424.5	19.8
1981 Summer	2374 <sup>2359</sup> <sub>10.53%</sub>	2632.4 (2)	216.4	2848.8	474.8	20.0

Notes

- (1) includes the first 500 MW unit at peak hour capability
- (2) includes the first and second 500 MW unit at peak hour capability

The peak load forecast as shown above reflects a reasonable rate of annual growth as compared to historical trends.

If you have any questions regarding our analysis, please contact me.

Very truly yours,

T. MABRY ERVIN  
 Executive Director

TME/FS/cd

1748  
 1933  
 2068

2114

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**Document No. 3**  
**Proposed Findings of Fact, Conclusions of Law**  
**and Proposed Recommended Order**

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

RECEIVED  
JAN 5 1978

In re: Application by Gulf Power )  
Company for Power Plant Site )  
Certification, Caryville Steam )  
Plant, Holmes/Washington County, )  
Florida )

CASE NO. 75-436

DEPT. ENVIRONMENTAL REG.  
Environmental Law Section

PROPOSED FINDINGS OF FACT, CONCLUSIONS  
OF LAW AND PROPOSED RECOMMENDED ORDER

The Florida Public Service Commission by and through its undersigned attorney, hereby submits its proposed findings of fact, conclusions of law and proposed recommended order:

FINDINGS OF FACT

1. Applicant Gulf Power Company, hereafter Applicant, submitted the application for site certification required by Section 403.506, Florida Statutes. Hereafter, references to section numbers shall refer to the Florida Statutes, which phrase shall be omitted. An initial public hearing as required by Section 403.508(2), was held which resulted in a favorable recommendation.

2. The Florida Public Service Commission, the Division of State Planning of the Department of Administration and the Department of Environmental Regulation, hereafter respectively the Commission, the Division and the Department, each conducted the study required by Section 403.507.

3. The Commission concluded, following thorough review of the study required by Section 507.507(1)(b), that the Applicant had an integrated system, so that the area to be served by the proposed plant constituted the entire service area of the Applicant and that a need for additional electrical generating capacity exists in that area which could be met by the proposed plant.

4. The Division found that the proposed plant is compatible with the Applicant's ten-year site plant, filed under the provisions of Section 403.505, and recommended certification.

5. The Department staff report concluded, following thorough review of the criteria specified in Section 403.507(2) as to both construction and operation, that the impact of the plant was acceptable, provided the Applicant complied with the conditions of certification

recommended by the Department staff, and accordingly recommended certification for the first two 500 MW units and for the 3,000 MW capacity of the site, subject to supplemental application for additional increments.

6. The Applicant presented testimony concerning the need for the electrical generating capacity of the proposed plant and the area to be served which was substantially in agreement with the findings of the Commission.

7. On the issues of need for additional generating capacity and the area to be served by the proposed plant, there was no evidence presented contrary to the findings of the Commission or the evidence of the Applicant.

8. The proposed power plant site certification proceeding includes five associated major transmission lines, with a total length of approximately 115 miles, of which approximately 33 miles will be routed through new corridors. The routings of these lines is shown fully in exhibit 1. The environmental impact of these lines is considered along with that of the plant itself, pursuant to Section 403.503(7), and is minimal.

9. The Applicant proposes to construct a service corridor to carry intake and discharge water lines and associated facilities from the Choctawhatchee River to the plant, generally along the route shown in Exhibits 12 and 13.

10. The Applicant proposes to construct its service corridor as a causeway costing approximately \$216,000. The Department proposes other alternatives, of which the most acceptable is a concrete trestle structure estimated by the Applicant to cost approximately \$899,000. Exhibit 15. Cost differentials between the types of structures were not specifically considered by the Department. (Tr. 308, 309, 410 and 411)

11. The Applicant proposes a biological monitoring program limited in time to the construction phase of the first two 500 MW units and of each increment and to the initial operating period. The Department proposes biological monitoring for the entire life of the site, whether or not the biological monitoring program reveals anything, except normal conditions.

