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October 12, 2016

VIA ELECTRONIC FILING

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

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

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

Dear Ms. Stauffer:

Attached is the Direct Testimony and Exhibit of Gulf Power Company Witness Michael L. Burroughs.

(Document 3 of 29)

Sincerely,

Robert L. McGee, Jr.

Robert L. McGee, Jr.
Regulatory & Pricing Manager

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 160186-EI

TESTIMONY AND EXHIBIT

OF

MICHAEL L. BURROUGHS

GULF POWER COMPANY

Before the Florida Public Service Commission
Prepared Direct Testimony of
Michael L. Burroughs
Docket No. 160186-EI
In Support of Rate Relief
Date of Filing: October 12, 2016

Q. Please state your name and business address.

A. My name is Michael Burroughs. My business address is One Energy Place, Pensacola, Florida 32520.

Q What is your position?

A. I am Vice President of Power Generation and the Senior Production Officer of Gulf Power Company (Gulf or the Company).

Q. What are your responsibilities as Vice President of Power Generation and Senior Production Officer?

A. I am responsible for Power Generation, Fuel, Supply Side Renewable Energy Development and Generation Planning. This includes responsibilities for all of Gulf's wholly owned and jointly owned plants and all power purchase agreements.

Q. Please state your prior work experience and responsibilities.

A. I was hired by Alabama Power Company in 1991 as a Junior Engineer at Plant Barry in Mobile, Alabama. I progressed through various positions until I transferred to Gulf, assuming the role of Planning and Engineering Manager at Plant Smith in Panama City, Florida in 1999. During the following seven years, I held positions of Maintenance Manager as well as Compliance and Engineering Manager. In May 2006, I was selected to be the Assistant to the Executive Vice President and Chief Production Officer of Southern Company Generation and Alabama Power Company. In September 2007, I was named Plant Manager of Yates Generating Plant in Newnan, Georgia with Georgia Power Company. I assumed my current position as Vice President of Power Generation and Senior Production Officer of Gulf in August 2010.

Q. What is your educational background?

A. I graduated with a Bachelor of Science degree in Mechanical Engineering from the University of Alabama at Birmingham in 1990.

Q. What is the purpose of your testimony?

A. My testimony discusses the continued diversification of Gulf generating resources, Gulf's resource planning process, and closure-related activities for the coal-fired assets at Plant Scholz and Plant Smith Units 1 and 2 (Smith 1 and 2). I will also establish that our safety performance has been excellent and the reliability of our generating resources continues to be among the best in the electric utility industry. I justify Production investment, Production operation and maintenance (O&M) expenses, and fuel inventory levels necessary for Gulf's continued provision of reliable generation. Lastly, I will address Gulf's Plant Held for Future Use (PHFU).

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring Exhibit MLB-1, Schedules 1 through 11. Exhibit MLB-1 was prepared under my direction and control, and the information contained therein is true and correct to the best of my knowledge and belief.

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

A. Yes. A list of MFRs I sponsor or co-sponsor is included on Exhibit MLB-1, Schedule 1. The information contained in the MFRs I sponsor or co-sponsor is true and correct to the best of my knowledge and belief.

I. GULF'S GENERATION RESOURCES

Q. Please describe Gulf's generating resources.

A. Gulf generates or purchases electricity from a diverse group of resources, including: (a) units owned solely by Gulf; (b) units owned jointly with other operating companies within the Southern electric system (SES); (c) units in the SES available to Gulf through the SES Intercompany Interchange Contract (IIC); and (d) units available to Gulf under power purchase agreements (PPAs). The fuels used for the generation resources available to Gulf include coal, oil, natural gas, landfill gas, municipal solid waste, wind and solar.

Q. Please describe the generation forecasted to be owned, operated, and used by Gulf to serve its native load customers in 2017.

A. Exhibit MLB-1, Schedule 2 provides a list of the units owned and operated or co-owned by Gulf that will be used to serve native load customers in 2017.

Q. What PPAs will Gulf have in place and use to provide electric service in 2017?

A. Exhibit MLB-1, Schedule 3 provides a list of the power purchase resources available to Gulf during 2017 and information regarding the fuels and technologies used by these generating resources. Other than the Kingfisher agreement executed in June 2016, which is currently pending before the Florida Public Service Commission (FPSC or the Commission), all of these agreements have been approved by the FPSC.

Q. Other than the environmental capital projects addressed through Gulf's Environmental Cost Recovery Clause (ECRC), what major changes have been made to Gulf's generating resources since Gulf's 2012 test year base rate proceeding?

A. There have been a number of changes in Gulf's generating resources since Gulf's 2012 test year rate proceeding. These changes include plant closures, expiration of PPAs, further diversification of our generating resources by the addition of solar and wind energy purchase agreements, and the rededication of Scherer Unit 3 to serve native load customers.

Since Gulf's 2012 test year base rate proceeding, Gulf has closed Smith 1 and 2 and Plant Scholz. These closures were precipitated by new environmental requirements. It was less costly for Gulf's customers to retire these units than to install new environmental controls to comply with these additional requirements. Gulf announced the closure of Plant Scholz on March 22, 2013, and it ultimately ceased operations on April 15, 2015. The retirement of Smith 1 and 2 was announced on February 6, 2015, and those units ultimately ceased operations on March 31, 2016.

As discussed in Gulf's last rate case, Gulf's PPAs with Coral Baconton (195 MW) and Dahlberg (299 MW) expired in May 2014. Neither contract was renewed.

Gulf has continued to look for opportunities to diversify its generating resources in a cost-effective manner. In April 2015, the FPSC approved three energy purchase agreements for the addition of 120 MW of utility-scale solar. This allowed Gulf to add solar to its generating resources for the first time. In May 2015, the FPSC approved Gulf's wind energy purchase agreement which was the first in the state of Florida. This 178 MW wind energy purchase agreement is for 20 years and provides further diversification of our generating resources. In June 2016, Gulf signed a second wind energy purchase agreement for an additional 94 MW of wind resources. This agreement has been submitted to the Commission for approval. Gulf continues to be a leader in diversifying its reliable and cost-effective generating resources, including renewable resources such as wind and solar.

Q. Please discuss the closing of Plant Scholz.

A. On February 16, 2012, the Environmental Protection Agency published final air toxics standards for coal- and oil-fired Electric Generating Units; these standards are commonly known as the Mercury and Air Toxics Standards or "MATS." Plant Scholz was the first coal-fired plant in the state of Florida, and these units contributed greatly to the growth and economic expansion of Northwest Florida. The units were used and useful in supplying the energy needs of our customers since 1953. However, based on this rule and the $26 million (NPV 2013) cost to comply with its stringent requirements, Gulf Power made the difficult decision to close Plant Scholz.

As shown in Gulf Witness Ritenour's testimony Schedule 3, Plant Scholz has $609,000 of equipment inventory remaining. This inventory was used to ensure reliable operation of these units until their retirement. All of the Gulf Plants maintain an equipment inventory of specific, critical parts in order to address equipment issues quickly and to ensure reliability while a plant is in service. Gulf focused on optimizing equipment inventory levels for many years and took appropriate measures to minimize the inventory remaining when the plant ceased generating electric power. Gulf prudently managed the equipment inventory at Plant Scholz; therefore, as addressed by Ms. Ritenour, Gulf is requesting recovery of the balance of its prudently incurred equipment inventory for Plant Scholz.

Q. Please discuss the closing of Smith 1 and 2.

A. The MATS rule also adversely affected the prospective operation of Smith 1 and 2. Gulf's analysis indicated that expenditures of $73 million (NPV 2015) would be required to install environmental controls on Smith 1 and 2 to meet the MATS requirements. Additionally, there were other potential environmental regulations that challenged the long-term viability of Smith 1 and 2. The extensive evaluation of various environmental compliance strategies resulted in the determination that it was in the best interest of Gulf's customers to retire Smith 1 and 2.

The retirement of Smith 1 and 2 means that Gulf must address remaining inventory and account for the remaining net book value associated with Smith 1 and 2. On their retirement date, Smith 1 and 2 had $2,810,000 of equipment inventory remaining. This inventory was necessary to ensure the reliable operation of these units until their retirement. As with Plant Scholz, Gulf maintained an equipment inventory of specific critical parts necessary to ensure reliability. Just as with Plant Scholz, when the possibility of closing Smith 1 and 2 became more likely, Gulf implemented the same measures to minimize stranded inventory levels. Although the success of these enhanced measures to minimize remaining equipment inventory was limited by numerous other units of similar vintage closing in the surrounding states, Gulf prudently managed the equipment inventory for Smith 1 and 2. Ms. Ritenour will address the proper ratemaking treatment of this activity.

The MATS rule and other new environmental requirements and their associated costs of compliance made the premature closure of Smith 1 and 2 the least costly alternative for Gulf's customers. The retirement of Smith 1 and 2 prior to the units being fully depreciated left Gulf with approximately $60 million in remaining net book value. These units have been used and useful in serving the needs of Gulf customers for almost 40 years and were operated and managed in an exceptional manner. Ms. Ritenour will address the proper ratemaking treatment of the remaining net book value related to Smith 1 and 2.

Q. Please discuss the rededication of Scherer Unit 3 to serve native load customers.

A. Scherer Unit 3 is a coal-fired unit with an 818 MW nameplate rating (857 MW capacity rating) that is jointly owned by Georgia Power Company and Gulf Power Company. Gulf has owned 25 percent of Scherer Unit 3 since 1987 when it was purchased to serve retail customers. Until December 31, 2015, Gulf's share of this unit was committed to temporary off-system sales to wholesale customers. As these wholesale contracts have begun to expire, the related portions of Scherer Unit 3 have been rededicated to serve native load customers. The rededication of Scherer Unit 3 is more fully discussed in the testimonies of Gulf Witnesses Deason, Burleson, and Liu.

Scherer Unit 3 is a fully controlled, coal-fired unit with Selective Catalytic Reduction, Flue Gas Desulfurization, and Baghouse equipment installed for optimum and long-term emissions compliance. Scherer Unit 3 is the most economical coal-fired unit in Gulf's generation fleet, and it uses Powder River Basin (PRB) coal as its fuel source. Lastly, the performance of Scherer Unit 3 has been outstanding, with excellent heat rate and reliability.

II. GULF'S RESOURCE PLANNING PROCESS

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

A. The resource planning process utilized by Gulf to determine its future needs is coordinated within the SES Integrated Resource Planning (IRP) process. Gulf participates in the IRP process along with the other SES retail operating companies (Alabama Power, Georgia Power, and Mississippi Power). Gulf receives a number of benefits from being part of a collaborative system planning process. Planning its capacity additions in conjunction with the SES retail operating companies allows Gulf to meet its demand and reserve requirements by utilizing the temporary surpluses of capacity available on the SES or by sharing our temporary capacity surpluses with the other retail operating companies.

This ability to coordinate capacity additions and rely temporarily on any surplus system reserves provides Gulf the opportunity to defer capacity addition decisions in order to consider (a) larger blocks of need that might represent less costly addition alternatives, (b) emerging technologies that might not have been available earlier, and (c) emerging environmental requirements that might affect unit addition choices. Another benefit to Gulf that is gained from planning a large system such as the SES is the ability to receive support of system planning personnel as the need arises without incurring the costs of a large planning staff of its own.

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

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

Q. Is this the same planning process used in Gulf's last rate case and the same process described in Gulf's Ten Year Site Plan?

A. Yes.

III. GULF'S SAFETY AND OPERATIONAL PLANT PERFORMANCE

Q. Please address the performance of Gulf's power plants.

A. Gulf uses a number of indicators to measure the performance of its units/plants. They include Equivalent Availability Factor (EAF), heat rate, Equivalent Forced Outage Rate (EFOR) (both annual and peak season), and OSHA recordable incidents. Both EAF and heat rate are tracked in the Commission's Generation Performance Incentive Factor (GPIF) program. Gulf considers heat rate and EFOR to be the primary indicators of efficiency and reliability, respectively, and uses them to evaluate the effectiveness of our planned outage and maintenance programs.

Q. What does EFOR measure?

A. EFOR measures a generating unit's inability to provide electricity when dispatched and is the primary tool used by Gulf to track unit reliability. EFOR is reported in terms of the hours when a generating unit could not deliver electricity as a percentage of all the hours during which that unit was called upon to deliver electricity.

