ORIGINAL

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 010949-EI

TESTIMONY AND EXHIBIT

OF

R. G. MOORE



A SOUTHERN COMPANY

DOCUMENT NUMBER-DATE

1		GULF POWER COMPANY Refere the Electide Rublic Service Commission
2		Prepared Direct Testimony and Exhibit of Bebert G. Moore
3		Docket No. 010949-El
4		In Support of Rate Relief Date of Filing: September 10, 2001
5		
6	Q.	Please state your name, business address, and occupation.
7	Α.	My name is Robert G. Moore and my business address is One Energy
8		Place, Pensacola, Florida 32520. I am Vice President of Power
9		Generation and Transmission at Gulf Power Company.
10		
11	Q.	Please summarize your educational and professional background.
12	Α.	I graduated from the University of Alabama in 1973 with a Bachelor of
13		Science Degree in Mechanical Engineering. I joined Alabama Power
14		Company in 1973 as a junior engineer at Plant Barry in Mobile, Alabama.
15		In 1978, I transferred to Mississippi Power Company where I held various
16		positions of increasing responsibility including Plant Manager - Plant
17		Daniel, and Plant Manager – Plant Watson. I transferred to Georgia
18		Power Company in 1993 as Plant Manager – Plant Bowen.
19		In 1997, I was elected to my present position as Vice President of Gulf
20		Power Company.
21		
22	Q.	What are your areas of responsibility within Gulf Power Company?
23	А.	I have responsibility for the Power Generation, Fuel, Environmental
24		Affairs, Procurement and Materials, and Transmission and System
25		Control functions at Gulf Power Company. This includes the generation

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1		and transmission of electricity, fuel supply, environmental services,
2		intercompany interchange contract administration, and procurement of
3		materials and contract services.
4		
5	Q.	Have you prepared an exhibit that contains information to which you will
6		refer in your testimony?
7	Α.	Yes. Schedule 1 is an index to the other schedules in my exhibit. Each
8		schedule of this exhibit was prepared under my supervision and direction.
9		Counsel: We ask that Mr. Moore's Exhibit (RGM-1), comprised
10		of 11 schedules, be marked for identification as
11		Exhibit(RGM-1)
12		
13	Q.	Are you the sponsor of certain Minimum Filing Requirements (MFRs)?
14	Α.	Yes. The MFRs that I am sponsoring, in part or in whole, are listed on
15		Schedule 11 of my exhibit.
16		
17	Q.	What is the purpose of your testimony in this proceeding?
18	Α.	I will present evidence related to Smith Unit 3, the Company's new
19		combined cycle 574 megawatt generating unit scheduled to go into
20		commercial operation on or before June 1, 2002, other production
21		Operation and Maintenance (O & M) expenses, and construction projects
22		included in our test year to show that the amounts budgeted for these
23		items are reasonable, prudent and necessary. I will address: (1) the
24		capital and O & M requirements of Smith Unit 3, (2) the need for
25		additional O & M dollars to maintain our existing fleet of generating units,

(3) the variance between the O & M Benchmark and the test year for
 production, (4) the construction budget for power production, and (5) the
 projected fuel inventory included in working capital.

4

Q. What are the capital additions to rate base for Smith Unit 3?
A. The Smith Unit 3 project is budgeted at \$220.5 million. This includes
project design, site preparation, environmental mitigation, generating
equipment, start-up costs, taxes, and Allowance for Funds Used During
Construction. Schedule 2 of my exhibit is the budget breakdown of the
Smith Unit 3 construction costs.

11 Gulf's load and energy forecast identified a capacity need 12 beginning in the summer of 2002 to serve our customers and maintain an 13 adequate level of generating reserves. Previous market inquiries confirmed that the amount of firm capacity in the market was becoming 14 scarce and more expensive. Gulf knew that it needed to re-evaluate its 15 16 capacity resource alternatives to meet the Company's needs for 2002 and 17 beyond. Commission Order No. PSC-99-1478-FOF-EI confirmed the need for the addition of Smith Unit 3. 18

19

20 Q. What is the impact on Gulf's production O & M expenses associated with21 Smith Unit 3?

22 A. The O & M budget for Smith Unit 3 is \$3.4 million in the test year.

- 23 Schedule 3 of my exhibit provides a summary of the operation and
- 24 maintenance expenses for Smith Unit 3. The \$1.7 million for labor
- 25 includes an increased staff at Plant Smith of 29 full-time positions needed

to operate and maintain the new unit. Schedule 4 of my exhibit provides a
 detailed listing of the additional personnel complement associated with
 Smith Unit 3. The additional \$1.6 million is needed to cover contract
 maintenance labor, including the Long Term Service Agreement (LTSA),
 and spare parts.

- 6
- Q. Why did Gulf decide to contract with the equipment manufacturer for the
 long-term service of Smith Unit 3?

9 Α. The LTSA with the equipment manufacturer allows Gulf access to an 10 experienced group of technical experts with knowledge regarding the 11 specifics of this state of the art generating equipment which is new 12 technology for Gulf. The LTSA enables Gulf to reduce the number of 13 additional full-time maintenance personnel and to hire a minimal staff to 14 operate and maintain the unit. Furthermore, the LTSA provides Gulf with 15 access to a ready supply of discounted parts for all major outages. The 16 customers benefit from the LTSA through reduced costs of staffing, 17 discounts on major parts, and reduced carrying costs on inventory.

- 18
- Q. Please explain the need for additional O & M dollars to maintain Gulf's
 existing fleet of generating units.
- A. In addition to Smith Unit 3, the other major factors contributing to the higher O & M expenses are increased planned outage costs and other increased maintenance costs applicable to Gulf's existing fleet of generating units. The total production costs in the test year are
- 25 \$83.7 million of which the O & M for Smith Unit 3 is \$3.4 million.

