

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 110138-EI

TESTIMONY AND EXHIBIT
OF
RAYMOND J. GROVE

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1 GULF POWER COMPANY

2 Before the Florida Public Service Commission
3 Prepared Direct Testimony of
4 Raymond W. Grove
5 Docket No. 110138-EI
6 In Support of Rate Relief
7 Date of Filing: July 8, 2011

8 Q. Please state your name and business address.

9 A. My name is Ray Grove. My business address is One Energy Place,
10 Pensacola Florida, 32520.

11 Q By whom are you employed?

12 A. I am employed by Gulf Power Company (Gulf or the Company). I am the
13 Manager of Power Generation Services.

14
15 Q. What are your responsibilities as Manager of Power Generation Services?

16 A. I am responsible for Generation Planning, including the Ten Year Site
17 Plan and the Renewable Standard Offer Contract, reporting plant
18 performance through the Generation Performance Incentive Factor,
19 supply side renewable energy development, Operations and Maintenance
20 (O&M) budgeting for Production, and capital budgeting for Production.

21
22 Q. Please state your prior work experience and responsibilities.

23 A. I was hired by Gulf in January 1982 as a district accountant responsible
24 for accounting and budgeting for the Western District. In 1984, I
25 transferred to Internal Auditing, with primary responsibility for auditing

1 Power Generation and Fuel. I transferred to Power Generation in 1998,
2 with responsibility for accounting and budgeting for Power Generation. I
3 assumed the additional responsibility for Generation Planning in 2002 and
4 supply side renewable generation in 2008.

5

6 Q. What is your educational background?

7 A. I graduated with a Bachelor of Arts in Accounting from the University of
8 West Florida in 1981.

9

10 Q. What are the purposes of your testimony?

11 A. My testimony discusses Gulf's generation resources used and useful in
12 the provision of electric service to our customers. These resources
13 include Gulf-owned resources, jointly-owned generation resources, the
14 Southern electric system (SES) resources available pursuant to the
15 Intercompany Interchange Contract (IIC), and power purchase
16 agreements (PPAs) with independent generators, including renewable
17 generators. My testimony also addresses Gulf's resource planning
18 process, Production investment, and 2012 Production O&M budget.

19

20 Q. Are you sponsoring any exhibits?

21 A. Yes. I am sponsoring Exhibit RWG-1, Schedules 1 through 12. Exhibit
22 RWG-1 was prepared under my direction and control, and the information
23 contained therein is true and correct to the best of my knowledge and
24 belief.

25

1 Q. Are you sponsoring any of the Minimum Filing Requirements (MFRs) filed
2 by Gulf?

3 A. Yes. A list of MFRs I sponsor or cosponsor is included on Exhibit RWG-1,
4 Schedule 1. The information contained in the MFRs I sponsor or co-
5 sponsor is true and correct to the best of my knowledge and belief.
6
7

8 I. GULF'S GENERATION RESOURCES

9

10 Q. Please describe Gulf's generating resources during the 2012 test year.

11 A. Gulf will generate or purchase electricity from a diverse group of resources
12 in 2012. These resources will include: (a) units owned solely by Gulf,
13 (b) units owned jointly with other operating companies within the SES,
14 (c) units in the SES available to Gulf through the SES IIC, and (d) units
15 available to Gulf under PPAs. The fuels used for the generation resources
16 available to Gulf include coal, oil, natural gas, landfill gas and municipal
17 solid waste.
18

19 Q. Please describe Gulf's projected capacity mix by fuel type for 2012.

20 A. In the summer of 2002 at the beginning of the test year in Gulf's last rate
21 case, Gulf had 2,625 megawatts (MW) of capacity available to serve our
22 customers, as shown on Schedule 2, page 1 of 2, of Exhibit RWG-1. The
23 resources available to Gulf were primarily coal generation, which made up
24 75.7 percent of the resources owned or available through PPAs. For the
25 summer of 2012, Gulf will have 3,852 MW of capacity available for our

1 customers. Exhibit RWG-1, Schedule 2, page 2 of 2, shows that the
2 resources available to Gulf will be made up of 48.4 percent coal,
3 50.4 percent gas, 0.8 percent oil, and 0.4 percent renewable. Since our
4 last rate case, Gulf has increased its fuel diversity and reduced its reliance
5 on coal.

6
7 Through an effective planning process, Gulf has a generation mix which
8 will allow us to provide our customers energy from whichever resources
9 are most economical. When coal prices are high, more gas resources can
10 be utilized; when gas prices are high, more coal resources can be utilized.
11 In addition, as a party to the SES IIC, Gulf takes advantage of making
12 purchases or sales through the Southern Company Power Pool (the Pool)
13 that further benefit our customers.

14
15 Q. Please describe the generation resources forecasted to be owned,
16 operated and used by Gulf to serve its retail customers in 2012.

17 A. Exhibit RWG-1, Schedule 3 provides a list of the units owned and
18 operated or co-owned by Gulf and used to provide retail service. The list
19 includes Gulf's ownership in Plant Daniel located in Mississippi. A
20 summary of these units, fuel type, and capacity is as follows:

- 21 ● Plant Crist has four coal units totaling 906 MW;
- 22 ● Plant Smith has two coal units, a gas fired Combined Cycle
23 (CC), and an oil fired Combustion Turbine (CT) totaling 945
24 MW;
- 25 ● Plant Scholz has two coal units totaling 92 MW;

- 1 • Plant Daniel has two coal units of which Gulf owns 510 MW;
- 2 • Pea Ridge has three gas fired units totaling 12 MW; and
- 3 • Perdido has two landfill gas units totaling 3.2 MW.

4

5 Q. What PPAs will Gulf have in place and use to provide electric service in
6 2012?

7 A. Exhibit RWG-1, Schedule 4 provides a list of the power purchase
8 resources available to Gulf during 2012 and information regarding the
9 fuels and technologies used by these generating resources.

10

11 Q. You mentioned the SES Intercompany Interchange Contract, or IIC.
12 Please summarize that arrangement.

13 A. The IIC is a contract among Alabama Power Company, Georgia Power
14 Company, Mississippi Power Company, Gulf Power Company and
15 Southern Power Company (collectively the Operating Companies). The IIC
16 is designed to provide for the continued operation of the electrical system
17 of the Operating Companies in such a manner as to achieve the maximum
18 possible economies consistent with the highest practical reliable service,
19 the reasonable utilization of natural resources, and the equitable sharing
20 among the Operating Companies of the costs associated with the
21 operation of facilities that are for the mutual benefit of the Operating
22 Companies and their customers.

23

24

25

1 Q. How does the SES IIC work to the benefit of Gulf's customers?

2 A. Gulf's customers benefit tremendously from Gulf's participation in this
3 pooling arrangement. Benefits include, but are not limited to, the
4 following:

- 5 1. Economic dispatch production cost savings,
- 6 2. Economic sharing of generating reserve capacity,
- 7 3. Lower reserve margin requirements,
- 8 4. Ability to install large, efficient generating units,
- 9 5. Reduced requirements for operating reserves,
- 10 6. Pool market for temporary surpluses of capacity and energy on
11 Gulf's system,
- 12 7. Ready supply of energy for purchase when Gulf is short,
- 13 8. Peak-hour load diversity, and
- 14 9. Opportunity energy sales and purchases.

15

16 In summary, Gulf's decision to enter into and participate in the SES IIC
17 was reasonable and prudent, and the benefits justify that Gulf's
18 participation in the IIC is in the best interest of our customers.

19

20 Q. Besides the environmental capital projects addressed through Gulf's
21 Environmental Cost Recovery Clause (ECRC), what major changes have
22 been made to Gulf's generation resources since Gulf's last base rate
23 proceeding?

24 A. Since our last rate case, there have been five major changes to Gulf's
25 generating fleet unrelated to ECRC projects.

- 1 (1) Plant Crist Units 1, 2, and 3 (80MW) were retired as part of an
2 agreement with the Florida Department of Environmental Protection
3 (FDEP). The retirement of Plant Crist Units 1, 2, and 3 was
4 approved in Docket No. 020943-EI, Order No. PSC-02-1396-PAA-
5 EI.
- 6 (2) In 2006, Gulf signed two PPAs for a total of 488 MW of peaking
7 capacity that took effect in June 2009 and will last for five years
8 through May 2014. The contracts are with Shell Energy North
9 America for the electrical output from four units at the Coral
10 Baconton facility and with Southern Power Company (an affiliate)
11 for the electrical output from four units at their Dahlberg facility.
12 These PPAs were approved in Docket No. 060811-EI, Order No.
13 PSC-07-0329-PAA-EI. In addition, the contract with Southern
14 Power Company was approved by the Federal Energy Regulatory
15 Commission (FERC).
- 16 (3) In 2008, Gulf signed a 6-year PPA with Bay County in Florida to
17 purchase the electrical output from its 11 MW waste-to-energy
18 facility. The PPA with Bay County was approved in Docket No.
19 080612-EI, Order No. PSC-09-0012-PAA-EI.
- 20 (4) In 2009, Gulf signed a 14-year PPA with Shell Energy North
21 America for 885 MW of intermediate capacity from its Central
22 Alabama facility. The contract took effect in November 2009. This
23 PPA was approved in Docket No. 090169-EI, Order No. PSC-09-
24 0534-PAA-EI.

25

1 (5) In 2010 Gulf finished construction of a 3.2 MW landfill gas-to-
2 energy facility (Perdido) in Escambia County, Florida.

3
4 Each of these changes to Gulf's generating resources is discussed later in
5 my testimony.

6
7
8 **II. GULF'S RESOURCE PLANNING PROCESS**

9
10 Q. Please provide an overview of Gulf's resource planning process.

11 A. The resource planning process utilized by Gulf to determine its future
12 needs is coordinated within the SES Integrated Resource Planning (IRP)
13 process. Gulf participates in the IRP process along with the other SES
14 retail operating companies (Alabama Power, Georgia Power, and
15 Mississippi Power). Gulf receives a number of benefits from being part of
16 a large system planning process. Since Gulf comprises only about
17 6.9 percent of the total SES summer peak demand, its needs are relatively
18 small compared to the entire system. This collaborative planning allows
19 Gulf to coordinate its capacity additions to meet its demand and reserve
20 requirements in a manner that utilizes the temporary surpluses of capacity
21 available on the SES or shares our temporary surpluses of capacity with
22 the other retail operating companies.

23
24 This ability to coordinate capacity additions and rely temporarily on any
25 surplus system reserves also allows Gulf to defer capacity addition

1 decisions until the timing allows consideration of (a) larger blocks of need
2 that might justify less costly addition alternatives, (b) emerging
3 technologies that might not have been available earlier, and (c) emerging
4 environmental requirements that might affect unit addition choices.

5 Another benefit to Gulf is the advantage gained from planning a large
6 system such as the SES without the costs of a large planning staff of its
7 own.

8
9 As discussed in Gulf's Ten Year Site Plan (TYSP), the SES IRP process
10 employs a 15 percent reserve margin target for long range planning. Gulf,
11 as a member of the SES, has access to all the reserves of Southern
12 Company, which at a 15 percent reserve margin represents approximately
13 5,000 MW. A 15 percent reserve margin in 2012 for Gulf represents 396
14 MW. If Gulf were required to carry a 20 percent reserve margin (as other
15 Florida utilities are required to carry) Gulf would need to add 132 MW of
16 capacity. Assuming Gulf purchased or constructed CT capacity to meet
17 this increased reserve requirement, Gulf's customers would be subjected
18 to, at least, an additional \$12.5 million in annual revenue requirements.
19 As I discussed earlier in my testimony, the ability for Gulf to carry lower
20 reserve margins is one of the many benefits of Gulf's participation in the
21 IIC.

22
23 The generation mix process employed by the SES uses PROVIEW (a
24 computer model) to screen available technologies in order to produce a
25 listing of preferred capacity resources from which to select the most cost-

1 effective plan for the system. The resulting SES resource needs are
2 allocated among the operating companies based on reserve requirements.
3 Each operating company then determines the resources that will best
4 meet its capacity and reliability needs.

5
6 Gulf's long-range goal is to have economical, reliable generating capacity
7 available to meet our customers' needs. In order to meet the anticipated
8 demand that often develops irregularly and in increments much smaller
9 than the capacity of a large, efficient generating unit, and to realize the
10 economies of scale inherent in large units, most electric utilities will
11 construct "blocks" of generating capacity which are temporarily in excess
12 of the requirements anticipated at the time the unit is initially brought on
13 line. If the utility were to satisfy only the annual increase in demand, these
14 small blocks would be much higher in cost on a per unit basis and much
15 lower in efficiency.

16
17 In planning generating capacity additions, Gulf has certain advantages
18 that greatly benefit its customers. Gulf Power, Alabama Power, Georgia
19 Power, and Mississippi Power operate as an integrated generation and
20 transmission network over a four-state area. Coordinated planning with
21 our Southern system affiliates allows for the staggered construction of
22 larger, more efficient generating units spread throughout the Southern
23 electric system.

24
25

1 Q. Is this the same planning process used in Gulf's last rate case and the
2 same process described in Gulf's TYSP?

3 A. Yes.

4

5 Q. Please address the relationship of Gulf's major generating resource
6 changes since its last rate proceeding to Gulf's generation resource
7 planning process.

8 A. Since Gulf's last rate case, Gulf entered into four PPAs, which were the
9 result of Gulf's effective resource planning process. Each of these
10 agreements has been reviewed and approved by the Florida Public
11 Service Commission (FPSC or the Commission). In addition, Gulf
12 constructed a 3.2 MW landfill gas-to-energy facility which began operation
13 in 2010, and this resource addition was evaluated within Gulf's generation
14 resource planning process. The retirements of Plant Crist Units 1, 2 and 3
15 were the result of an agreement negotiated with the FDEP. While the
16 retirement decision was not the product of Gulf's resource planning
17 process, the effect of the retirements was incorporated into Gulf's
18 resource planning process.

19

20 Q. Please address Gulf's decision to retire Plant Crist Units 1, 2 and 3.

21 A. In 2002, Plant Crist Units 1, 2, and 3 were the oldest units on Gulf's
22 system and were scheduled for retirement in 2011. On August 28, 2002,
23 Gulf entered into an agreement with the FDEP for the purpose of ensuring
24 compliance with new air quality standards for ozone. The agreement
25 required Gulf to undertake various activities at Plant Crist in order to

1 reduce overall plant-wide air emissions of nitrogen oxides. The
2 Commission approved this settlement with the FDEP, including the early
3 retirement of Crist Units 1, 2, and 3, in Docket No. 020943-EI, Order No.
4 PSC-02-1396-PAA-EI.