Q. What is economic dispatch?

A. Economic dispatch is the process of dispatching units based on cost. Gulf has units committed and on line to serve existing load in addition to spinning reserves. The spinning reserves are units that are on line (running at less than full load) to support the loss of another unit in the event a unit is forced off line. Spinning reserves are a critical part of ensuring the reliability of the system. As customer demands increase, Gulf commits additional resources to serve those demands using the most economical units first. As customer demands decrease, Gulf takes the highest cost units off line first. Economic dispatch is designed to ensure the customers receive the benefits of the most economic units, that is, the units with the lowest incremental operating costs.

Q. Why is it important to ensure units are available for economic dispatch?

A. By dispatching the least-cost units first, Gulf ensures our customers receive the lowest cost resources. This is why it is critical to maintain a low EFOR, particularly in the peak months. Whenever a more economical unit is forced off line, the replacement energy will likely be more expensive, and this may impact our customers through higher fuel costs.

Q. What EFOR measures does Gulf track, and why?

A. Gulf tracks both Annual EFOR and Peak Season EFOR. Plant performance goals are set around Peak Season EFOR. Gulf historically tracked Peak Season as the period from May 1 through September 30 each year when typically the demand for electricity had been the highest. Currently, Gulf's Peak Season EFOR includes the months of January, February, June, July and August.

Q. What is a heat rate?

A. Heat rate is a measure of a unit's efficiency in converting fuel to electricity. It is a measure of the amount of fuel required to generate a kilowatt hour (kWh). The lower a unit's heat rate, the more efficiently it converts fuel to electricity.

Q. Please address why EFOR and heat rate performance are important to customers.

A. EFOR is a measure of a unit's reliability. A low EFOR ensures that the lowest cost units are available to produce electricity when called upon to meet the demands of customers. Also, maintaining a low EFOR ensures that units are available to make wholesale power sales when opportunities arise. This results in a reduced fuel cost to our native load customers since most of the gain from these sales is applied as a credit to fuel expense. As discussed earlier in my testimony, heat rate is an efficiency measure. The lower the heat rate, the less fuel consumed to generate electricity. The customer benefits by paying less in fuel costs and having lesser amounts of fuel required in inventory.

Q. What are the Annual and Peak Season EFOR for Gulf's generating units?

A. Exhibit MLB-1, Schedule 4, shows Gulf's Annual and Peak Season EFOR.

Q. How does Gulf's EFOR compare to others in the industry?

A. As shown on Exhibit MLB-1, Schedule 4, Gulf's Annual and Peak EFOR performances compare extremely favorably with peer utilities. Schedule 4, pages 1 and 2 show graphically how Gulf's actual Annual and Peak Season EFOR compare to the peer group averages from 2012 through 2014. Schedule 4, pages 3 and 4 show where Gulf's actual average performance for the same period compares to each of the peer utilities. While 2015 data for the peer industry group is not yet available, Gulf achieved, and customers benefited from, excellent EFOR rates in 2015, as shown on Schedule 4 pages 1 and 2. Gulf's excellent performance is indicative of Gulf's management and employees' commitment in serving our customers.

Q. What is the source of the data Gulf has used to compare its EFOR performance to that of other utilities?

A. Gulf obtained Annual and Peak Season EFOR data from the North American Electric Reliability Corporation (NERC).

Q. Please address Production safety at Gulf Power.

A. Safety is the first priority for every employee at Gulf Power. Safety is a core value, and it is our desire that we work every day and every job safely. The overall objective of our safety program is zero accidents.

Since 2006, Gulf's OSHA Recordable Incident Rate (RIR) has been 0.699. Gulf's Production safety performance compares favorably with the industry average RIR of 1.053. Stated differently, Gulf's RIR has been 33.65 percent better than the industry for the period 2006 through 2015. In fact, Plant Scholz experienced no recordable incidents for 14 years at the time of its retirement. For 2015, Gulf Generation's RIR of 0.00 percent was recognized as first in the Southeastern Electric Exchange with an award for Top Safety Performance in Fossil Hydro Generation.

The success we have experienced is driven by our philosophy that management at Gulf will provide an environment where we send every employee home every day as healthy as when they reported to work. This provides benefits to our employees and our customers through greater productivity.

IV. GULF'S PRODUCTION INVESTMENT

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

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

Plant personnel begin the Production budgeting process by evaluating existing plant equipment performance and maintenance costs. Where performance has degraded or is forecasted to degrade to an unacceptable level and maintenance costs are increasing, replacement of the equipment becomes necessary. As part of this evaluation process, plant personnel review the information provided by Gulf to the NERC Generation Availability Data System (GADS) to evaluate events that have triggered unplanned outages or unit de-rates. Gulf develops plans to address GADS events that continue to be problematic and makes decisions to repair or replace existing equipment. Once plant personnel have identified specific projects, the Group Managers at each plant review the proposed project list to determine which projects will be submitted to the Plant Management Team (the Plant Manager and his direct reports). The Plant Management Team meets to discuss each proposed project to determine which projects will be submitted for the next level of review to be included for consideration in the final budget.

Each plant presents its proposed list of capital projects to the Power Generation Leadership Team (the Vice President of Power Generation and his direct reports). The plant managers then meet with the Power Generation Leadership Team to prioritize all projects at the Power Generation Level to ensure the most critical projects are included in the budget submitted for final review by Gulf’s executives.

Lastly, the Production Capital Additions Budget request is presented to Gulf’s executives. The final Capital Additions Budget is ultimately approved or revised by executive management.

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

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

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

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

Q. Was Gulf's Production non-ECRC Capital Additions Budget for 2016 and 2017 developed by this budget and cost control process?
A. Yes. The projects included in Gulf's Production Capital Additions Budget were approved pursuant to this rigorous evaluation and approval process. Gulf's effective capital budgeting and cost control process has helped to ensure that our generating fleet continues to provide reliable and efficient generation. The dollars included in the test year non-ECRC Capital Additions Budget for Production are reasonable, prudent, and necessary. Gulf will continue to evaluate the benefits of additional capital projects in the future to ensure that we are able to provide our customers with reliable, cost-effective and efficient generating capacity.

Q. Mr. Burroughs, Gulf shows a total of $3.458 billion of plant-in-service investment in Gulf's 2017 rate base in this case. Are the Production assets associated with these costs used and useful in the provision of electric service to the public?
A. Yes. The Production assets, which comprise a total of $1.299 billion of plant-in-service in Gulf's 2017 rate base in this case, are used and useful in Gulf's provision of electric service.

Q. What amount is included in Gulf's 2017 rate base for Gulf's ownership in Plant Scherer Unit 3?
A. The non-ECRC Production plant-in-service amount included in Gulf's 2017 rate base for Gulf's ownership in Scherer Unit 3 that is currently not committed to off-system sales is $154,859,000. Mr. Deason, Mr. Burleson

and Ms. Liu's testimonies address the rededication of Scherer Unit 3 to serve native load customers.

Q. What were the total major non-ECRC capital additions in 2013 through 2015?

A. The major Production non-ECRC capital additions for 2013 through 2015 were $64,900,000. Please see Exhibit MLB-1, Schedule 5 for a list of the major projects included in Production non-ECRC capital additions since 2013.

Q. Were these Production capital additions reasonable and prudently incurred?

A. Yes. They were incurred pursuant to the previously discussed capital budget process. They also were subject to cost controls used to govern budgeted expenditures.

Q. What is Gulf's projected Production Capital Additions Budget for 2016 and 2017 excluding items recovered through the ECRC?

A. Gulf's Production non-ECRC Capital Additions Budget for 2016 is $82,673,000. As shown on Exhibit MLB-1, Schedule 6, there are 98 projects planned for 2016. Gulf's Production non-ECRC Capital Additions Budget for 2017 is $38,404,000. As shown in Exhibit MLB-1, Schedule 7, there are 101 capital projects in 2017.

All of these budgeted projects for both 2016 and 2017 are needed to address safety, to maintain efficiency (heat rate), or to sustain reliability.

Q. Are you supporting the generation rate base adjustment shown on Ms. Ritneour's Schedule 2 in the amount of $12,603,000 that was made to plant-in-service?

A. Yes. This adjustment reflects the 13-month average cost of changes to three projected capital projects that arose following the completion of the Company's budget on which the 2017 test year is based. These three projects and their projected cost are included in the Capital Additions Budget in Exhibit MLB -1, Schedules 6 and 7:

1. The investment in the Plant Crist canal integrity project is necessary to maintain the integrity of the canal near the coal unloading dock. This investment is included in Schedule 6 with a projected cost of $9,500,000 in 2016. The 13-month average cost is $9,500,000.
2. The investment in the Plant Daniel trestle project is necessary to replace the coal unloading trestle. This investment will be incurred over two years and is shown in Schedule 6 at a projected cost of $193,000 for 2016 and in Schedule 7 at a projected cost of $4,250,000 in 2017. The 13-month average cost is $2,734,000.
3. The investment in the Header Wall at Plant Crist is necessary to replace the front and rear wall headers on Unit 6. This investment will be incurred over two years and is included in Schedule 6 at a projected cost of $100,000 in 2016 and in Schedule 7 at a projected cost of $500,000 in 2017. The 13-month average cost is $369,000.

V. GULF'S 2017 PRODUCTION O&M BUDGET

Q. Please address how Gulf's Production O&M Budget is formulated.

A. Each year, Gulf's Power Generation Organization develops a five-year O&M budget based on historical results, projected maintenance and outage planning. As we develop the budget request, we focus on planned outages and baseline expenses.

Over the years, Gulf's plant personnel have gained valuable knowledge relating to the maintenance of our equipment. Our experience indicates that each unit should have a regularly scheduled planned outage to inspect and repair fuel handling equipment, boilers and auxiliary equipment every 18 to 24 months unless conditions warrant an adjustment to the schedule. In addition, a major planned outage is scheduled on each unit every 8 to 10 years, which includes work on the turbine and generator equipment in addition to the equipment listed above.

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

The five-year O&M budgets are developed at the plant level with the goal of maintaining high reliability and efficiency. As discussed in my testimony on

Plant Performance, Gulf has done an exceptional job of maintaining high unit reliability and efficiency. At the same time Gulf has fostered an environment where employee safety is our number one priority.

As each plant develops a five-year O&M budget, the Plant Management Team seeks input from system owners and unit owners to ensure the most critical issues receive attention. Each plant assigns a system owner (expert) over major systems such as boiler, turbine or generator. In addition, each unit has an individual assigned as the unit owner with the expectation that the individual will be the coordinator of any work related to the assigned unit. As the O&M budget is developed, the Plant Management Team meets to discuss all aspects of the equipment maintenance requirements.

Once the Plant Management Team is satisfied that their O&M budgets meet the plant's needs, the Power Generation Leadership Team meets to discuss the overall Power Generation O&M budget. In the event that there are resource (labor, physical, or financial) constraints, the Power Generation Leadership Team discusses risks associated with projects and prioritizes projects to help ensure the most critical activities are included in the budget. Lastly, the Power Generation budget is submitted to Gulf's Corporate Planning group. Gulf Witness Mason discusses the budget process that takes place after Corporate Planning receives the Power Generation O&M budget request.

Q. What are Gulf's Production O&M budgets for 2016 and 2017 excluding costs recovered through the ECRC?

A. Gulf's Production O&M budget for 2016 is $112,501,000 including Production Steam, Production Other, and Production Other Power Supply expenses.

Gulf's Production O&M budget for 2017 is $122,154,000, including Production Steam, Production Other, and Production Other Power Supply expenses. Gulf's Production O&M budget for 2017 is set forth on Exhibit MLB-1, Schedule 8 and Schedule 9.

Q. Is Gulf's projected level of Production O&M expenses of $122,154,000 in 2017 representative of a going forward level of Production O&M expenses beyond 2017?

A. Yes. As shown on Exhibit MLB –1 Schedule 9, the average Production O&M budget for the four-year period (2017 through 2020) is $122,123,000. Gulf's Production O&M expense for the 2017 test period is representative of the ongoing level of expense necessary to maintain generation performance and reliability.

Q Mr. Burroughs, does Gulf's projected level of Production O&M expenses of $122,154,000 in 2017 include O&M savings for closing Plant Scholz?