1 Since Gulf's last rate case in 1990, our generating units have aged 2 significantly and have been required to produce more electricity on an 3 annual basis. Generating plants contain a large amount of rotating 4 equipment. This equipment is subject to extremely high stresses due to the high temperatures and pressures at which they operate. Gulf's 5 6 customers enjoy significant advantages over customers of other electric 7 utilities in that we have chosen coal, a plentiful low-cost fuel, for Gulf's 8 generating plants. However, coal is highly abrasive in nature and causes 9 much more wear on generating plant components than gas or oil, thereby 10 increasing maintenance costs. During the last 12 years, we have worked 11 hard to maintain these units so that they have continued to provide 12 reliable, low cost service to our customers. The fact that our rates are 13 among the lowest in the nation is a testament to the value we provide our 14 customers.

We are now at the point where we must spend additional money on these units so that they continue to provide this reliable, low cost energy into the future. The requested amount in the test year, which includes production A & G and production O & M, is essential to effectively operate, maintain and support Gulf's entire generating fleet.

20

Q. Please explain the increase in total production cost from the 2000
historical year to the test year.

A. As shown in Mr. Saxon's Schedule 3, the total increase in production from
 2000 is \$10.4 million. Of that total, \$3.1 million is associated with
 increased planned outages and \$3.4 million are expenses associated with

1 Smith Unit 3. The remaining \$3.9 million in production cost is necessary 2 for Gulf to continue to effectively maintain our generating fleet in a manner 3 that maximizes our equipment and unit availability while maintaining the 4 lowest cost to our customers. These units are 11 years older than in our 5 last rate case; the newest went into commercial operation in 1981. These 6 increased maintenance costs are directly related to the age of the units, 7 coupled with the cumulative effect of a 37 percent increase in total 8 generation. This increased generation translates to a significant amount 9 of additional coal burned in the units since 1990. This, in turn, causes an 10 increase in the wear and tear of boiler components and auxiliary 11 equipment (i.e. coal mills, ash handling equipment, fans, ductwork, etc.) 12 13 Q. Please define planned outage and other maintenance cost. 14 Α. In order to better manage our O & M expenses, track costs, and monitor performance results, Gulf has adopted a philosophy of capturing 15 16 production expenses in the following categories: (1) Baseline, 17 (2) Planned Outage, and (3) Special Projects. 18 Baseline expenses are the costs required to conduct the day-to-day

operation and maintenance of the plant. Planned outage expenses are
 those that occur in support of periodically scheduled maintenance of
 major components such as boiler, turbine, generator, or auxiliary
 equipment. Special Projects expenses are for projects significant in cost,
 that are tracked individually to enhance cost control and ensure
 acceptable performance. Although a particular special project may not
 occur annually, there will be special projects that have to be completed

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each year. The level of special project costs included in the test year is
representative of the costs that will be incurred in future years. This
change in philosophy was initiated to provide a consistent cost
methodology to all our power plants. This consistent cost approach also
provides Gulf with the ability to better manage our projects, while
identifying best practices and opportunities for improvement to enhance
the performance of our units.

8

9 Q. What is the impact of planned outages on Gulf's production O & M in the10 test year?

11 Α. The budget for planned outages in the test year is \$14.0 million. This 12 compares to \$10.9 million in actual planned outage expenses in the year 2000, the most recent complete historical year available at the time of this 13 14 filing. The increase from calendar year 2000 to the test year is primarily 15 attributed to the overall scope of the planned outages. The major 16 difference in the test year and the historical year is an increase in the scope of the planned outages at Smith Units 1 & 2 and the addition of an 17 18 outage for Plant Daniel.

The test year budget is more representative of future conditions.
As shown on my Schedule 5, the projected average annual planned
outage expenses for the five-year period 2002 through 2006 is
\$15.7 million. Gulf's test year outage budget of \$14.0 million is
\$1.7 million below the projected five-year average.

25

1 Q. What is the main performance indicator used by Gulf to determine the 2 effectiveness of its planned outage and maintenance program? Gulf uses Equivalent Forced Outage Rate (EFOR) to gauge the 3 Α. 4 effectiveness of its planned outage and maintenance program. EFOR is one of many standard calculations developed by the North American 5 Electric Reliability Council Generating Availability Data Systems (NERC 6 7 GADS). Gulf has been a participant in NERC GADS since its inception in 1982. The EFOR calculation takes into account forced outages and 8 deratings on a unit by unit basis. It is the measure of a unit's ability to 9 meet full load when needed by the system. 10

11

How does Gulf determine the priority of projects to address EFOR? 12 Q. Gulf has been proactive in implementing several major preventive 13 Α. maintenance programs that have improved the overall effectiveness of 14 scheduling and planning processes. One program is the plant reliability 15 optimization (PRO) program that was developed in partnership with the 16 Electric Power Research Institute (EPRI). PRO is a maintenance process 17 that seeks to produce the appropriate balance between corrective 18 maintenance, preventive maintenance, and predictive maintenance. PRO 19 combines all diagnostic, maintenance, financial, and process data into an 20 effective decision-making tool. The ultimate goal is to perform 21 maintenance at the least cost while maximizing equipment reliability. The 22 EFOR for Gulf's units has declined significantly since 1997, in part, 23 because of efforts that have more effectively targeted preventive 24 maintenance expenditures to those preventive maintenance projects that 25

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have the greatest impact. These EFOR reductions have occurred even
 though total generation for Gulf's units has increased 25 percent from
 1997 to 2000. Schedule 6 of my exhibit provides a detailed outline of
 Gulf's generation and EFOR for the years 1991 through 2000. The total
 increase in generation over this period is 37 percent.

6

7 Q. What is the effect of not performing the required maintenance? 8 Α. In order to provide reliable and cost effective generation to our customers. 9 Gulf must maintain plant efficiencies and minimize forced outages. 10 Without O & M dollars sufficient to continue our current maintenance practices, the EFOR of the units will be negatively impacted and the 11 12 customers would ultimately bear the burden of higher costs. In the shortterm, higher forced outage rates could require additional market energy 13 purchases in order to meet customer load requirements. For example, 14 market replacement power costs for a one percent higher summer EFOR 15 caused by a single outage (64 hours) on Crist Unit 7 could have cost the 16 customers as much as \$10 million in the summer period of 1999. The 17 18 additional dollars we are requesting in this rate case are more than 19 justified to offset the potential exposure of our customers to the costs 20 associated with increased EFOR.