5
6 Q. Please address Gulf's decision to enter into 488 MW of five-year power
7 purchase contracts from June 2009 through May 2014.

8 A. In the 2005 TYSP, Gulf forecasted that its reserve margins in 2009 would,
9 absent construction or purchase of resources, be below its reserve margin
10 criterion of 15 percent. The forecasted reserve deficiency was
11 approximately 400 MW.

12
13 Confronted with a need for additional peaking capacity, Gulf determined,
14 for a variety of reasons, to look to the market rather than self-build
15 alternatives to meet its additional short-term needs. First, Gulf's
16 assessment of the competitive wholesale market suggested there was
17 likely capacity available that could be obtained through a Request for
18 Proposals (RFP) process. Second, Gulf desired, if the costs were
19 appropriate, to diversify its portfolio of resources. Third, Gulf desired the
20 flexibility associated with deferring a decision that would involve
21 consideration of a self-build alternative. Deferring consideration of a self-
22 build alternative at this time of great uncertainty about prospective
23 environmental compliance costs provided several advantages. The type
24 and timing of Gulf's 2009 need suggested an addition of CT capacity if
25 Gulf's need were to be met by a self-build option in 2009. However,

1 deferring that need to 2014 would allow Gulf to consider other types of
2 technologies and allow Gulf to defer capital investment. As a result, the
3 deferral allowed more time for the emergence of technology improvements
4 that might enhance performance and/or reduce costs.

5
6 To meet its projected 2009-2014 reserve margin shortfall, Gulf conducted
7 a capacity solicitation in 2005. The RFP was conducted consistent with
8 the Commission's rule regarding capacity solicitations, even though the
9 rule was inapplicable because Gulf was not considering a self-build option.

10
11 Gulf received three bids in response to the RFP, and after careful
12 analysis, Gulf selected two bids that best fit Gulf's needs. The contract
13 negotiations resulted in Gulf submitting two executed PPAs to the
14 Commission for approval. The contracts were approved by the
15 Commission in Docket No. 060811-EI, in Order No. PSC-07-0329-PAA-EI.
16 In addition, because one of the contracts was with an affiliate (Southern
17 Power), that contract was reviewed and approved by the FERC.

18
19 Q. Please address Gulf's decision to enter into a power purchase agreement
20 with Bay County for the electrical output from its Municipal Solid Waste
21 Facility.

22 A. Bay County owns and operates a Solid Waste Facility in Panama City,
23 Florida. Gulf is committed to obtaining cost-effective energy supplies for
24 our customers and to obtaining the benefits of fuel diversity wherever
25 practical. Gulf is also committed to encouraging and promoting renewable

1 energy pursuant to several sections of Chapter 366, including Sections
2 366.82, 366.91, and 366.92, Florida Statutes. This negotiated contract
3 provides renewable energy produced by an existing in-state facility with a
4 proven performance record. It also enhances Gulf's fuel diversity. The
5 resulting contract between Gulf and Bay County was reviewed and
6 approved by the Commission in Docket No. 080612-EI, Order No. PSC-
7 09-0012-PAA-EI.

8
9 Q. Please address Gulf's decision to enter into the 14-year PPA with Shell
10 Energy North America (SENA) for the capacity and energy from its Central
11 Alabama facility.

12 A. The PPA with SENA was also the result of Gulf's generation resource
13 planning process. Anticipating the expiration of the 2009 PPAs, Gulf
14 began the process of developing an RFP for 2014. The primary drivers of
15 Gulf's need to add generation resources in 2014 were the expiration of
16 two PPAs totaling 488 MW and projected load growth. Gulf's 2009 TYSP
17 indicated that Gulf's 2014 generation resource need was expected to be
18 976 MW, and Gulf anticipated issuing an RFP with a self-build option.

19
20 Just prior to the date scheduled for issuing the final RFP, Gulf learned that
21 SENA desired to enter into a bilateral negotiation for a PPA with Gulf for
22 the output of its facility located in Central Alabama. Initial review indicated
23 that the SENA resource might be an extraordinary opportunity for Gulf's
24 customers. Therefore, Gulf decided not to proceed with its RFP.

25

1 Further cost-benefit analysis revealed a net present value (NPV) cost
2 savings to customers of \$587 million in 2014 dollars associated with the
3 PPA compared to the self-build resource. Therefore, Gulf entered into a
4 PPA with SENA.

5
6 The resulting contract between Gulf and SENA was reviewed and
7 approved by the Commission in Docket No. 090169-EI, Order No. PSC-
8 09-0534-PAA-EI. It should be noted that the forecasted \$587 million NPV
9 savings to customers did not reflect the additional benefits of having the
10 capacity and energy of the unit available to Gulf prior to 2014. Every time
11 the unit is dispatched prior to June 2014, Gulf's customers benefit from
12 additional energy savings.

13
14 Q. Please address Gulf's decision to construct a landfill gas-to-energy facility
15 at the Perdido landfill.

16 A. In July 2008, Escambia County, Florida issued an RFP for the sale of
17 landfill methane gas from its Perdido landfill. Landfill gas is defined as a
18 renewable energy resource pursuant to Section 366.91(2), Florida
19 Statutes. The Florida Legislature has repeatedly recognized that it is in
20 the public interest to promote the development of renewable energy
21 resources in the state in order to, among other things, reduce dependence
22 on natural gas, minimize volatility of fuel costs, encourage investment in
23 the state and improve environmental conditions. Given these facts, Gulf
24 began to evaluate the possibility of developing a project to utilize the gas
25 being offered through this RFP.

1 In order to minimize or negate any impact to our customers, Gulf used the
2 avoided cost of the unit contained in its Renewable Standard Offer
3 Contract (RSOC) as the basis for determining the price Gulf would be
4 willing to pay to Escambia County for its landfill methane gas. Using the
5 established avoided cost concepts, Gulf submitted a bid for the
6 procurement of the gas being offered under this RFP.

7
8 After submitting a winning bid in response to the RFP, Gulf entered into a
9 twenty-year agreement with Escambia County to purchase landfill gas
10 necessary to fuel a 3.2 MW landfill gas to energy facility to be located
11 adjacent to the Perdido landfill. The total price to construct the project
12 was \$5.5 million, including the associated connection to Gulf's distribution
13 system.

14
15 The facility's investment and expenses are included in Gulf's base rate
16 request. The O&M expense included in the test year is \$770,000. The
17 fuel savings associated with this project are already being passed to
18 customers through the fuel clause. At the time Gulf conducted its analysis
19 of the Perdido project, Gulf estimated that it would result in approximately
20 \$23.5 million in fuel savings to Gulf's customers over its twenty-year life.

21
22 As Gulf continues to evaluate technologies available to provide renewable
23 energy, it has become clear that the ability for a renewable energy
24 provider to develop a project at or below avoided cost will be very
25 challenging. Landfill gas may be the most cost-effective renewable

1 resource available at this time. This confirms that Gulf's decision to
2 develop this project was prudent and in the best interest of our customers.

3
4 Q. Are the major changes to Gulf's generating resources since its last rate
5 case proceeding reasonable and prudent?

6 A. Yes. The changes in Gulf's generating fleet since our last rate case were
7 driven by Gulf's desire to provide economical and reliable generating
8 capacity to our customers. The retirement of Crist Units 1, 2 and 3 was
9 required by an agreement that Gulf entered into with the FDEP as part of
10 a plan to ensure compliance with new air quality standards for ozone.
11 These retirements accelerated Gulf's projected need to add capacity to
12 meet our customers' rising demands.

13
14 Gulf's subsequent decision to solicit intermediate-term PPAs to defer its
15 2009 capacity need was also reasonable and prudent. Indeed, the
16 Commission determined the reasonableness of that capacity solicitation in
17 approving the contracts that were the products of the RFP. Gulf went
18 beyond legal requirements in soliciting alternatives and ultimately
19 purchased power at a cost less than the cost of a self-build option.

20
21 As noted in the Commission order approving the agreement, the contract
22 between Gulf and Bay County provides Gulf with a viable source of
23 electric energy from a renewable fuel source. It also meets all the
24 requirements and rules governing Qualified Facilities and small power
25 producers, including purchases at or below avoided cost. It was

1 reasonable and prudent for Gulf to enter into the Bay County agreement
2 consistent with the Commission's policy to encourage Qualifying Facilities.

3
4 Gulf's decision to enter into a 14-year PPA with SENA for the output of
5 gas-fired combined cycle units from 2010 through 2023 was also
6 reasonable and prudent, as the Commission determined in Order No.
7 PSC-09-0534-PAA-EI. Gulf seized the opportunity to use a market
8 resource which was available at a cost well below the cost at which Gulf
9 could have built comparable combined cycle units. These cost savings
10 will flow entirely to Gulf's customers, who at the same time avoid having to
11 pay carrying costs on an additional investment. This decision also
12 forestalled Gulf from having to make other generating addition decisions at
13 a time of great uncertainty about prospective environmental compliance
14 costs.

15
16 Gulf's decision to develop the landfill gas project in Escambia County was
17 reasonable and prudent. The methodology employed to determine cost
18 effectiveness was sound and in compliance with Gulf's RSOC that was
19 approved by the Commission.

20
21 In each instance, Gulf Power clearly had an eye on the future and
22 considered the effect of these decisions on prospective Gulf Power
23 capacity decisions. Each decision met Gulf's long-range resource
24 planning goal to have economical, reliable generating capacity available to
25

1 meet our customers' needs. Each decision was reasonable, prudent and
2 in the best interests of our customers.
3
4

5 III. GULF'S PRODUCTION INVESTMENT 6

7 Q. Mr. Grove, Gulf Witness McMillan shows a total of \$2.6 billion of plant in
8 service investment in Gulf's 2012 rate base in this case. Other witnesses
9 have testified that these costs are properly recorded consistent with the
10 Uniform System of Accounts and generally accepted accounting
11 principles. Are the Production assets associated with these costs used
12 and useful in the provision of electric service to the public?

13 A. Yes. The Production assets, which comprise a total of \$1,043,349,000 of
14 plant in service in Gulf's 2012 rate base in this case, are used and useful
15 in Gulf's provision of electric service.
16

17 Q. Were these Production costs reasonable and prudently incurred?

18 A. Yes. They were incurred pursuant to our capital budget process. I will
19 discuss that process later in my testimony. They also were subject to cost
20 controls used to govern budgeted expenditures. These cost controls are
21 also discussed later in my testimony.
22

23 Q. What is Gulf's projected Production Capital Additions Budget for 2011 and
24 2012 excluding Plant Scherer and items recovered through the ECRC?
25

1 A. Gulf's Production non-ECRC Capital Additions Budget for 2011 is
2 \$68,334,000. As shown on Exhibit RWG-1, Schedule 5 page 1 of 2, there
3 are 75 projects scheduled for 2011.

4

5 Gulf's Production, non-ECRC Capital Additions Budget for 2012 is
6 \$43,738,000. The major items included in the Production non-ECRC
7 Capital Additions Budget for the test year are:

- 8 • Crist Unit 6 Spring Boiler/Turbine Outage (\$6,200,000);
- 9 • Crist Unit 7 Fall Boiler/Turbine Outage (\$14,000,000);
- 10 • Static Exciter and Voltage Regulators on Crist Units 6 & 7 (\$5,000,000)
- 11 • Smith Unit 2 & 3 Spring Boiler Outages (\$3,400,000); and
- 12 • Daniel Unit 1 Spring Boiler Outage (\$800,000).

13 All of these budgeted projects are needed to address safety issues, to
14 maintain efficiency (heat rate), or to sustain reliability. As shown in Exhibit
15 RWG-1, Schedule 5, page 2 of 2, there are 58 capital projects in 2012.

16

17 Q. Please address how Gulf's Production Capital Additions Budget is
18 formulated.

19 A. The Production Capital Additions Budget process is a multi-step process
20 that begins at the plant level and is ultimately approved by Gulf's
21 Executive Management Team, which is made up of the CEO and the four
22 Vice Presidents of Gulf. All capital projects are evaluated to ascertain the
23 necessity of performing the work.

24

25

1 Plant personnel begin the Production budgeting process by evaluating
2 existing plant equipment performance and maintenance costs. Where
3 performance has degraded or is forecasted to degrade to an unacceptable
4 level and maintenance costs are increasing, replacement of the equipment
5 becomes necessary. As part of this evaluation process, plant personnel
6 review the information provided by Gulf to the North American Electric
7 Reliability Corporation Generation Availability Data System (NERC GADS)
8 to evaluate events that have triggered unplanned outages or unit derates.
9 Gulf develops plans to address GADS events that continue to be
10 problematic and makes decisions to repair or replace existing equipment.
11 Once plant personnel have identified specific projects, the Group
12 Managers at each plant review the proposed project list to determine
13 which projects will be submitted to the Plant Management Team (the Plant
14 Manager and his direct reports). The Plant Management Team meets to
15 discuss each proposed project to determine which projects will be
16 submitted for the next level of review to be included for consideration in
17 the final budget.

18
19 Each plant presents its proposed list of capital projects to the Power
20 Generation Leadership Team (the Vice President of Power Generation
21 and his direct reports). The Plant Managers then meet with the Power
22 Generation Leadership Team to prioritize all projects at the Power
23 Generation Level to ensure the most critical projects are included in the
24 budget submitted for final review by Gulf's executives.

25

1 Lastly, the Production Capital Additions Budget request is presented to
2 Gulf's executives. The Vice President of Power Generation is required to
3 explain and justify the Production Capital Additions Budget, and the final
4 Capital Additions Budget is ultimately approved by executive
5 management.

6
7 Q. How does Gulf control capital costs after the Capital Additions Budget is
8 developed?

9 A. Once the Capital Additions Budget is approved, each project is assigned a
10 project manager who is responsible for all aspects of the project. The
11 project manager will develop documentation outlining the scope of the
12 project and work with Supply Chain Management to develop a bid
13 package. From start to finish, the project manager is responsible for all
14 on-site management, including contractor performance and invoice
15 review. The plant manager receives a report from the Manager of Power
16 Generation Services each month detailing capital project expenditures and
17 any budget variance for all projects. The plant manager is responsible for
18 explaining all budget variances. At the Company level, the Corporate
19 Planning group requires a detailed explanation quarterly of all budget
20 variances greater than 10 percent or \$250,000 (whichever is lower).
21 Variances less than \$10,000 do not require a variance explanation.

22
23 Q. How are new capital projects or changes to existing projects incorporated
24 in the current year budget?

1 A. In the event a new project or an increase in expenditures associated with
2 an existing project is necessary, the planning unit must submit a
3 justification letter to the Vice President with functional responsibility. If
4 approved by the functional Vice President, the letter is also reviewed and
5 approved by the Chief Financial Officer. Finally, the letter is sent to
6 Corporate Planning where the change is documented and added to the
7 financial plan.

