

Susan D. Ritenour
Secretary and Treasurer
and Regulatory Manager

One Energy Place
Pensacola, Florida 32520-0781

Tel 850.444.6231
Fax 850.444.6026
SDRITENO@southernco.com

REDACTED



March 31, 2010

Ms. Ann Cole, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0850

Dear Ms. Cole:

RE: Docket No. 100007-EI

Enclosed are an original and fifteen copies of Gulf Power Company's Request for Confidential Classification for certain portions of its Environmental Compliance Program Update for the Clean Air Interstate Rule, and Clean Air Visibility Rule, to be filed in the above referenced docket.

Sincerely,

Susan D. Ritenour (lw)

lw

Enclosures

COM	_____	cc w/encl.: Squire, Sanders, & Dempsey, L.L.P.
APA	_____	Charles A. Guyton, Esq.
ECR	<u>13</u>	Beggs & Lane
GCL	<u>1</u>	Jeffrey A. Stone, Esq.
RAD	_____	
SSC	_____	
ADM	_____	
OPC	_____	
CLK	<u>1</u>	

DOCUMENT NUMBER-DATE

32374 APR-1 2

FPSC-COMMISSION CLERK

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: **Environmental Cost
Recovery Clause**

Docket No.: **100007-EI**

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished this
31st day of March, 2010, by regular U. S. Mail to the following:

Martha Carter Brown, Esq.
Senior Counsel
FL Public Service Comm.
2540 Shumard Oak Blvd.
Tallahassee FL 32399-0850

John W. McWhirter, Jr., Esq.
McWhirter Reeves & Davidson
P.O. Box 3350
Tampa, FL 33601-3350

Paula K. Brown, Administrator
Regulatory Coordination
Tampa Electric Company
P. O. Box 111
Tampa FL 33601

John T. Butler, Esq.
Attorney for Florida Power & Light
Company
700 Universe Boulevard
Juno Beach FL 33408-0420

James D. Beasley, Esq.
J. Jeffry Wahlen
Attorneys for Tampa Electric Co.
Ausley & McMullen
P. O. Box 391
Tallahassee FL 32302

Cheryl Martin
Florida Public Utilities Company
P. O. Box 3395
West Palm Beach FL 33402-3395

Shayla L. McNeill, Capt. USAF
Karen S. White
AFLSA/JACL-ULT
139 Barnes Drive, Suite 1
Tyndall AFB, FL 32403

John T. Burnett, Esq.
R. Alexander Glenn, Esq.
Progress Energy Service Co.
P. O. Box 14042
St. Petersburg FL 33733-4042

Gary V. Perko, Esq.
Hopping Green & Sams
P. O. Box 6526
Tallahassee FL 32314

Paul Lewis, Jr.
Progress Energy Florida, Inc.
106 E. College Ave., Ste. 800
Tallahassee FL 32301-7740

Patricia Ann Christensen
Associate Public Counsel
Office of Public Counsel
111 W. Madison St., Rm. 812
Tallahassee, FL 32399

R. Wade Litchfield, Esq.
Associate General Counsel for
Florida Power & Light Company
700 Universe Boulevard
Juno Beach FL 33408-0420

Vicki Gordan Kaufman
John C. Moyle
118 N. Gadsden Street
Tallahassee, FL 32301


JEFFREY A. STONE

Florida Bar No. 325953

RUSSELL A. BADDERS

Florida Bar No. 007455

STEVEN GRIFFIN

Florida Bar No. 0627569

BEGGS & LANE

P. O. Box 12950

Pensacola FL 32591-2950

(850) 432-2451

Attorneys for Gulf Power Company

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Environmental Cost
Recovery Clause

Docket No.: 100007-EI
Date: March 31, 2010

REQUEST FOR CONFIDENTIAL CLASSIFICATION

GULF POWER COMPANY ["Gulf Power", "Gulf", or the "Company"], by and through its undersigned attorneys and pursuant to Rule 25-22.006, Florida Administrative Code, hereby files a request that the Florida Public Service Commission enter an order protecting from public disclosure certain portions of its Environmental Compliance Program Update for the Clean Air Interstate Rule and Clean Air Visibility Rule (the "Compliance Program"). As grounds for this request, the Company states:

1. Gulf Power seeks confidential classification for portions of its Compliance Program which is being filed concurrently with this request. The subject information relates to competitive interests, the disclosure of which would impair the competitive business of Gulf Power and Gulf Power's ability to procure goods and services on a fair and reasonable basis. The information is therefore entitled to confidential classification pursuant to section 366.093(3)(d)-(e), Florida Statutes.

2. Table 3.1-1 identifies in detail Gulf Power's projected capital expenditures, by plant and by project, associated with the Compliance Program. Disclosure of this information could negatively impact Gulf's ability to negotiate pricing favorable to its customers when contracting with vendors of materials needed by Gulf in order to implement its Compliance Program. Similarly, Table 3.1-2 identifies in detail Gulf Power's projected operation and maintenance expenses, by plant and by project, associated with the Compliance Program. Disclosure of this information could negatively impact Gulf's ability to negotiate pricing favorable to its customers when contracting with vendors of services needed by Gulf in order to implement its Compliance Program.

DOCUMENT NUMBER-DATE

02374 APR -1 0

FPSC-COMMISSION CLERK

3. Tables 3.3-1 and 3.3-2 provide the results of an economic viability study by Gulf Power of its generating assets. These tables provide unit-specific cost projections for combined cycle generation for use as coal retirement replacements. Wholesale competitors as well as suppliers of commodities and services could utilize this information to undermine Gulf's bargaining position in the markets where Gulf must compete to obtain commodities and services or make purchases or sales of wholesale power. In addition, disclosure of this information could negatively impact Gulf's ability to negotiate pricing favorable to its customers in the event that Gulf determined to sell one or more of its generating assets.

