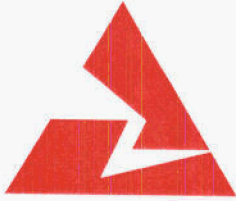


ORIGINAL

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

DOCKET NO. 010949-EI

**TESTIMONY AND EXHIBIT
OF
M. W. HOWELL**

GULF 
POWER
A SOUTHERN COMPANY

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GULF POWER COMPANY

Before the Florida Public Service Commission
Prepared Direct Testimony and Exhibit of
M. W. Howell
Docket No. 010949-EI
In Support of Rate Relief
Date of Filing: September 10, 2001

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

A. My name is M. W. Howell, and my business address is One Energy Place, Pensacola, Florida 32520. I am Transmission and System Control Manager for Gulf Power Company.

Q. Please summarize your educational and professional background.

A. I graduated from the University of Florida in 1966 with a Bachelor of Science Degree in Electrical Engineering. I received my Masters Degree in Electrical Engineering from the University of Florida in 1967, and then joined Gulf Power Company as a Distribution Engineer. I have since served as Relay Engineer, Manager of Transmission, Manager of System Planning, Manager of Fuel and System Planning, and Transmission and System Control Manager. My experience with the Company has included all areas of distribution operation, maintenance, and construction; transmission operation, maintenance, and construction; relaying and protection of the generation, transmission, and distribution systems; planning the generation, transmission, and distribution systems; bulk power interchange administration; overall management of fuel planning and procurement; and operation of the system dispatch center.

I am a member of the Engineering Committees and the Operating

1 Committees of the Southeastern Electric Reliability Council and the
2 Florida Reliability Coordinating Council and have served as chairman of
3 the Generation Subcommittee of the Edison Electric Institute System
4 Planning Committee. I have served as chairman or member of many
5 technical committees and task forces within the Southern electric system,
6 the Florida Electric Power Coordinating Group, and the North American
7 Electric Reliability Council. These have dealt with a variety of technical
8 issues including bulk power security, system operations, bulk power
9 contracts, generation expansion, transmission expansion, transmission
10 interconnection requirements, central dispatch, transmission system
11 operation, transient stability, underfrequency operation, generator
12 underfrequency protection, and system production costing.

13
14 Q. Have you previously testified before this Commission?

15 A. Yes. I have testified in various rate case, cogeneration, territorial dispute,
16 planning hearing, need determination, fuel clause adjustment, and
17 purchased power capacity cost recovery dockets.

18
19 Q. Have you prepared an exhibit that contains information to which you will
20 refer in your testimony?

21 A. Yes. I have one exhibit to which I will refer. This exhibit was prepared
22 under my supervision and direction.

23 Counsel: We ask that Mr. Howell's Exhibit MWH-1,
24 consisting of two schedules, be marked for
25 identification as Exhibit No. ____.

1 Q. Are you the sponsor of certain Minimum Filing Requirements (MFRs)?

2 A. Yes. Those which I am sponsoring are listed on Schedule 1 of my exhibit.

3 To the best of my knowledge, the information in all of the listed MFRs is
4 true and correct.

5

6 Q. What is the purpose of your testimony in this proceeding?

7 A. I will address Gulf Power Company's (Gulf) participation in the Southern
8 electric system (SES) generation and transmission planning processes,
9 SES power pool operations, the Intercompany Interchange Contract (IIC)
10 and the benefits it provides to Gulf's customers, IIC treatment of Plant
11 Smith Unit 3 capacity, the Company's off-system sales, transmission line
12 facility charges, transmission operation and maintenance (O & M)
13 expenses, the transmission construction program, and services provided
14 by Southern Company Services, Inc., (SCS) for the transmission,
15 substation, and interchange functions.

16

17 Q. Please describe the SES generation planning process in which Gulf
18 participates.

19 A. Gulf plans for generation additions in conjunction with the other SES
20 operating companies through the SES Integrated Resource Planning
21 (IRP) process. The IRP incorporates historical and future economic
22 trends and conditions that will impact the SES business for the next
23 twenty to twenty-five years. Activities conducted in the IRP process
24 include the determination of escalation rates that affect fuel, construction,
25 O & M, and labor costs; energy and demand forecasting; assessment of

1 demand-side program impacts on SES system loads; technology
2 screening analysis and evaluation; and technology engineering cost
3 estimation modeling. Currently planned retirement dates of selected SES
4 generating units are evaluated, as well as the economics of possible unit
5 repowering over the planning horizon. Also, the market for power
6 purchases is evaluated in order to determine the cost-effectiveness as
7 opposed to the available supply-side and demand-side options.