8
9 Q. Was Gulf's Production non-ECRC Capital Additions Budget of
10 \$68,334,000 in 2011 and \$43,738,000 in 2012 developed by this budget
11 and cost control process?

12 A. Yes. The projects included in Gulf's Production Capital Additions Budget
13 were approved pursuant to this rigorous evaluation and approval process.
14 Gulf's effective capital budgeting and spending program has helped
15 ensure our generating fleet has continued to provide reliable and efficient
16 generation. The dollars included in the test year non-ECRC Capital
17 Additions Budget for Production are reasonable, prudent, and necessary.
18 Gulf will continue to evaluate the benefits of additional capital projects in
19 the future to ensure that we are able to provide our customers with
20 reliable, cost-effective and efficient generating capacity.

21
22
23
24
25

1 **IV. GULF'S 2012 PRODUCTION O&M BUDGET**

2

3 Q. What are Gulf's Production O&M budgets for 2011 and 2012?

4 A. Gulf's Production O&M budget for 2012 is set forth on Exhibit RWG-1,
5 Schedule 6 and Schedule 7. Gulf's Production O&M budget for 2012 is
6 \$110,888,000, including Steam Production, Other Production, and Other
7 Power Supply expenses.

8

9 Gulf's Production O&M budget for 2011 is set forth on Exhibit RWG-1,
10 Schedule 7. Gulf's Production O&M budget for 2011 is \$110,435,000,
11 including Steam Production, Production Other, and Other Power Supply
12 expenses.

13

14 Q. Are Gulf's projected levels of Production O&M expenses of \$110,435,000
15 in 2011 and \$110,888,000 in 2012 reasonable and prudent?

16 A. Yes. My conclusion is based primarily on the fact that Gulf's 2011 and
17 2012 Production O&M budget are the product of a rigorous budget
18 process implemented by experienced employees who know their jobs and
19 their facilities. Each year, Gulf's Power Generation Organization develops
20 a five-year O&M budget based on historical results, projected
21 maintenance and outage planning. As we develop the budget request, we
22 focus on planned outages and baseline expenses.

23

24 Over the years, Gulf's plant personnel have gained valuable knowledge
25 relating to the maintenance of our equipment. Our experience indicates

1 that each unit should have a regularly scheduled planned outage to
2 inspect and repair fuel handling equipment, boilers, turbine valves and
3 auxiliary equipment every 18 to 24 months. In addition, a major planned
4 outage is scheduled on each unit every 8 to 10 years, which includes work
5 on the turbine and generator equipment in addition to the equipment listed
6 above.

7
8 Baseline expenses are costs required to conduct the day-to-day operation
9 and maintenance of the generating equipment and auxiliary equipment
10 and facilities. Baseline expenses include all labor, material and other
11 expenses, such as contracts for maintaining grounds, janitorial services,
12 and other services.

13
14 The five-year O&M budgets are developed at the plant level with the goal
15 of maintaining high reliability and efficiency. As discussed in Gulf Witness
16 Burroughs' testimony, Gulf has done an exceptional job of maintaining
17 high unit reliability and efficiency while at the same time fostering an
18 environment where employee safety is our number one priority.

19
20 As each plant develops a five-year O&M budget, the Plant Management
21 Team seeks input from system owners and unit owners to ensure the
22 most critical issues receive attention. Each plant assigns a system owner
23 (expert) over major systems such as boiler, turbine or generator. In
24 addition, each unit has an individual assigned as the unit owner with the
25 expectation that the individual will be the coordinator of any work related

1 to the assigned unit. As the O&M budget is developed, the Plant
2 Management Team, which includes the plant manager and his direct
3 reports, meets to discuss all aspects of the equipment maintenance
4 requirements.

5
6 Once the Plant Management Teams are satisfied that their O&M budgets
7 meet the plant's needs, the Power Generation Leadership Team (the Vice
8 President of Power Generation and his direct reports) meets to discuss
9 the overall Power Generation O&M budget. In the event that there are
10 resource (labor, physical, or financial) constraints, the Power Generation
11 Leadership Team discusses risks associated with projects and prioritizes
12 projects to help ensure the most critical activities are included in the
13 budget. Lastly, the Power Generation budget is submitted to Gulf's
14 Corporate Planning group. Gulf Witness Buck discusses the budget
15 process that takes place after Corporate Planning receives the Power
16 Generation O&M budget request.

17
18 The \$110,888,000 2012 Production O&M budget was developed using
19 teams from the plants whose expertise and understanding of plant
20 equipment and plant operations has been clearly demonstrated by the
21 continued high performance indicators of the units. Their budgets were
22 then reviewed and modified by Plant Management Team, the Vice
23 President of Power Generation and his leadership team, and ultimately
24 Gulf's Executive Management Team. The 2012 Production O&M budget
25 is the product of this robust budgeting process.

1 Q. Is Gulf's projected level of Production O&M expenses of \$110,888,000 in
2 2012 representative of a going forward level of Production O&M expenses
3 beyond 2012?

4 A. Yes. As shown on Schedule 7 of Exhibit RWG-1, the average Production
5 O&M budget for the five year period (2011 – 2015), which includes the
6 prior year and the test year, is \$113,223,000. The Production O&M
7 expense for 2011 and the 2012 test period are consistent with this
8 average, and they are representative of the ongoing level of expense
9 necessary to maintain generation performance and reliability.

10

11 Q. Production O&M expenses in 2012 are higher than the five year historical
12 average for the period 2006 through 2010. Why is the 2012 Production
13 O&M Budget representative of the ongoing level of expenses necessary to
14 maintain generation performance and reliability?

15 A. The historical average levels of Production O&M expense for the years
16 2006 through 2010 are not representative of Gulf's going forward level of
17 Production O&M expenses. If Gulf were held to such a level of expenses,
18 necessary and essential maintenance would have to be foregone, and
19 generation unit performance would likely suffer significantly. There are a
20 number of factors that have led to the increase in Production O&M
21 expenses for the period 2011-2015 relative to the period 2006-2010.

22

23 Q. Please address the factors that are driving Gulf's Production O&M
24 expense level up in the period 2011-2015.

25

1 A. There are at least five primary factors that are driving the Production O&M
2 expense increase. First, despite the retirement of old units and the
3 addition of new units, the age of Gulf's generation fleet is increasing, and
4 with age, greater levels of maintenance are necessary to maintain or
5 improve generating unit performance. Second, there are a number of
6 costs in the Production function that are simply increasing at a rate higher
7 than the Consumer Price Index (CPI), the general measure of inflation.
8 Third, Gulf has a generating unit (Smith Unit 3) that was relatively new in
9 the 2006-2010 time-periods and required very little O&M expense. Fourth,
10 Gulf has one new unit (Perdido) that was not constructed and operational
11 until October 2010. Fifth, Gulf worked very hard during the 2009-2010
12 time frames to avoid asking for base rate relief when customers were
13 struggling during the worst economic downturn since the Great
14 Depression. The lower O&M expenses incurred during this historical
15 period helped Gulf avoid asking for base rate relief without affecting the
16 reliability or efficiency of our generating fleet. However, the historical level
17 of expenses is not sustainable without affecting the reliability and
18 efficiency of our fleet.

19
20 Q. Mr. Grove, please address the effect of Gulf's aging generation fleet on its
21 Production O&M budget in 2012.

22 A. This is best explained by comparing the ages of Gulf's generating units at
23 the time of its last rate case with the age of Gulf's generating units in
24 2012, and comparing the amount of Production O&M expense allowed in
25

1 the last rate case with not only the levels of actual expenses in 2006-2010,
2 but also the budgeted levels of Production O&M expense in 2011-2015.

3
4 All of Gulf's generating units that were in-service at the end of 2002 are
5 now 9.5 years older. Exhibit RWG-1, Schedule 8 shows the age of the
6 fleet in 2002 compared to 2012.

7
8 When one examines the trend of Production O&M expenses over both the
9 2006-2010 periods and the projected 2011-2015 period, the trend is
10 generally upward. This is shown on Exhibit RWG-1, Schedule 7. As the
11 age of the generating fleet increases, so does the cost necessary to
12 maintain and repair the fleet. There are only two years during this period
13 in which that relationship has not held true: 2009 and 2013. In each of
14 those years, factors other than age cause a slight deviation from this
15 discernable trend of cost increases. In 2009, the Production O&M
16 expense declined from the 2008 level because Gulf made a conscious
17 decision to avoid requesting a rate increase during a severe economic
18 recession. In 2013, the projected O&M level of expenses is only modestly
19 below projected 2012 levels, due primarily to a decrease in planned
20 outage expense from \$23,149,000 in 2012 to \$18,886,000 in 2013. This
21 reduction in planned outage expense in 2013 is driven by a smaller scope
22 of outages. When these differences are explained, the general
23 relationship between aging units and levels of operation and maintenance
24 expenses is clear – as units age, more must be spent on maintenance to
25 maintain or improve reliability.

1 Q. Since Gulf's last rate case has the projected useful life of your generating
2 fleet changed?

3 A. Yes. Based on Gulf's effective ongoing maintenance practices, we have
4 been able to extend the projected retirement dates on many of Gulf's units
5 by up to 20 years. Exhibit RWG-1, Schedule 9 shows the estimated
6 retirement dates included in the 2002 TYSP and the 2012 TYSP.

7

8 Q. What are the expected benefits of extending the projected lives of these
9 units?

10 A. There are two major benefits. First, extending the lives of the units
11 reduces the effective depreciation rate of the assets. This, in turn,
12 reduces the need for rate relief. In addition, extending the lives of units
13 allows Gulf to postpone the procurement or construction of additional
14 resources. That also reduces or defers Gulf's need for rate relief.

15

16 Q. Mr. Grove, the second reason you gave for projected O&M expenses for
17 2011-2015 being higher than historical expenses in the 2006-2010 period
18 was an increase of certain costs at a rate greater than the rate of inflation.
19 Please explain your observation.

20 A All other things being equal, if the same work was performed in 2002 and
21 in 2012, one would expect the cost of the work to have risen close to the
22 rate of inflation. However, that has not been the case; costs for the same
23 scope of work have risen much faster than inflation. For example, in
24 2005, Plant Crist replaced the Lower Economizer on Unit 6 at a cost of
25 \$1,127,667 for material. The same work was performed again in 2010,

1 and the cost of the material was \$2,050,120. That is an increase of
2 81 percent, or a 16.4 percent increase each year. In comparison, the CPI
3 rose cumulatively by only 11.64 percent between 2005 and 2010.

4
5 In its O&M benchmark calculations, the Commission uses CPI, which is a
6 general measure of inflation for consumers. However, the rate of inflation
7 for the work performed on generating units is better captured in other
8 measures of inflation. The Producer Price Index (PPI) is a better overall
9 measure for inflation than CPI when it comes to addressing Production
10 O&M expense inflation. From the test year in Gulf's last rate case through
11 the 2012 test year requested in this case, CPI has risen 25.34%, while:

12 PPI - Turbine & Generator set manufactures has risen 37.4%;

13 PPI - Commodities - Metals and Metal Products has risen 64.3%;

14 PPI - Commodities - Iron and Steel has risen 95.2%; and

15 PPI - Industrial - Valve Manufacturing has risen 48.8%.

16 These escalation rates, which are more closely tied to Production O&M
17 expenses than CPI, explain some of the increase in Production O&M
18 expense between test periods.

19
20 Q. The third reason you gave for the increase of Production O&M expenses
21 between 2006-2010 historical periods and the 2011-2015 projected period
22 was the aging of a generator (Smith 3) that was relatively new in the
23 historical period. Please address how that affects the relative levels of
24 Production O&M expenses in those time periods.

25

1 A. In our prior rate case, Plant Smith Unit 3 was in its first full year of
2 operation. As discussed later in the benchmark variance justification for
3 Production Other, the budget for Plant Smith has risen significantly since
4 the last rate case. Similarly, the average projected cost associated with
5 Smith 3 in the period 2011-2015 of \$7.3 million is \$1.7 million higher than
6 the average cost in the historical period 2006 through 2010 of \$5.6 million.
7 Once again, this increase is being driven by an increase in maintenance
8 expense that is directly related to repairing equipment that was relatively
9 new in the historical period.

10

11 Q. The fourth reason you gave for the increase of Production O&M expenses
12 between the 2006-2010 historical period and the 2011-2015 projected
13 period was the addition of new generating units (Perdido). Please
14 address how this affects the relative levels of Production O&M expenses
15 in those time periods.

16 A. Gulf added new generation at Perdido in October 2010. There were no
17 O&M expenses associated with this facility in the years 2005 through
18 2009. In addition, there was less than a full year of expenses in 2010;
19 however, the years 2011 through 2015 fully reflect the annual O&M
20 expense associated with the Perdido facility.

21

22 Q. The final reason you gave as to why the 2012 level of Production O&M
23 expenses is more representative of ongoing levels of Production O&M
24 levels than the levels of Production O&M levels during the period 2006-
25 2010 relates to Gulf's efforts to control expenses to avoid asking for a

1 base rate increase at a time when Gulf's customers were struggling
2 through the worst economic downturn since the Great Depression. Please
3 address that point in more detail.

4 A. This is best explained by looking at the allowed Production O&M
5 expenses in the 2002/2003 test year, the actual Production O&M
6 expenses in 2006 through 2010 and the budget levels of Production O&M
7 expenses for 2011 through 2015. There was a clear trend of an increase
8 in Production O&M expenses from the 2002/2003 test year level of
9 \$76,996,000 in Gulf's last rate case through the actual level in 2008 of
10 \$88,424,000. (Actual Production O&M expense for 2006 through 2010 is
11 shown on Exhibit RWG-1, Schedule 7). Then, in 2009, Gulf decreased its
12 Production O&M expenses to \$84,209,000. This \$4,215,000 reduction in
13 Production O&M expenses was part of the effort that Gulf undertook to
14 defer its need to ask for base rate relief.

15
16 This reduction in Production O&M expenses in 2009 was not done without
17 careful deliberation. We prioritized our maintenance decisions to address
18 critical issues. We took the approach of trying to perform as much
19 maintenance as we could on our larger units that are dispatched more
20 often, and we did not perform selective maintenance on smaller units
21 which, if they experienced forced outages, would not as severely impact
22 overall reliability.

23
24 A similar effort was undertaken in 2010, but in that year we could no
25 longer drive down Production O&M costs. They had to increase.

1 Although our internal budget process had developed and submitted a
2 Production budget of \$94,665,000, we were able to hold actual expenses
3 to \$92,889,000. Once again, we prioritized maintenance, but we did it to
4 avoid having to ask for a base rate increase during a time of weak
5 economic recovery and high unemployment. We made calculated risk
6 assessments of what maintenance had to be performed. Our EFOR
7 performance indicator shows Gulf was able to make these reductions
8 while we continued to maintain excellent performance.