4. Table 4.5-1 identifies Gulf Power's estimated allowance costs between 2011 and 2018. Disclosure of this information could negatively impact Gulf's ability to negotiate pricing favorable to its customers when contracting for the purchase of allowances.

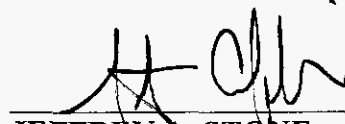
5. Finally, the Section 3.3.4 of the Compliance Program contains certain transmission cost assumptions and study results which are specific to Gulf Power's generating plants. Competitors, as well as suppliers of commodities and services, could utilize this information to undermine Gulf's bargaining position in the markets. In addition, disclosure of this information could negatively impact Gulf's ability to negotiate pricing favorable to its customers in the event that Gulf determined to sell one or more of its generating assets.

6. The information filed pursuant to this Request is intended to be, and is treated as, confidential by the Gulf Power and, to this attorney's knowledge, has not been otherwise publicly disclosed.

7. Submitted as Exhibit "A" are highlighted pages from the Compliance Program which contain confidential information. Exhibit "A" should be treated as confidential pending a ruling on this request. Attached as Exhibit "B" are two edited copies of Exhibit "A," which may be made available for public review and inspection. Attached as Exhibit "C" to this request is a line-by-line/field-by-field justification for the request for confidential classification.

WHEREFORE, Gulf Power Company respectfully requests that the Commission enter an order protecting the information highlighted on Exhibit "A" from public disclosure as proprietary confidential business information.

Respectfully submitted this 31st day of March, 2010.

A handwritten signature in black ink, appearing to read "Jeffrey A. Stone", is written over a horizontal line.

JEFFREY A. STONE

Florida Bar No. 325953

RUSSELL A. BADDERS

Florida Bar No. 007455

STEVEN R. GRIFFIN

Florida Bar No. 0627569

Beggs & Lane

P. O. Box 12950

Pensacola, FL 32591

(850) 432-2451

Attorneys for Gulf Power Company

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Environmental Cost
Recovery Clause

_____)

Docket No.: 100007-EI

Date: March 31, 2010

REQUEST FOR CONFIDENTIAL CLASSIFICATION

EXHIBIT "A"

Provided to the Commission Clerk under separate cover as confidential
information.

EXHIBIT "B"

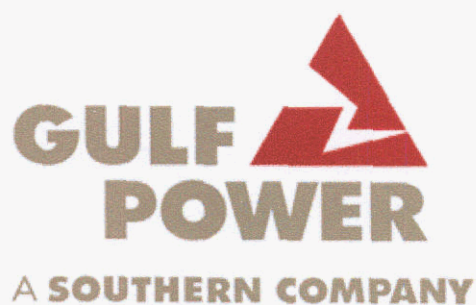
CONTAINS CONFIDENTIAL INFORMATION

Exhibit A

**GULF POWER COMPANY
ENVIRONMENTAL COMPLIANCE
PROGRAM UPDATE**

for the

**Clean Air Interstate Rule
Clean Air Visibility Rule**



April 1, 2010

CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	REGULATORY AND LEGISLATIVE UPDATE	4
2.1	Clean Air Interstate Rule	4
2.2	Clean Air Mercury Rule.....	5
2.3	Clean Air Visibility Rule	6
3.0	GULF'S COMPLIANCE PROGRAM.....	7
3.1	Gulf Power's Electric Generating System	7
3.2	Compliance Options.....	10
3.3	Gulf's Evaluation of Compliance Options.....	11
4.0	PLANT-BY-PLANT COMPLIANCE PROGRAM	17
4.1	Plant Crist.....	17
4.2	Plant Daniel	18
4.3	Plant Smith	20
4.4	Plant Scholz	22
4.5	Gulf's Allowance Purchases.....	23
5.0	POTENTIAL NEW ENVIRONMENTAL REGULATIONS	24
5.1	New 8-Hour Ozone Standard.....	24
5.2	New Fine Particle Standard	24
5.3	Global Climate Issues	25
6.0	SUMMARY OF GULF'S COMPLIANCE PROGRAM.....	27

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1.0-1	Projected 2010-2018 Compliance Program Capital and O&M Costs by Plant	3
2.1-1	CAIR Emission Reduction Requirements	4
3.1-1	Compliance Program Capital Expenditures	8
3.1-2	Compliance Program Plant O&M Expenses	9
3.3-1	Net Replacement Costs - Crist Unit 6	14
3.3-2	Net Replacement Costs - Daniel Units 1 and 2	16
4.5-1	Gulf Power Allowance Projection and Costs (2010-2018)	23

1.0 EXECUTIVE SUMMARY

Since the Clean Air Act Amendments (CAAA) were passed by Congress in 1990, Gulf Power Company (Gulf Power or Gulf) has reviewed and updated its environmental compliance planning as needed on an on-going basis. The goal of this process is to identify reasonable, cost-effective compliance strategies that will minimize the impact on Gulf Power's customers while achieving environmental objectives and assuring compliance with all environmental requirements.

On June 22, 2007, the Office of Public Counsel (OPC), the Florida Industrial Power Users' Group (FIPUG) and Gulf filed a petition for approval of a stipulation regarding the substantive provisions of Gulf's compliance plan. That stipulation identified 10 specific components, Phase I, of Gulf's program as being reasonable and prudent for implementation and set forth a process for review in connection with the three remaining components of the program. On August 14, 2007, the Commission voted to approve the stipulation with the proviso that Gulf provide an annual status report regarding cost-effectiveness and prudence of the phases in its program into which the Company is moving.