- 21
- Q. How does the O & M Benchmark calculation included in Mr. McMillan's
 testimony for production compare to the test year?
- A. As noted by Mr. McMillan, Gulf's total company O & M for the test year is
 \$3.7 million under the O & M Benchmark. The test year budget for

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Production O & M expenses is over the Benchmark by \$9.4 million. As
 shown on my Schedule 7, this variance consists of four segments:
 (1) Production Steam, (2) Production Other, (3) Production Other Power
 Supply, and (4) Production Related Administrative and General.

5

6 Q. Please discuss the \$5.8 million variance in total Production Steam. In 1990, the Commission allowed \$5.9 million for boiler and turbine 7 Α. inspections. This results in a Benchmark of \$8.2 million as shown on my 8 9 Schedule 8. In the test year, Gulf's total planned outage costs are \$14.0 million for a variance of \$5.8 million over the Benchmark. This is 10 due, in part, to the additional maintenance costs associated with the 11 increased amounts of generation required. As previously stated, our 12 generating units have aged significantly and have been required to 13 produce more electricity on an annual basis. Since 1990 there has been 14 a 37 percent increase in total generation as compared to the historical 15 16 vear 2000.

In addition, we now use diagnostic tools that were not readily 17 available in 1990 such as: thermography, boiler mapping, tube sampling, 18 non-destructive examination, and motor signature testing. These tools 19 allow us to locate problems before they actually occur, thereby increasing 20 the maintenance activities performed today. The added costs of these 21 additional maintenance activities are incurred to help reduce EFOR and 22 provide more reliable, low cost generation to our customers. The 23 Benchmark does not recognize this more inclusive outage philosophy 24 used today as compared with 1990. 25

1 Q. Please explain how the outage philosophy used today differs from that 2 used in 1990 and the resulting impact on the Benchmark comparison. 3 Α. As I discussed previously in my testimony, Gulf adopted a philosophy of 4 budgeting and tracking production expenses as baseline, planned outage, 5 or special projects. As we currently define them, planned outages include 6 maintenance work performed while the unit is scheduled off line for a 7 specified period. Planned outages include, but are not limited to, work on 8 the boiler, turbine, generator, pulverizer, precipitator, cooling towers, 9 stack, ductwork, and other auxiliary equipment. Year to year budget 10 fluctuations are largely due to scope changes in planned outages and 11 special projects associated with various units within our generating fleet.

ł

12 The current philosophy of tracking baseline, outage, and special 13 projects costs provides our management with the ability to better manage projects, while identifying best practices and opportunities for 14 15 improvement to enhance the performance of our units. This was not the case in 1990 when only three major turbine and boiler inspections 16 17 occurred as shown on my by Schedule 5. Other outages were taken but not identified as major turbine boiler inspections. The associated 18 additional outage dollars were not specifically identified with outages in 19 20 the 1990 test year. Because of the diagnostic tools available today, 21 outages under our definition are more inclusive in terms of scope of work 22 to be performed during the planned outage. Therefore, comparing the 23 resulting Benchmark amount to the planned outage amount in the test 24 year is not an appropriate comparison.

25

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- Q. Please compare Gulf's Production Other O & M expenses for the test year
 to the Benchmark level.
- A. The Production Other segment is \$3.8 million over the Benchmark level.
 This variance is attributed to the additional costs associated with Smith
 Unit 3 of \$3.4 million and annual maintenance cost of \$450,000 applicable
 to the Pea Ridge Cogeneration facility which was added to Gulf's system
 after the 1990 test year. The amount budgeted for these two facilities is
 reasonable, necessary, and prudent in order to keep these generating
 units operating to serve Gulf's customers.
- 10
- Q. Please compare Gulf's Production Other Power Supply O & M expenses
 for the test year to the Benchmark level.
- The test year budget in Production Other Power Supply accounts is 13 Α. \$1.1 million over the Benchmark level. Of this variance, \$896,000 is 14 directly related to Gulf's share of costs associated with operating the 15 Southern electric system's wholesale energy trading floor. This activity 16 provides: (1) better utilization of the most efficient generating sources, 17 (2) management of reliability power purchases, (3) economic purchases of 18 lowest-cost wholesale power, and (4) wholesale sales of excess system 19 generating capacity. Gulf's customers benefit from greater system 20 21 reliability and reduced costs.

The remainder of the variance for the Production Other Power Supply segment is related to increased costs of the Power Coordination Center (PCC) which coordinates the bulk power supply operations for Gulf and the other operating companies of the Southern electric system. The

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1 bulk power supply operations provided by the PCC include interchange 2 evaluations, real time generation control, transmission security and sales, 3 and operations planning. FERC regulations related to Orders 888, 889. 4 and 2000 have all been issued since the Benchmark year. Activities 5 associated with compliance with these orders have caused the increase of \$208.000 associated with the development and implementation of 6 7 relevant automated systems. These costs are offset by the benefits that 8 Gulf's customers receive through an enhanced competitive wholesale 9 energy market.

- 10
- 11 Q. Please compare Gulf's Production Related A & G expenses for the test
 12 year to the Benchmark level.
- A. As shown on Schedule 7 of my exhibit, the budget for Production Related
 A & G in the test year is \$1.3 million under the Benchmark. This variance
 is associated with reductions in A & G costs at Plant Daniel of \$914,000
 and an overall reduction of \$871,000 in A & G costs associated with
 insurance expenses and employee benefits allocated to Production.
- 18
- Q. Is the \$83.7 million included in production the appropriate level of O & M
 expense to use in setting Gulf's base rates?
- A. Yes. As mentioned earlier, Gulf as a company is \$3.7 million below the
 Benchmark established by this Commission. The approved level in the
 last rate case resulted in a Benchmark level of \$74.3 million for
 production. I have discussed reasons for the variance of \$9.4 million from
 the Benchmark previously in my testimony. The \$83.7 million level of

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1 O & M for Production in the test year is reasonable, prudent, and 2 necessary to continue to maintain reliable low cost generation for our 3 customers. Furthermore, the test year O & M level is representative of 4 levels that will continue to be incurred in the future when new rates 5 resulting from this case are in effect.