9
10 Q. Does the level of Gulf's actual expenses in 2009 and 2010 indicate that it
11 is not necessary for Gulf to spend Production O&M at the levels
12 suggested by its 2011 budget process?

13 A. Absolutely not. A well maintained system such as Gulf's can forego some
14 scheduled maintenance for a limited period of time without a severe risk of
15 adverse consequences. However, it cannot forego scheduled
16 maintenance over an extended period of time without predictable adverse
17 consequences in unit performance, system reliability and ultimately
18 customer satisfaction. Gulf has no prudent choice other than to increase
19 Production O&M expenses to avoid these adverse consequences.
20 Continued operation at these levels of Production O&M is simply too risky
21 for our customers. It is time to increase Gulf's Production O&M expenses
22 and recognize those levels on a going forward basis.

1 Q. Mr. Grove, the Commission has historically employed an O&M benchmark
2 calculation in base rate proceedings. How does Gulf's 2012 Production
3 O&M expense forecast compare to the O&M expense benchmark?

4 A. The O&M benchmark for Production is \$96,507,000, as provided to me by
5 Mr. McMillan. Gulf's projected 2012 Production O&M expenses for 2012
6 are \$110,888,000, which results in a benchmark variance of \$14,381,000.
7 This is shown on Exhibit RWG-1, Schedule 10.

8
9 Q. Does Gulf's O&M benchmark variance for 2012 undermine your
10 conclusion that Gulf's 2012 Production O&M expenses are reasonable
11 and prudent?

12 A. No. The O&M benchmark has never been, nor is it meant to be, a
13 budgeting tool. It is a regulatory mechanism used to provide a reference
14 point to reflect CPI growth between rate cases. As discussed by
15 Mr. McMillan, benchmark variations may be explained by a variety of
16 different factors. For example, an O&M increase due to the cost of
17 compliance with a new regulatory requirement would be totally unrelated
18 to inflation. Gulf's projected 2012 Production O&M budget is the result of
19 a sophisticated and robust budgeting process, and it is that process that
20 assures that those projected expenses are reasonable and prudent.
21 Indeed, that process has been used to justify Gulf's entire Production
22 O&M budget, not just the O&M benchmark variance.

23
24 Q. Please break down the \$14,381,000 Production benchmark variance into
25 Production Steam, Production Other, and Production Other Power Supply.

1 A. As shown on Exhibit RWG-1, Schedule 10, Production Steam is
2 \$9,965,000 over the benchmark, Production Other is \$2,940,000 over the
3 benchmark and Production Other Power Supply is \$1,476,000 over the
4 benchmark.

5

6 Q. Please justify Gulf's \$9,965,000 Production Steam O&M benchmark
7 variance.

8 A. Gulf's Production Steam O&M benchmark variance justification consists of
9 two general categories. First, there are certain Production Steam O&M
10 expenses in the 2012 test period that were not included in the test year of
11 Gulf's last rate case; therefore, these costs are not captured by the O&M
12 benchmark calculation. These expenses total \$3,559,000. Second,
13 certain Production Steam expenses have grown faster than inflation since
14 Gulf's last rate case. This growth is explained both by increased scope of
15 work and underlying costs that have risen faster than inflation as
16 measured by CPI. This second group of Steam Production O&M
17 expenses totals \$7,565,000.

18

19 Q. Please justify the \$3,559,000 of Production Steam O&M expenses that are
20 new or incremental and therefore not captured in the O&M benchmark
21 calculation.

22 A. None of the following Production Steam O&M expenses projected for
23 2012 were included in the Steam Production O&M expenses allowed in
24 Gulf's last rate case. Therefore, they are not captured in the O&M
25 benchmark calculation. They are all new or incremental activities, and all

1 of them are necessary for Gulf to provide continued reliable service to our
2 customers.

3	• Genguard cyber security	\$ 550,000
4	• Research and Development (R&D)	370,000
5	• Renewable energy manager	150,000
6	• O&M improperly attributed to Scherer Unit 3	<u>2,489,000</u>
7	Total	<u>\$3,559,000</u>

8

9 Q. Please justify the \$550,000 of O&M expenses associated with Gulf's
10 Genguard cyber security programs that were not projected to be incurred
11 in Gulf's last rate case.

12 A. The Genguard Cyber Security program is Gulf's response to the need to
13 ensure protection and reliability of the grid and to ensure compliance with
14 the NERC Cyber Security policies of 2009. Gulf is required by law to
15 comply with these policies, subject to penalties. Failure to comply with
16 these policies would also expose Gulf's system to reliability risks. The
17 project improves cyber security and control for selected units whose loss
18 potentially could impact the reliability of the grid. This is an entirely new
19 activity that is necessary to meet requirements that have been imposed
20 since Gulf's last rate case.

21

22 Q. Please justify the \$370,000 of O&M expenses associated with R&D
23 projects that were not projected to be incurred in Gulf's last rate case.

24 A. The test year of Gulf's last rate case included \$867,000 of R&D expenses.
25 Escalating that amount by CPI (25.34 percent) results in an O&M

1 benchmark for Steam Production O&M R&D expenses of \$1,087,000.
2 Gulf projects it will spend \$1,457,000 on Steam Production O&M R&D
3 expenses in 2012, resulting in a \$370,000 benchmark variance.
4

5 This 2012 Steam Production O&M R&D expense benchmark variance is
6 primarily due to Gulf's participation in three ongoing projects: (1) Flue Gas
7 Treatment, (2) the Power System Development Facility at Wilsonville, and
8 (3) the 25 MW Carbon Capture center at Plant Barry in Alabama. As I
9 discuss below, these projects are important to Gulf's customers. Gulf,
10 indeed the entire Southern system, relies heavily on coal generation, and
11 efforts to control emissions in the face of new environmental emission
12 regulations will be critical to keeping these units operating to serve
13 customers.
14

15 The Flue Gas Treatment project screens, develops, and tests new
16 technologies for more cost effective compliance with new and future
17 power plant emission regulations. Power plant flue gas is treated with
18 emissions control equipment, including the scrubber and Selective
19 Catalytic Reduction system currently installed at Plant Crist. With proper
20 development and testing, these technologies can be used to increase the
21 collection of other emissions that are the subject of new regulations.
22 These emissions include particulates, mercury and hydrochloric acid
23 aerosols. However, other new technologies such as baghouses, activated
24 carbon and wet electrostatic precipitation may still be required. Gulf's
25 customers benefit as a result of the knowledge gained through the

1 program, which helps provide a foundation on which our decisions are
2 made relative to the types of technologies that best suit our generating
3 fleet. In our prior rate case, Gulf included \$75,897 in our requested O&M
4 expenses for this project. When escalated by CPI, the benchmark for this
5 project is \$95,000. Our request of \$221,000 in the 2012 test year for
6 Gulf's share of the project creates a benchmark variance of \$126,000.
7

8 Southern Company manages and operates the U.S. Department of
9 Energy's National Carbon Capture Center (NCCC), a focal point of the
10 national effort to develop advanced technologies to reduce greenhouse
11 gas emissions from coal-fired power plants. Working with scientists and
12 technology developers, the NCCC, located at the Power Systems
13 Development Facility in Alabama, screens, develops, and tests emerging
14 technologies to capture carbon dioxide from coal-based power plants.
15 The center accelerates carbon dioxide technology by offering
16 infrastructure that bridges the gap between lab-scale research and large
17 demonstration projects, providing a testing ground for the next generation
18 of more cost effective, higher-performing carbon capture technologies. In
19 2012, Gulf's portion of this R&D demonstration project is \$178,000.
20

21 A portfolio of solutions is needed to provide timely and least cost
22 reductions in carbon dioxide emissions from power generation sources.
23 Accordingly, Southern Company, Mitsubishi Heavy Industries and the
24 Electric Power Research Institute began construction of a 25 MW carbon
25 dioxide capture and storage demonstration at Alabama Power's Plant

1 Barry. The demonstration involves the construction and operation of a
2 500 ton per day carbon capture plant. The captured carbon dioxide will be
3 transported through an 11 mile pipeline and injected into a deep geologic
4 formation near the Citronelle Oil Field. Extensive geologic formations like
5 that found in the Citronelle area are common in the Southeast U.S.
6 providing a large carbon dioxide storage capacity. In 2012, Gulf projects
7 O&M R&D expenses of \$219,000 for its portion of this demonstration
8 project. If EPA's carbon control rule is adopted or carbon control
9 legislation is adopted, carbon capture and sequestration will become
10 critically important and may be necessary for Gulf to preserve any coal
11 fired generation.

12
13 Q. Please justify the \$150,000 of 2012 Production Steam O&M expenses
14 associated with Gulf's Renewable Energy Manager that were not included
15 in Gulf's last rate case.

16 A. As I discussed earlier, Gulf is committed to obtaining cost-effective energy
17 supplies for our customers and to obtaining the benefits of fuel diversity
18 wherever practical. Gulf is also committed to encouraging and promoting
19 renewable energy pursuant to several sections of Chapter 366, including
20 Sections 366.82, 366.91, and 366.92, Florida Statutes. In order to
21 effectively manage the continuous inquiries related to renewable energy
22 projects and to develop cost effective supply side renewable projects, Gulf
23 has created a Renewable Energy Manager position to deal with all issues
24 associated with supply-side renewable energy. This position will play a
25 critical role in developing Gulf's overall renewable energy program in a

1 manner that maximizes the benefits of emerging technologies while at the
2 same time ensuring the impacts to our customers are minimized.

3

4 Q. You also mentioned that another \$2,489,000 of 2012 Production Steam
5 O&M expenses are projected for Gulf's retail operations that were not
6 included in Gulf's Production Steam O&M expenses in the last rate case.
7 Please explain.

8 A. In the 2012 test year, all expenses associated with Plant Scherer have
9 been removed from the retail base rate calculation due to the fact that Gulf
10 uses the output from Plant Scherer to serve wholesale contracts. In our
11 prior rate case, Gulf also removed all expenses associated with Plant
12 Scherer from our base rate calculation. However, in making that
13 adjustment Gulf made an error and removed \$1,986,000 of Steam
14 Production expenses greater than the Steam Production expenses
15 included in the financial projection for Plant Scherer. As a result of this
16 error, Gulf's request for Steam Production O&M expense in the prior rate
17 case was \$1,986,000 below what was actually needed for maintenance of
18 Gulf's territorial units. Since Gulf's retail rates were set including this
19 error, Gulf's retail customers have received the benefit of this error for the
20 past ten years. For 2012, only those O&M expenses specifically
21 associated with Plant Scherer have been removed from Gulf's request for
22 Production Steam O&M expense.

23

24

25

1 The error discussed above accounts for \$2,489,000 of the benchmark
2 variance in 2012. Without this error in Production O&M expenses in Gulf's
3 last test year, Gulf's 2012 Steam Production O&M benchmark would have
4 been \$91,098,000 million rather than \$88, 609,000. Consequently, Gulf's
5 benchmark variance would have been \$7,476,000 instead of \$9,965,000.
6 Gulf's error, which has worked to the benefit of Gulf's customers for
7 almost a decade, should not be perpetuated into the future.

8

9 Q. Earlier you mentioned another type of Production Steam O&M expenses
10 that was part of Gulf's O&M benchmark justification – expenses that have
11 grown faster than inflation as measured by CPI. Why have these
12 expenses exceeded the O&M benchmark?

13 A. There are two reasons that these expenses (listed below) have exceeded
14 inflation as measured by CPI. First, Gulf has expanded the scope of this
15 work in 2012 relative to the scope of the work performed in the last test
16 year of 2002/03 in Gulf's last rate case. This expansion of scope is
17 necessary and is representative of the expenses Gulf will incur on a going
18 forward basis. Second, the costs associated with these types of expenses
19 have escalated at a rate faster than the rate of inflation reflected in CPI,
20 the measure of inflation used in the O&M benchmark calculation. These
21 increases are beyond Gulf's control.

22

23

24

25

1 The Production Steam O&M expenses that share these justifications are:

2	• Planned outage expenses	\$4,422,000
3	• Enterprise Solutions	587,000
4	• Fuels Management expenses	1,135,000
5	• Ash disposal and sales	<u>1,421,000</u>
6	Total	<u>\$7,565,000</u>

7

8 Q. Please discuss Gulf's approach to planned outages.

9 A. Gulf has 12 generating units, and in 2012 there are 8 planned outages. A
10 total of 40 planned outage weeks are scheduled across the fleet. The
11 planned outage schedule varies from year to year based on the
12 maintenance requirements of each generating unit and the need for
13 adequate generating capacity in service to meet demand throughout the
14 year. The planned maintenance forecast for 2012 is typical of the
15 expected future planned outage requirements.

16

17 In general, Gulf plans outages on each unit every 18 to 24 months, unless
18 conditions indicate a planned outage is needed sooner. Outage planning
19 begins as soon as the previous outage is completed. Plant management,
20 system owners, and unit owners continually evaluate unit performance
21 and determine what items need to be addressed at the next outage. Prior
22 to the unit outage the team meets to determine what specific items need
23 to be addressed while the unit is off-line. The major equipment evaluated
24 for each outage includes boilers, pulverizers, condenser systems, turbine
25 valves and other auxiliary equipment.

1 Q. Please address why Gulf's request for \$22,016,000 for planned outages in
2 Production Steam in the test year is representative of planned outage
3 expenses in the future.

4 A. Exhibit RWG-1, Schedule 11 provides a detailed analysis of planned
5 outage expense in Production Steam for the five-year period beginning
6 with 2011. The planned outage expenses for the 2012 test year are
7 \$22,016,000. The prior year (2011) is budgeted for \$21,923,000.

8

9 Q. How does Gulf's 2012 Production Steam O&M planned outage expenses
10 compare with Gulf's planned outage expenses allowed in its last rate
11 case?

12 A. Exhibit RWG-1, Schedule 11, page 2 of 2 shows the total outage expense
13 requested for Production Steam in the last rate case was \$14,037,000,
14 which escalates to a benchmark amount of \$17,594,000. The Gulf
15 Production Steam request for the test year is \$22,016,000, for a variance
16 of \$4,422,000.

17

18 Q. Why do Gulf's 2012 planned outage O&M expenses for Production Steam
19 exceed the O&M benchmark level of \$17,594,000 based upon Gulf's
20 allowed level of planned outage expenses from its last rate case?