A. Yes. In the years leading to the closure of Plant Scholz, Gulf had been anticipating its closure and had been performing minimal maintenance to keep the units available through their retirement date of April 2015. In the test year and prior year, Gulf has budgeted $205,424 and $205,449, respectively, for care of the grounds and structures at Plant Scholz. Gulf is required to close the ash pond at Plant Scholz. Until the ash pond closure and ultimate dismantlement of the building, Gulf will continue to incur O&M costs to monitor and care for the grounds and to provide security for the land and ash pond.

Q. Does Gulf's projected level of Production O&M expenses of $122,154,000 in 2017 include O&M savings for closing Smith 1 and 2?

A. Yes. During the 2015 budget process, which was completed in 2014 prior to the decision to retire Smith 1 and 2, Gulf had forecasted to spend $2,875,000 and $3,361,000 in 2016 and 2017 respectively for planned outages. The decision to retire Smith 1 and 2 was announced in February 2015. After that announcement, Gulf performed minimal maintenance to keep the units available through their retirement date of March 31, 2016. During the 2016 budget process, Gulf did not budget any future amounts for planned outages.

Gulf will continue to incur O&M costs to monitor and maintain the ash pond for Smith 1 and 2 until the ash pond is closed.

Q. Are Gulf's projected levels of Production O&M expenses of $112,501,000 in 2016 and $122,154,000 in 2017 reasonable and prudent?

A. Yes. My conclusion is based primarily on the fact that Gulf's 2016 and 2017 Production O&M budgets are the product of a rigorous budget process previously discussed in my testimony and implemented by experienced employees who know their jobs and their facilities.

The $122,154,000 included in the 2017 Production O&M budget was developed using teams from the plants whose expertise and understanding of plant equipment and plant operations has been clearly demonstrated by the continued high performance indicators of the units. The budgets are then reviewed and modified by the Plant Management Team, the Power Generation Leadership Team, and ultimately Gulf's Executive Management Team. The 2017 Production O&M budget is the product of this robust budgeting process and has been appropriately adjusted for specific items addressed in this base rate case.

Q. On your Schedule 9, you show a series of adjustments in the year 2017. Please explain the purpose of each of those adjustments.

A. There are five adjustments to the Production O&M request on Schedule 9:

1. Scherer Unit 3 Non-ECRC Production Steam Adjustment. This adjustment of $2,129,000 reflects the O&M expense associated with Gulf's ownership portion of Scherer Unit 3 that is currently committed to off-system sales as discussed in Ms. Ritenour's testimony.
2. Plant Daniel Production Steam Adjustment. This adjustment of $1,300,000 is a result of the addition of turbine valves and mill journals, which were identified subsequent to Gulf's final budget, to the 2017 planned outage. The maintenance on this equipment occurs at periodic intervals, and the next maintenance activity is scheduled in 2017.

3. Plant Crist Production Steam Adjustment. This adjustment of $1,100,000 increases the scope of the planned outage in 2017 to include the replacement of Unit 6 boiler tubes. During a boiler inspection after the 2016 through 2020 forecasts were developed, it was determined that these boiler tubes must be replaced. Boiler tube replacement is a normal maintenance activity performed to ensure the reliability of the unit.
4. Plant Smith Production Steam Adjustment. This adjustment removes $1,733,000 of labor and benefits from Production Steam. When Gulf originally developed the budget in the fall of 2015 for the budget cycle 2016 through 2020, Gulf budgeted in Production O&M all employees anticipated to remain at Plant Smith each year. Subsequent to that time, Gulf has determined that 18 FTE's budgeted at $1,733,000 will be working on ECRC and dismantlement projects associated with the dismantlement of Plant Scholz and Smith 1 and 2 along with ash pond closures at both Plants. An additional adjustment of $319,000, as shown on Ms. Ritenour's Schedule 21, removes the benefits charged to A&G associated with this labor reduction.
5. Other Adjustments. The Production portion of four adjustments shown on Ms. Ritenour's Schedule 21 reduces Production O&M $850,000. These four adjustments are supported by other witnesses.

Q. Mr. Burroughs, the Commission has historically examined the reasonableness of O&M expenses using the O&M benchmark. How does Gulf's 2017 Production O&M budget compare to the O&M benchmark?

A. While the O&M benchmark calculation is shown on MFR C-37, for ease of reference I have included a summary of the O&M Benchmark calculation for all the Production function on Exhibit MLB-1, Schedule 8. It shows the entire Production O&M budget allowed by the Commission in Gulf's 2012 test year rate case was $106,935,000. Multiplying that 2012 allowed value by the inflation compound multiplier, the O&M benchmark level of Production O&M expenses for 2017 is $115,968,000. Gulf's total 2017 test year Production O&M expenses are $122,154,000. So, there is a total O&M Production benchmark variance of $6,186,000.

It should be noted that Gulf's Other Power Supply portion of the Production O&M benchmark calculation is actually below the O&M benchmark calculation. So, the two Production functions that have 2017 forecasted levels of O&M expenses above the O&M Benchmark are Production Steam and Production Other.

Q What is Gulf's justification for exceeding the Production Steam O&M benchmark by $1,091,000 in the 2017 test year?

A. The rededication of Scherer Unit 3 to serve native load customers explains the O&M benchmark variance. No O&M costs associated with Scherer Unit 3 were reflected in the 2012 allowed O&M expenses in Gulf's 2012 test year rate case. Gulf did not ask for any such expenses because Scherer Unit 3 was devoted to wholesale sales and not native load customers during the 2012 test year. However, in the 2017 test year, a portion of Scherer Unit 3 has been rededicated to native load customers, so the O&M expenses associated with the portion of Scherer Unit 3 not currently committed to off-system sales are included in the test year, and this inclusion results in Gulf exceeding the O&M benchmark for Production Steam.

Production Steam O&M expenses associated with the rededicated portion of Scherer Unit 3 in 2017 are $6,740,000. Therefore, excluding these O&M expenses associated with Scherer Unit 3, Production Steam would be under the 2017 benchmark by $5,649,000.

Q. What is Gulf's justification for exceeding the Production Other O&M benchmark by $5,350,000 in the 2017 test year?

A. There are three primary reasons that Gulf's 2017 test year Production Other O&M expenses exceed the O&M benchmark by $5,350,000:

- Transfer of common costs from Steam to Production Other $2,560,000
- Increase in Smith 3 HRSG maintenance expenses $1,404,000
- Increase in maintenance for other Smith 3 components $1,436,000

Q. Please address the transfer of common costs from Production Steam to Production Other for the Smith Plant.

A. In the 2012 test year allowed level of Production O&M expenses, there were common expenses for Plant Smith related to Production Steam and Production Other because the Plant Smith site had two operational coal units that were charged to Production Steam and an operational combined cycle unit that was charged to Production Other. In the 2017 test year, Plant Smith common dollars were charged to Production Other because the only remaining operational unit, Smith Unit 3 (Smith 3), is charged to Production Other. Approximately $2,560,000 of the benchmark variance in Production Other is related to these common expenses that moved from Production Steam to Production Other O&M. These Common expenses include: plant site maintenance for roads, grounds and buildings; security; service water; wells; cooling towers; fire protection; water treatment; and computer equipment. These prudently incurred and necessary expenses were associated with the site and were used in common by all three units and are now properly charged to Production Other.

Q Please address the increase in Smith 3 Heat Recovery Steam Generator (HRSG) maintenance expenses at a rate faster than the growth in CPI since Gulf's 2012 test year rate case.

A. The expense necessary to maintain the HRSG equipment in 2017 is $2,500,000. This has grown faster than the HRSG expense allowed for Smith 3 in the 2012 test year for a number of reasons: (a) the HRSG is aging and needs more maintenance than it required earlier in its life; (b) Smith 3 is being dispatched more than it was in earlier periods because of the low price of natural gas, and this increased dispatch has resulted in more maintenance of the HRSG; and (c) the amount allowed for HRSG maintenance by the Commission in the 2012 test year rate case was not representative of the going forward level of HRSG maintenance required for Smith 3.

Smith 3 was brought into service in 2002. The maintenance expenses for the HRSG were relatively modest for the early years of the unit's operation. The unit was relatively new, and because the price of coal powered generation was lower than the price of natural gas generation early in the life of Smith 3, the unit was not dispatched as much as it is currently. This lower level of HRSG maintenance lasted through 2009.

By 2010, the maintenance costs for the Smith HRSG had risen to much higher levels. This was due to the aging of the unit and the increasingly higher dispatch of the unit. It is not unusual for maintenance expenses to increase with age and use, and that has certainly been the case with the expenses associated with the Smith 3 HRSG.

In Gulf's 2012 test year rate case, Gulf acknowledged these increasing costs and budgeted $1,454,000 for Smith 3 HRSG maintenance expenses. However, the Commission disallowed $443,000 of the budgeted HRSG maintenance expenses based upon a review of historical levels of HRSG maintenance costs. So, it was this lower level of HRSG maintenance costs, $1,011,000, escalated by CPI that is included in the O&M benchmark.

As history has shown, the amount allowed for HRSG maintenance in Gulf's 2012 test year has not been representative of the ongoing level of HRSG expense necessary to maintain the unit. Despite the Commission's 2012 test year disallowance, Gulf spent $2,755,000 on HRSG maintenance in

2012 because it was necessary to maintain the unit's reliability. So, even Gulf's 2012 test year projection was too low.

The inadequacy of the HRSG maintenance expenses in the O&M benchmark calculation is shown by comparing them to actual HRSG maintenance expenses over the period 2011 through 2015. This is shown on Exhibit MLB-1, Schedule 10. Over that five-year period, the Smith 3 HRSG expenses have averaged $2,821,000 and with escalation to 2017 dollars expenses have averaged $3,034,000. In contrast, the level of HRSG expenses in the O&M benchmark for 2017 is only $1,096,000. Simply stated, the O&M benchmark level of expenses for HRSG maintenance is not representative of historic levels of HRSG maintenance over the last five years.

More importantly, the level of HRSG maintenance expenses assumed in the O&M benchmark, $1,096,000, is not representative of the level of HRSG maintenance necessary to maintain the HRSG in the years 2016 and beyond. The cost projections for HRSG operation and maintenance, which were prepared by the personnel most familiar with the HRSG, average $3,137,000 going forward over the next five years. Gulf's 2017 projection of HRSG maintenance expenses of $2,500,000 is reasonable and perhaps even conservative given the level of HRSG related maintenance expenses going forward.

Q. Please address the increase in the O&M expenses for other components of Smith 3 at a rate higher than the O&M benchmark.

A. The turbine system, combustion turbine, service water system, condensate system, and service facilities are also experiencing higher costs for increased maintenance and increased chemical consumption due to high utilization and aging of the combined cycle. As with the HRSG expenses, the 2017 test year expenses ($2,708,000) necessary to maintain other components of Smith 3 have increased due both to the age of the unit and its increased utilization. With lower natural gas prices, Smith 3 is projected to be dispatched at a much higher level in 2017 and beyond than it was in its earlier years of operation. This has resulted in higher operational costs, such as increased chemical consumption, as well as increased maintenance expenses.

The historic growth in these operation and maintenance costs for the other components of Smith 3 is seen by contrasting the amount budgeted and allowed for Smith 3 non-HRSG costs in the 2012 test year, $1,173,000, and actual Smith 3 non-HRSG costs from 2011 through 2015, as shown on Exhibit MLB-1, Schedule 10.

Of course, what is of even more importance in this case is not what the Smith 3 non-HRSG O&M expenses have historically been, but what they are projected to be in 2016 and beyond. As shown on Exhibit MLB-1, Schedule 10, the average of the Smith 3 non-HRSG O&M costs for the period 2016 through 2020 is $3,688,000. These expenses were developed by the personnel who actually operate and maintain the plant and were reviewed by management charged to maintain unit performance and reliability. These are the same individuals who have helped Gulf achieve its outstanding unit performance, and it is their trained and experienced judgment that justifies this budgeted level. The 2017 level of Smith 3 non-HRSG O&M expenses, $2,708,000, is reasonable and perhaps even conservative given the going forward level of O&M expense necessary to maintain unit performance and reliability.