This document is the third update of Gulf's original environmental compliance program¹ approved by the Florida Public Service Commission (Commission or FPSC) in Order No. PSC-07-0721-S-EI. That program: (a) addressed the requirements of the Clean Air Interstate Rule (CAIR), Clean Air Mercury Rule (CAMR), and the Clean Air Visibility Rule (CAVR); (b) reviewed the decision process for assuring compliance at Gulf Power; and (c) provided cost estimates for incorporating these requirements at Gulf Power. The document reviewed the specific issues, timing, alternatives, process, and costs necessary for compliance with the new federal rules and the corresponding implementation programs developed by the Florida Department of Environmental Protection (FDEP) and the Mississippi Department of Environmental Quality (MDEQ).

Since the Commission's approval of Gulf's compliance program in 2007, there have been a number of developments. Gulf has addressed in several of its intervening filings, as well as in the annual updates, changes to schedules of approved projects, such as the addition and cancellation of Activated Carbon Injection (ACI) at Plant Daniel and other compliance program changes. However, there have been three significant court decisions that have had and will have further impact on Gulf's compliance program. In February 2008, the U.S. Court of Appeals for the District of Columbia Circuit ("DC Circuit") issued an opinion vacating the Environmental Protection Agency's (EPA) CAMR. In a separate proceeding in the U.S. District Court for the District of Columbia, the EPA has asked the court to enter a consent decree that would require the EPA to issue a proposed Maximum Achievable Control Technology (MACT) rule by March 16, 2011, and a final rule by November 16, 2011. The EPA is currently developing a MACT rule for coal and oil-fired electric generating units, which will likely address numerous Hazardous Air Pollutants (HAPs), including mercury.

1- The title of Gulf's compliance environmental program has been revised since the original filing in March of 2007. CAMR was removed from the document title when projected capital costs for mercury monitoring were removed from the program.

In July 2008, in response to petitions brought by certain states and regulated industries challenging particular aspects of CAIR, the DC Circuit issued a decision vacating CAIR in its entirety and remanding it to the EPA for further action consistent with its opinion. On December 23, 2008, however, the Court altered its July decision in response to a rehearing petition and remanded CAIR to the EPA without vacatur, thereby leaving CAIR compliance requirements in place while the EPA develops a revised rule. Florida and Mississippi currently have EPA-approved plans to implement this rule. The EPA is expected to issue a proposed CAIR replacement rule in July 2010.

This document addresses Gulf's ongoing compliance projects and the reasons Gulf plans to continue these projects. Florida and Mississippi's EPA approved CAIR implementation plans must be met. Gulf Power's compliance program will be impacted by factors such as: implementation of these rules; the result of EPA's promulgation of the MACT rule and a CAIR replacement rule; FDEP's, and the MDEQ's responses to court decisions vacating CAMR; changes to existing environmental laws and regulations, the cost of emissions allowances, performance of emission control equipment; and any change in the use of coal. Based on these factors, future environmental compliance costs will continue to be incurred, and projections will be revised. The timing of the requirements and costs incurred will be a function of the compliance options selected, fuel burn, energy demand, fuel sulfur content, availability and prices for allowance purchases, natural gas prices, performance of emission control equipment, and other variables.

A capital and operations and maintenance (O&M) cost summary for Gulf's compliance program is provided in Table 1.0-1. Detailed capital and O&M costs are provided in Section 3 of this document.

As noted in the Commission's approval of Gulf's original environmental compliance program, the program would likely evolve over time, so, at present, only Phase I projects have been approved. The remaining components of Gulf's compliance program were in the planning phase when the Commission approved the Phase I projects for Environmental Cost Recovery Clause (ECRC) recovery, subject to ongoing review of costs within the annual review process. The remaining Phase II components include the Plant Daniel Units 1 and 2 Selective Catalytic Reduction (SCR) systems, the Plant Smith Units 1 and 2 scrubber, and the Plant Smith baghouse project. The Plant Daniel Units 1 and 2 SCRs are the first Phase II components of Gulf's compliance program for which Gulf is requesting approval. The Plant Daniel SCRs have progressed from the "flexible" planning stage to the implementation stage. The Plant Daniel Units 1 and 2 SCRs are scheduled to be placed in-service in 2014 and 2015, respectively to meet the requirements of CAIR, the anticipated 8-hour ozone nonattainment designation, and anticipated mercury MACT requirements. The SCRs, along with the Plant Daniel scrubber, provide a co-benefit of significantly reducing mercury emissions. The schedule and decisions about the Plant Smith scrubber and baghouse projects remain very flexible. The Plant Smith scrubber and baghouse projects are included in Gulf's compliance program for future review and approval.

Gulf Power has remained in compliance with all requirements of the CAAA and has addressed local concerns regarding potential ozone nonattainment in Pensacola and along the Gulf Coast. Implementation of the program described in this document will help assure continued compliance; however, new ozone standards may still result in the Pensacola area being designated as nonattainment. The FDEP recently released a list of nonattainment areas for ozone to EPA that included both the Pensacola Metropolitan area and Bay County. EPA is expected to make the final designations early next year.

Beyond CAIR and CAVR, many of the future regulatory requirements, especially those needed to attain current and future ozone and fine-particulate ambient standards, will be aimed at further nitrogen oxide (NO_x) and sulfur dioxide (SO₂) reductions. However, many of these anticipated requirements are not yet fully developed. With the vacatur of CAMR, it is anticipated that EPA will adopt a rule for MACT for power plant mercury emissions and other hazardous air pollutants. As mentioned earlier, the EPA has been ordered to promulgate a new rule addressing the issues in the D.C. Circuit's 2008 CAIR decision. In addition, there are multiple state, federal and international initiatives regarding greenhouse gases (GHG), particularly carbon dioxide (CO₂), pending. If adopted, these rules could further impact Gulf's compliance program. All of this uncertainty reinforces the need for a flexible, robust compliance plan. Accordingly, as decision dates for equipment purchases approach, and as regulatory and economic drivers become better defined, the analysis will be updated as needed to enable the selection of the most reasonable and cost-effective compliance alternatives while maintaining future flexibility in the plan.