- 6
- Q. Please summarize the Production Construction Budget for the period
 January 1, 2001 through May 31, 2002.

9 Α. The total Production Construction Budget for the period January 1, 2001 10 through May 31, 2002 is \$238.1 million. This includes \$188.2 million 11 associated with Smith Unit 3 and \$49.8 million of other production-related 12 items. The other production related items include \$9.5 million of 13 environmental projects and \$5.8 million of Scherer capital expenditures. 14 Mr. Labrato addresses the adjustments used to remove investments and 15 related accumulated depreciation associated with UPS contracts and with 16 amounts recovered through the Environmental Cost Recovery Clauses. 17 The remaining \$34.5 million included in the production construction 18 budget is for specific projects at Gulf's generating facilities designed to 19 improve heat rate, prevent forced outages, or otherwise help ensure the 20 availability of efficient, low-cost generation to our customers. Schedule 9 21 of my exhibit is a listing of all capital projects included in this period for 22 production.

- 23
- 24 Q. Please summarize the Production Construction Budget for the test year.
- 25

Α.

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The test year construction budget for production is \$13.0 million. This

includes \$677,000 associated with Smith Unit 3, \$11.0 million of retrofit
 items, \$1.0 million of environmental projects, and \$301,000 of Scherer
 capital expenditures. All capital projects are designed to improve heat
 rate, prevent forced outages, or improve plant efficiency. Schedule 10 of
 my exhibit is a listing of all capital projects for the test year.

- 6
- Q. What processes do you use to ensure capital dollars are spent
 effectively?

9 Α. As previously stated, Gulf monitors NERC GADS data as part of the production capital analysis process. Gulf develops plans to address 10 GADS events that continue to be problematic and makes decisions to 11 repair or replace existing equipment. For all capital projects, the Project 12 Evaluation and Prioritization System (PREPS) model is used to determine 13 the economic viability of a project. The PREPS model assigns benefits in 14 terms of dollars to heat rate improvements, reduced forced outage rates, 15 or reduced station service expenses and compares those benefits to the 16 project costs. The normal criteria to implement a capital project are a 17 payback of less than five years and a 1.2 benefit to cost ratio. 18

19

20 Q. How is the Construction Budget managed?

A. Each project is assigned a project manager who is responsible for
 developing potential solutions and preparing all PREPS analyses. The
 project manager will develop documentation outlining the scope of the
 project and work with procurement contract personnel to develop a bid
 package. From start to finish, the project manager is responsible for all

1		on-site management including contractor performance and invoice review.
2		The plant manager receives a report from Generation Services each
3		month detailing total capital project expenditures and budget variances for
4		all projects. The plant manager is responsible for explaining all budget
5		variances. At the Company level, the Corporate Planning group requires
6		a detailed explanation quarterly of all budget variances that meet specific
7		variance criteria.
8		
9	Q.	What recovery amount is Gulf requesting for total inventory dollars
10		including fuel stock and in-transit fuel?
11	Α.	Gulf is requesting a total fuel inventory of \$42.4 million. This includes
12		\$29.4 million for fuel stock and \$13.0 million for in-transit fuel.
13		
14	Q.	Please describe Gulf's coal inventory policy.
15	Α.	Our policy is to maintain plant inventory levels sufficient to safeguard
16		against disruptions in supply and inconsistencies in delivery of coal due to
17		weather conditions and other factors affecting the transportation sector.
18		Preliminary stockpile levels are determined using the Utility Fuel Inventory
19		Model developed by EPRI and the electric utility industry. The model
20		evaluates, among other factors, the economics associated with being
21		forced to procure coal in the spot market versus the costs associated with
22		carrying various levels of inventory. The model results are then
23		considered along with specific plant logistics and other market intelligence
24		in setting inventory target levels for the coming year. These inventory
25		levels are then used in the SES Fuel Optimization and Evaluation System

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(FOES) model to develop a fuel budget for all plants in the SES, including
Gulf. FOES is used to evaluate the load dispatch of the SES fleet and
fuel price forecast. It then generates a fuel budget for each plant. For the
test year this evaluation resulted in inventory targets for Gulf's bargeserved coal fired plants of approximately 40 normal full load (NFL) days
and for its rail-served plants (excluding Scherer), a range from 20 to 37
NFL days.

8

9 Q. How does this policy compare to the policy used in the last case? 10 Α. The SES fleet of generating units is dispatched and runs based on the economics associated with marginal fuel prices. Because the marginal 11 12 prices are constantly changing with the markets, burn projections fluctuate accordingly. Since "burn" is really a moving target, Gulf now employs a 13 "NFL burn day" as a stable Benchmark by which to measure inventory 14 levels. A NFL burn day is equal to the amount of fuel required, at a 15 standard unit per plant heat rate and given fuel-heating value, to run at full 16 load for 24 hours. In the last case, a budget burn or projected test year 17 burn was employed to determine burn days. Based on the latter method 18 of determining burn days, Gulf is requesting 52 days of projected burn, as 19 compared to the last rate case in which the Florida Public Service 20 Commission allowed for 90 projected burn days. 21

22

Q. Based on this policy, what is Gulf's forecasted inventory level for the testyear?

25 A. For all Gulf plants (excluding Scherer), the 13 month average of the

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monthly ending inventory levels, not including in-transit coal, for May 2002
through May 2003, is a stockpile of 695,829 tons (\$26.8 million), or
36 days NFL supply. This compares to a total of 784,887 tons
(\$37.0 million) allowed in the last rate case.

5

6 Q. Have you included in your request for working capital an amount for
7 in-transit coal?

A. Yes. Gulf pays its coal suppliers upon shipment. Therefore, capital is
invested in coal that has not yet been received at the plants. The amount
of the in-transit coal for the test year is \$13.0 million. Since a major
portion of Gulf's coal supply is delivered by barge, considerable time is
involved in transporting the coal to the plant sites. This investment in coal
that is in-transit should be included in the working capital component of
Gulf's rate base.