*Needed to assure  
minimal adverse environmental  
impact mandated by  
statute*

12. The testimony on the cost differential between the two proposed monitoring programs was approximate but was not contradicted and suggests that the Applicant's proposal would cost approximately \$100,000 for its total of two years operation as opposed to approximately \$100,000 per year for the entire life of the site.

13. Cost differentials between proposals by the Applicant and the Department were not considered by the Department.

14. The Applicant will be required to meet emission and discharge standards set by both state and federal governments to protect the environment.

15. Cost of compliance with any standard or program will ultimately be borne by the customers of the Applicant.

#### CONCLUSIONS OF LAW

1. The Applicant's application is complete and fully complies with all requirements of law and rules adopted pursuant thereto.

2. Proper notice of all hearings and other proceedings was given to all appropriate persons as required by law and rules adopted pursuant thereto.

3. The Commission, the Division and the Department performed all studies and made all recommendations in the manner required by law and rules adopted pursuant thereto.

4. As a matter of law, the uncontradicted evidence presented by the Applicant and the Commission's report requires the conclusion that the area to be served by the proposed plant is the entire service area of the Applicant and that there is a need for electrical generating capacity in that service area which can be met by the proposed plant.

5. As a matter of law, General Condition 11.2. proposed by the Department would operate to vary the rulemaking procedure prescribed by the Administrative Procedure Act and would operate to vary Section 403.511, since it could be construed to operate as a waiver of Applicant's rights under Chapter 120 and would appear to be on its face a waiver of the provisions of Section 403.511(1) inasmuch as the Department would not in fact be bound by the certification as that section requires.

#### RECOMMENDATIONS

From the foregoing and from the record and its exhibits and attachments as a whole, I conclude that the certification sought in this proceeding should be granted, subject to the following terms and conditions:

1. This certification shall be subject to the General and

Special Conditions of Certification as proposed by the Department except as modified herein.

2. Certification at this time shall issue for the first two 500 MW units and for the ultimate site capacity of 3,000 MW, provided that supplemental applications be filed for each subsequent increment in capacity to allow evaluation of each such increment.

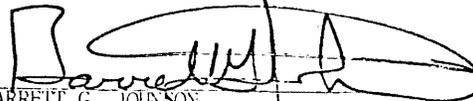
3. General Condition 11.a. should be struck in its entirety, and General Condition 11.b. should be amended to read:

After notice and hearing in accordance with the provisions of Section 120.57(1), Florida Statutes, unless such notice and hearing is waived in whole or in part by the Applicant, the Board may modify the conditions of this certification as required to meet the objectives of Chapter 403, Florida Statutes.

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Since the Commission has no institutional expertise in the environmental aspects of this proceeding, the Commission has not proposed any conclusions of law or recommended any specific disposition of the issues raised with respect to construction of the service corridor, the type of biological monitoring program to be imposed, if any, or the use of herbicides as a minor component of weed control in transmission line corridors. However, the Commission would urge consideration of the Applicant's proposals, since they are considerably less expensive in each case, since the cost differentials, and therefore the cost-benefit ratio for each set of proposals, was not considered by the Department, and since all costs will ultimately be borne by the ratepayers of the Applicant, whom the Commission has a duty to protect.

Respectfully submitted,



BARRETT G. JOHNSON  
Office of General Counsel  
Florida Public Service Commission  
700 South Adams Street  
Tallahassee, Florida 32304

Attorney for the Commission

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing instrument was provided by U. S. Mail to Mr. William P. White, Jr., Department of Environmental Regulation, Koger Office Center, Tallahassee 32303; Mr. Tom Krilowicz, Division of State Planning, 660 Apalachee Parkway, Tallahassee 32304; Mr. Miles Davis, Attorney at Law, Beggs, Lane, Daniel, Gaines and Davis, Post Office Box 12950, Pensacola 32576; and Mr. Fred T. Dunneman, Route One, Box 23A, Caryville 32427, on January 2, 1976.

  
BARRETT G. JOHNSON