8 The key assumptions for optimizing the system generation addition
9 model are load forecasts, demand-side options, candidate units, reserve
10 margin, cost of capital, fuel costs, and escalation rates. Once the
11 necessary assumptions are determined, technologies are screened to the
12 most acceptable candidates, planning inputs are defined, and the SES
13 generation mix analysis is initiated. After the results of the mix analysis
14 are verified, each individual operating company evaluates its specific
15 needs and recommends the type and timing of its unit additions. When all
16 companies are satisfied with their capacity additions, and the sum
17 matches the system need, the system base supply-side plan is complete.
18 The result of this allocation is an individual operating company supply
19 plan, as it would fit within the SES planning criteria. Once the individual
20 operating company supply plans are determined, demand-side options
21 are evaluated as a cost-effective alternative to the supply plan.

22 Finally, after the incorporation of the cost-effective demand-side
23 impacts, a final IRP for each individual operating company is produced. A
24 financial analysis of the IRP's impact is performed by considering changes
25 in load forecast as well as fuel price variations, as sensitivities, in order to

1 assess the impact on the SES's cost. Once the plan has proven to be
2 robust and financially feasible, it is reviewed with and presented for
3 approval to executive personnel.

4 In summary, the SES's IRP process involves a significant amount
5 of manpower and computer resources in order to produce a least-cost,
6 integrated demand-side and supply-side resource plan. During the entire
7 process, a broad range of alternatives to meet the SES's projected
8 demand and energy requirements are considered. The result of the SES
9 IRP process is an integrated plan that can meet the needs of our
10 customers in a cost-effective and reliable manner.

11

12 Q. Please describe the SES transmission planning process in which Gulf
13 participates.

14 A. Gulf plans for transmission system additions in a process separate from
15 the IRP. The SES transmission system is viewed as a medium used to
16 reliably transport electric power from its generation sources to the point of
17 its consumption under a number of system conditions, known as
18 contingencies. The results of the IRP, particularly with regard to location
19 of future generating units, are factored into the transmission planning
20 process in order to determine the impacts of various generation site
21 options on the transmission system. The system is studied under
22 different contingencies for various load levels to ensure that the system
23 can operate adequately without exceeding conductor thermal and system
24 voltage limits.

25 When the study reveals a potential problem with the transmission

1 system that could adversely impact Gulf's ability to maintain or restore
2 reliability, a number of possible solutions are identified, and their costs are
3 evaluated to determine which is the most cost-effective. Once it is
4 concluded which solution is appropriate to correct the problem, a capital
5 budget expenditure request is prepared for executive approval so that the
6 necessary facilities are added or improved.

7

8 Q. Did you participate in the need determination process for Smith Unit 3?

9 A. Yes. I provided testimony in Docket No. 990325-EI that addressed Gulf's
10 customers' need for the additional generating capacity represented by the
11 Smith Unit 3 combined cycle addition and the steps taken by Gulf to
12 analyze that need. As Transmission and System Control Manager for
13 Gulf, my responsibility in the need determination process was to ensure
14 that all viable power supply alternatives were thoroughly evaluated so that
15 the most cost-effective supply alternative was chosen.

16

17 Q. In determining that Plant Smith Unit 3 was Gulf's most economical choice
18 for supplying the needs of its customers, were independent power
19 suppliers given the chance to supply these power supply needs?

20 A. Yes. As part of the SES IRP process, the market for power purchases is
21 evaluated in order to determine the cost-effectiveness of purchases as
22 opposed to the available supply-side and demand-side options. In
23 accordance with Florida Public Service Commission Rule No. 22.082,
24 FAC, Gulf directed the preparation of a Request For Proposals (RFP) that
25 contained the power supply criteria that would meet the needs of Gulf's

1 customers. The RFP was advertised in state and national publications,
2 and approximately one hundred potential suppliers were mailed a copy of
3 the RFP.

4
5 Q. What did the results of the RFP tell Gulf about the cost-effectiveness of
6 the Smith Unit 3 project?

7 A. Gulf's proposed self-build option, Smith Unit 3, was a clear winner when
8 compared to the best RFP response received. This superior economic
9 advantage clearly showed that Smith Unit 3 was the most cost-effective
10 power supply alternative. Smith Unit 3 is the most economic alternative in
11 part because of its location on the transmission system where voltage
12 support is critically needed.

13
14 Q. Have the results of the Smith Unit 3 evaluations been brought before this
15 Commission?

16 A. Yes. On June 7, 1999, in Docket No. 990325-EI, the Commission held a
17 hearing on Gulf's request for determination of need for Smith Unit 3. After
18 hearing the evidence in the case, the Commission voted unanimously to
19 certify the need, and subsequently issued Order No. PSC-99-1478-FOF-
20 EI approving Smith Unit 3 as the best power supply alternative to meet
21 Gulf's customers' needs.