VI. GULF'S 2017 FUEL INVENTORY

Q. What recovery amount is Gulf requesting for total fuel inventory, including fuel stock and in-transit fuel?

A. Gulf is requesting a total fuel inventory of $67,428,000 to be included in its 2017 rate base. The request is lower than the amount allowed in the 2012 test year rate case by $19,376,000. This requested fuel inventory for 2017 includes $46,494,000 for fuel stock and $20,934,000 for in-transit coal.

Q. Please explain the reason for the requested decrease in fuel inventory working capital.

A. The decrease in the amount requested in this case is primarily due to a lower projected market price for fuel being delivered to Gulf generating plants.

Q. Please describe Gulf's coal inventory policy.

A. Gulf's policy is to maintain coal inventory levels sufficient to safeguard against disruptions in supply, inconsistencies in delivery of coal due to weather conditions, and other factors affecting the coal transportation sector. Coal inventory levels for each generating plant are evaluated and targets are established based on a number of factors such as: plant specific coal handling and storage limitations; market intelligence on coal supply availability; coal transportation/logistics information; and the historical perspective obtained through considerable experience developed in coal stockpile management by the Southern Company fuel organization. The operating companies of the Southern Company are one of the largest coal consumers in the nation and have a long history of successfully operating coal-fired generating plants.

Once target coal inventory levels are established, they are formally approved by the SCS Vice President of Fuel Services for use as an input in the fuel budgeting model, FUELPRO, to develop a fuel cost of generation budget for all plants in the SES. The fuel burn derived from the hourly load dispatch of each generating unit in the SES fleet and the current fuel price forecast for each fuel type, including transportation rates, are also inputs to the FUELPRO model. The output of FUELPRO is a fuel budget for each plant, which includes monthly fuel purchases, burn and ending inventory expressed in units of measure (quantity), total dollars, and dollars per unit. For the test year, the coal inventory policy evaluation resulted in average inventory targets for Plant Crist, Gulf's barge-served coal-fired plant, of approximately 27 normal full load (NFL) burn days and for Gulf's rail-served plants (Scherer Unit 3 and Daniel 1 and 2), 50 and 40 NFL days, respectively.

Q. What is a normal full load (NFL) burn day?

A. A NFL burn day is a method of expressing units of inventory relative to the normal maximum consumption of fuel at a specific generating facility over a 24 hour period. Normal maximum consumption does not include output maximums that can be achieved for short periods by using supplemental firing to operate at "full pressure" on traditional steam and combined cycle units. The use of NFL burn days allows for the expression of inventory units in common terms so that fuel inventories of generating plants with various capacity sizes (MW) and capacity factors can be compared on an "apples to apples" basis.

A NFL burn day is calculated by multiplying the total daily energy output (kilowatt hours or kWh) of a generating plant by the weighted average heat rate (British thermal units per kWh or Btu/kWh) of the units at that generating plant. Both the total daily energy output and the unit heat rates are determined by actual plant performance measurements over a period of time. The resulting calculated Btus per day are then converted to standard units for each fuel type such as tons for coal and gallons or barrels for oil. This method explicitly recognizes Gulf's heat rate performance in establishing its requested fuel inventory levels. As an example, the NFL day burn for a generic 500 MW coal-fired unit fueled by bituminous coal would be calculated as follows:

A = Normal Hourly Full Load Rating = 500,000 kWh

B = Average Unit Heat Rate = 10,800 Btu/kWh

C = Fuel Heating Value = 11,600 Btu/lb

(A x B) / (C x 2,000 lbs/ton) = 232.76 tons/hour

NFL day burn = 232.76 tons/hour x 24 hours/day = 5586 tons/day

Q. What is Gulf's forecasted coal inventory level for the test year?

A. For all Gulf plants, the 13-month average of the monthly ending coal inventory levels, not including in-transit coal, for the test year, is a stockpile of 631,863 tons with a cost of $40,125,000. This compares to a total of 693,196 tons with a cost of $67,958,000 allowed in the 2012 test year rate case. The decrease in coal inventory value (dollars) is due to a decrease in the projected delivered market price of coal combined with a slight decrease in the quantity of coal inventory since the 2012 test year rate case.

Q. How does the average unit cost of coal inventory compare to the amount used in the 2012 test year rate case?

A. In Gulf's 2012 test year rate case the weighted average unit cost of coal in inventory was $98.04 per ton. The current weighted average unit cost of coal used to project the total cost of Gulf coal inventory in the test year is $63.50 per ton. The decrease is due to a reduction in the projected market price of coal and coal transportation relative to the 2012 test year rate case and the addition of lower cost-per-unit Powder River Basin coal utilized for Scherer Unit 3.

Q. How has actual coal inventory compared to the amount allowed in the 2012 test year rate case?

A. The actual ending coal inventory as of December 31, 2015, including Scherer Unit 3 inventory and in-transit coal, was $95,717,388. This exceeded the total amount allowed in the 2012 test year rate case of $78,676,000 by $17,041,388. This is due to two factors: (1) the 2015 year-end coal inventory quantity was above target levels because the coal burn quantity was significantly below projected amounts, and (2) the addition of Scherer Unit 3 coal inventory that was not included in the 2012 test year rate case. The lower than expected coal consumption is due to lower customer loads and low natural gas prices shifting the generation mix to lower cost, natural gas fired generation. Gulf expects to return coal inventory levels to the target quantity later in 2017 by reducing the amount of projected coal purchases to match the lower expected coal burn for the period.

Q. If Gulf is projecting lower coal consumption in this case at Plants Crist and Daniel than in its 2012 test year rate case, why hasn't the volume of coal held in inventory at these plants declined?

A. The simple answer is that Gulf's coal stockpiles are tied to NFL days rather than projected burn days. Coal stockpile levels based upon NFL are an assurance of reliability to Gulf's customers. If Gulf's coal units have to run at full load for an extended period of time to assure customer reliability, Gulf needs to be able to assure two factors: (1) unit availability and (2) sufficient fuel supply. As I discussed previously, Gulf is an industry leader in unit availability. Gulf also follows a coal inventory policy that assures when its coal units are needed by its customers there is enough fuel on site to assure performance.

Extended coal unit performance can be needed for customers for a variety of reasons. Of course, swings in the relative prices of coal and gas can result in greater coal dispatch. However, beyond economics, there are a host of reasons that Gulf's coal units may be needed for reliability purposes: outages at gas fired units, transmission outages on lines from gas units, or natural gas supply interruptions. In addition, disruptions in the supply or transportation of coal, which can be caused by barge or train interruptions, also dictate a need to assure adequate coal stockpiles.

Having an adequate supply of coal on hand for events that trigger reliability challenges is not unlike having a reserve margin in place for generation. We have more capacity available than is needed to just meet needs because sometimes units are not available. Limitations on fuel create the same reliability threats. It does no good to customers for Gulf to have generation in reserve to meet reliability issues if those units do not have sufficient fuel to operate as needed. So inventory levels are determined not by projected burn, but by amounts necessary to assure reliability.

Q. Why does Gulf include an amount in working capital for in-transit coal inventory?

A. Gulf pays its coal suppliers upon loading of the coal into Gulf's transportation equipment at the coal supplier's originating facility. Therefore, capital is invested in coal that has not yet been received at the destination generating plants. A major portion of Gulf's coal supply is delivered by ship, rail, and barge to an intermediate coal blending/transfer facility (Alabama State Docks McDuffie Coal Terminal) located in Mobile, Alabama and then by barge to the Crist generating plants. A considerable amount of time is involved in the process of transporting coal from the origin mine to the intermediate blending and barge loading location and then transporting the coal to the final destination plant stockpile. This investment in coal that is in-transit should be included in the working capital component of Gulf's rate base.

Q. How does the amount for in-transit coal that you included in your request for working capital compare to the amount included in the 2012 test year rate case?

A. The amount of in-transit coal included in the test year fuel inventory request is $20,934,000. This compares to $10,718,000 included in the 2012 test year rate case. The increase is due primarily to an increase in the quantity of in-transit coal being held at the McDuffie Coal Terminal offset somewhat by a lower projected market price of coal in 2017. It should be noted that even with this increase of in-transit coal inventory, Gulf's overall coal inventory for the

2017 test year is lower in volume and total cost than that allowed in Gulf's 2012 test year rate case.

Q. What is Gulf's natural gas inventory policy?

A. Gulf's Natural Gas Policy requires that base load combined cycle units have firm gas storage capacity and gas transportation for system reliability purposes. The gas storage capacity requirement must be met before a gas fired combined cycle unit will be accepted as electric generating capacity for purposes of meeting an operating company's reserve capacity margin obligation. The purpose of the policy is to maintain a certain portion of a generating plant's natural gas supply requirement in storage to provide natural gas supply during gas supply interruptions caused by pipeline and compressor station failures, hurricanes, well freezes, etc. In addition, having available gas storage capacity for pipeline balancing is necessary to avoid penalties imposed by pipelines for large swings in daily and hourly demands when the generating unit is economically dispatched or when other sudden changes, like plant outages, cause a swing in demand.

Q. What is Gulf's forecasted natural gas inventory level for the test year?

A. Gulf projects a 13-month average natural gas inventory of 1,330,316 MCF for the test year and has included $4,317,000 in working capital for this gas storage amount. This quantity of gas inventory is equal to 7 NFL burn days for Gulf's Plant Smith Unit 3 and for Gulf's PPA with the Central Alabama combined cycle facility.

Q. How does the 13-month average natural gas inventory for the test year compare to the approved inventory from the 2012 test year rate case?

A. Gulf was allowed an inventory of 835,702 MCF and $4,300,000 in working capital for gas inventory in the 2012 test year rate case. Gulf is requesting a natural gas fuel inventory of 1,330,316 MCF and $4,317,000 in this case. The amount of natural gas inventory in the test year is 494,614 MCF and $17,000 higher than the amount approved in the 2012 test year rate case.

Q. Please explain the increase in the volume of natural gas inventory in this case compared to Gulf's 2012 test year rate case.

A. As shown on Exhibit MLB-1, Schedule 11, the higher volume of natural gas inventory in this rate case is due to the Central Alabama facility having been added as a firm generating resource and being routinely used to minimize customer fuel costs. In June 2014, the Central Alabama facility was added as a firm generating resource for Gulf. Under that PPA, Gulf has the responsibility for providing natural gas supply for unit operation, and as a result, natural gas inventory has been included in the test year for this generating unit. The costs associated with this higher volume of inventory are largely offset by a lower average unit cost of gas than in Gulf's 2012 test year rate case.

Q. How does the 13-month average unit cost of natural gas inventory for the test year compare to the amount used in the 2012 test year rate case?

A. In the 2012 test year rate case the average unit cost of natural gas in inventory was $5.15 per MCF. Since the 2012 test year rate case the market price of natural gas has decreased due to a higher supply of natural gas in the market. The current average unit cost of natural gas used to calculate the total cost of Gulf natural gas inventory in the test year is $3.245 per MCF.

Q. What is Gulf's forecast distillate oil inventory level for the test year?

A. Gulf's projected distillate oil inventory level, including both lighter oil and combustion turbine generating fuel, for the test year is 23,654 barrels. An amount of $2,052,000 has been included in working capital for distillate oil inventory.

Q. How does this oil inventory request compare to the oil inventory amount approved in Gulf's 2012 test year rate case?

A. The amount of distillate oil inventory included in the 2012 test year rate case was 49,850 barrels or $3,370,000, which was primarily for lighter oil inventory at coal-fired units. The test year amount requested is a reduction of 26,196 barrels and $1,318,000 from the amount approved in the 2012 test year rate case. In 2015, the Plant Scholz coal units retired and in March 2016, the Smith 1 and 2 coal units retired, which ended the need to carry lighter oil inventory at these plants. The lighter oil inventory for these facilities was removed at the respective expiration/retirement dates for these generating units.

Q. How does the average unit cost of distillate oil inventory compare to the amount used in the 2012 test year rate case?

A. In Gulf's 2012 test year rate case the average unit cost of distillate oil in inventory was $67.60 per barrel. Since the 2012 test year rate case, the market price of distillate oil has increased due to higher worldwide demand for all oil products. The current average unit cost of distillate oil used to project the total cost of Gulf's oil inventory in the test year is $86.75 per barrel.

Q. Is Gulf's requested level of fuel inventory appropriate?

A. Yes. The fuel inventory requested by Gulf is reasonable, prudent and necessary to provide fuel inventory levels that will ensure Gulf's units are prepared to meet the needs of our customers with the lowest cost generation available.