Table 1.0-1
Projected 2010-2018 Compliance Program
Capital and O&M Costs by Plant

Plant	Phase I Capital Expenditures (\$ in millions)	Phase II Capital Expenditures (\$ in millions)	Phase I O&M Expenses (\$ in millions)	Phase II O&M Expenses (\$ in millions)
Crist	239	0	183	0
Daniel*	278	238	48	27
Smith	0.2	306	18	4
Scholz	0	0	0.2	0
TOTAL	517	544	249	31

*Costs for Gulf Power's ownership portion of Plant Daniel in Mississippi.
Note: Allowance cost projections are not included in Table 1.0-1

2.0 REGULATORY AND LEGISLATIVE UPDATE

This section provides a regulatory and legislative update and review of the CAIR, CAMR and other potential mercury regulations, and CAVR.

2.1 CLEAN AIR INTERSTATE RULE

In March 2005, the EPA published the final CAIR, a rule that addresses transport of SO₂ and NO_x emissions that contribute to nonattainment of the ozone and fine particulate matter National Ambient Air Quality Standards (NAAQS) in the Eastern United States. This cap and trade rule addresses power plant SO₂ and NO_x emissions that were found to contribute to nonattainment of the 8-hour ozone and fine particulate matter standards in downwind states. Twenty-eight eastern states, including Florida and Mississippi, are subject to the requirements of the rule. The rule calls for additional reductions of NO_x and SO₂ to be achieved in two phases, 2009/2010 and 2015, as shown in Table 2.1-1.

Table 2.1-1

CAIR Emission Reduction Requirements

Emissions	Phase I reduction from acid rain allocations or current emissions	Phase II reduction from current allocations or current emissions
SO₂	50 % (2010)	66 % (2015)
NO_x	50 % (2009)	65 % (2015)

On July 11, 2008, in response to petitions brought by certain states and regulated industries challenging particular aspects of CAIR, the D.C. Circuit issued a decision vacating CAIR in its entirety, and remanding it to EPA for further action consistent with its opinion. In December 2008, however, the Court altered its July 2008 decision in response to a rehearing petition and remanded CAIR to the EPA without vacatur, thereby leaving CAIR compliance requirements in place while EPA develops a revised rule. The States of Florida and Mississippi have EPA-approved plans to implement this rule. Compliance with these plans will be accomplished by the installation of additional emission controls at the Company's coal-fired facilities and/or by the purchase of emission allowances. Decisions regarding Gulf's CAIR compliance strategy were made jointly with the CAMR and CAVR compliance plans due to co-benefits of proposed controls.

Gulf Power's overall compliance strategy has been developed in response to numerous federal and state regulatory requirements, many of which remain unaffected by the court's ruling. The court's decision has the potential to impact future decision making regarding capital expenditures, the installation and operation of pollution control equipment, the purchase of emissions allowances, and the carrying cost of the existing emissions allowances. The ultimate impact of this decision, if any, cannot be determined at this time and will

depend on subsequent legal action, including future EPA and State rulemaking. However, what is clear for the present is that Gulf must comply with Florida and Mississippi's EPA approved CAIR implementation plans. The EPA is expected to issue a proposed CAIR replacement rule in July 2010.

2.2 CLEAN AIR MERCURY RULE

In March 2005, the EPA published the final CAMR, a cap and trade program for the reduction of mercury emissions from coal-fired power plants. The rule set caps on mercury emissions to be implemented in two phases, 2010 and 2018, and provided for an emission allowance trading market.

The final CAMR was challenged in the D.C. Circuit. The petitioners alleged that the EPA was not authorized to establish a cap-and-trade program for mercury emissions and instead the EPA must establish MACT standards for coal-fired electric utility steam generating units. In February 2008, the court issued an opinion vacating the CAMR. The vacatur became effective with the issuance of the court's mandate on March 14, 2008, nullifying CAMR mercury emission control obligations and monitoring requirements.

In a separate proceeding in the U.S. District Court for the District of Columbia, the EPA has asked the Court to enter a proposed consent decree that would require the EPA to issue a proposed MACT rule by March 16, 2011, and a final rule by November 16, 2011. The EPA is currently developing a MACT rule for coal and oil-fired electric generating units greater than 25 megawatts under Section 112 of the Clean Air Act that will likely address numerous HAPs, including mercury. On January 4, 2010, Southern Company received an Information Collection Request (ICR) from the EPA in the form of a Section 114 letter. The ICR requires the company to submit existing data and conduct emissions testing to support an electric generating unit MACT rule. Costs for the ICR testing are included under an ECRC O&M program that is not part of the compliance program. The 2010 projected costs for the MACT-ICR project are approximately \$466,000. These costs were approved for ECRC recovery in Order PSC-09-0759-FOF-EI.

Pursuant to the Clean Air Act, Section 112(i)(3)(A), an existing electric generating unit must achieve compliance with the new HAPs MACT standard no later than three years after the effective date of the new rules. Gulf is expected to be required to comply with the new HAPs MACT rules by early 2015. The HAPS MACT rulemaking could require emission reductions more stringent than those required by the CAMR. The CAMR court decision does not impact state rules that may continue to be developed in Florida.