22
23 Q. What is the function of the IIC?

24 A. The contract is the mechanism wherein the operating companies of the
25 SES agree to operate an integrated electric system or power pool. The

1 IIC is dynamic in nature in that it is reviewed annually and updated as
2 required to reflect changing conditions while ensuring equitable sharing of
3 the benefits and responsibilities of operating the integrated SES. The
4 contract is prepared under the direction of the SES Operating Committee,
5 which consists of one executive representative from each operating
6 company and one representative from SCS. The transactions involved in
7 system operations and the sharing of benefits and responsibilities of
8 pooling among member companies are specified in the IIC. Under terms
9 of the IIC, the generating resources of all member companies are
10 economically dispatched to serve the total system load requirements.
11 This concept insures that multiple benefits accrue to the customers of
12 each operating company.

13
14 Q. Please summarize Gulf's participation in SES power pool operations.

15 A. Gulf's territorial generation and transmission facility operations are
16 coordinated with the other operating company facilities through the SES
17 Power Coordination Center (PCC) in Birmingham, Alabama. Through the
18 PCC, Gulf and the other SES operating companies form a centralized
19 power pool that provides electric service to their customers in the most
20 reliable and economical manner. All operating company facilities are
21 committed to serving total SES load requirements, and the companies
22 take advantage of coordinated generation unit maintenance scheduling,
23 unit commitment planning, system reliability, security analysis, and
24 economic dispatch. The centralized control of the SES by the PCC also
25 provides ready access to the numerous system generation and

1 transmission resources if power supply emergencies arise. There are
2 many complex issues that arise when operating a large interconnected
3 electric grid, and the IIC governs the many procedures used to operate
4 the integrated SES through the centralized power pool concept.

5

6 Q. What are the benefits that Gulf's customers derive from the IIC pooling
7 arrangement?

8 A. Gulf's customers benefit tremendously from Gulf participating in this
9 pooling arrangement. This Commission has consistently recognized
10 these benefits in past proceedings and rate orders. Our analyses over the
11 years have consistently shown that Gulf's customers receive significant
12 benefits annually as a result of Gulf's participation in the SES power pool,
13 as opposed to operating separately. These benefits include, but are not
14 limited to, the following:

- 15 1. Economic dispatch production cost savings.
- 16 2. Economic sharing of generating reserve capacity.
- 17 3. Ability to install large, efficient generating units.
- 18 4. Reduced requirements for operating reserves.
- 19 5. Pool market for temporary surpluses of capacity and energy on
20 Gulf's system.
- 21 6. Ready supply of energy for purchase when Gulf is short.
- 22 7. Potential long-term power sale revenues.
- 23 8. Unit power sale benefits.
- 24 9. Peak-hour load diversity.
- 25 10. Potential opportunity energy transaction benefits.

1 These multiple benefits that accrue to Gulf and the other SES
2 operating companies result from the coordinated planning and operation
3 of the power pool. Clearly, increased reliability is a major factor in pool
4 operation. In the event of the loss of generation or transmission ties
5 within Gulf's system, the pool responds instantly with replacement
6 capacity and energy from the most economical source available at the
7 time. The SES's many transmission interconnections with neighboring
8 utilities also allow us to purchase power for the system in an emergency;
9 therefore, the multiple transmission ties to other regional utilities ensure
10 that we can buy the cheapest energy available at all times.

11 Certainly, a major benefit of the pool to Gulf has been the selection
12 of generating unit size in the SES. Because of the capacity equalization
13 process under the IIC, Gulf has been able to completely own or purchase
14 shares of 500 MW and 800 MW state-of-the-art generating units. Gulf's
15 latest generation fleet addition, Plant Smith Unit 3, is a state-of-the-art,
16 highly efficient 574 MW gas fired combined cycle unit. All of this capacity
17 has been purchased at a lower cost per KW and is more efficient
18 generation than otherwise would have been available to a relatively small
19 company such as Gulf. The Company could not support construction and
20 ownership of such large units without participating in the SES power pool.
21 Thus, it is our participation in the pool and the IIC that enables Gulf's
22 customers to achieve the savings associated with these large, more
23 efficient units.

24 Coordination of major maintenance periods for turbine inspections
25 and other generating unit outages can be a major problem for a company

1 of Gulf's size. However, with the coordinated maintenance planning that
2 takes place within the SES, we are able to accomplish major maintenance
3 on our large generating units and purchase economical replacement
4 power at the same time.