21 A. As I noted earlier in my testimony, there are two primary reasons. First,
22 Gulf's scheduled planned outages in the 2012 test year are much broader
23 in scope than the planned outages in Gulf's 2002/2003 test year. Even
24 though Gulf will be performing fewer planned outages in 2012 than in the
25 last test year, the dollars associated with the planned outages is much

1 greater due to the increased scope of work needed to maintain reliability
2 on an aging fleet.

3
4 Second, the cost of planned outages and the equipment and materials
5 used in these outages have risen much faster than inflation as measured
6 by CPI. These cost increases are beyond Gulf's control and are not
7 captured in the O&M benchmark calculation. For instance, turbine and
8 generator set manufacturing costs, a critical part of the planned outages in
9 2012 at Plant Crist on Units 6 and 7, have risen 37.4 percent since the last
10 test year, although CPI has risen only 25.34 percent. Similarly, industrial-
11 valve manufacturing costs have risen 48.8 percent since Gulf's last rate
12 case whereas CPI has risen only 25.34 percent. Industrial valves are
13 critical equipment in almost every outage. In each of Gulf's planned
14 outages in 2012, iron and steel will comprise component parts. The price
15 of iron and steel commodities has risen 95.2 percent since Gulf's last rate
16 case, whereas the rate of inflation in the CPI benchmark calculation has
17 risen only 25.34 percent. Similarly, the cost of metals and metal products,
18 also used in Gulf's planned outages in 2012, have risen 64.3 percent
19 since Gulf's last rate case, instead of the CPI increase of only 25.34
20 percent.

21
22 Q. Please address why the scope of planned outages assumed in the 2012
23 test year is appropriate.

24 A. As I have discussed throughout my testimony, Gulf has worked hard to
25 maintain our fleet of generators in a manner that ensures high reliability.

1 Our success is demonstrated in the testimony of Mr. Burroughs. We
2 achieved this success while controlling cost to prevent Gulf from having to
3 ask for a base rate increase at a time when our customers were
4 recovering from a major hurricane and a major recession. However, we
5 have reached a point where additional dollars are needed to maintain the
6 reliability of our fleet. As one can see from the outages discussed below,
7 the work we are planning simply includes the normal type of maintenance
8 that is required to maintain our fleet of generation. Moreover, the work
9 described below is indicative of the work we plan to continue on our entire
10 fleet in the future. The following is a list of the outages planned for the
11 test-year:

- 12 ● Plant Crist Unit 6 has a 72-day planned outage to address turbine,
13 turbine valves, generator, Selective Catalytic Reduction (SCR) tie-
14 in, boiler inspection/repairs, fan/air preheater, pulverizers, and ash
15 handling systems.
- 16 ● Plant Crist Unit 7 has a 79-day planned outage to address turbine,
17 turbine valves, generator, boiler inspection/repairs, fan/air
18 preheater, condensate pumps, pulverizers, and ash handling
19 systems.
- 20 ● Plant Scholz Unit 1 has a 22-day planned outage to address off-line
21 work orders and general boiler inspection.
- 22 ● Plant Smith Unit 2 has a 23-day planned outage to address turbine
23 valves, fans/ductwork, ash handling, boiler inspection/repairs, and
24 boiler feed pumps.

25

- 1 • Plant Daniel Unit 1 has a 58-day planned outage to address turbine
- 2 valves, fans/air preheater, pulverizers, ash handling, boiler
- 3 inspection/repairs, and boiler feed pumps.
- 4 • Plant Daniel Unit 2 has a 9-day planned outage to address
- 5 common equipment and install ductwork isolation blanks.
- 6 • Plant Daniel Unit 2 has an additional 7-day planned outage to
- 7 address common equipment and remove ductwork isolation blanks.

8

9 Q. How do the planned outages scheduled in the 2012 test year compare to

10 the prior test year planned outages?

11 A. The scope of the work on an outage has a direct impact on the cost of the

12 outage. In the prior test year Gulf had outages scheduled on Crist Units 6

13 and 7, Smith Unit 2, and Daniel Unit 1. Gulf has scheduled outages on

14 these same units in the current test year; however, the scope of the work

15 in 2012 is much larger.

16

17 In the prior test year, the outage on Plant Crist Unit 6 included work on the

18 boiler, pulverizers, precipitator and cooling towers. In 2012 Gulf will

19 perform work on the boiler, pulverizers, and precipitator. However, Gulf

20 will also perform significant work on the turbine (\$2,400,000) and the

21 generator (\$2,200,000). The total benchmark variance for Plant Crist

22 Unit 6 is \$5,098,000.

23

24 In the prior test year, the outage on Plant Crist Unit 7 included work on the

25 boiler, pulverizers, precipitator, turbine valves, and cooling towers. In

1 2012 Gulf will again perform work on the boiler, pulverizers, and
2 precipitator. However, Gulf will also perform significant work on the
3 turbine (\$750,000) and the generator (\$2,300,000). The total benchmark
4 variance for Plant Crist Unit 7 is \$3,899,000.

5
6 In the prior test year, the outage on Plant Smith Unit 2 included work on
7 the boiler, ash handling, and pulverizers. In 2012 Gulf will again perform
8 work on the boiler and pulverizers. However, Gulf will also perform
9 significant work on the turbine valves (\$750,000). The total benchmark
10 variance for Plant Smith Unit 2 is \$986,000.

11
12 In the prior test year, the outage on Plant Daniel Unit 1 included work on
13 the boiler, pulverizers, generator and turbine. In 2012, Gulf will again
14 perform work on the boiler and pulverizers. However, Gulf will also
15 perform significant work on the nose arch of the boiler (\$3,200,000). The
16 total benchmark variance for Plant Daniel Unit 1 is \$1,626,000.

17
18 Q. Mr. Grove, you justified Steam Production O&M outage expense
19 benchmark variances totaling \$11,609,000 for outages associated with
20 four units due to increased scope of work and increased cost of materials
21 since the last rate case. Why do you use only \$4,422,000 of that
22 benchmark variance in your benchmark variance justification?

23 A. All of the \$11,609,000 of increased outage related Steam Production O&M
24 expenses for these four units is justified by the increased scope of work
25 and increased costs in 2012 relative to the last test year. However, there

1 were some Steam Production outages in the last test year that are not
2 scheduled again for 2012. So, to be conservative in my approach, I have
3 netted the benchmark escalated costs of the projects that do not reoccur
4 in 2012 against the \$11,609,000 variance justification.

5

6 Q. Please justify the \$587,000 of Production Steam O&M related to
7 Enterprise Solutions forecast in 2012 that were not projected to be
8 incurred in Gulf's last test year and so are not in the O&M benchmark
9 calculation.

10 A. As described by Gulf Witness Erickson, the Enterprise Solutions project
11 consisted of the installation of Oracle and Maximo to replace the aging
12 accounting, supply chain, and generation systems. Oracle and Maximo
13 are used to input, process, and summarize accounting information. In
14 addition, the system allows users to procure and pay for materials and
15 services as well as manage work orders. Many of the previous systems
16 were old, highly customized, and were becoming increasingly expensive
17 to maintain. The expenses of \$587,000 are the portion of Enterprise
18 Solution expenses being charged directly to Production Steam that are
19 above the level of expense charged for the old systems.

20

21 Q. Please address the \$1,135,000 of Production Steam O&M fuels
22 management expenses forecasted in the 2012 test year that are above
23 the benchmark.

24 A. Gulf's fuels management expenses have exceeded the benchmark as a
25 result of a variety of changes in these activities:

- 1 • Railcar lease and management
- 2 • Fuel Services management and oversight
- 3 • Crist Scrubber limestone and gypsum management, and
- 4 • Plant Daniel fuel unloading expenses.

5

6 Since Gulf's last rate case Plant Daniel has begun using Powder River
7 Basin (PRB) Coal. This has increased the management oversight
8 associated with this new coal supply and transportation requirement. Gulf
9 has also changed the delivery mode for a majority of its coal supply from
10 an exclusive barge transportation mode to rail and barge transportation.
11 This shift in transportation mode has required Gulf to lease a fleet of open
12 hopper railcars for the movement of coal from the coal's origin to the
13 Alabama State Docks in Mobile, Alabama. This fleet of railcars requires
14 both logistic support and maintenance by our Fuel Services organization.
15 Additional personnel were needed to perform these railcar management
16 functions, and the labor, overhead, and expenses of these new employees
17 are being included in Gulf's O&M expenses. In 2012 these expenses will
18 be \$351,000 over the benchmark. The increased cost of managing the
19 PRB coal is more than offset by associated fuel savings.

20

21 Since Gulf's last rate case a new fuel accounting system (COMTRAC)
22 was purchased to replace the original fuel accounting system (FAACS).
23 This was necessary because the FAACS system software was no longer
24 being technically supported due to outdated source code. In addition,
25 more stringent accounting controls adopted as a result of Sarbanes-Oxley

1 requirements made changes to the fuel accounting process necessary.
2 As a result of accounting system upgrades and new accounting control
3 requirements, additional O&M costs associated with management of
4 software system and accounting oversight have been incurred by Fuel
5 Services. Additional personnel were needed to perform these fuel
6 accounting management functions, and the labor, overhead, and
7 expenses of these new employees are being included in Gulf's O&M
8 expenses. In 2012 these expenses will be \$355,000 over the benchmark.
9

10 Since the last rate case Gulf has added Flue Gas Desulfurization
11 (scrubber) equipment at Plant Crist for the reduction of sulfur emissions.
12 The scrubber uses limestone as a feedstock to react with sulfur in the gas
13 stream which produces a synthetic gypsum product. The procurement
14 and delivery of the limestone feedstock and the associated contract
15 administration is being managed by Fuel Services, but it is not being
16 recovered by Gulf in either the Fuel or ECRC clauses. In addition, the
17 synthetic gypsum product is required to be disposed of in a beneficial use
18 under an agreement between Gulf and the FDEP. This cost is not being
19 recovered through ECRC. Fuel Services also manages the marketing and
20 sales of Gulf's synthetic gypsum to end users in the wallboard, cement,
21 and agricultural industries. Additional personnel were needed to perform
22 these limestone and gypsum management functions, and the labor,
23 overheads, and expenses of these new employees are being included in
24 Gulf's O&M budget. In 2012 these expenses will be \$264,000 over the
25 benchmark.

1 Since our last rate case Mississippi Power Company (MPC) contracted
2 with a third party to unload coal trains at Plant Daniel. This work was
3 previously performed by MPC employees. Plant Daniel has leased
4 additional equipment to handle the increased requirements of managing
5 PRB coal inventory. In 2012 these expenses will be \$367,000 over the
6 benchmark. This increased cost is more than offset by fuel savings
7 associated with burning PRB coal.

8
9 Other Fuel expenses increased at less than the O&M benchmark.
10 Collectively, these expenses are \$202,000 below the benchmark.

11
12 Q Please address why the cost of ash disposal and sales has increased
13 beyond the benchmark.

14 A. In the prior test year, Gulf budgeted \$918,000 for ash disposal and sales.
15 Using the CPI adjustment, the benchmark for ash disposal and sales is
16 \$1,150,000. Gulf's current request for ash disposal and sales is
17 \$2,571,000, resulting in a benchmark variance of \$1,421,000.

18
19 Q. What has caused the cost of managing ash to increase beyond the CPI
20 benchmark?

21 A. The ash disposal expense included in the test year, which is above the
22 benchmark by \$1,421,000, is necessary to manage ash and meet all
23 environmental requirements at our four coal electric generating facilities.
24 The major change in ash handling expense is not driven by an increase in
25 volume as one might expect. The ash contracts (which are competitively

1 bid) are renegotiated every three or four years, and the contract price to
2 handle ash has exceeded CPI growth. As an example, in 2002 the
3 contract for managing ash at Plant Crist was \$339,000; in 2012 the
4 contract is \$800,000, or an increase of 136 percent. This is far beyond the
5 25.34 percent increase used in the benchmark calculation. Another
6 contributing factor is that in the prior test period Plant Daniel was able to
7 dispose of ash by selling the ash in the market. Such sales are no longer
8 available. The change in the market for ash sales has reduced revenues
9 which previously were credited against ash disposal costs.

10
11 Plant Crist has increased the budget for removing solids from the ash
12 pond settling basins by approximately \$250,000 in order to meet the more
13 stringent water quality standards required by Gulf's National Pollution
14 Discharge Elimination System industrial wastewater permits. The
15 stringent water quality-based copper effluent limitations included in
16 Chapter 62 Part 302, Florida Administrative Code, became effective in
17 May 2002.

18
19 The ash disposal expense included in the 2012 test year is necessary to
20 manage ash and meet all environmental requirements at our four coal
21 electric generating facilities.

22
23 Q. Please justify Gulf's \$2,940,000 Production Other O&M benchmark
24 variance.

25

1 A. Expenses in this area relate mainly to the Plant Smith Unit 3 Combined
2 Cycle and the Perdido Landfill gas to energy project. The following is a list
3 of projects that have caused Gulf to exceed the benchmark calculation:

4	• Plant Smith Unit 3 planned outage	\$830,000
5	• Plant Smith Unit 3 maintenance	845,000
6	• Gas Fuel Management	593,000
7	• Perdido	<u>770,000</u>
8	Total Other Production	<u>\$3,038,000</u>

9

10 Q. How old was Smith Unit 3 at the time of Gulf's last rate case?

11 A. Smith Unit 3 went into commercial service in April 2002, approximately
12 two months earlier than projected. The test year for the last rate case was
13 June 2002 through May 2003, which corresponded with the first twelve
14 months that Smith Unit 3 was projected to be in service. At the end of
15 2002, Smith Unit 3 had been in service nine months.

16

17 Q. How old will Smith Unit 3 be at the midpoint of the 2012 test year?

18 A. At the midpoint of the 2012 test year, Plant Smith Unit 3 will be ten years
19 old.

20

21 Q. How has the relative age of Smith Unit 3 affected the level of Production
22 Other O&M expenses in the projected test year versus the test year in
23 Gulf's last rate case and the O&M benchmark calculation?

24 A. Because Smith Unit 3 was a new unit in Gulf's last rate case and will be
25 over a decade old in the 2012 projected test year in this case, there are far

1 more O&M expenses projected for Smith Unit 3 in the 2012 test year.
2 Since the O&M expenses associated with Smith Unit 3 comprise a
3 significant portion of Gulf's Other Production O&M expenses, a major
4 portion of the O&M benchmark variance for Other Production is justified by
5 examining the Smith Unit 3 O&M expenses.

6
7 Q. What is the O&M benchmark level of Smith Unit 3 planned outage
8 expenses escalated from the last test year to 2012?

9 A. Exhibit RWG-1, Schedule 11, page 2 of 2 shows the total outage expense
10 requested for Production Other in the last rate case was \$242,000. That
11 escalates to an O&M benchmark amount of \$303,000. Gulf's Smith Unit 3
12 planned outage expense for the test year is \$1,133,000, which results in a
13 benchmark variance of \$830,000.