VII. GULF'S PLANT HELD FOR FUTURE USE

Q. Please explain Gulf's approach to plant held for future use.

A. As part of the normal, ongoing planning processes, Gulf Power evaluates not only its projected resource needs, but also a variety of generation resources to meet future needs. Gulf's most recent Ten Year Site Plan reflects Gulf's next need for resources to be in 2023, when the current Central Alabama PPA for 885 MW of firm capacity expires. Gulf's projected resource need in 2023 is 613 MW. As noted in Gulf's Ten Year Site Plan, the most economic self-build options to meet the needs of Gulf's customers would be gas-fired combined cycle (CC) or simple cycle combustion turbine (CT) units. Of course, the costs associated with those technology options vary depending upon the sites considered. So, in its planning to identify its most cost-effective self-build options, Gulf considers various technologies at various sites to discern the most economic technology and site or sites.

Q. Previously you stated that the most economical self-build technology options for Gulf's customers were gas-fired CC and CT units. What site or sites proved to be the most economical for these alternatives?

A. If Gulf were to build a gas-fired CC unit to meet its forecasted 2023 need, the lowest cost option would be sited at the North Escambia site. The same CC unit was analyzed at multiple sites available to Gulf, and the cost advantages of the North Escambia site were significant. The net present value savings associated with the North Escambia site relative to alternative sites for a CC unit ranged from $42 to $239 million.

If Gulf were to build CTs to meet its need in 2023, the most economical alternative would be to split the CTs between two sites: North Escambia and Gulf's Plant Smith. The net present value savings associated with the North Escambia site relative to alternative sites for CT units ranged from $13 to $44 million.

Q. Please describe the North Escambia site and its advantages for siting gas-fired generation.

A. The property is approximately 2,728 acres and is strategically located near a gas pipeline, transmission and water. Natural gas supply would be transported to the North Escambia site by tying into an existing main pipeline located north of the site. This gas transportation option is the least cost option for all Gulf generation site alternatives. The North Escambia site is also located in close proximity to existing transmission facilities. The site allows for two water sources: the Escambia River and wells located throughout portions of the 2,728 acres. Aside from the site being the most economical for Gulf's next anticipated generation resource to serve Gulf's customers, it also provides benefits in that it allows for multiple types of generation resources. The site supports the potential development of multiple CC or CT resources and even some solar.

Q. Is Gulf's North Escambia site currently in rate base?

A. No. Unlike the Caryville and Shoal River properties that are included in rate base as Plant Held for Future Use (PHFU), the North Escambia site is not included in rate base. Gulf requested that a larger (4000 acres) and more costly North Escambia site be included in rate base in its 2012 test year rate case, but the Commission declined stating:

> We agree with OPC, FIPUG, FRF, and FEA that: (1) the Caryville site is available for any needed future generating plant(s); (2) Gulf may share the ownership of the Escambia Site with its sister companies; and (3) there was not an order

> granting a determination of need that would allow the Company to petition for and the Commission the opportunity to review the “nuclear option” and all the various corresponding costs. In light of our approval of Gulf’s retention of the Caryville site and the other available sites already included in rate base, we believe that Gulf has sufficient options for its future generation needs. Moreover, we find that Gulf has failed to support the inclusion of the North Escambia County Nuclear plant site and associated cost in PHFU. Therefore, PHFU shall be reduced by $26,751,000 ($27,687,000 system). In addition, Gulf shall not be permitted to accrue AFUDC for this site. As discussed above, Gulf has neither obtained the requisite order granting a determination of need nor has it received the necessary authorization to accrue AFUDC on the site costs. Therefore, Gulf shall be required to adjust its books to remove the $2,977,838 in accrued carrying charges. (Order No. PSC-12-0179-FOF-EI at page 26)

While Gulf is not seeking to accrue AFUDC previously disallowed, Gulf is seeking Commission approval to include the North Escambia site in rate base in the amount of $16,618,908, which includes $13,042,898 of PHFU and $3,576,010 in preliminary survey and investigation charges.

Q. Given the Commission's prior decision not to include the North Escambia site in rate base, why is Gulf requesting that the property now be included as PHFU in rate base?

A. The simple answer is that the inclusion of the North Escambia property in rate base is in the best interests of Gulf's customers.

Q Why is the inclusion of the North Escambia site in rate base in the best interest of Gulf's customers?

A. First, the North Escambia site can accommodate both of the leading candidate technologies for Gulf's next resource need. Second, it can accommodate multiple additions of Gulf's leading candidate technologies. Third, and most important, the North Escambia site is the lowest-cost site available to Gulf for siting either of its leading candidate technologies. For CC technology or CT technology, it benefits Gulf's customers by tens of millions of dollars because of its site attributes.

The economic analysis demonstrates that the North Escambia property is the most economic option for either the addition of CCs or CTs. Gulf consistently looks not only at short-term solutions but also what is best in the long term for its customers. This site offers the most flexibility for future generation technologies, which ensures that Gulf will be able to provide reliable generation for its next need as well as far into the future. Gulf's customers are fortunate that the site is still available for their benefit.

Q Please address why Gulf’s customers are fortunate that the North Escambia site is still available for them.

A. As I previously noted, the Commission not only declined to include the $26,751,000 investment in the North Escambia site in rate base in 2012, but also instructed Gulf to remove almost three million dollars of accrued AFUDC on the project. So, Gulf’s shareholders have funded tens of millions of dollars of investment for as much as eight years without earning any return on their investment. Gulf’s management held on to this property because they were convinced that it was in its customers’ interest to hold this property rather than sell it and lose the prospect of it not being available to meet future needs. That is why I say Gulf’s customers are fortunate that this property is still available for their benefit.

Q Have circumstances changed since the 2012 disallowance?

A. Yes. Unlike the 2012 test year rate case where intervenor witnesses argued Gulf had no need within a 10-year planning horizon, Gulf now has a documented need within its 10-year planning horizon. The North Escambia site is the most economical site for both of the leading technologies to meet that need. It is more cost effective to Gulf’s customers than the “other sites already included in rate base.”

Q. If the Commission were to disallow the North Escambia site in rate base what would be the outcome to Gulf’s customers?

A. Gulf’s customers would likely lose the benefit of this asset. The Company would have to seriously consider selling this site. Gulf has held this property for the benefit of its customers since 2008, but it has not earned the first dollar of return on this valuable investment. Gulf cannot continue to hold this property without earning a return; that would be unfair to investors who invest with an expectation of an opportunity to earn a fair return on their investment, as is more fully developed by Gulf Witnesses Vander Weide and Liu. If the Commission does not allow the North Escambia site in rate base, Gulf will seriously consider selling this valuable site, and it is unlikely that it will ever be available for purchase again, as this area continues to grow. The most immediate impact would be increased costs to Gulf's customers for Gulf's next planned generation need in 2023. The other sites under consideration each have higher overall costs than generation located at the North Escambia site. Customers would also lose the value of this site for other more distant resource needs.

VIII. CONCLUSION

Q. Please summarize your testimony.

A. Gulf maintains and operates generation resources designed to serve our customers economically and reliably. Gulf's Generation operation has continued to provide economical, reliable electricity to our customers. The reliability of Gulf's generating units and low EFOR are clear indications that Gulf has executed an effective maintenance program that continues to provide our customers with reliable service.

Gulf has continued to diversify its generating resources through resource planning for the future needs of its customers and closure-related activities for the coal-fired assets at Plants Scholz and Smith. Our safety performance has been excellent, and the reliability of our generating resources continues to be among the best in the electric utility industry.

Gulf's Production investment and O&M expenses are absolutely necessary in order to maintain reliable plant performance in the future. Our past performance indicates that Gulf continues to be a good steward of its generating resources and can be trusted to maintain reliable performance in the future to the benefit of its customers.

Gulf's fuel inventory policy, adjusted for generating plant additions, retirements, and current market fuel prices, is essentially the same as testified to in the last rate case. Gulf's fuel inventory policy is an integral part of our strategy to ensure that we have an adequate supply of fuel available at all times for the reliable operation of Gulf's generating assets. Without an appropriate level of fuel inventory, having exceptional plant performance and also reliable transmission and distribution systems would be of no value to our customers.

Scherer Unit 3 is a fully controlled and reliable coal-fired unit that has been rededicated for the primary use of our retail customers. The rededication of Scherer Unit 3, plus the recent addition of solar and wind generation, demonstrates Gulf's commitment to diversification of its generating resources.

Gulf's Ten Year Site Plan indicates that we will have a resource need in 2023. The North Escambia site is the most economical and versatile land site that could support CCs or CTs—the alternatives that are the lowest cost options available to Gulf under current planning assumptions.

In conclusion, our customers expect and deserve a reliable, diverse, cost-effective, and efficient generating fleet. We continue to provide exactly this for our customers. Gulf's performance indicators are a testament to that fact.

Q. Does this conclude your testimony?

A. Yes.

AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)

Docket No. 160186-EI

Before me the undersigned authority, personally appeared Michael L. Burroughs, who being first duly sworn, deposes, and says that he is the Vice President of Power Generation and Senior Production Officer of 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.

s/ Michael L. Burroughs
Michael L. Burroughs
Vice President of Generation and
Senior Production Officer

Sworn to and subscribed before me this 5th day of October, 2016.

Melissa Darnes
Notary Public, State of Florida at Large

Commission No. FF912698

My Commission Expires December 17, 2019

NOTARY PUBLIC STATE OF FLORIDA
MELISSA DARNES
MY COMMISSION # FF 912698
EXPIRES: December 17, 2019
Bonded Thru Budget Notary Services

Exhibit

Responsibility for Minimum Filing Requirements

Schedule	Title
B-11	Capital Additions and Retirements
B-12	Net Production Plant Additions
B-16	Nuclear Fuel Balances
B-18	Fuel Inventory by Plant
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
C-42	Hedging Costs
F-4	NRC Safety Citations
F-5	Forecasting Models
F-8	Assumptions

Owned and Operated or Jointly Owned Generating Capacity

Unit Description	Net Generation (MW)	Commercial Operation Date
Crist Unit 4	75	Jul 1959
Crist Unit 5	75	Jun 1961
Crist Unit 6	299	May 1970
Crist Unit 7	475	Aug 1973
Smith Unit 3	556	Apr 2002
Smith Unit A	32	May 1971
Pea Ridge Unit 1	4	May 1998
Pea Ridge Unit 2	4	May 1998
Pea Ridge Unit 3	4	May 1998
Perdido Unit 1	1.5	Oct 2010
Perdido Unit 2	1.5	Oct 2010
Daniel Unit 1	255	Sep 1977
Daniel Unit 2	255	Jun 1981
Scherer Unit 3	214(1)	Jan 1987

(1) 76% of Gulf's ownership of Scherer Unit 3 has been rededicated to serve native load customers.