2.3 CLEAN AIR VISIBILITY RULE

The Clean Air Visibility Rule (formerly called the Regional Haze Rule) was finalized in July 2005, with a goal of restoring natural visibility conditions in certain areas (primarily national parks and wilderness areas) by 2064. The rule involves (1) the application of Best Available Retrofit Technology (BART) to certain sources built between 1962 and 1977, and (2) the application of any additional emissions reductions which may be deemed necessary for each designated area to achieve reasonable progress by 2018 toward the natural conditions goal. Thereafter, for each 10-year planning period, additional emissions reductions will be required to continue to demonstrate reasonable progress in each area during that period. For power plants, the CAVR allows states to determine that the CAIR satisfies BART requirements for SO₂ and NO_x. States have completed or are currently completing implementation plans that contain strategies for BART compliance and any other measures required to achieve the first phase of reasonable progress. The Florida Regional Haze rule, Chapter 62 Part 296.340, F.A.C., requires BART compliance as expeditiously as practicable, but not later than December 31, 2013. The State of Mississippi Regional Haze State Implementation Plan (SIP) was submitted to MDEQ in September 2009 and the EPA has not formally responded, commented or requested information from MDEQ. The regulatory timeline for EPA disapproval (45 days) has passed; therefore, it is assumed that all MPC facilities are currently in compliance with CAVR through 2015. It is expected, however, that scrubbers and SCRs will be a major consideration for compliance with CAVR beyond 2015.

3.0 GULF'S COMPLIANCE PROGRAM

3.1 GULF POWER'S ELECTRIC GENERATING SYSTEM

Gulf Power owns and operates three fossil-fueled generating facilities in Northwest Florida (Plants Crist, Smith and Scholz). Gulf also owns a 50 percent undivided ownership interest in Unit 1 and Unit 2 at Mississippi Power Company's Plant Daniel. This fleet of generating units consists of ten fossil steam units, one combined cycle (CC) unit, and one combustion turbine (CT). The name plate generating capacity of Gulf's generating fleet affected by CAIR and/or CAVR is 2,783 Megawatts (MW).

A summary of the compliance program capital projects and associated expenditures through 2018 is provided in Table 3.1-1. The projected plant O&M expenses associated with the capital projects are included in Table 3.1-2. The cost information is provided by plant and by project.

A
B
C
D
E
F
G
H
I
J

Table 3.1-1
Compliance Program Capital Expenditures
\$ in Thousands

Prior Years**	
By Plant	
Plant Crist	
Mercury Monitoring	
Unit 6 SCR	13,187
Units 4-7 Scrubber	594,260
Plant Scholz	
Mercury Monitoring	644
Plant Smith	
Unit 2 Baghouse*	
Unit 1 SNCR	8,362
Unit 2 SNCR	2,905
Mercury Monitoring	1,433
Units 1-2 Scrubber *	
CAIR Parametric Monitor	230
Plant Daniel	
Mercury Monitoring	
Unit 1 SCR*	
Unit 2 SCR*	
Units 1 & 2 Scrubber	2,929
Unit 1 SNCR	
Unit 1 Low NOx Burners	1,511
Unit 2 SNCR	
Unit 2 Low NOx Burners	3,670
By Project	
Mercury Monitoring	2,077
SCRs	13,187
Scrubbers	597,189
SNCRs	11,267
Baghouse	
CAIR Parametric Monitor	230
Low Nox Burners	5,181
Annual Total	629,131

* Phase II projects that have not been approved for ECRC recovery

**2006-2009 expenditures

Expenditures presented for Plant Daniel represent Gulf's ownership portion.

Allowance cost projections are not included in Table 3.1-1

C
D
E
F
G
H
I
J

A
B
Table 3.1-2
Compliance Program Plant O&M Expenses
\$ in Thousands

By Plant
Plant Crist
Mercury Monitoring
Unit 6 SCR
Units 4-7 Scrubber
Plant Scholz
Mercury Monitoring
Plant Smith
Unit 2 Baghouse*
Unit 1 SNCR
Unit 2 SNCR
Mercury Monitoring
Units 1-2 Scrubber*
CAIR Parametric Monitor
Plant Daniel
Mercury Monitoring
Unit 1 SCR*
Unit 2 SCR*
Units 1&2 Scrubber
Units 1 & 2 SNCR(s)
Unit 1 Low NOx Burners
Unit 2 Low NOx Burners
By Project
Mercury Monitoring
SCRs
Scrubbers
SNCRs
Baghouse
CAIR Parametric Monitor
Low NOx Burners
Annual Total

* Phase II projects that have not been approved for ECRC recovery
 Expenses presented for Plant Daniel represent Gulf's ownership portion.
 Allowance cost projections are not included in Table 3.1-2

3.2 COMPLIANCE OPTIONS

As part of Gulf's environmental compliance planning evaluation Gulf considered four major options for environmental compliance:

- Dependence on allowance purchases
- Fuel switching
- Retrofit of environmental emission controls to existing generating units
- Retirement of existing generating units and replacement with new or purchased generation

Combinations of these options were also considered.

3.2.1 Allowance Purchase Option

In addition to the already existing SO₂ (acid rain) and seasonal NO_x (ozone) allowance markets, the CAIR introduced an additional allowance market for annual NO_x. Cap and trade programs use a market-based approach to reduce emissions. The program sets a cap, or limit, for each pollutant such as SO₂ and NO_x, which is then divided into emission allowances that are allocated to each affected source. Sources are allowed to determine the most reasonable, cost-effective way to comply. Facilities may install environmental emission controls, use fuel switching, replace the generating units, rely on the emission allowance market, or use some combination of these options.

3.2.2 Fuel Switching Option

Fuel switching refers to instances where an electric generating unit's primary fuel is changed to reduce emissions. For certain facilities, NO_x emissions can be reduced by burning high-moisture, low-Btu sub-bituminous coals, while mercury emissions can be reduced by utilizing coal lower in mercury content. In Gulf's case, fuel switching to lower sulfur coal was shown under the Acid Rain Program to be a cost effective means for reducing emissions of SO₂.