14
15 Q. Why is the 2012 Smith Unit 3 planned outage expenses of \$830,000 over
16 the O&M benchmark?

17 A. This is due to a combination of factors. First, Smith Unit 3 is no longer
18 new. It has aged, and like other units, with the passage of time, more
19 O&M expenses are required. Second, the scope of the planned outage at
20 Smith Unit 3 in 2012 is appreciably larger than the scope of the Smith
21 Unit 3 planned outage included in the 2002/03 test period. In Gulf's last
22 rate case, most of the \$241,000 was budgeted for work on the turbine
23 system and the heat recovery steam generator. In the current test year,
24 the planned outage scope includes work on the gas supply system,
25 generator system, cooling towers, condenser/hotwell system, boiler feed

1 pumps, air and gas system, combustion turbine system, heat recovery
2 steam generator valves and piping, and the control system.

3
4 The scope of the planned outage at Smith Unit 3 in 2012 has been
5 developed based upon the manufacturer's recommended maintenance
6 schedule, the expertise of the capable people at Gulf who operate and
7 maintain Smith Unit 3 and Gulf's Production Management Team. This
8 scope of work is necessary to preserve the reliability and performance of
9 this valuable generating asset.

10
11 Q. Please discuss the \$845,000 O&M expenses over the benchmark for
12 maintenance related to the Smith Unit 3.

13 A. There are three major systems at Smith Unit 3 that are causing
14 maintenance to exceed the O&M benchmark. Those three systems are
15 the feedwater system, the combustion turbine system and the heat
16 recovery steam generator system.

17
18 The feedwater system includes a vast amount of transport piping, drains
19 and valves. All of this is insulated and much of the piping is elevated
20 above ground level. We have been steadily replacing components as
21 needed to prevent reliability issues. The majority of the work requires
22 scaffold and insulation removal and reinstallation. Components are being
23 changed from carbon steel to stainless steel to increase longevity while
24 helping to control future costs. This work represents \$130,000 of the
25 benchmark variance.

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The combustion turbine system also contains piping, drains, and valves. Additionally, multiple platforms, enclosures, exposed motor and electrical boxes are being replaced. Where possible, components are being replaced with stainless steel to increase longevity while helping to control future costs. This work represents \$370,000 of the benchmark variance.

The heat recovery steam generator requires the same type of ongoing maintenance as the feedwater and combustion turbine systems. Piping, valves, platforms, and handrails are commonly replaced. Various paint coatings are also being applied to assess their impact on longevity and the future cost control. This work represents \$670,000 of the benchmark variance.

Other maintenance that will be performed on Smith Unit 3 will increase at less than the O&M benchmark. Collectively, these expenses are \$325,000 below the benchmark.

Q. Please discuss the \$593,000 of Production Other O&M expenses related to the gas procurement program.

A. Smith Unit 3 was Gulf's first large scale gas asset, and in the prior rate case no dollars were requested to support the gas program. The \$593,000 of Production Other O&M expenses for the gas procurement program covers procuring gas, managing the transportation contract, and managing the hedging program for Smith Unit 3. In addition, these dollars

1 include the gas procurement program for Gulf's three PPAs totaling over
2 1,350 MW.

3

4 Q. Please justify the \$770,000 of 2012 Production Other O&M expenses
5 associated with the Perdido landfill gas to energy facility that were not
6 included in Gulf's last test year.

7 A. As I discussed earlier, in July 2008, Escambia County, Florida issued an
8 RFP for the sale of landfill gas from its Perdido landfill. Landfill gas is
9 defined as a renewable energy resource pursuant to section 366.91(2),
10 Florida Statutes. The Florida Legislature has repeatedly stated that it is in
11 the public interest to promote the development of renewable energy
12 resources in the state. They recognized that renewable energy reduces
13 dependence on natural gas, minimizes volatility of fuel costs, encourages
14 investment in the state and improves environmental conditions. To
15 address these legislative concerns, Gulf began to evaluate the possibility
16 of developing a project to utilize the gas being offered within this RFP.

17

18 In order to minimize or negate any impact to our customers, Gulf used the
19 RSOC as the basis for determining the price Gulf would be willing to pay
20 the County for its gas. Using the established avoided cost concepts, Gulf
21 submitted a bid for the procurement of the landfill gas being offered under
22 this RFP.

23

24

25

1 The O&M dollars used in this evaluation were part of the overall
2 assessment of avoided cost for the Perdido project. As a result, the cost
3 is prudent, necessary and reflective of expenses going forward.
4

5 Q. Please justify Gulf's \$1,476,000 Production Other Power Supply O&M
6 benchmark variance.

7 A. Expenses in Production Other Power Supply that exceed the benchmark
8 are related to the following:

9	• Energy Management Systems	\$486,000
10	• Resource Planning	79,000
11	• Fleet Operations and Trading	700,000
12	• Financial and Contract Services	<u>277,000</u>
13	Production Other Power Supply	<u>\$1,542,000</u>
14		

15 Q. Please justify the \$486,000 of 2012 Production Other Power Supply O&M
16 expenses associated with the Energy Management Systems that are over
17 the Benchmark calculation.

18 A. Energy Management System budget increases over the last 10 years are
19 a reflection of expanding industry regulations as well as increasing
20 complexities in managing the bulk electric system. Bulk Power Operations
21 (BPO) is responsible for ensuring a reliable and economic operation of the
22 bulk electric system and as such provides direct benefit to Gulf. The
23 Sarbanes-Oxley Act of 2002 and the Energy Policy Act of 2005 (along with
24 the resulting establishment of the Electric Reliability Organization and
25 mandatory reliability standards) have resulted in additional processes,

1 procedures, application features, new tools, and resources to maintain
2 and demonstrate compliance with the industry regulations. In addition to
3 the regulatory requirements, new business requirements related to power
4 purchase agreements at Plant Dahlberg, Coral Baconton, and Central
5 Alabama that directly benefit Gulf Power have been implemented.

6
7 The additional complexity related to the bulk electric system stems from a
8 need to continuously improve our ability to collect and manage
9 supervisory control and data acquisition assets in compliance with
10 regulatory requirements and support business requirements. Over the
11 past 10 years, BPO and Energy Management Systems (EMS) have
12 continued to enhance current systems and implemented new systems,
13 such as operator training simulators, N-1 contingency analysis, situational
14 awareness, and transient stability analysis. Implementation of these
15 technologies has a direct benefit to Gulf Power associated with operating
16 the transmission system at an increased level of reliability due to the
17 advancements of these technologies. The operator training simulators are
18 a benefit because they afford our Power Systems Coordinators (PSCs)
19 the opportunity to participate in training that provides Continuing
20 Education Hours, thus helping the PSCs maintain their NERC
21 Certification. Without such technology and training improvements, Gulf's
22 ability to manage its increasingly complex bulk electric system would
23 decline, system reliability would deteriorate and customer satisfaction
24 would drop. As a direct result of these additional technologies and
25 business requirements, BPO and EMS have increased their need for

1 resources and have increased their reliance on application/tools to
2 increase efficiency and reduce risk of errors.

3
4 Q. Please justify the \$79,000 of 2012 Production Other Power Supply O&M
5 expenses associated with the Resource Planning that are over the
6 Benchmark calculation.

7 A. The Resource Planning Organization is responsible for developing
8 generation mix studies, Integrated Resource Planning, environmental
9 compliance evaluations and supporting RFP development for supplying
10 generation resources to meet our retail customers' growing demands. In
11 addition, they support the eventual development of contracts (PPAs) and
12 contract negotiations that develop as a result of an RFP. The complexities
13 associated with planning at a time with so much uncertainty related to
14 potential environmental legislation have also resulted in additional
15 expenses. Additional personnel are needed to support the overall
16 planning process, and the labor, overhead, and expenses of these new
17 employees are being included in Gulf's O&M expenses.

18
19 The prior test year budget for planning was \$124,000, resulting in a
20 benchmark of \$155,000. In the 2012 test year Gulf has budgeted
21 \$234,000 for Resource Planning. This results in a variance of \$79,000.
22 The O&M dollars budgeted for generation planning are prudent and
23 necessary to insure the Company has adequate generation to meet our
24 customers' needs.

25

1 Q. Please justify the \$700,000 of 2012 Production Other Power Supply O&M
2 expenses associated with the Fleet Operations and Trading that are over
3 the Benchmark calculation.

4 A. Fleet Operations and Trading (FOT) is responsible for ensuring a reliable
5 and economic generation supply for the Pool. Budget increases in FOT
6 over the last 10 years reflect the ever-increasing complexity in managing
7 the generation Pool and growing compliance requirements.

8

9 The additional complexity related to the Pool stems from an increased
10 reliance on third-party generation and contract implementation for those
11 resources, as well as managing new challenges in operations. FOT has
12 implemented numerous new contracts including Gulf's PPAs for facilities
13 located at Plant Dahlberg, Coral Baconton, and Central Alabama.

14

15 With respect to regulatory and compliance requirements, FOT
16 responsibilities have increased in areas such as NERC requirements,
17 energy auction, market based rates and generation dominance analysis.
18 As a direct result of these additional complexities, FOT has increased its
19 reliance on application/tools to increase efficiency and reduce the risk of
20 errors.

21

22 Q. Please justify the \$277,000 of 2012 Production Other Power Supply O&M
23 expenses associated with the Financial and Contract Services that are
24 over the Benchmark calculation.

25

1 A. Financial and Contract Services manages the billings for capacity and
2 energy purchases (PPAs), which ultimately provide energy to our retail
3 customers. This includes Gulf's PPAs for power from the facilities located
4 at Plant Dahlberg, Coral Baconton and Central Alabama. The costs
5 associated with these contracts are incremental to our prior rate case, and
6 each of these contracts provides value to our retail customers. The other
7 services provided by the Financial and Contract Services group include
8 (a) wholesale fuel and emission reconciliations which document the
9 wholesale portions of these costs to ensure retail customers do not
10 subsidize the wholesale customers, (b) administration of the Intercompany
11 Interchange Contract, (c) and Pool Billing. The increase in expenses
12 associated with the Financial and Contract Services group are a direct
13 result of additional workload associated with an increase in the number
14 and complexities of contracts used to support Gulf's retail customers. The
15 benchmark variance of \$277,000 is prudent and necessary to effectively
16 support Gulf's PPAs.

17

18

19

V. 2012 PRODUCTION WORKFORCE

20

21 Q. Mr. Grove, at the end of 2010, Gulf had 342 full time equivalent (FTE)
22 employees in the Production function. In the test year Gulf has budgeted
23 labor costs equivalent to 394 FTE employees in Production. Why does
24 Gulf need to add 52 FTEs in Production by 2012?

25

1 A. At the end of 2010, three years of holding the line on Production O&M
2 expenses to help avoid asking for a base rate increase had taken a toll on
3 Gulf's Production labor force. It was clear that it was necessary to hire
4 additional employees in the Production function to be able to perform not
5 only baseline maintenance, but also a broader scope of unit outages. This
6 increased personnel requirement was reflected in the 2011 O&M budget
7 cycle.

8

9 Q. What is the status of Gulf filling the 52 FTE positions budgeted for 2012
10 that were vacant at the end of 2010?

11 A. We are in the process of filling the positions with the exception of the
12 positions at Plant Scholz. We plan to have the majority of the positions
13 filled by the end of 2011. I will discuss the status of the positions as they
14 relate to the Power Generation Office, Plant Crist, Plant Smith and Plant
15 Scholz.

16

17 Q. Please address the projected additional workforce at the Power
18 Generation Office.

19 A. As of December 2010, there was one vacant position, the Renewable
20 Energy Manager, at the Power Generation Office. The previous
21 incumbent took a position at Alabama Power at the end of 2010, and Gulf
22 hired a replacement in March 2011. I have previously justified this
23 incremental position in the O&M benchmark justification section.

24

25

1 Q. Please address the projected additional workforce at Plant Crist.

2 A. At Plant Crist, there were 15 vacancies at the end of 2010 that we are in
3 the process of filling. These 15 vacancies, as well as five new positions at
4 Plant Crist, are set forth by position and budget type on Exhibit RWG-1,
5 Schedule 12. Six of the positions at Plant Crist will either be charged to
6 capital projects or the Environmental Cost Recovery Clause. Also note
7 that five of the positions are for Utilitypersons. These are entry level
8 positions that form the pool for future mechanics, electricians, or
9 operators. It is our intent to fill all 20 of these positions. A complete work
10 force capable of performing all necessary operation and maintenance at
11 this site is in the best interest of Gulf's customers.

12

13 Q. Please address the projected additional workforce at Plant Smith.

14 A. At Plant Smith, there were 23 vacancies at the end of 2010 that are
15 included in Gulf's 2012 O&M budget. These 23 vacancies are set forth by
16 position and budget type on Exhibit RWG-1, Schedule 12. Gulf has filled
17 or is in the process of filling all except 2 of these 23 vacancies. There are
18 two positions that are open. An Instrument and Control (I&C) Specialist
19 position is currently on hold pending resolution of uncertainty regarding
20 environmental regulation. This open position is included in Gulf's 2012
21 O&M budget. The second open position is for an Operations Team
22 Leader, and that position is being used as a developmental position. That
23 position will be filled by the end of 2011. Eight of the 23 positions are for
24 entry level Utilitypersons. These are entry level positions that form the
25 pool for future mechanics, electricians, or operators. With the exception of

1 the I&C Specialist, all other positions at Plant Smith that were vacant at
2 year end 2010 are scheduled to be filled.

3

4 Q. Please address the vacancies at Plant Scholz at year end 2010 and
5 whether those positions are likely to be filled by 2012.

6 A. At year end 2010 there were 26 filled positions at Plant Scholz, and in
7 2012 Gulf has budgeted a full complement or 34 positions at Plant Scholz.
8 The eight vacancies at Plant Scholz are set forth by position and budget
9 type on Exhibit RWG-1, Schedule 12.

10

11 Due to current uncertainty associated with environmental regulations, Gulf
12 has not begun to fill these eight vacant positions at Plant Scholz. Contract
13 labor and temporary reassignments from Plant Smith have been used to
14 supplement the workforce at Plant Scholz. Although Gulf has chosen not
15 to fill those positions until there is more clarity about prospective
16 environmental regulations, the labor expenses included in the 2012 test
17 year are appropriate for the ongoing operation of this plant.

18

19

20

VI. SUMMARY

21

22 Q. Please summarize your testimony.

23 A. Gulf maintains and operates a diverse set of generation resources
24 designed to serve our customers economically and reliably. Since our last
25 rate case, Gulf has made sound generation planning decisions that were

1 clearly in the best interest of our customers. In the case of the Central
2 Alabama PPA, the Company was able to defer potentially large
3 construction expenditures with a solid contract that is expected to provide
4 over \$500 million (NPV) in savings to our customers.