Power Purchase Agreements

Agreement	Technology	Fuel	MW	Start Date	End Date
Bay County	Steam	MSW	11	Jul 2014	Jul 2017
Central Ala.	CC	Gas	885	Nov 2009	May 2023
Gulf Coast Solar Center I	PV	Solar	30	Nov 2017[1]	Dec 2043
Gulf Coast Solar Center II	PV	Solar	40	Nov 2017[1]	Dec 2043
Gulf Coast Solar Center III	PV	Solar	50	Nov 2017[1]	Dec 2043
Morgan Stanley[2]	WT	Wind	178[4]	Jan 2016	Dec 2035
Morgan Stanley[3]	WT	Wind	94[4]	Oct 2016	Dec 2035

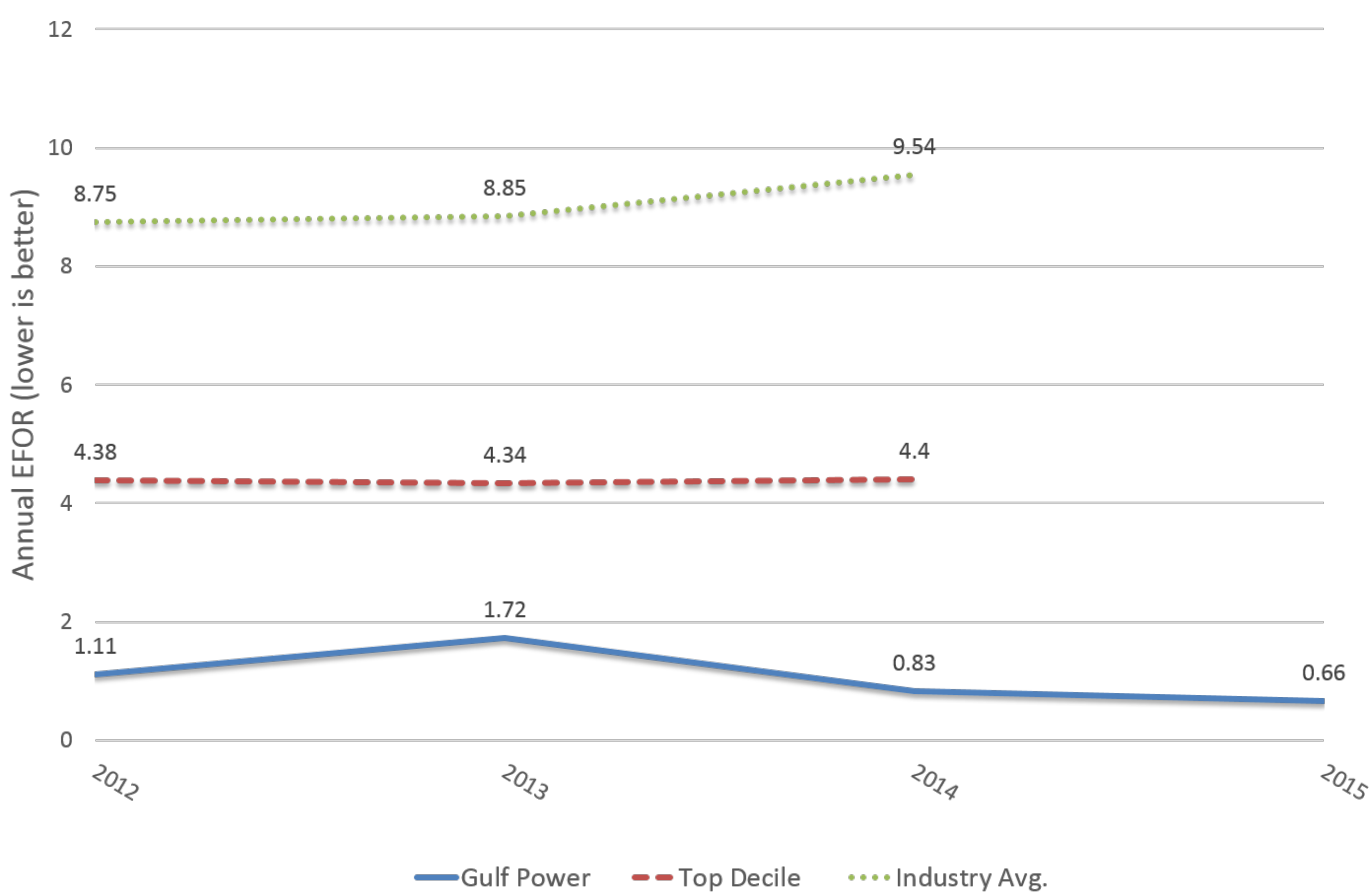
(1) Final Required Commercial Operation Date per the agreements.

(2) Kingfisher Wind Facility agreement executed December 2014

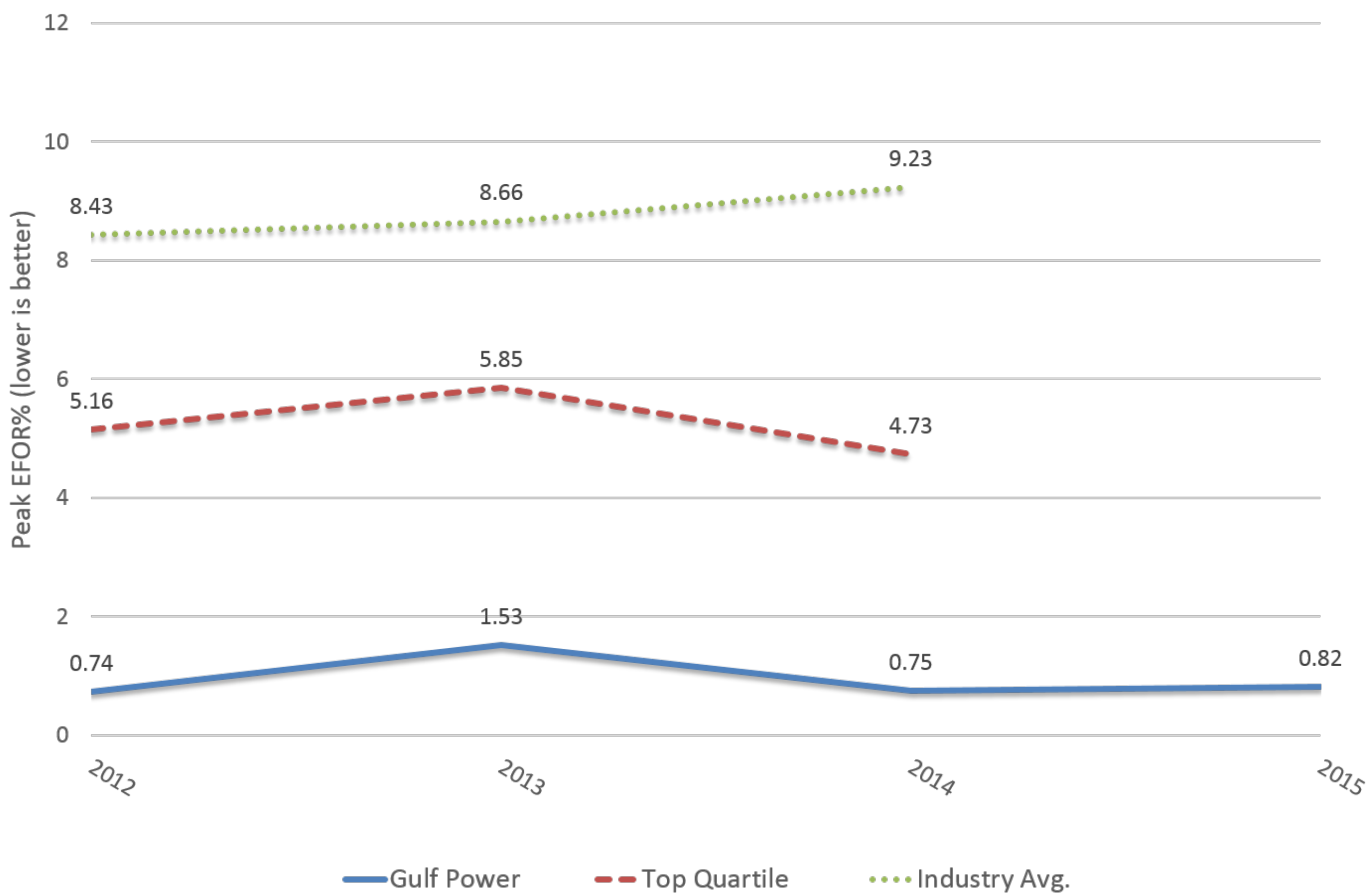
(3) Kingfisher Wind Facility agreement executed June 2016 and pending FPSC approval

(4) Gulf Power portion of project resulting from the agreement.

Equivalent Forced Outage Rate (EFOR)
Annual EFOR%



Equivalent Forced Outage Rate (EFOR)
Peak Season EFOR% (Jan-Feb, Jun-Aug)



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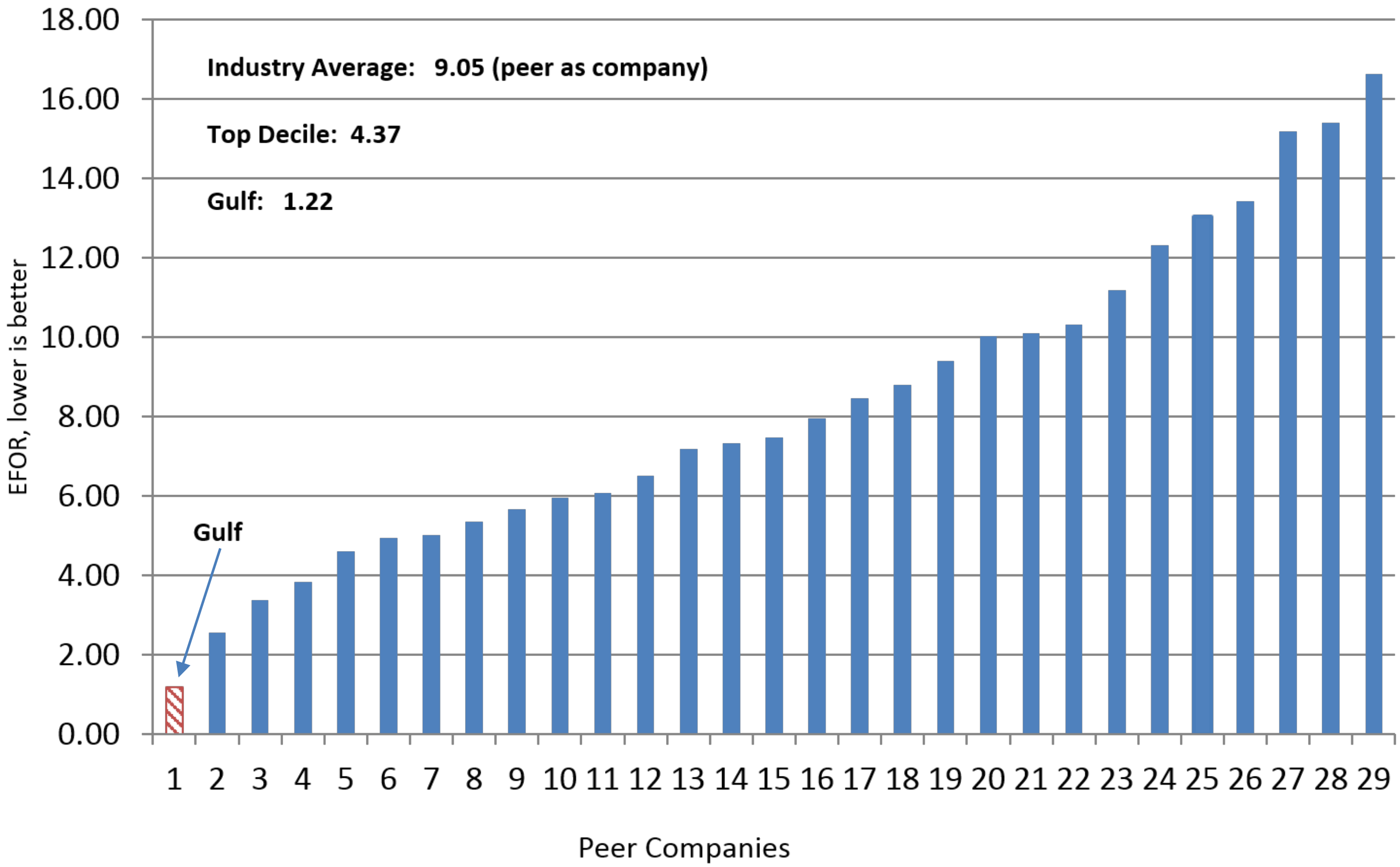
Gulf Power vs. Peer Group
Average Annual EFOR (2012 – 2014)