3.2.3 Retrofit Options

Retrofit options refer to additional environmental emission controls that can be installed on existing generating units. As discussed in Section 2, affected coal-fired electric generating units would be required to comply with SO₂ and NO_x limits under CAIR and CAVR, if the units are to continue to operate. These reductions may be met by installing additional SO₂ and NO_x emission controls on existing units. Currently, the proven control technology of choice for SO₂ reduction is wet scrubbing. For NO_x removal, there are a number of proven

emission controls available such as Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), and Low NO_x Burners (LNBs).

3.2.4 Retirement and Replacement Option

A retirement and replacement evaluation is used to compare retrofit compliance options to premature retirement and replacement of specific generating units in order to determine the most reasonable, cost-effective compliance option. The retirement option is typically more applicable to smaller, older, less efficient coal plants that cannot financially support the addition of environmental controls. The evaluation methodology and the evaluation results are discussed in Section 3.3.4.

3.3 GULF'S EVALUATION OF COMPLIANCE OPTIONS

3.3.1 Evaluation of Allowance Purchase Option

The SO₂ and seasonal NO_x allowance markets have proven to be fundamentally driven by supply and demand. However, over time, many speculative investors have begun entering the allowance markets, particularly the SO₂ market, introducing considerable volatility and uncertainty concerning the price and availability of allowances.

The costs of compliance with the SO₂ programs represent a major portion of Gulf Power's total environmental compliance program cost. With the high price volatility, the future price and availability of allowances cannot be treated as predictable; therefore, depending solely on the market for SO₂ compliance presents a large risk for Gulf Power's customers. Additionally, should allowances not be available, Gulf Power might be forced to operate higher cost units while curtailing operation of lower cost units in order to maintain compliance.

The CAIR program introduced an additional allowance market for annual NO_x. This market was expected to emerge as soon as the states finalized their implementation plans. Indeed, EPA has populated the annual NO_x accounts. Due to the December 2008 court decision leaving CAIR intact, these allowances are necessary for continued operation after January 1, 2009. In addition, the seasonal NO_x programs were implemented in Florida and Mississippi during 2009.

Total dependence on these commodity markets for compliance would be very risky and potentially costly for Gulf Power and its customers. The market does, however, provide realistic opportunities for reducing costs through selected and limited purchases of allowances in conjunction with other options to achieve cost effective compliance.

In summary, in order for the allowance market based approach to be an appropriate solution for Gulf Power's compliance shortfall, these allowance markets must be established, reasonably stable, and have sufficient quantities of allowances available. Furthermore, to avoid short-term supply and demand volatility, these conditions must be met with sufficient

lead time to allow time to pursue other options such as constructing emission controls. Given the timing of construction schedules and the compliance deadlines for the new rules, Gulf Power could not wait to see if stable allowance markets emerged. These overall uncertainties eliminated the exclusive use of an all allowance purchase option from consideration.

3.3.2 Evaluation of Fuel Switching Option

Fuel switching was shown under the Acid Rain Program to be cost effective for reducing emissions of SO₂. For certain facilities, NO_x emissions can be reduced by burning high-moisture, low-Btu sub-bituminous coals, and some coals are lower in mercury content than others. However, for the magnitude of emission reductions required by CAIR and CAVR, fuel switching alone is no longer a viable option.

3.3.3 Evaluation of Retrofit Options

Having determined that neither an all allowance compliance program nor an all fuel switching compliance program would be feasible or desirable, Gulf Power was left with the primary options of either retrofitting units or retiring and replacing units (and, if necessary, supplementing those options with allowance purchases or fuel switching). However, before making a comparison of retrofit and replacement options, Gulf Power first had to choose among competing retrofit options. Those selections of the best retrofit options were discussed in Gulf's original environmental compliance program and have not changed; therefore, they are not repeated here.

3.3.4 Evaluation of Retrofit versus Replacement Options

Selection between retrofit and replacement options is based upon a financial assessment of which option ultimately is expected to be the most reasonable, cost effective alternative for Gulf's customers. The analyses examine the relative cost of dispatching the System (a) with the retrofit technology in place and (b) with having retired the unit without making the retrofit and instead, replacing it with new capacity. The 2010 replacement analyses included Plant Crist Unit 6 and Plant Daniel Units 1 and 2.

The analyses were performed using a detailed site specific methodology. The detailed evaluation focused on a comparison of continued unit operation or replacement by a CC. The evaluation included hourly production cost modeling and cost implications to the transmission system. Changes in production cost, capital, and other fixed costs were captured in the comparison analysis to help determine the most economical option.

Methodology

The economic analyses focused on a comparison of continued operation with retrofit controls to replacement by a combined cycle unit. This evaluation included refined commitment and energy value modeling and cost implications to the transmission system. Changes in energy value, capital, and other fixed costs were captured in the comparison analysis to help determine the most economical option. Replacement energy costs were estimated using the Southern Electric System marginal replacement costs for both the continued coal operation and the replacement alternative. Marginal replacement costs were generated with the Pro-Sym® model. The marginal replacement costs were then used in the Southern Company GenVal model to dispatch both the coal unit and the combined cycle unit. The energy benefits (marginal replacement costs minus variable operating costs) were compared to determine the commitment and energy value to the Southern Electric System for both generating options. Fixed costs associated with the continued operation of the existing generating units were based on projections of annual O&M costs and the Net Present Value (NPV) of the revenue requirements associated with incremental capital investment necessary to keep the unit operational over the evaluation period. Replacement, installation capital, fixed O&M, and continue to operate capital are site specific costs. The NPV of the difference between replacement cost and unit operational cost is calculated to determine the overall net contribution.