15

What is Gulf's natural gas inventory forecast for the test year? 16 Q. 17 Α. Guif's current policy is to maintain a certain portion of its natural gas 18 requirements in storage to provide for pipeline balancing and natural gas 19 interruptions caused by pipeline and compressor station failures, 20 hurricanes, well freezes, etc. Gas storage for balancing is necessary to avoid penalties imposed by pipelines for large swings in daily and hourly 21 22 demands when the generating unit is economically dispatched or when 23 other sudden changes, like plant outages, cause a swing in demand. Currently, a target inventory level of approximately ten NFL days supply 24 for Smith Unit 3, or 850,000 MMBtus, has been set. Based on the 25

1		capacity factor for Smith Unit 3 in the test year, this equates to about
2		17.5 average burn days. In addition, Gulf maintains approximately ten
3		days burn of natural gas storage for Crist Plant or about 100,000 MMBtus.
4		Gulf has included \$2.1 million in working capital for gas storage.
5		
6	Q.	What is Gulf's forecast distillate oil inventory level for the test year?
7	Α.	Gulf's projected distillate oil inventory level, including both lighter oil and
8		combustion turbine generating fuel, for the test year (excluding Scherer) is
9		16,105 barrels. The amount of \$487,000 has been included in working
10		capital for distillate oil inventory.
11		
12	Q.	Please summarize your testimony.
13	Α.	The construction of the 574 megawatt Smith Unit 3 is a major factor
14		creating Gulf's need for rate relief. Gulf's RFP and subsequent need
15		determination clearly demonstrate that Smith Unit 3 is necessary and the
16		most economical option available to Gulf's customers. The capital
17		addition of Smith Unit 3 of \$220.5 million and the associated O & M
18		expenses of \$3.4 million are reasonable, prudent and necessary
19		expenses and in the best interests of Gulf's customers.
20		The Production Construction budget is necessary to continue to
21		improve heat rate, prevent forced outages, or otherwise help ensure the
22		availability of efficient, low-cost generation to our customers. The fuel
23		inventory levels requested in working capital are reasonable and the coal
24		inventory levels fall below the guidelines established in our last rate
25		hearing proceeding.

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1 Gulf's production operations continue to provide low cost, reliable 2 electricity to our customers, while at the same time the demand has 3 increased significantly. The availability of Gulf's generating units and low 4 EFOR are clear indications that Gulf has developed an effective program that will continue to provide our customers with reliable service. Gulf is 5 6 committed to maintaining our generating facilities through the effective 7 use of resources. Gulf's production construction and O & M costs are 8 carefully controlled and utilized in a manner to ensure high availability and 9 low EFOR. The \$83.7 million budgeted for power production O & M in the 10 test year are reasonable, prudent, and necessary expenses and are 11 representative of levels that will continue to be incurred in the future when 12 new rates resulting from this case are in effect. Gulf is committed to 13 continual improvement of our maintenance and operations practices so 14 that our customers will be best served and their long-term electric costs 15 will continue to be among the lowest in the nation.

The results, as reflected in Gulf's record associated with EFOR, are a clear indication that the planned outage and maintenance practices of Gulf are efficient and effective. With the increasing age of our generating facilities and a 37 percent increase in generation for those units, Gulf has reached a point where we can no longer continue to maintain a reasonable level of reliability without the level of O & M and capital expenditures requested in the test year.

23

24 Q. Does this conclude your testimony?

25 A. Yes.

AFFIDAVIT

STATE OF FLORIDA COUNTY OF ESCAMBIA Docket No. 010949-EI

Before the undersigned authority, personally appeared Robert G. Moore, who being first duly sworn, deposes, and says that he is the Power Generation and Transmission Vice President of Gulf Power Company, a Maine corporation, and that the foregoing is true and correct to the best of his knowledge, information, and belief.

Robert G. Moore Power Generation and Transmission Vice President

Sworn to and subscribed before me by Robert G. Moore who is day of Sector he personally known to me this $\frac{7+4}{2}$ __, 2001.

Public, State of Florida at Notariv



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Smith Unit 3 Construction Costs (\$000)

Engineering/Project management	\$5,645
Major generator and balance of plant equip.	121,878
Construction	53,319
Switchyard and step up-transformer	10,400
Training	1,685
Natural gas conditioning station	1,600
Start-up gas transportation	4,900
Start-up natural gas costs	3,000
Unit start-up costs	1,660
Environmental licensing costs	1,751
Wetland mitigation	649
AFUDC & administration	<u>14,008</u>
Total Project	<u>\$220,495</u>

Smith Unit 3 Operation and Maintenance Expenses (\$000)

Gulf Labor	\$1,709
Contract Labor	226
Materials	1,219
Long Term Maintenance Agreement	222
Total Budget	<u>\$3,376</u>

Smith Unit 3 Personnel Complement

- 10 Plant Equipment Operators
- 5 Team Leaders Operations
- 2 Welder Mechanics
- 2 Chemical and Results Technicians
- 2 Electricians
- 2 Instrument and Control Technicians
- 1 Storekeeper
- 1 Utilityperson
- 1 Cost Analyst
- 1 Control Analyst
- 1 Planner
- <u>1</u> Administrative Assistant
- <u>29</u> Total