5 Gulf is also able to share in the diversity of power needs resulting
6 from the system providing service to such a large geographical region.
7 The territories of the system companies have weather, time zone, and
8 customer mix differences. These differences result in variations in load
9 patterns, because the operating companies do not all reach their annual
10 peak demand at the same time. This improves the overall system load
11 factor and means that fewer generating units have to be constructed and
12 committed to service at a given time, thus creating lower system
13 production costs.

14

15 Q. How will Plant Smith Unit 3 capacity be treated in the IIC?

16 A. The 574 MW combined cycle unit will be a generating capacity resource
17 for Gulf's territorial customers and will be treated like all of Gulf's other
18 territorial generating capacity resources. The Smith Unit 3 capacity will be
19 included in the IIC's capacity equalization calculation as an owned
20 capacity resource available to serve the total load of Gulf and the SES.

21

22 Q. Does membership in the SES power pool enable Gulf to participate in
23 multiple off-system power sales agreements?

24 A. Yes. The SES is in a regional position that allows the interchange and
25 sale of power directly to 13 interconnected utility systems and numerous

1 power marketers that have access to the SES through these
2 interconnections. Gulf has physical transmission line connections to only
3 two of these systems, but because of its IIC participation, Gulf is
4 essentially interconnected with all thirteen neighboring utility systems.
5 The IIC, which governs the operation of the SES power pool, provides for
6 the equitable distribution of these off-system sales among SES operating
7 companies; and this allows Gulf to be a party to many different power
8 purchase and sales contracts with regional utilities and other power
9 marketers. Some of these neighboring utilities are heavily dependent
10 upon oil and natural gas for electric generation. Because Gulf and the
11 SES have an excellent mix of generation resources with a high
12 percentage of economical coal capacity, a market for sales of electricity
13 off the SES has resulted. The coordination and economic dispatch of
14 these generation resources make the SES a reliable source of
15 economically priced energy for the entire region and provide substantial
16 cost savings for Gulf's customers.

17

18 Q. What types of sales are made through the SES power pool?

19 A. These off-system sales fall into two primary categories: market-based
20 opportunity energy sales, and Unit Power Sales (UPS). Opportunity
21 energy sales, commonly referred to as economy energy sales, occur
22 when the SES incremental energy price is below that of purchasing
23 entities. These sales have no associated capacity, and the energy is
24 priced according to market-based principles such that the customers of
25 both the selling and purchasing companies benefit. Currently, the SES,

1 through its Generation and Energy Marketing (GEM) organization, sells
2 economy energy to neighboring southeastern utilities and numerous other
3 utilities and power marketers. The SES will continue to market this energy
4 to the extent that it remains beneficial to the territorial customers of the
5 SES operating companies.

6 UPS are sales of capacity and energy entitlements from specific
7 generating units. These sales provide for capacity based on unit specific
8 costs. Currently, the generation contracted covers sales to three utilities
9 within the state of Florida through 2010. The UPS contracts allow the
10 SES to substitute peaking capacity for coal base-load generating units at
11 a lower total cost to the territorial customer. GEM will continually evaluate
12 new markets for off-system opportunity sales and UPS if cheaper long-
13 term replacement capacity can be secured. Selling unit specific capacity
14 will continue to be an alternative for future generation needs only when
15 the SES operating companies can sell base capacity and replace it with
16 combustion turbines or other more efficient and cost effective capacity to
17 meet its territorial customers' needs.

18
19 Q. What has been the impact of off-system sales on Gulf's retail customers?

20 A. These sales have provided revenues from short-term surplus energy and
21 capacity that have substantially reduced the revenue required from the
22 retail customer to provide long-term reliable electric service.

23

24

25

1 Q. What is another significant benefit provided by Gulf's membership in the
2 SES power pool?

3 A. This membership has allowed Gulf to purchase a share of Plant Daniel
4 and Plant Scherer at tremendous savings to its customers.

5
6 Q. How is the IIC budget determined?

7 A. The IIC budget is determined on an annual basis, and it is used by
8 Mr. Saxon as an input into Gulf's overall budgeting process. The two
9 components are the capacity and energy portions of the IIC budget.
10 Capacity determinations are projected on a monthly basis, driven by each
11 SES operating company's monthly peak-hour load responsibility and
12 expected generating capacity. The pricing for capacity transactions from
13 a surplus company to a deficit company is based on the incremental costs
14 of SES peaking generation or purchased power resources.

15 The energy budget is prepared utilizing a probabilistic dispatch
16 model that determines the most economical generation sources each
17 hour to provide for the entire SES load. When it is more economical to
18 buy from another pool member, rather than generate, the model captures
19 this in the dispatch simulation. The model aggregates all the energy
20 transactions for a year, and this information is represented in our pool
21 budget.