The evaluation incorporated sixteen integrated scenarios in order to capture variations in the operating environments that would affect potential retirement of the units. The sixteen cases were developed around uncertainty in fuel prices and CO₂ legislation. The CO₂ price assumptions were \$0/ton, \$10/ton, \$20/ton and \$30/ton (in 2009 dollars), starting in 2015 and escalating at 5 percent above inflation. The fuel price sensitivities utilized variations in gas and coal prices based on a low, moderate, moderate with volatility, and high forecast which relied on Charles River Associates (CRA) fuel forecasts.

Plant Crist Unit 6

The purpose of the Plant Crist evaluation was to determine the economic benefits of retiring Crist Unit 6 in December of 2014 and replacing the unit with the lowest cost option. The evaluation included estimates of transmission cost implications associated with a potential retirement. It was assumed in this study that the replacement combined cycle unit would be placed on the Plant Crist site. The evaluation retired and replaced Crist Unit 6 with one 2x1 G series CC in January of 2015, avoiding the Crist 6 SCR installation in the fall of 2012.

Transmission Cost Assumptions

1										
2										
3										
4										
5										

1
2

Results

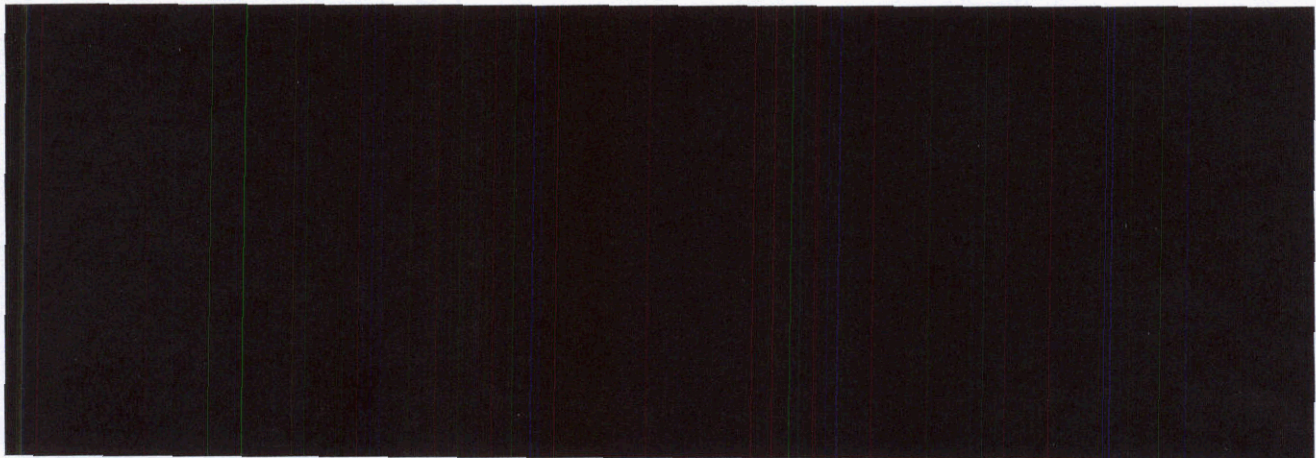
An economic evaluation of the Plant Crist CC replacement option was performed to compare customer costs from 2010-2035. The CC replacement option was compared back to the cost of continuing operation of Crist Unit 6 with the SCR installed. Table 3.3-1 presents the NPV customer costs resulting from a comparison of costs of a replacement combined cycle minus the cost to continue to operate Crist Unit 6 with a SCR.

It showed that for fifteen of the sixteen scenarios considered, it is more beneficial to Gulf's customers to continue to operate Crist Unit 6 with the SCR installed rather than replacing Crist Unit 6 with a CC unit. This analysis does not attempt to monetize the fuel diversity benefits Gulf's customers receive from maintaining coal capacity and avoiding an undue system reliance on natural gas. This analysis clearly shows the better option to Gulf's customers is the installation of the Crist Unit 6 SCR.

Table 3.3-1
Net Replacement Costs – Crist Unit 6

Economic Retirement Study

Customer Costs for CC Replacement Option Relative to Continued Operation with the SCR
(NPV 2010 in millions)



Plant Daniel Units 1 and 2

The purpose of the Plant Daniel evaluation was to determine the economic benefits of retiring Daniel Units 1 and 2 in December of 2014 and replacing the units with the lowest cost option. The evaluation included estimates of transmission cost implications and site closure costs associated with a potential retirement. The evaluation retired and replaced Daniel Units 1 and 2 with two 2x1 G series CCs in January of 2015, avoiding the Daniel Units 1 and 2 SCRs in the fall of 2014 and the spring of 2015, respectively, and the fall 2014 scrubber installation. It was assumed in this study that one replacement CC would be placed on the Plant Crist site and one replacement CC would be placed on the Plant Daniel site.

Transmission and Site Closure Cost Assumptions

1	
2	
3	
4	
5	
6	
7	

Site closure cost estimates for Daniel Units 1 and 2 were based on a 2009 study. The results of that study indicated that for Daniel Units 1 and 2, the projected site closure cost is \$25.5 million in 2009\$, which included closure of the ash pond.