Planned Outage Costs

	Benchmark 1990	Actual 2000	Test Year Budget	2002 Budget	2003 Budget	2004 Budget	2005 Budget	2006 Budget
CRIST				and the second second			No. and No.	
Unit 1		22,564	0	0	0	0	0	0
Unit2		108,423	0	0	0	0	0	0
Unit 3		1,466	0	0	0	0	0	0
Unit 4		1,773,183	1,142,425	1,142,425	2,000,645	602,809	1,243,472	4,005,417
Unit 5		716,655	1,305,121	1,305,121	1,763,396	780,640	4,380,135	735,914
Unit 6	4,400,000	1,683,913	1,490,521	5,840,626	1,490,521	1,732,458	1,366,383	2,082,756
Unit 7		1,797,674	1,772,229	2,621,267	1,772,229	6,698,387	1,246,582	1,582,925
Crist Common		498,586	605,000	418,000	250,000	35,000	50,000	100,000
Total	4,400,000	6,602,464	6,315,296	11,327,439	7,276,791	9,849,294	8,286,572	8,507,012
SMITH								
Unit 1		494,363	2,055,149	471,200	2,230,698	1,132,519	504,609	515,870
Unit 2		551,509	1,023,955	2,136,616	465,305	1,158,147	486,617	5,457,733
Unit A		0	0					
Combined Cycle Unit		0	226,350	225,000	230,400	235,598	240,952	246,330
Smith Common		83,420	0	0	0	127,825	0	0
Total	0	1,129,292	3,305,454	2,832,816	2,926,403	2,654,089	1,232,178	6,219,933
SCHOLZ								
Unit 1		20,938	551,200	1,100,000	204,800	209,420	214,180	218,960
Unit 2	940,000	778,206	201,200	200,000	204,800	209,420	214,180	218,960
Scholz Common		50,459	0	0	0	0	0	0
Total	940,000	849,603	752,400	1,300,000	409,600	418,840	428,360	437,920
TOTAL TERRITORIAL PLANTS	5,340,000	8,581,359	10,373,150	15,460,255	10,612,794	12,922,223	9,947,110	15,164,865
Daniel Total	555,500	2,338,165	3,606,668	4,361,180	4,213,769	2,077,512	1,970,694	2,014,640
TOTAL PLANTS w/o Scherer	5,895,500	10,919,524	13,979,818	19,821,435	14,826,563	14,999,735	11,917,804	17,179,505

5 year average 2002 through 2006 \$15,749,008

Gulf's Generation and EFOR

	Gulf Territorial	Gulf Territorial Equivalent Forced
Year	(MWh)	Outage Rate EFOR (%)
1991	8,560,572	7.87
1992	9,331,162	8.67
1993	8,639,713	8.08
1994	8,358,733	4.20
1995	8,467,755	4.77
1996	8,753,146	3.20
1997	9,358,847	7.06
1998	10,896,377	9.60
1999	11,676,299	5.59
2000	11,712,825	2.50

O & M Benchmark Comparison (\$000)

	1990 <u>Allowed</u>	Test Year <u>Benchmark</u>	Budget for Test Year	<u>Variance</u>
Production Steam	\$46,945	\$65,084	\$70,870	\$5,786
Production Other	47	65	3,905	3, 84 0
Production Other Power Supply	966	1,339	2,427	1,088
Production Related A & G	<u> </u>	7,840	<u>6,493</u>	(<u>1,347)</u>
Total Production	<u>\$53.613</u>	<u>\$74,328</u>	<u>\$83,695</u>	<u>\$9.367</u>

¢000

STEAM PRODUCTION

	<u> <u> </u></u>
1990 Allowed	46,945
Test Year Adjusted Benchmark	65,084
Test Year Adjusted Request	<u>70.870</u>
System Benchmark Variance	5,786

		Test	Test	
	1990	Year	Year	
Description	Allowed	<u>Benchmark</u>	<u>Request</u>	<u>Variance</u>
1. Planned Outages	5,895	8,173	13,980	5,807

In 1990, the Commission allowed \$5.9 million for boiler and turbine inspections as adjusted to a Benchmark of \$8.2 million as shown on my Schedule 8. In the test year, Gulf's total planned outage costs are \$14.0 million or an increase of \$5.8 million over the Benchmark. This is due, in part, to the additional maintenance costs associated with the increased amounts of generation required. As previously stated, our generating units have aged significantly and have been required to produce more electricity on an annual basis. Since 1990 there has been a 37 percent increase in total generation as compared to the historical year 2000.

In addition, we now use diagnostic tools that were not readily available in 1990 such as: thermography, boiler mapping, tube sampling, non-destructive examination, and motor signature testing. These tools allow us to locate problems before they actually occur, thereby, increasing the maintenance activities performed today. The added cost of these additional maintenance activities are incurred to help reduce EFOR and provide more reliable, low cost generation to our customers. The Benchmark does not recognize this more inclusive outage philosophy used today as compared with 1990.

PRODUCTION OTHER

		1990 Allowed Test Year Adjusted I Test Year Adjusted I System Benchmark	Benchmark Request Variance	<u>\$000</u> 47 65 <u>3.905</u> <u>3.840</u>	
De	scription	1990 <u>Allowed</u>	Test Year <u>Benchmark</u>	Test Year <u>Request</u>	Variance
1. 2.	Smith Unit 3 O & M Pea Ridge	0 0	0 0	3,376 450	3,376 <u>450</u> <u>3,826</u>

The major factor creating the need for rate relief is the addition of Smith Unit 3. Gulf will increase staffing at Plant Smith to maintain and operate Smith Unit 3 by 29 full-time positions. The increase of \$3.4 million is to provide the necessary resources to operate and maintain Smith Unit 3.

Gulf Power is the owner of a cogeneration facility located on the plant site of one of Gulf's industrial customers. All electric energy produced by Gulf's cogeneration facility is delivered to Gulf's electric grid and the customer hosting Gulf's cogeneration facility then purchases energy back from Gulf. The \$450,000 annual expense is the amount Gulf is obligated to pay the equipment manufacturer under an extended service agreement ("ESA") that addresses virtually all maintenance needs for electric generating components of the cogeneration facility. Gulf's financial obligation for the maintenance covered by ESA is fixed at \$450,000 for 20 years beginning in 1998.

PRODUCTION OTHER POWER SUPPLY

1990 Test ` Test ` Syste	Allowed Year Adjusted E Year Adjusted F m Benchmark V	Benchmark Request Variance	<u>\$000</u> 966 1,339 <u>2,427</u> <u>1,088</u>	
Description	1990 <u>Allowed</u>	Test Year <u>Benchmark</u>	Test Year <u>Request</u>	Variance
1. SoCo Energy Marketing 2.Power Coordination Center	0 173	0 239	896 447	896 1 104

The variance of \$896,000 is directly related to Gulf's share of costs associated with operating the Southern electric system's wholesale energy trading floor. This activity provides: 1) better utilization of the most efficient generating sources; 2) management of reliability power purchases; 3) economic purchases of lowest-cost wholesale power; and 4) wholesale sales of excess system generating capacity. Gulf's customers benefit from greater system reliability and reduced costs.