5
6 Gulf's Production operation continues to provide low cost, reliable electric
7 service to our customers to meet their increasing demand for electricity.
8 The reliability of Gulf's generating units and low EFOR are clear
9 indications that Gulf has executed an effective maintenance program that
10 continues to provide our customers with reliable service. Gulf is
11 committed to maintaining our generating facilities through the effective use
12 of resources that focuses not only on reliability but also efficiency.

13
14 Gulf's entire Production, Other Production, and Other Power Supply
15 investment should be included in Gulf's rate base. This property is used
16 and useful in providing service to Gulf's customers. Moreover, the
17 investment has been reasonably and prudently incurred and managed.

18
19 Gulf's Production capital additions and O&M expenses are carefully
20 controlled and utilized in a manner to ensure high availability and low
21 EFOR. The \$110,888,000 budgeted for Power Production O&M and
22 \$43,738,000 budgeted for Capital Additions in the test year are
23 reasonable, prudent, and necessary expenditures and should be included
24 in establishing Gulf's base rates.

25

1 Q. Does this conclude your testimony?

2 A. Yes, it does.

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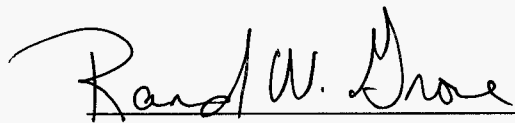
25

AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)


Docket No. 110138-EI

Before me the undersigned authority, personally appeared Raymond W. Grove, who being first duly sworn, deposes, and says that he is the Manager of Power Generation Services for Gulf Power Company, a Florida corporation, and that the foregoing is true and correct to the best of his knowledge, information, and belief. He is personally known to me.

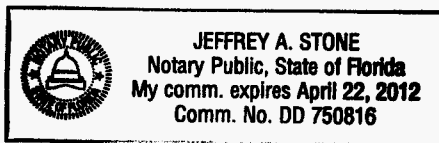


Raymond W. Grove
Manager of Power Generation Services

Sworn to and subscribed before me this 30th day of June, 2011.



Notary Public, State of Florida at Large
Commission No. DD 750816
My Commission Expires April 22, 2012



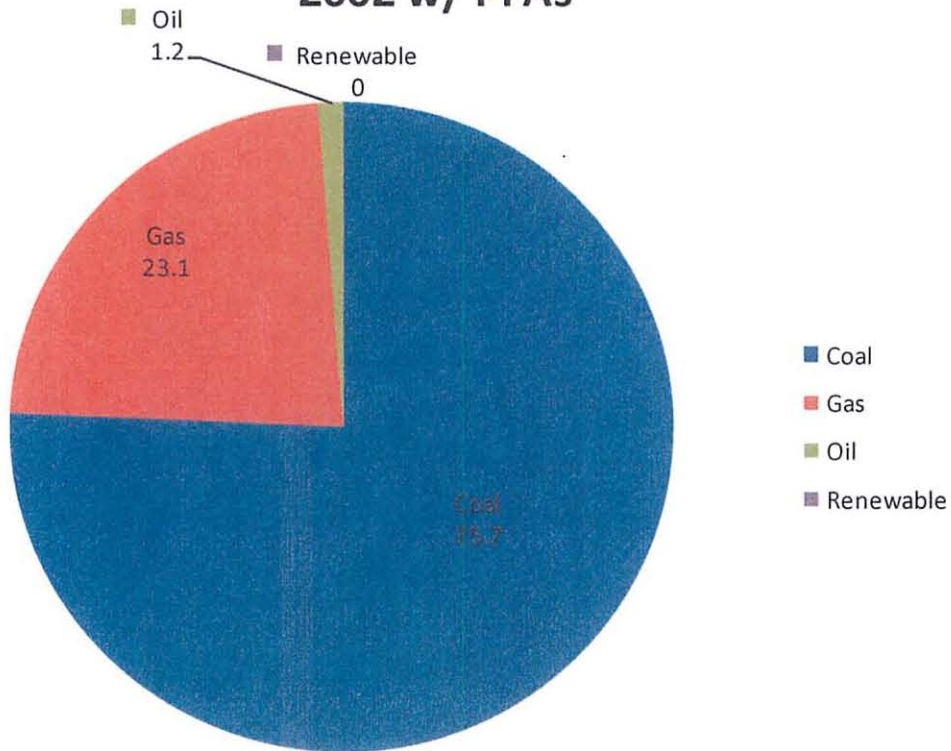
Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. _____(RWG-1)
Schedule 1

Responsibility for
Minimum Filing Requirements

<u>Schedule</u>	<u>Title</u>
B-11	Capital Additions and Retirements
B-12	Net Production Plant Additions
C-6	Budgeted Versus Actual Operating Revenues and Expenses
C-8	Detail of Changes in Expenses
C-9	Five Year Analysis – Change in Cost
C-34	Statistical Information
C-41	O&M Benchmark Variance by Function
F-5	Forecasting Models
F-8	Assumptions

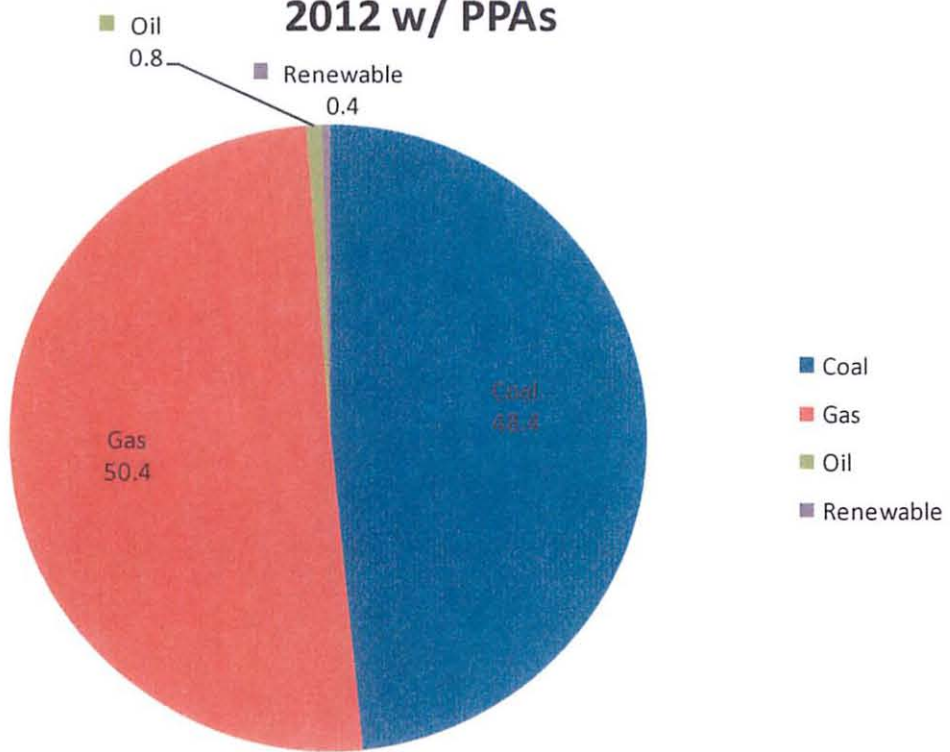
Total Capacity 2,625 MW

**Net Capability by Type
2002 w/ PPAs**



Total Capacity 3,852 MW

**Net Capability by Type
2012 w/ PPAs**



Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. _____ (RWG-1)
Schedule 3

Owned and Operated or Jointly Owned Generating Capacity

Unit Description	Net Generation (MW)	Commercial Operation Date
Crist Unit 4	75	July 1959
Crist Unit 5	75	June 1961
Crist Unit 6	291	May 1970
Crist Unit 7	465	Aug 1973
Smith Unit 1	162	June 1965
Smith Unit 2	195	June 1967
Smith Unit 3	556	Apr 2002
Smith Unit A	32	May 1971
Scholz Unit 1	46	Mar 1953
Scholz Unit 2	46	Oct 1953
Pea Ridge Unit 1	4	May 1998
Pea Ridge Unit 2	4	May 1998
Pea Ridge Unit 3	4	May 1998
Perdido Unit 1	1.6	Oct 2010
Perdido Unit 2	1.6	Oct 2010
Daniel Unit 1	255	Sep 1977
Daniel Unit 2	255	Jun 1981

Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. _____ (RWG-1)
Schedule 4

Power Purchase Agreements

<u>Agreement</u>	<u>Technology</u>	<u>Fuel</u>	<u>MW</u>	<u>Start Date</u>	<u>End Date</u>
Bay County	Steam	MSW	11	July 2008	July 2014
Coral Baconton	CT	Gas/Oil	196	June 2009	May 2014
Dahlberg	CT	Gas/Oil	292	June 2009	May 2014
Central Ala.	CC	Gas	885	Nov 2009	May 2023

2011 Production Capital Additions Budget
(\$000)

Description	2011	Description	2011
PERDIDO LANDFILL GAS ENERGY	120	CRIST U6 SW COOLER REPLACEMENT	500
CRIST UNIT 7 HRA SIDEWALLS HEADER TO HEADER	1,000	CRIST UNIT 6 REHEAT AND SUPERHEAT DAMPERS	840
CRIST UNIT 7 REHEATER	2,000	CRIST 6&7 IGNITER AIR SYSTEM	250
CRIST UNIT 6 PRIMARY SUPERHEATER	2,500	CRIST 7C AIR COMPRESSOR	135
CRIST UNIT 6 HRA SIDEWALLS HEADER TO HEADER	3,450	CRIST CYBER SECURITY	400
CRIST 6 STATIC EXCITER AND VOLTAGE REGULATOR	2,200	CRIST HYDRO-MIXERS	1,000
CRIST 7 STATIC EXCITER & VOLTAGE REGULATOR	1,700	CRIST - UNIT 6 REPLACE REHEATER	3,500
ENVIR - WASTE - CRIST FLY ASH LANDFILL STORAGE CELL C	350	CRIST 6&7 BOILER AWARE PROGRAM	80
CRIST U6 REPL BREAKERS CABLE & SWITCHES PER ARC FLA:	100	CRIST COMMON -CONVEYOR BELTS REPLACEMENT	150
CRIST 5 BOTTOM ASH DOGHOUSE AND SLUICE GATE	138	CRIST 4-7 DEMINERALIZER NEUTRALIZATION BASIN PUMP	210
CRIST 6 - 6A 4160 VOLT BREAKERS	400	CRIST UNIT 6 HOT REHEAT PIPING	2,000
CRIST 6 -6B 4160 VOLT BREAKERS	375	SCHOLZ-MISC. STEAM PLANT ADDITION	120
CRIST 6 REHEAT SPRAY SYSTEM	250	SMITH - MISC. STEAM PLANT ADDITIO	425
CRIST 4-7 NITROGEN CAPPING SYSTEM	210	SMITH-U3 TURBINE CONTROLS REPLACEMENT	1,500
CRIST UNIT 6 TURBINE OIL COOLER	290	SMITH UNIT 1 VACUUM PUMPS	250
CRIST 6 FINISHING SUPERHEAT HEADER	1,150	SMITH-U1 FLY ASH AND SOOTBLOWER CONTROLS	200
CRIST 7 REPLACE FINISHING SUPERHEAT OUTLET HEADER	1,500	SMITH UNIT 1 REPLACE RETRACTS ON BOILERS	350
CRIST FUEL HANDLING CRANE	7,328	SMITH UNIT #2 EXPANSION JOINT REPLACEMENT	300
CRIST - MINOR MISC ITEMS	500	SMITH 3 MISC REPLACEMENTS	1,200
CRIST 7 REHEAT OUTLET HEADER REPLACEMENT	1,000	SMITH-BUILD NEW WAREHOUSE FOR INVENTORY	2,250
CRIST 6 LOWER ECONOMIZER AND HEADER REPLACEMENT	2,450	SMITH-CYBER SECURITY	167
CRIST 5 - PULVERIZED COAL PIPING	1,500	ENVIR - WASTE-SMITH 1&2 - CAP ASH LANDFILL CELLS	200
CRIST 5 GENERATOR STATOR REWIND	3,500	SMITH 3 CC AIR HANDLING UNIT	85
CRIST 6 REHEAT HEADER	1,100	SMITH - U3 CORROSION PROJECT	1,000
CRIST 4 & 5 REPLACE INTAKE SCREENS	500	DANIEL-MISC. STEAM PLANT ADDITIONS &	213
CRIST 6 FD FAN OUTLET POSITIONER REPLACEMENTS	138	DANIEL 2 ACE TWIP C05348 MS PE 2185	201
CRIST 6 CONTROL UPGRADE	385	DANIEL 2 HP/IP TURBINE UPGRADE	5,228
CRIST 5 - L-0 TURBINE BLADE	566	DANIEL 1&2 CONVEYOR BELT	38
CRIST 5 - 16-17-AND 18 STAGE TURBINE BLADE	300	DANIEL 2 CAPITAL VALVE REPLACEMENTS	52
CRIST 6 GRAPHICS UPGRADES	330	DANIEL 1&2 CONTROL ROOM A/C SYSTEMS	100
CRIST 7 OVATION 400 CONTROLLERS REPLACEMENT	100	DANIEL 2 HOT AIR HEATER BASKETS	376
CRIST 4, 5, 6 & 7 BATTERY BANK	250	DANIEL 1&2 FIRE PROTECTION CONTROLS	38
CRIST 4&5 BATTERY BANK	250	DANIEL 1&2 CONVEYOR DIRECT DRIVE GEARBOXES	110
CRIST - MISC ADDITIONS	500	DANIEL 1&2 AIR COMPRESSORS	140
CRIST 6 BATTERY BANK	250	DANIEL 2 INLET VANES ON PA FANS	186
CRIST CONDENSATE MAKEUP PIPING	300	DANIEL 2 EXPANSION JOINTS C00435 C00437 C01716	130
CRIST U7 REPL BREAKERS CABLE & SWITCHES PER ARC FLA	175	DANIEL 1 GSU TRANSFORMER	5,005
CRIST U5 REPL BREAKERS CABLE & SWITHCES FOR ARC FLA	250		68,334