22
23 Q. Does Gulf currently have transmission facility agreements related to its
24 ownership in Plant Daniel and Plant Scherer?

25 A. Yes. These agreements were discussed in Gulf's last rate case, Docket

1 No. 891345-EI, and Gulf currently has the same agreements with
2 Alabama Power Company (APC), Mississippi Power Company (MPC),
3 and Georgia Power Company (GPC). These agreements, sometimes
4 referred to as transmission rental agreements, compensate these
5 companies for their transmission facilities used by Gulf to deliver capacity
6 and energy from the jointly owned plants in Mississippi and Georgia to the
7 customer. The charge to Gulf from MPC is related to the Daniel-Wade-
8 Barry 230 kilovolt (kV) transmission line that begins at Plant Daniel in
9 Mississippi, runs to the Wade Substation in Mississippi, and terminates at
10 Plant Barry in Alabama. The charge to Gulf from APC is related to the
11 Barry-Crist 230 kV line that begins at Plant Barry in Alabama and
12 interconnects with Gulf's transmission system at the Florida state line.
13 These charges to Gulf from APC and MPC are based on the cost of these
14 transmission facilities and are a small fraction of what a fully embedded
15 transmission service charge or alternative transmission construction would
16 cost Gulf. The charge to Gulf from GPC is related to transmission
17 facilities owned by GPC that are utilized to deliver capacity and energy
18 from Plant Scherer Unit 3. Because Gulf's share of Plant Scherer is now
19 fully committed to UPS until 2010, there has been no charge for
20 transmission service since 1995 to the retail customers. In all cases, the
21 available alternatives of a fully embedded transmission service charge or
22 construction of new facilities were evaluated prior to our decision to enter
23 into the agreements.

24
25

1 Q. How have these arrangements benefited Gulf's customers?

2 A. As discussed above, the transmission line facility charges represent
3 significantly less cost to Gulf's customers than the other alternative of
4 utilizing the standard embedded cost of transmission facilities as a basis
5 for transmission service charges. Thus, not only do our customers realize
6 millions of dollars in savings through generation cost savings over the life
7 of the associated shared plants, Plants Daniel and Scherer, but they also
8 receive additional savings through the lower transmission service costs
9 that we have been able to secure.

10

11 Q. Please summarize transmission O & M expenses for the test year period
12 of June 2002 through May 2003 as compared to the Benchmark level for
13 transmission.

14 A. The total requested transmission O & M expenses of \$8,209,000 consist
15 of two major categories: transmission line facility charges, and other
16 transmission expenses. A comparison of these expenses to their
17 Benchmark levels is shown on Schedule 2 of my exhibit. The amount of
18 transmission line facility charges requested for the June 2002 through
19 May 2003 test year is \$1,163,000. This amount is based on charges from
20 APC and MPC and, as I previously discussed, represents significant cost
21 savings to Gulf's customers as compared to a fully embedded
22 transmission service charge or the alternative transmission construction
23 cost. The benchmark amount for the transmission line facility charges is
24 \$3,622,000. These expenses are under their benchmark by \$2,459,000,
25 primarily since they are essentially fixed in price.

1 The remaining transmission O & M expenses requested for the test
2 year period are \$7,046,000. These projected expenses will be needed to
3 adequately monitor and control the daily interconnected operations of
4 Gulf's transmission system, maintain the integrity of its transmission
5 substations and 230 kV, 115 kV and 46 kV transmission lines, and retain
6 a highly specialized, well trained workforce equipped with up-to-date tools
7 and machinery to operate and maintain Gulf's transmission system. The
8 Benchmark amount for these transmission O & M expenses is
9 \$7,615,000. These expenses are under their Benchmark by \$569,000.
10 This difference is primarily due to improved maintenance practices and
11 the use of equipment and materials utilizing advanced technologies that
12 contribute to lower transmission system maintenance costs.

13 As discussed by Mr. Saxon, each department at Gulf that charges
14 to transmission accounts goes through a detailed review during each
15 budget cycle regarding expenses for the budget year that are necessary
16 to maintain a reliable transmission system. These expenses are reviewed
17 on a departmental and company wide basis before being recommended
18 for approval by Gulf's Leadership Team. Thus, these expenses receive
19 several levels of review prior to being included in the budget.

20
21 Q. Please compare transmission O & M expenses for the test year period of
22 June 2002 through May 2003 to the adjusted historical year 2000
23 transmission O & M expenses shown on Schedule 3 of Mr. Saxon's
24 exhibit.