The variance for the Production Other Power Supply segment is related to increased costs of the Power Coordination Center (PCC) which coordinates the bulk power supply operations for Gulf and the other operating companies of the Southern electric system. The bulk power supply operations provided by the PCC include interchange evaluations, real time generation control, transmission security and sales, and operations planning. FERC regulations related to Orders 888, 889, and 2000 have all been issued since the benchmark year. Activities associated with compliance with these orders have caused the increase of \$208,000 associated with the development and implementation of relevant automated systems. These costs are offset by the benefits that Gulf's customers receive through an enhanced competitive wholesale energy market.

PRODUCTION RELATED A & G

	1990 Test Test Syste	1990 Allowed Test Year Adjusted B Test Year Adjusted R System Benchmark V		<u>\$000</u> 5,655 7,840 <u>6,493</u> <u>(1,347)</u>	
De	<u>scription</u>	1990 <u>Allowed</u>	Test Year <u>Benchmark</u>	Test Year <u>Request</u>	Variance
1.	Plant Daniel A & G	2,698	3,740	2,8 26	(914)
2.	Insurance Expenses & Employee Benefits	2,694	3,736	2,865	<u>(871)</u> (1.785)

The decrease in the A & G dollars charged at Daniel is consistent with the overall decrease in A & G expenses, relative to the benchmark, at Mississippi Power Company. Since 1990, there has been a decrease in the number of employees overall at Mississippi Power and that coupled with the initiative to charge cost directly to functional accounts whenever possible has resulted in less A & G expenses related to the Plant Daniel joint ownership agreement.

Production related property insurance was \$915,000 in 1990 and only increased slightly in the test year to \$935,000, resulting in a \$334,000 variance under the Benchmark. Production related employee benefits increased from \$1,779,000 in 1990 to \$1,930,000, resulting in a \$537,000 variance under the benchmark.

PRODUCTION STEAM EXPENSE SUMMARY

I	BENCHMARK (\$000)		TEST YEAR (\$000)		TEST YEAR vs BENCHMARK	
ITEM ⁽¹⁾	1990 ALLOWED	1990 ALLOWED BENCHMARK	ITEM ⁽¹⁾	<u>0&M</u>	VARIANCE	
TURBINE & BOILER INSPECTIONS	5,895	8,173	PLANNED OUTAGE	13,980	5,807	
	<u> </u>		BASELINE	54,164		
			SPECIAL PROJECT	2,726		
OTHER	41,050	56,911	OTHER	56,890	(21)	
TOTAL	46,945	65,084	TOTAL	70,870	5,786	

⁽¹⁾ Category definitions have changed since 1990. See testimony for details.

Generation Construction Budget January 1, 2001 Through May 31, 2002

PROJECT DESCRIPTION

NEW GENERATION		
LANSING SMITH UNIT NO. 3 - COMBINED CYCLE UNIT		
Production	\$	188,232,000
Transmission		9,715,990
ENVIRONMENTAL		
BATA CEM TEST TRI MONITORS		30.000
CEMS BEPLACEMENT		200,000
CRIST - CEMS REPLACEMENT		125.000
CRIST - CEMS REPLACEMENT		125.000
CRIST - CEMS REPLACEMENT		84.375
CRIST - CEMS REPLACEMENT		84,375
SCHOLZ 1 & 2 - FLOW MONITOR REPLACEMENTS		160,000
SMITH 1 - CEMS REPLACEMENT		125,000
SMITH 2 - CEMS REPLACEMENT		125,000
SMITH 1&2 CONVERSION OF SHIELD WATER SUPPLY		53,000
INSTALL RAW WATER WELL FLOWMETERS		9,325
DANIEL 2 - UPGRADE PRECIPITATOR INTERNALS		5,603,272
SMITH 1 - LOW NOX - GNOCIS		1,200,000
SMITH 1&2 DUST SUPRESSION SYSTEM		150,000
BOTTOM ASH HYDROBIN REPLACEMENT		1,200,000
CRIST UNITS 4-7 FLYASH LANDFILL ZONE 3A DEVEL		200,000
CRIST 1-5 - COOLING TOWER FAN CONTROLS		50,000
UNIT 6 & 7 COOLING TOWER CHEMICAL FEED SYSTEM		18,970
	S	9,543,317
RETROFIT	•	070 75 0
CRIST - MISC STEAM PLANT ADDITIONS	\$	873,750
CRIST - MISC STEAM PLANT ADDITIONS		97,085
CRIST - UNIT 6 CONDENSER CLEANING SYSTEM		250,000
CRIST - UNIT 7 CONDENSER CLEANING SYSTEM		200,000
CRIST 1-7 - NEW RAW WATER SUPPLY WELL		200,000
CHIST 1-7 - NO. 3 DEMINERALIZER CONTROLS		1 200,000
CHIST 1-7 TURBINE ROUP		1,200,000
CHIST 4 - HEPLACE AIR HEATER BASKETS		300,009
		150,000
		100,000
		1 000 200
		65.000
CONST 5 - DEDI ACE AIR HEATER RASKETS		400,000
CRIST 5 . REPLACE FINISHING SUPERFHEATER		700.000
CRIST 5 - REPLACE REHEATER		1.000.000
CRIST 6 - REPLACE BOILER CONTROLS		2,700,000
CRIST 6 - REPLACE BOILER UNKAGES AND TUBBINE CONTROLS		800.000
CRIST 6 - REPLACE COLD FND AIR HEATER BASKETS		200.000
CRIST 6 - SUPERMEATER		2.400.000