**2012 Production Capital Additions Budget
(\$000)**

Description	2012	Description	2012
PERDIDO LANDFILL GAS ENERGY	120	CRIST - UPGRADE PLANT RADIO SYSTEM	400
CRIST 7 BOTTOM ASH PIT TRASH HOPPER	150	CRIST 7 BOTTOM ASH HOPPER	3,000
CRIST UNIT 7 HRA SIDEWALLS HEADER TO HEADER	2,000	ENVIR-WASTE- CRIST-FLY ASH LANDFILL STORAGE CELL DE	500
CRIST UNIT 7 REHEATER	3,000	CRIST UNIT 6 HOT REHEAT PIPING	2,000
CRIST 6 STATIC EXCITER AND VOLTAGE REGULATOR	2,000	CRIST 5 ID FAN MONORAIL	250
CRIST 7 STATIC EXCITER & VOLTAGE REGULATOR	3,000	SCHOLZ-MISC. STEAM PLANT ADDITION	120
CRIST U6 REPL BREAKERS CABLE & SWITCHES PER ARC FLA:	200	SMITH - MISC. STEAM PLANT ADDITIO	500
CRIST 4 STEAM COOLED FRONT WALL REPLACEMENT	300	SMITH-U2 TURBINE CONTROLS REPLACEMENT	900
CRIST 5 STEAM COOLED FRONT WALL REPLACEMENT	300	SMITH UNIT 2-REPLACE DUCTWORK/EXPANSION JOINTS	350
CRIST 7 PYRITE LINES	144	SMITH 3 REPLACE INLINE AIR FILTERS	364
CRIST 7 HOT END AIR HEATER BASKETS	1,208	SMITH 1&2 - REPLACE #5 HP HEATER	500
CRIST 4&5 SSS TRANSFORMER REPLACEMENT	50	SMITH UNIT #2 EXPANSION JOINT REPLACEMENT	300
CRIST 6 FINISHING SUPERHEAT HEADER	1,150	SMITH 3 MISC REPLACEMENTS	1,200
CRIST 7 REPLACE FINISHING SUPERHEAT OUTLET HEADER	1,500	SMITH-CYBER SECURITY	86
CRIST - MINOR MISC ITEMS	500	ENVIR - WASTE-SMITH 1&2 - CAP ASH LANDFILL CELLS	200
CRIST 7 PYRITE HOPPERS	180	SMITH PLANT-INSTALL NEW PLANT EMBANKMENTS	475
CRIST 7 FLY ASH CONTROLS	300	SMITH - U3 CORROSION PROJECT	1,000
CRIST 7 REHEAT OUTLET HEADER REPLACEMENT	1,000	DANIEL-MISC. STEAM PLANT ADDITIONS &	863
CRIST 6 - PULVERIZED COAL PIPING	3,000	DANIEL 1 VALVE REPLACEMENT C05249 MS PE 2154	53
CRIST 7 - MAIN TURBINE OIL COOLERS	600	DANIEL FIRE PUMP DIESEL	26
CRIST 7 OVATION 400 CONTROLLERS REPLACEMENT	3,750	DANIEL 1&2 CONVEYOR BELT	28
CRIST 7 UPS REPLACEMENT	88	DANIEL 2 HOT AIR HEATER BASKETS	258
CRIST - MISC ADDITIONS	500	DANIEL I&2 CONVEYOR DIRECT DRIVE GEARBOXES	70
CRIST CONDENSATE MAKEUP PIPING	300	DANIEL 1&2 AIR COMPRESSORS	140
CRIST UNIT 7 PARTICIAN WALL HEADER TO HEADER	1,400	DANIEL 1 INLET VANERS ON PA FANS	185
CRIST U6 SSS TRANSFORMER TIE BREAKER	850	DANIEL UNIT 1 & 2 LAB ANALYSIS EQIP	250
CRIST U4 REPL BREAKERS CABLE & SWITCHES FOR ARC FLA	75	DANIEL 1 EXPANSION JOINTS C01693	200
CRIST U6 SW COOLER REPLACEMENT	1,000	DANIEL 1 DCS UPGRADE	260
CRIST UNIT 6 NO. 6 HIGH PRESSURE FEEDWATER HEATER	500	DANIEL 1 BOILER FEED PUMPS	95
			43,738

Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No.____ (RWG-1)
Schedule 6

2012 Production O&M Budget
(\$000's)

<u>Description</u>	2012 Test Year <u>Amount</u>
Steam Production	98,574
Other Production	7,801
Other Power Supply	<u>4,513</u>
Total Production	<u>110,888</u>

Excludes Environmental Cost Recovery O&M and Plant Scherer

Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. _____ (RWG-1)
Schedule 7

**Gulf Power Company
Production O&M Expenses
(\$000)**

	<u>Actual 2006</u>	<u>Actual 2007</u>	<u>Actual 2008</u>	<u>Actual 2009</u>	<u>Actual 2010</u>
Baseline Materials	7,362	7,906	7,288	6,376	7,762
Baseline Other	38,359	37,832	40,727	37,820	46,923
Baseline Labor	<u>27,146</u>	<u>26,347</u>	<u>27,328</u>	<u>25,769</u>	<u>27,237</u>
Total Baseline	72,867	72,085	75,343	69,965	81,922
Total Outages	6,342	10,260	13,014	14,183	10,871
Special Projects	301	58	67	61	96
Total Actual/Budget	<u>79,510</u>	<u>82,403</u>	<u>88,424</u>	<u>84,209</u>	<u>92,889</u>

Average	85,487
----------------	---------------

	<u>Budget 2011</u>	<u>Budget 2012</u>	<u>Budget 2013</u>	<u>Budget 2014</u>	<u>Budget 2015</u>
Baseline Materials	9,526	8,734	10,055	9,821	10,326
Baseline Other	47,485	47,544	49,430	51,036	55,973
Baseline Labor	<u>30,077</u>	<u>30,828</u>	<u>31,614</u>	<u>32,480</u>	<u>33,371</u>
Total Baseline	87,088	87,106	91,099	93,337	99,670
Total Outages	22,960	23,149	18,886	20,195	20,615
Special Projects	387	633	314	355	322
Total Actual/Budget	<u>110,435</u>	<u>110,888</u>	<u>110,299</u>	<u>113,887</u>	<u>120,607</u>

Average	113,223
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Excludes Environmental Cost Recovery O&M and Plant Scherer

Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. _____ (RWG-1)
Schedule 8

Owned and Operated or Jointly Owned Generating Capacity
(Age of generating fleet in 2002 compared to 2012)

<u>UNIT</u>	<u>MW</u>	<u>Operation Date</u>	<u>Age At June 2002</u>	<u>Age At January 2012</u>	<u>Projected Retirement Date</u>	<u>Remaining Useful Life</u>
Crist Unit 4	75	7/1/1959	43	53	Dec-24	12
Crist Unit 5	75	6/1/1961	42	53	Dec-26	14
Crist Unit 6	291	5/1/1970	32	42	Dec-35	23
Crist Unit 7	465	8/1/1973	29	39	Dec-38	26
Smith Unit 1	162	6/1/1965	37	47	Dec-30	18
Smith Unit 2	195	6/1/1967	35	45	Dec-32	20
Smith Unit 3	556	4/1/2002	0	10	Dec-42	30
Smith Unit A	32	5/1/1971	31	41	Dec-27	15
Scholz Unit 1	46	3/1/1953	49	59	Note	
Scholz Unit 2	46	10/1/1953	49	59	Note	
Pea Ridge Unit 1	4	5/1/1998	4	14	Dec-18	6
Pea Ridge Unit 2	4	5/1/1998	4	14	Dec-18	6
Pea Ridge Unit 3	4	5/1/1998	4	14	Dec-18	6
Perdido Unit 1	1.6	10/1/2010	0	2	Dec-29	17
Perdido Unit 2	1.6	10/1/2010	0	2	Dec-29	17
Daniel Unit 1	255	9/1/1977	25	35	Dec-42	30
Daniel Unit 2	255	6/1/1981	21	31	Dec-46	34

Note - Gulf has not included a retirement date for Plant Scholz in Gulf's Ten-Year-Site plan. Gulf has not made a firm decision or commitment to retire any of these units on the projected retirement dates shown.

Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. ____ (RWG-1)
Schedule 9

**Owned and Operated or Jointly Owned Generating Capacity
2002 Ten Year Site Plan Compared to 2012 Ten Year Site Plan**

UNIT	MW	Operation Date	2002 TYSP Retirement Date	Forecast Life In 2002	2012 TYSP Retirement Date	Forecast Life In 2012
Crist Unit 4	75	7/1/1959	Dec 2014	55	Dec-24	65
Crist Unit 5	75	6/1/1961	Dec 2016	55	Dec-26	65
Crist Unit 6	291	5/1/1970	Dec 2015	45	Dec-35	65
Crist Unit 7	465	8/1/1973	Dec 2018	45	Dec-38	65
Smith Unit 1	162	6/1/1965	Dec 2015	50	Dec-30	65
Smith Unit 2	195	6/1/1967	Dec 2017	50	Dec-32	65
Smith Unit 3	556	4/1/2002	Dec 2027	25	Dec-42	40
Smith Unit A	32	5/1/1971	Dec 2006	35	Dec-27	55
Scholz Unit 1	46	3/1/1953	Dec 2011	58	Note	
Scholz Unit 2	46	10/1/1953	Dec 2011	58	Note	
Pea Ridge Unit 1	4	5/1/1998	Dec 2018	20	Dec-18	20
Pea Ridge Unit 2	4	5/1/1998	Dec 2018	20	Dec-18	20
Pea Ridge Unit 3	4	5/1/1998	Dec 2018	20	Dec-18	20
Perdido Unit 1	1.6	10/1/2010	N/A	N/A	Dec-29	20
Perdido Unit 2	1.6	10/1/2010	N/A	N/A	Dec-29	20
Daniel Unit 1	255	9/1/1977	Dec 2022	45	Dec-42	65
Daniel Unit 2	255	6/1/1981	Dec 2026	45	Dec-46	65

Note - Gulf has not included a retirement date for Plant Scholz in Gulf's Ten-Year-Site plan. Gulf has not made a firm decision or commitment to retire any of these units on the projected retirement dates shown.

Florida Public Service Commission
Docket No. 110138-EI
GULF POWER COMPANY
Witness: R. W. Grove
Exhibit No. _____ (RWG-1)
Schedule 10

2012 Production O&M Benchmark Comparison
(\$000)

<u>Description</u>	2002/2003		2012 Test Year	
	Base Year	Test Year	Production	
	<u>Allowed</u>	<u>Benchmark</u>	<u>O&M Budget</u>	<u>Variance</u>
Steam Production	70,695	88,609	98,574	9,965
Other Production	3,878	4,861	7,801	2,940
Other Power Supply	<u>2,423</u>	<u>3,037</u>	<u>4,513</u>	<u>1,476</u>
Total Production	<u>76,996</u>	<u>96,507</u>	<u>110,888</u>	<u>14,381</u>

**Gulf Power Company
Planned Outages 2011 - 2015
(\$000's)**

(excludes labor, ECRC and Plant Scherer)

	2011	2012	2013	2014	2015
Crist Plant Unit 4	-	-	2,548	2,703	-
Crist Plant Unit 5	5,762	-	2,205	2,950	-
Crist Plant Unit 6	4,738	6,966	2,814	-	4,490
Crist Plant Unit 7	4,412	6,120	-	3,515	4,493
Crist Common	317	322	309	207	212
Scholz Plant Unit 1	-	-	-	825	250
Scholz Plant Unit 2	-	-	-	-	1,075
Scholz Common	39	39	40	25	26
Smith Plant Unit 1	3,015	-	2,535	-	4,477
Smith Plant Unit 2	-	2,269	-	4,916	-
Smith CT	-	-	125	-	-
Smith CC	1,037	1,133	1,891	1,138	1,640
Smith Common	129	153	145	75	346
Plant Daniel	3,511	6,147	6,274	3,522	3,319
Perdido	-	-	-	319	287
Total	22,960	23,149	18,886	20,195	20,615
Production Steam	21,923	22,016	16,870	18,738	18,688
5 year average	19,647				
Production Other	1,037	1,133	2,016	1,457	1,927
5 year average	1,514				

Gulf Power Company					
Planned Outages					
<i>Benchmark Comparison</i>					
Crist	Prior Test Year		Benchmark	Test Year	Variance
4	1,142,000	1.2534	1,432,000	-	(1,432,000)
5	1,305,000	1.2534	1,636,000	-	(1,636,000)
6	1,491,000	1.2534	1,868,000	6,966,000	5,098,000
7	1,772,000	1.2534	2,221,000	6,120,000	3,899,000
Common	791,000	1.2534	991,000	322,000	(669,000)
Scholz	Prior Test Year		Benchmark	Test Year	Variance
1	551,000	1.2534	691,000	-	(691,000)
2	201,000	1.2534	252,000	-	(252,000)
Common	34,000	1.2534	43,000	39,000	(4,000)
Smith	Prior Test Year		Benchmark	Test Year	Variance
1	2,055,000	1.2534	2,576,000	-	(2,576,000)
2	1,024,000	1.2534	1,283,000	2,269,000	986,000
CT	-	1.2534	-	-	-
CC	242,000	1.2534	303,000	1,133,000	830,000
Common	64,000	1.2534	80,000	153,000	73,000
Daniel	Prior Test Year		Benchmark	Test Year	Variance
	3,607,000	1.2534	4,521,000	6,147,000	1,626,000
Total Production	14,279,000		17,897,000	23,149,000	5,252,000
Production Steam	14,037,000		17,594,000	22,016,000	4,422,000
Production Other	242,000		303,000	1,133,000	830,000

2012 Production Workforce

Location	Position	Number	Salary Type
Power Generation Office	Renewable Energy Manager	1	O&M
Plant Crist	Welder Mecahnic	4	Capital
	Welder Mecahnic	2	O&M
	Operations Specialist	1	O&M
	Operators	-4	O&M
	I&C Specialist	3	O&M
	Planner	1	O&M
	Engineers	2	O&M
	Maintenance Specialist	2	O&M
	Administrative Assistant	1	Capital
	Chemical & Results Technicians	2	ECRC
	Team Leader - Fuel	1	O&M
Utility Persons	5	O&M	
Total Plant Crist		20	
Plant Smith	Operators	2	O&M
	Team Leader - Operations	1	O&M
	Utility Person	8	O&M
	Electrician	3	O&M
	Welder Mechanic	3	O&M
	I&C Specialist	1	O&M
	Engineers	1	O&M
	Planner	1	O&M
	C&R Technician	1	O&M
	Compliance Specialist	1	O&M
	Contract Support Specialist	1	O&M
Total Plant Smith		23	
Plant Scholz	Operations Specialist	1	O&M
	Operators	1	O&M
	Utility Person	1	O&M
	I&C Technician	1	O&M
	Welder Mechanic	2	O&M
	Maintenance Specialist	1	O&M
	Team Leader - Compliance	1	O&M
Total Plant Scholz		8	
Total Capital		5	289,000
Total ECRC		2	129,000
Total O&M		45	2,800,000