25 A. Gulf's transmission O & M expenses for the test year total \$8,209,000.

1 For the year ending December 31, 2000, the adjusted transmission O & M
2 expenses are \$6,975,000. The difference is an increase of \$1,234,000.
3

4 Q. Please explain what factors contribute to the increase in O & M expenses.

5 A. The primary reason for the difference is the need for increased inspection
6 and maintenance of our transmission facilities. While Gulf has been
7 adding new facilities as necessary to accommodate customer load
8 growth, the fact remains that the great majority of its facilities are relatively
9 old. As they age, they naturally require more maintenance due to normal
10 deterioration to keep them fit and providing reliable service to the
11 Company's customers. Transmission line inspections and repairs have
12 increased approximately \$638,000 between the two periods. This is due
13 to a combination of the need to accommodate the aging of the facilities,
14 as well as the fact that the historical year was a relatively low year for
15 such expenses. Again, remember that overall Gulf's transmission
16 expenses are well under the Benchmark.

17 Miscellaneous transmission expenses are up slightly over
18 \$100,000, also partially due to the year 2000 being a down year for costs
19 in this area. Maintenance of substation equipment is up \$200,000,
20 reflecting the addition of two items not contained in the historical year
21 2000. These two items are the need to slightly increase corrosion
22 protection expenses for Gulf's equipment, and the need to clean 230 kV
23 insulators subject to contamination build-up due to the surrounding
24 environment. Otherwise, these insulators would have frequent flashovers,
25 with quite negative impacts to the reliability of Gulf's customers' electric

1 service.

2 These are the primary increases between the two periods.
3 Customer growth and escalation between the two periods account for the
4 remainder of the difference.

5

6 Q. Do you believe all these costs are necessary and prudent?

7 A. Absolutely. Gulf has been able to provide a high level of reliability to its
8 customers by the technological and cost-saving programs that have been
9 implemented. But the Company has reached the limit of what those
10 programs can provide. With more facilities and customers being added
11 each year, and the aging of Gulf's facilities, these costs are critical to the
12 Company's ability to keep customer reliability high.

13

14 Q. What transmission and substation facility efficiency improvements has
15 Gulf implemented since its rate case in 1990?

16 A. Since 1990, Gulf has evaluated and purchased new products that have
17 provided and will continue to provide better value for all company
18 stakeholders. Gulf is using spun concrete transmission poles where
19 practical to ensure longer pole life, lower maintenance costs, improved
20 transmission system reliability, and lower initial construction cost. Also,
21 Gulf's transmission department personnel have served on several SES
22 study teams to produce a standard SES design for new substations that
23 greatly reduces engineering and construction time and costs. In recent
24 years, Gulf and SES personnel have been sharing "best practices"
25 throughout all functional areas of the SES so that facility design and

1 maintenance techniques become more efficient. For example, Gulf's
2 substation personnel have pioneered the use of cast concrete poles to
3 replace the reinforced concrete-mounted steel structures that support
4 current carrying substation buswork. This thoroughly tested substation
5 design innovation has already saved Gulf significant material and labor
6 costs, and it will continue to do so as Gulf uses the design in future
7 substation sites.

8 During the 1990's, Gulf and the SES tested and deployed the new
9 Energy Management System (EMS) as its mainstay generation and
10 transmission system controller used by SES system control centers. The
11 EMS's versatile hardware and software replaces the antiquated Power
12 Management System that began its service to the SES in the 1970s. With
13 the computer based EMS, the SES will be able to readily adapt computer
14 hardware and software to the increasingly complex requirements being
15 placed on the SES and other electric utility grids nationwide.

16
17 Q. Please give a summary of your transmission construction program from
18 January 2001 through May 2002.

19 A. The transmission department has initiated several key projects during this
20 period to ensure the continued reliability of Gulf's transmission system, as
21 well as to meet the growing energy needs of the company's customers.
22 Total construction expenditures of approximately \$49 million are projected
23 for the period January 2001 through May 2002. The Company has
24 already completed a rebuild of the South Crestview-Glen Tap 115 kV line
25 and added new 115/12 kV transformer banks at its Highland City and

1 Destín substations during 2001. During the remainder of the period, Gulf
2 will place into service such major facilities as the Farley-Sinai Cemetery
3 230 kV line and substation, the Alligator Swamp-Santa Rosa Energy
4 230 kV line and substation, and the Laguna Beach-Santa Rosa No. 2
5 115 kV line.

6 Included in the above mentioned \$49 million is approximately
7 \$10 million in construction costs for the Smith Unit 3 step-up substation
8 and interconnection facilities. This \$10 million amount is part of the total
9 installed cost of the Smith Unit 3 generation addition project. Also,
10 projects to upgrade the Smith-Highland City, Callaway-Highland City, and
11 Smith-Greenwood 115 kV transmission lines in order to accommodate
12 Smith Unit 3 are included in the total construction costs for January 2001
13 through May 2002. When the total construction costs of approximately
14 \$31 million for the Farley-Sinai Cemetery, Smith Unit 3 interconnection,
15 and the Laguna Beach projects are removed from the \$49 million total
16 amount for the period, the resulting transmission construction costs of
17 approximately \$18 million compare favorably with the historical year 2000
18 level of transmission construction expenditures, and are representative of
19 a typical level of annual construction costs.