	¢	1 300 000
	Ŷ	550,000
		1 700 000
		1,700,000
		20 205
DANIEL 1 - ACOUSTICAL LEAN DETECTORS		006.390
		200,339
DANIEL 1 - WESTINGHOUSE CONTROL SYSTEM		443,472
DANIEL 1 MISC OUTAGE		39,354
DANIEL 2 - AIR PREHEATER SONIC BLOWERS		201,955
DANIEL 2 ACOUSTICAL LEAK DETECTORS		38,395
DANIEL 2 MISC OUTAGE		10,104
DANIEL 2 NOZZLE BLOCK		206,369
DANIEL 2 WESTINGHOUSE WDPF CONTROLS SYSTEM		1,982,930
DANIEL 2-REPLACE COAL MILL PIPING		55,246
DANIEL COMMON WAREHOUSE REMODELING		348,000
DANIEL DOZIER REPLACEMENT		400,000
DANIEL LAB CONTROLS		86,154
DANIEL UNIT 2 REHEATER REPLACEMENT		2,675,000
DANIEL-MISC. STEAM PLANT ADDITIONS &		18,957
PLANT DANIEL COMMON DEGASIFIER FOR THE DEMINERALIZER		70,000
PORTABLE MANLIFT		200,000
PURCHASE AND INSTALL E-CRANE COAL UNLOADER		2,500.000
REPLACE FOUR (4) SUMP PUMPS		310,000
REPLACE MOBILE CRANE		250,000
BEPLACE TWO CAT FORKLIFTS AND TWO CROWN STOCK PICKERS		89,270
REPLACE UNIT & VACUUM PUMPS		360,000
REPLACE UNITS 4-8 CONVEYOR SYSTEM SWITCHGEAR FOR FUEL HANDL		140,000
SCHOLZ ASH LINE REPLACEMENT		100,000
SCHOLZ-MISC. STEAM PLANT ADDITION		141.670
SCHOLZ-MISC. STEAM PLANT ADDITION		14,165
SMITH - MISC STEAM PLANT ADDITIO		315,335
		56,665
		20,835
		80,000
		1 300 000
		805,000
		1 200,000
SMITH COAL HANDLING DUZIER REPLACEMENT		1,200,000
UNIT #2 AIR HEATEN BASKET REFLACEMENT		24 492 902
	<u>ə </u>	34,482,823
SCHERER		
SCHERER 3 . INSTALL WATER CANNON	\$	246.500
SCHERER 3 - REPLACE BOILER CONTROLS	*	669,750
SCHERER.MISC ADDITIONS & IMPROVEMEN		332,895
		4 361 000
		123,000
		68.375
SCHEREN S & 4 DOST CONTROL EQUIPMENT		5,801,520
TOTAL	<u>\$</u>	247.775,650
Less Smith Unit 3 Transmission		-9,715,990
TOTAL GENERATION CONSTRUCTION BUDGET	\$	238,059,660

Generation Construction Budget Test Year

PROJECT DESCRIPTION

NEW GENERATION	\$\$77 000
EXAMINE ON THOM NO. 3 - COMBINED OF CLE ON T	4017,000
ENVIRONMENTAL	**** • • • •
CRIST - CEMS REPLACEMENT	\$206,250
CHIST-INSTALL BUTTOM ASH PYRITE SEPARATION SYS	41,005
	60,000
	500,000
	20,104
SMITH 182 - CAP ASH LANDHLL CELLS	150,000
RETROFIT	\$\$04,078
CRIST - MISC STEAM PLANT ADDITIONS	\$650.000
CRIST 6 - CIRCULATING WATER (ONCE THROUGH)	300.000
CRIST - MAJOR MISC ADDITIONS	118,750
CRIST 6-REPLACE INTERMEDIATE & HOT FND AIR HEATER BASKETS	541,775
CRIST 7 - REPLACE INTERMEDIATE & HOT END AIR HEATER BASKETS	120,710
CRIST 7 - REPLACE COAL FEEDERS	50,000
CRIST 4-7 - TRACTOR	199,800
CRIST 6-7 - BELT CHANGEOUTS	125,025
PLANT PERFORMANCE NETWORK	104,165
CRIST - COMPRESSOR AND AIR DRYER BUILDING	500,000
PURCHASE AND INSTALL E-CRANE COAL UNLOADER	500,000
REPLACE TWO CAT FORKLIFTS AND TWO CROWN STOCK PICKERS	17,859
SCHOLZ-MISC. STEAM PLANT ADDITION	110,000
SCHOLZ 1 REPLACE AIR HEATER BASKETS	100,000
SCHOLZ REPLACE STATION BATTERIES	80,000
SMITH - MISC. STEAM PLANT ADDITIONS	299,000
SMITH UNIT #1 REPLACE AIR HEATER BASKETS	550,000
SMITH UNIT #1 REPLACE FEEDERS	300,000
SMITH 1 -REPL LP FEEDWATER HEATER	193,750
DANIEL-MISC, STEAM PLANT ADDITIONS &	24,103
DANIEL 1 - REPLACE NOZZLE BLOCK	209,035
DANIEL UNIT 2 - FEEDWATER HEATERS AND DEAERATORS	163,437
DANIEL 1 MISC OUTAGE	17,202
DANIEL 2 MISC OUTAGE	31,011
DANIEL 1 - REPLACE COAL MILL PIPING	61,182
DANIEL 1 - WESTINGHOUSE CONTROL SYSTEM	1,971,562
DANIEL 2 WESTINGHOUSE WDPF CONTROLS SYSTEM	407,978
DANIEL 1 - REPLACE REHEATER	2,675,000
DANIEL - 2 BOTTOM ASH HOPPER	455,653
DANIEL 2-REPLACE COAL MILL PIPING	169,516
	\$11,046,513
	\$457 077
	0107,077 49 750
SUBERCH 3 - REFLAUE BUILLER UUNT MULS SCHEDER DURDER TIDE RATER	43,/50
SUBENER · NUDDER HIRE VULEN SCHEDER - TRACKER ROTER	10 520
	\$301,407
	440 (1 40 (
TOTAL PLANTS	\$13.008.999

Responsibility for Minimum Filing Requirements

<u>Schedule</u>

<u>Title</u>

A-8	Five Year Analysis - Change in Cost
B-16	Nuclear Fuel Balances
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B-18	Capacity Factors
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