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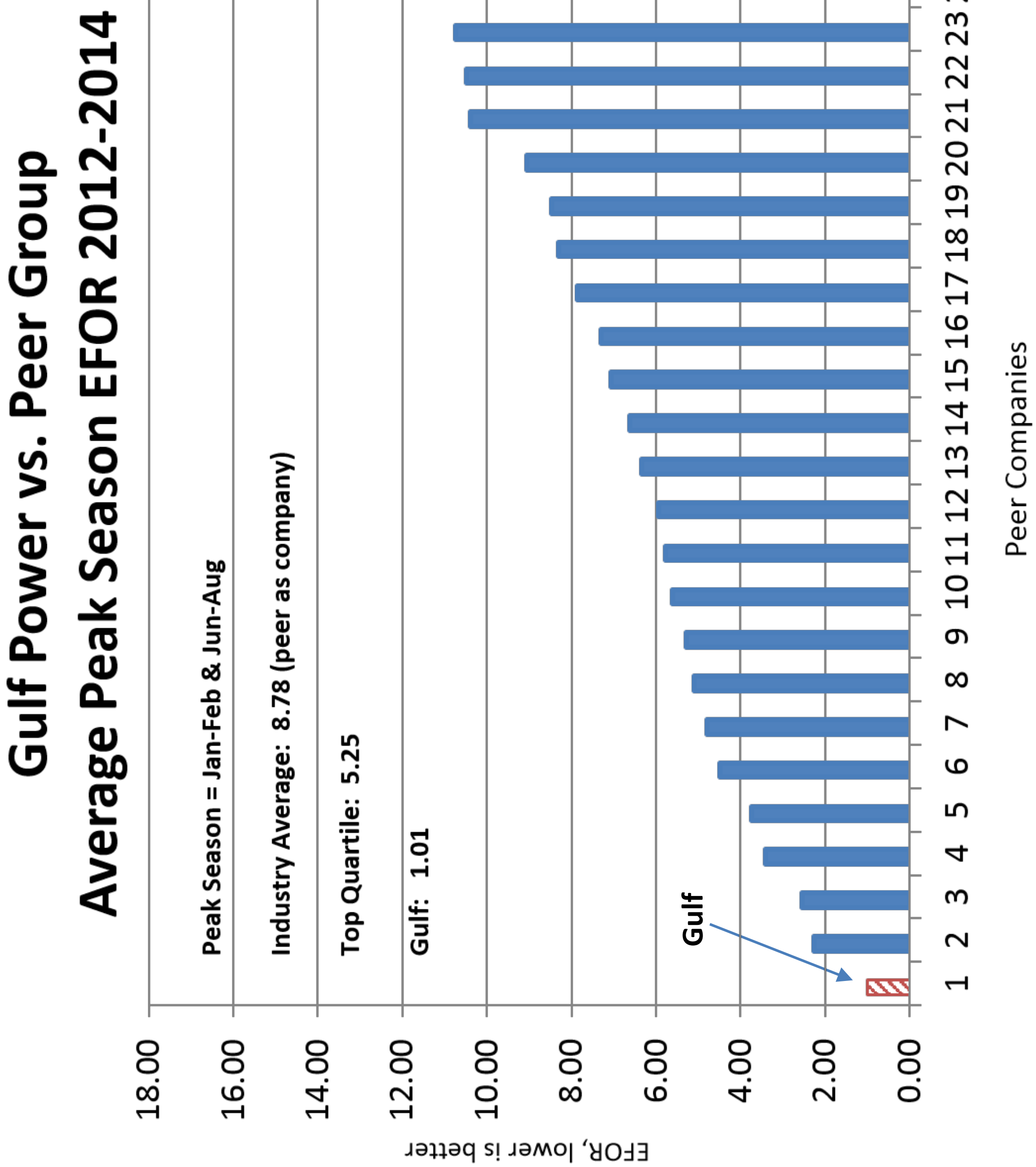

2013 - 2015 Major Production Non-ECRC Capital Additions
($000)

Description	Amount	Year
Crist 4 & 5 Transformer Replacement	1,200	2013
Crist 7 Control System Upgrade	1,100	2013
Crist Gas Pipeline	1,400	2013
Daniel 2 Condenser Tubes	2,500	2013
Smith 3 LTSA	19,800	2013
Smith 3 BFP Hydraulic Couplings	2,800	2013
Crist 4 Pulverized Coal Piping	1,400	2014
Crist 6 Air Heater Baskets	1,200	2014
Crist 7 Control System Upgrade	3,600	2014
Crist 7 Replace Breakers	1,100	2014
Crist 7 Water Wall Header	1,000	2014
Crist 4 & 5 Transformer Replacement	1,200	2014
Crist 4 & 5 Ash Controls	1,000	2014
Crist 7 Pulverized Coal Piping	3,300	2014
Smith 3 Corrosion Project	1,000	2014
Smith 3 Storm Water System	1,000	2014
Crist 6 Control System Upgrade	1,000	2015
Crist 6 Replace Ash Hopper	5,000	2015
Crist 6 Replace Breakers	2,300	2015
Crist 7 Replace Breakers	1,300	2015
Crist Fly Ash Landfill Storage Cell	1,400	2015
Daniel 1 & 2 Freeze Protection	1,800	2015
Daniel 1 Rewind Generator	5,200	2015
Daniel Conveyor Belt Addition	1,300	2015
Daniel Relay Replacement	1,000	2015
	$ 64,900	

2016 Non-ECRC Production Capital Additions Budget ($000)

Description	2016	Description	2016
CRIST - MINOR MISC ADDITIONS	750	DANIEL COMMON NEW CABLES FOR ASH SLUICE MOTORS	100
CRIST 4&5 COOLING TOWER FIRE PUMP	331	DANIEL COMMON REPLACE COAL YARD SWITCHGEAR	95
CRIST 6C 4160 VOLT BUS REPLACE BREAKERS	40	DANIEL CONVEYOR EQUIPMENT – CONVEYOR CAMERA	150
CRIST 7 AIR HEATER BASKETS	2,000	DANIEL DEGP R/R S1 CONVEYOR GEARBOX	75
CRIST 7 BOTTOM ASH HOPPER	8,447	DANIEL GENERATOR ROTOR REWIND	5
CRIST 7 BOTTOM ASH PIT TRASH HOPPER	158	DANIEL RELAY MODERNIZATION	150
CRIST 7 FLY ASH CONTROLS	315	DANIEL TRESTLE	193
CRIST 7C 4160 VOLT BUS REPLACE BREAKERS	40	DANIEL 1 REPLACE CRITICAL AC	33
CRIST A FLYASH COMPRESSOR	69	DANIEL 1 STRUCTURAL LIGHTING	475
CRIST ASH TRUCK SCALES	571	DANIEL 2 AUX. AIR BECK DRIVES AND REGISTERS	195
CRIST B FLYASH COMPRESSOR	69	DANIEL WATER TREATMENT PLANT CONTROLS	340
CRIST CANAL INTEGRITY	9,500	DANIEL-MISC. STEAM PLANT ADDITIONS & IMP.	306
CRIST CLEARWATER HDRS & PIPING	300	ENVIR - AIR - SCHERER 3 -MISC ENVIRONMENTAL PROJECTS	104
CRIST COMMON CONVEYOR BELTS REPLACEMENT	105	ENVIR-WASTE-CRIST FLY ASH LANDFILL CELL CAPPING	525
CRIST COMMON REPLACE FENCING (SECURITY)	550	ENVIR-WASTE-CRIST FLY ASH LANDFILL CELL DEVEL	1,000
CRIST CYBER SECURITY	145	PERDIDO LANDFILL GAS ENERGY	120
CRIST DRY ASH LAY-UP SYSTEM UNITS 4-7	368	SCHERER - MISC ADDITIONS AND IMPROVMENTS	135
CRIST LAB BATHROOMS	704	SCHERER 3 REPLACE 3D FIXED TRIPPER CHUTES	6
CRIST- REPLACE UNITS 6&7 ELEVATOR	1,500	SCHERER 3 REPLACE AND MOVE TRESTLE FEEDER	32
CRIST SWITCHYARD DRAINS	205	SCHERER 3 REPLACE CRUSHER HOUSE MCC U3 & U4	31
CRIST 7 BFPT CONTROLS REPLACEMENT	866	SCHERER 3 AUTO FIRE SUPPR - TURB/GENERATOR LUBE OIL	6
CRIST 4 ASSET PROTECTION	50	SCHERER 3 HP TURBINE DIAPHRAGM REPLACEMENT	1,830
CRIST 4 TURBINE WATER INDUCTION PROTECTION (TWIP)	1,969	SCHERER 3 REPLACE AIR HEATER BASKETS	26
CRIST 4-7 SILO ASH MCC REPLACEMENT	266	SCHERER 3 REPLACE BFPT CONTROLS	65
CRIST 5 575 VOLT BUS REPLACEMENT	16	SCHERER 3 REPLACE CONDENSER TUBE	259
CRIST 5 ASSET PROTECTION	50	SCHERER 3 REPLACE POLISHER CONTROLS	26
CRIST 5 TURBINE WATER INDUCTION PROTECTION (TWIP)	1,969	SCHERER 3 REPLACE VOLTAGE REGULATOR	5
CRIST 6 575 VOLT BREAKER REPLACEMENT	401	SCHERER 3 TURBINE CROSSOVER EXPANSION JOINT	13
CRIST 6 ASSET PROJECTION	50	SCHERER COMMON SPARE (GSU)	116
CRIST 6 BFPT OVERSPEED BOLT REPLACEMENT	280	SCHERER PORTABLE EQUIPMENT	7
CRIST 6 MAIN TURBINE OVERSPEED BOLT REPLACEMENT	334	SCHERER REPLACE SUPERHEAT PENDANT PLATEN	127
CRIST 6 PULVERIZER GEARBOX	128	SCHERER 3 REPLACE REHEAT REPLACEMENT	6
CRIST 7 575 VOLT BREAKER REPLACEMENT	539	SCHERER 3 REWIND MAIN GENERATOR STATOR	388
CRIST 7 AIRFLOW TRANSMITTER (KURZ) REPLACEMENT	399	SMITH - CONSTR SUB TRANSFORMER (LAGUNA BEACH)	1,000
CRIST 7 ASSET PROTECTION	50	SMITH - CYBER SECURITY	29
CRIST 7 MAIN TURBINE OVERSPEED BOLT REPLACEMENT	793	SMITH - NERC CIP IMPLEMENTATION	155
CRIST 7 PULVERIZER GEARBOXES	128	SMITH - PROPERTY LINE FENCING	1,500
CRIST 7 BFPT OVERSPEED BOLT REPLACEMENT	891	SMITH 1&2 - MISC. STEAM PLANT ADDITIONS	525
CRIST 6 HEADER WALL	100	SMITH 3 - ADMIN BLDG. EXPANSION	3,500
CRIST MAJOR MISC. ADDITIONS	1,000	SMITH 3 - AIR COMPRESSOR REPLACEMENT	100
DANIEL 1 & 2 AIR HEATER BASKET REPLACEMENT	54	SMITH 3 - COOLING TOWER DCS CABINET REPLACEMENTS	80
DANIEL 1 & 2 DUCT REPLACEMENT	85	SMITH 3 - COOLING TOWER FILL MEDIA REPLACEMENTS	125
DANIEL 1 & 2 INTELLIGENT SOOTBLOWING	38	SMITH 3 - CORROSION PROJECT	1,000
DANIEL 1&2 ASH HANDLING CONTROLS	378	SMITH 3 - DRIFT ELIMINATOR	150
DANIEL 2 CAPITAL VALVE REPLACEMENTS C03256	38	SMITH 3 - LTSA	27,492
DANIEL 2 FW HEATER 4 LP	120	SMITH 3 - MISC. STEAM PLANT ADDITIONS	1,000
DANIEL 2 REPLACE CRITICAL AC	303	SMITH 3 - REPLACE EVAP COOLER FILL MEDIA	100
DANIEL COMMON BREAKERS	280	SMITH 3 - REPLACE INLINE AIR FILTERS	400
DANIEL COMMON EMERGENCY NOTIFICATION SYSTEM	188	SMITH 3 - WATER MIST FIRE PROTECTION SYSTEM	685
		Total:	82,673

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2017 Non - ECRC Production Capital Additions Budget ($000)