20
21 Q. Please give a summary of your transmission construction program
22 planned for the June 2002 through May 2003 test year.

23 A. Gulf's current estimate for the test year period indicates that the company
24 expects to spend approximately \$7,505,000 for new transmission facility
25 construction. These transmission expenditures are necessary to serve

1 new customers; to strengthen the transmission system to meet additional
2 demand resulting from load growth; and to replace damaged, worn out, or
3 obsolete facilities. All of these transmission construction items are
4 necessary to serve the customers' current and future needs.

5
6 Q. What specific transmission and substation facilities and costs related to
7 Plant Smith Unit 3 are included in the construction budget?

8 A. There are none in the test year. As I mentioned earlier, however, there
9 are several projects currently under construction or already completed to
10 integrate the new unit into the system. While no major transmission
11 system upgrades or improvements are needed to connect the unit to
12 Gulf's system, three 115 kV lines in the vicinity of Plant Smith required
13 minor line work to accommodate this new generating capacity. The total
14 construction cost for these improvements is budgeted to be \$3.4 million,
15 and all three will be completed prior to the commercial in-service date of
16 the unit.

17 Also, improvements to the existing 230 kV switchyard at the site
18 were necessary to connect the new unit to the system. This work has
19 been completed at a cost of approximately \$2.8 million.

20
21 Q. What process is used to determine the need for new transmission
22 facilities?

23 A. All transmission capital projects are reviewed each year before they are
24 either added to or retained in the budgeting process. Long-range
25 transmission planning studies are typically performed annually to

1 determine what future transmission system improvements will be needed
2 in the coming ten-year period. When future deficiencies are determined,
3 alternative improvements are evaluated, and the most cost-effective
4 solution is recommended for inclusion in the budget. Several departments
5 within the company review these recommendations to ensure that these
6 are the most cost-effective and practical solutions available. Once a
7 project is in the budget, it is subjected to the same rigorous review on an
8 annual basis as any new project; thus, a transmission capital project will
9 generally have a number of reviews prior to dollars actually being spent on
10 the improvement. Mr. Saxon has a more extensive discussion of the
11 company's overall capital budgeting process in his prefiled testimony.
12

13 Q. What is Gulf doing to minimize new construction expenditures?

14 A. Transmission system improvements are evaluated on an alternative
15 economic basis before being included in the budget. Construction for
16 major transmission lines is awarded on the basis of competitive bids from
17 qualified contractors. Transmission equipment and material requirements
18 are also awarded on the basis of competitive bids. This process ensures
19 the lowest installed cost to Gulf's customers. And, of course, the strategic
20 location of Smith Unit 3 has saved, and will in the future continue to save,
21 Gulf's customers many tens of millions of dollars in avoided future
22 transmission line and substation construction costs.
23
24
25

1 Q. Please describe the services provided to your department by Southern
2 Company Services, Inc. (SCS).

3 A. Transmission and System Control takes advantage of the pool of
4 specialized professionals at SCS who utilize highly developed computer
5 facilities to assist in the evaluation, design, and operation of Gulf's
6 transmission and substation facilities. These services are not only
7 economical because of the sharing of these pooled resources with other
8 operating companies in the SES, but also because they are provided at
9 cost to Gulf. These services provided by SCS include transmission
10 system equipment evaluations, transmission line and substation design,
11 coordination of Gulf's transmission system operations through the PCC,
12 processing of system operations data, system security, power marketing
13 activities, and IIC budgeting and billing.

14
15 Q. Please summarize your testimony.

16 A. Because of Gulf's participation in the SES power pool and the IIC, there
17 are tremendous monetary benefits that are realized by Gulf's customers.
18 The low cost, shared capacity that Gulf was able to purchase at Plants
19 Daniel and Scherer are examples of how our participation in the IIC has
20 benefited our customers. Because Gulf is affiliated through the IIC with
21 an extremely large power system, there are opportunities for off-system
22 sales to outside utilities that would otherwise not be available to Gulf.
23 These opportunities for additional sales have provided significant
24 additional monetary benefits to our retail customers.

25 Our efforts in securing transmission facility agreements related to

1 our shared ownership of capacity at Plants Daniel and Scherer have
2 resulted in significant savings over standard transmission arrangements,
3 thus significantly reducing the long-term cost to Gulf's customers. Gulf's
4 transmission construction and O & M costs are carefully controlled
5 through an extensive budgeting review and approval process. The
6 requested \$7,505,000 for new transmission construction projects and the
7 \$8,209,000 in total transmission O & M expenses for the test year will
8 provide for the quality and level of facilities needed to serve Gulf's
9 customers' current and future needs. In all our activities in the
10 transmission area, Gulf has consistently acted prudently and devised
11 contracts and procedures that will serve to minimize our retail customer's
12 long-term cost. Gulf has also evaluated and employed new technologies
13 to build and maintain state-of-the-art transmission line and substation
14 facilities. Gulf is committed to continual improvements in transmission
15 and substation reliability through the use of highly qualified personnel and
16 modern equipment so that Gulf's customers will be best served and their
17 long-term electric service costs will continue to be among the lowest in
18 nation.

19
20 Q. Does this conclude your testimony?

21 A. Yes.

22
23
24
25

AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)

Docket No. 010949-EI

Before the undersigned authority, personally appeared
M. W. Howell, who being first duly sworn, deposes, and says that he is the
Transmission and System Control Manager, Transmission and System Control
Department of Gulf Power Company, a Maine corporation, and that the foregoing
is true and correct to the best of his knowledge, information, and belief.

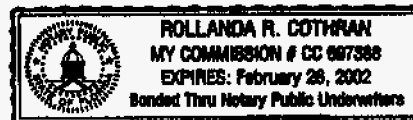
M. W. Howell

M. W. Howell
Transmission and System Control Manager

Sworn to and subscribed before me by M. W. Howell who is
personally known to me this 7th day of September, 2001.

Rollanda R. Cottrian

Notary Public, State of Florida at Large



RESPONSIBILITY FOR
MINIMUM FILING REQUIREMENTS

<u>SCHEDULE</u>	<u>TITLE</u>
A-8	Five Year Analysis-Change in Cost
C-8	Report Of Operation Compared To Forecast - Revenue And Expenses
C-12	Budgeted Versus Actual Operating Revenues And Expenses
C-19	Operation And Maintenance Expenses – Test Year
C-20	Operation And Maintenance Expenses – Prior Year
C-21	Detail Of Changes In Expenses
C-57	O&M Benchmark Variance By Function
F-9	Forecasting Models
F-17	Assumptions

O & M BENCHMARK COMPARISON

	(\$000)			
	<u>1990 Allowed</u>	<u>Test Year Benchmark</u>	<u>Test Year Request</u>	<u>Variance</u>
Transmission Facility Charges	1,978	3,622	1,163	(2,459)
Transmission Other	<u>4,159</u>	<u>7,615</u>	<u>7,046</u>	<u>(569)</u>
Transmission Total	<u>6,137</u>	<u>11,237</u>	<u>8,209</u>	<u>(3,028)</u>

TRANSMISSION FACILITY CHARGES

	<u>\$(000)</u>
1990 Allowed	1,978
Test Year Adjusted Benchmark	3,622
Test Year Adjusted Request	1,163
System Benchmark Variance	(2,459)

<u>Description</u>	<u>1990 Allowed</u>	<u>Test Year Benchmark</u>	<u>Test Year Request</u>	<u>Variance</u>
1. Facility Charges	1,978	3,622	1,163	<u>(2,459)</u>
				<u>(2,459)</u>

TRANSMISSION FACILITY CHARGES

1. Facility Charges

	<u>\$(000)</u>
1990 Allowed	1,978
Test Year Adjusted Benchmark	3,622
Test Year Adjusted Request	1,163
System Benchmark Variance	(2,459)

Justification

The requested test year amount is under the benchmark primarily since the monthly charges under the transmission facility agreements with Alabama Power Company and Mississippi Power Company are essentially fixed in price.

TRANSMISSION OTHER

	<u>\$(000)</u>
1990 Allowed	4,159
Test Year Adjusted Benchmark	7,615
Test Year Adjusted Request	7,046
System Benchmark Variance	(569)

<u>Description</u>	<u>1990 Allowed</u>	<u>Test Year Benchmark</u>	<u>Test Year Request</u>	<u>Variance</u>
1. Overhead Line Maint.	1,129	2,067	1,083	<u>(984)</u>
				<u>(984)</u>

TRANSMISSION OTHER
1. Overhead Line Maintenance

	<u>\$(000)</u>
1990 Allowed	1,129
Test Year Adjusted Benchmark	2,067
Test Year Adjusted Request	1,083
System Benchmark Variance	(984)

Justification

The requested test year amount is under the benchmark due to improved maintenance practices and the use of equipment and materials utilizing advanced technologies that contribute to lower transmission system maintenance costs.