Description	2017
CRIST - MINOR MISC ADDITIONS	750
CRIST 4 - AIR HEATER BASKETS	600
CRIST 4 BOTTOM ASH DOGHOUSE AND SLUICE GATE	168
CRIST 5 - AIR HEATER BASKETS	600
CRIST 5 ID FAN MONORAIL	250
CRIST 7A COMPRESSOR	153
CRIST COMMON CONVEYOR BELTS REPLACEMENT	105
CRIST CONDENSATE MAKEUP PIPING	299
CRIST 6 HEADER WALL	500
CRIST REPL HVAC FOR LAB BREAKROOM & OFFICE	215
CRIST REPLACE U4A BFP VOLUTE	158
CRIST SILO DRY UNLOADER A & B	698
CRIST 4-7 HYDROMIXER PUMP SUPPLY TANK & PIPING	263
CRIST 7 BFPT CONTROLS REPLACEMENT	26
CRIST 4 & U5 DUCTWORK	4,000
CRIST 4 ASSET PROTECTION	50
CRIST 4B BFP Volute Replacement	158
CRIST 5 575 VOLT BUS REPLACEMENT	193
CRIST 5 ASSET PROTECTION	50
CRIST 5A BFP VOLUTE REPLACEMENT	158
CRIST 6 575 VOLT BREAKER REPLACEMENT	193
CRIST 6 ASSET PROJECTION	50
CRIST 6 BFPT OVERSPEED BOLT REPLACEMENT	611
CRIST 6 CONDENSER VACUUM PUMP REPLACEMENT	698
CRIST 6 COOLING TOWER MEDIA REPLACEMENT	1,050
CRIST 6 DUCT WORK AND EXPANSION JOINTS	750
CRIST 6 INTAKE SCREENS REPLACEMENT	394
CRIST 6 MAIN TURBINE OVERSPEED BOLT REPLACEMENT	593
CRIST 6 MONITORING SYSTEM UPGRADES	50
CRIST 6 PULVERIZER GEARBOX	130
CRIST 6A AIR COMPRESSOR REPL	158
CRIST 7 ASSET PROTECTION	50
CRIST 7 PULVERIZER GEARBOXES	130
CRIST 6 REPLACE 6B COMPRESSOR	158
CRIST7 BFPT OVERSPEED BOLT REPLACEMENT	26
CRIST MAJOR MISC. ADDITIONS	1,000
DANIEL 1 & 2 AIR HEATER BASKET REPLACEMENT	554
DANIEL 1 & 2 DUCT REPLACEMENT	405
DANIEL 1 & 2 INTELLIGENT SOOTBLOWING	425
DANIEL 1 7A HP FW HEATER	23
DANIEL 2 EXPANSION JOINTS C00435 & C00437	150
DANIEL 2 FW HEATER 4 LP	433
DANIEL 2 REPLACE CRITICAL AC	292
DANIEL COMMON BREAKERS	295
DANIEL COMMON NEW BATCH MIXER FOR PRB COAL AT SILO	413
DANIEL COMMON NEW CABLES FOR ASH SLUICE MOTORS	100
DANIEL COMMON REPLACE COAL YARD SWITCHGEAR	150
DANIEL GENERATOR ROTOR REWIND	875
DANIEL TRESTLE	4,250
DANIEL 1 AND U2 OVATION EVERGREEN UPGRADE	645
DANIEL 1 AUX. AIR BECK DRIVES AND REGISTERS	195
DANIEL 1 REPLACE CRITICAL AC	270
DANIEL 1 STRUCTURAL LIGHTING	422
DANIEL 2 AUX. AIR BECK DRIVES AND REGISTERS	455
DANIEL 2 BFP A & B MINIMUM FLOW VALVES REPLACEMENT	68
DANIEL 2 IK SOOT BLOWER REPLACEMENT	500
DANIEL 2 NEW PYRITE HOPPERS AND PIPING	335
DANIEL 2 PA FAN INLET VANES	200
DANIEL 1 & 2 AIR DRYER REPLACEMENT	375
DANIEL 1 & 2 EH SKID REPLACEMENT	125
DANIEL 1 & 2 MILL MOTOR FOUNDATIONS	75
DANIEL 1 & 2 PYRITE HOLDING TANK	58
DANIEL WATER TREATMENT PLANT CONTROLS	270
DANIEL-MISC. STEAM PLANT ADDITIONS & IMP.	291
ENVIR-WASTE-CRIST FLY ASH LANDFILL STORAGE CELL DEVEL	1,500
PERDIDO LANDFILL GAS ENERGY	120
SCHERER - MISC ADDITIONS AND IMPROVEMENTS	169
SCHERER - MISC PE FOR ALL ROLLING STOCK	85
SCHERER - REPLACE DUCTWORK EXPANSION JOINTS	19
SCHERER 3 REPLACE 3D FIXED TRIPPER CHUTES	180
SCHERER 3 REPLACE 4D FIXED TRIPPER CHUTE	9
SCHERER 3 REPLACE AND MOVE TRESTLE FEEDER	47
SCHERER 3 AUTO FIRE SUPPRESSION - TURB/GENERATOR LUBE OIL	56
SCHERER 3 BOILER WATER CIRC PUMP	66
SCHERER 3 CLINKER GRINDER	41
SCHERER 3 CYCLE ISOLATION VALVE	28
SCHERER 3 HP TURBINE DIAPHRAGM REPLACEMENT	1,611
SCHERER 3 INSTALL CIRC WATER PUMP VIBRATION MONITOR SYSTEM	44
SCHERER 3 RELAY REPLACE ARC FLASH MITIGATION	119
SCHERER 3 REPLACE AIR HEATER BASKETS	76
SCHERER 3 REPLACE BFPT CONTROLS	283
SCHERER 3 REPLACE CONDENSATE MOTOR	14
SCHERER 3 REPLACE CONDENSER TUBE	1,135
SCHERER 3 REPLACE POLISHER CONTROLS	52
SCHERER 3 REPLACE VOLTAGE REGULATOR	144
SCHERER 3 TURBINE CROSSOVER EXPANSION JOINT	67
SCHERER 3 REPLACE UNDERGROUND WASTE WATER PIPING	71
SCHERER LAND PURCHASE	35
SCHERER NERC CIP V4 IMPLEMETATION	48
SCHERER PORTABLE EQUIPMENT	8
SCHERER REPLACE SUPERHEAT PENDANT PLATEN	1,112
SCHERER 3 - REPLACE FURNACE UPPER ARCH AND SCREEN TUBES	2
SCHERER 3 REPLACE REHEAT REPLACEMENT	411
SCHERER 3 REWIND MAIN GENERATOR STATOR	660
SCHERER REPLACE BURNERS	62
SMITH - STACK BREACH WORK AND JOINT REPAIRS	300
SMITH 1&2 - MISC. STEAM PLANT ADDITIONS	200
SMITH 3 - AIR COMPRESSOR BUILDING	100
SMITH 3 - CORROSION PROJECT	900
SMITH 3 - MISC. STEAM PLANT ADDITIONS	500
SMITH 3 CC STATION BATTERIES	50
Total:	38,404

2017 Production O&M Benchmark Comparison

($000)

Description	2012 Test Year Allowed	Test Year Benchmark	2017 Test Year Production O&M Budget	Variances
Steam Production	95,311	103,362	104,453	1,091
Other Production	7,312	7,930	13,280	5,350
Other Power Supply	4,312	4,676	4,421	(255)
Total Production	106,935	115,968	122,154	6,186

- Excludes Environmental Cost Recovery
- Includes 76% of Gulf’s ownership of Scherer Unit 3 that has been rededicated to serve native load customers.

Gulf Power Company
Production O&M FERC's
($000)

Excludes ECRC

	Budget 2016	Budget 2017	Budget 2018	Budget 2019	Budget 2020
Total Production O&M	114,787	124,466	116,494	122,109	134,017
Adjustments					
Scherer	(1,751)	(2,129)	(1,369)	(2,220)	
Plant Daniel		1,300			
Plant Crist Boiler Tubes		1,100			
Plant Smith Labor		(1,733)			
Other Adjustments	(535)	(850)	(909)	(904)	(881)
Total Adjusted Production O&M	**112,501**	**122,154**	**114,216**	**118,985**	**133,136**

Average 2017 – 2020: $122,123

Gulf Power Company

Smith Unit 3 - Combined Cycle

Benchmark and Average Historical and Forecast O&M Expenses

($000)

Excludes ECRC and Common

	2012 Test Year Allowed	CPI Multiplier	Benchmark	2017 Test Year	Variance
Heat Recovery Steam Generator	1,011	1.08447	1,096	2,500	1,404
Other Components (1)	1,173	1.08447	1,272	2,708	1,436
Total	**2,184**		**2,368**	**5,208**	**2,840**

	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	5 -Year Average
Heat Recovery Steam Generator (HRSG)	3,806	2,755	2,401	2,016	3,129	2,821
CPI Multiplier(2)	1.10699	1.08447	1.06882	1.05189	1.04956	
CPI Adjusted HRSG	4,213	2,988	2,566	2,121	3,284	3,034
Other Components (1)	1,543	1,988	2,862	2,253	2,959	2,321
CPI Multiplier(2)	1.10699	1.08447	1.06882	1.05189	1.04956	
CPI Adjusted Other Components	1,708	2,156	3,059	2,370	3,106	**2,480**
Total CPI Adjusted HRSG & Other Components	**5,921**	**5,144**	**5,625**	**4,491**	**6,390**	**5,514**

	Budget 2016	Budget 2017	Budget 2018	Budget 2019	Budget 2020	5 -Year Average
Heat Recovery Steam Generator	3,484	2,500	2,936	3,215	3,551	3,137
Other Components (1)	6,138	2,708	2,951	2,789	3,853	3,688
Total	**9,622**	**5,208**	**5,887**	**6,004**	**7,404**	**6,825**

(1) "Other Components" includes the Turbine System, Service Water System, Condensate System, Service Facilities, and Combustion Turbine

(2) CPI Multiplier applied to costs to escalate for inflation to 2017 dollars.

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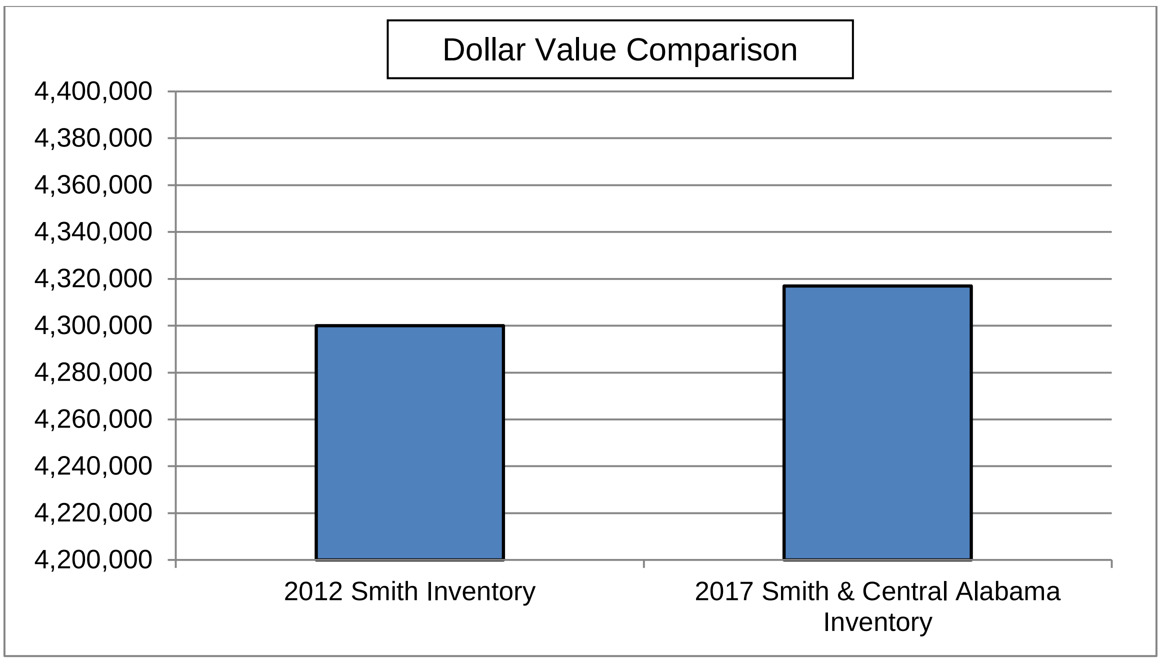
Gulf Power Company
Natural Gas Inventory Comparison
2012 vs 2017 Test Year



Gas Value, Volume and Commodity Comparison

	2012			2017		
Facility	**Volume MCF**	**Price Per MCF**	**Total Value**	**Volume MCF**	**Price Per MCF**	**Total Value**
Smith 3	835,702	$5.15	$4,300,000	597,285	$3.12	$1,861,000
Central AL	0	0	0	733,031	$3.35	$2,456,000
Totals	835,702	$5.15	$4,300,000	1,330,316	$3.25	$4,317,000