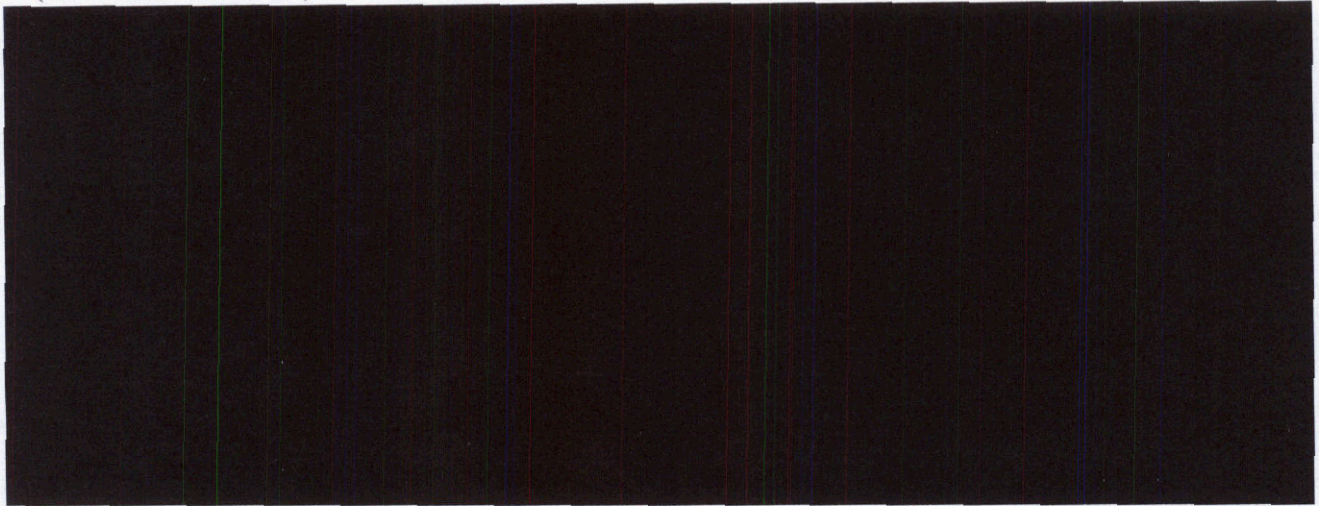
Results

An economic evaluation of the Plant Daniel CC replacement option was performed to compare customer costs from 2010-2039. The CC replacement option was compared back to the cost of continuing to operate Plant Daniel Units 1 and 2 with SCRs and a scrubber installed. Table 3.3.2 presents the NPV customer costs resulting from a comparison of costs of replacement combined cycle units minus the cost to continue to operate Daniel Units 1 and 2 with SCRs and a scrubber.

It showed that for thirteen of the sixteen scenarios considered, it is more beneficial to Gulf's customers to retrofit Plant Daniel Units 1 and 2, as proposed, rather than replacing them with CC units. In addition, there may be practical transmission timeline limitations that would put a 2015 replacement date in question. Even without monetizing the fuel diversity benefits of retaining coal generation on its system, the analysis shows that the proposed retrofit of the Plant Daniels Units is preferable to their replacement.

Table 3.3-2
Net Replacement Costs – Daniel Units 1 and 2

Economic Retirement Study
Customer Costs for CC Replacement Option Relative to Continued Operation with SCRs and
Scrubber
(NPV 2010 in millions)



Results Reflect 50% ownership by Gulf

4.0 PLANT-BY-PLANT COMPLIANCE PROGRAM

4.1 Plant Crist

Plant Crist is a four-unit, coal-fired electric generating facility located just north of Pensacola, Florida. Three older natural gas and oil-fired units at the site have been retired. Units 4 and 5 each have a nameplate rating of 93.7 MW and Units 6 and 7 have nameplate ratings of 369 MW and 578 MW, respectively. All four units were affected under the Acid Rain Program, and the plant has operated on low-sulfur coals since the 1990s to lower SO₂ emissions. All four units are equipped with low-NO_x burner systems. Plant Crist Units 4, 5 and 6 have SNCR systems, while Crist Unit 7 is equipped with an SCR system for NO_x control.

The Plant Crist Units 4 through 7 flue gas desulfurization (FGD) scrubber became operational in December 2009 and is designed to reduce SO₂ emissions by approximately 95%. With these reductions, Gulf Power will be able to reasonably manage compliance with its SO₂ allowance bank and some market purchases of allowances as required. Mercury emission reductions are also expected to be met through the co-benefits of the scrubber and SCR installations.

4.1.1 Plant Crist Retrofit Options

Plant Crist Unit 6 SCR Project

The Plant Crist Unit 7 SCR became operational in 2005, significantly reducing emissions of NO_x from the plant. This project was called for under an agreement with the FDEP. The agreement also called for additional NO_x reductions at Plant Crist Units 4 through 6 up to and including an SCR for Unit 6. Additional NO_x reductions are needed at Plant Crist, and only SCR technology will provide the additional increment needed. The SCR on Unit 6 will be important for Pensacola to achieve attainment with the anticipated 8-hour ozone non-attainment designation. In addition, the Crist Unit 6 SCR was also needed for CAIR and CAMR compliance. While CAMR compliance is no longer required, it is anticipated that EPA will adopt a rule for MACT for power plant mercury emissions. The Crist Unit 6 SCR will still be needed to satisfy FDEP requirements and the anticipated 8-hour ozone nonattainment designation. The Crist Unit 6 SCR is projected to be placed in-service in 2012.

4.1.2 Plant Crist Comparison of Retrofit versus Retirement and Replacement

During 2010, an analysis was run to determine the economic benefits of retiring Plant Crist Unit 6 in December 2014 and replacing the unit with the lowest cost option. The site specific analysis focused on a comparison of continued operation versus unit replacement by a combined cycle. This evaluation included refined commitment and energy value modeling and cost implications to the transmission system. Changes in energy value, capital and other fixed costs were captured in the comparison analysis to help determine the most economical

option. The economic results showed that for fifteen of the sixteen scenarios considered, it is more beneficial to Gulf's customers to continue to operate Crist Unit 6 with the SCR installed rather than replacing Crist Unit 6 with a CC unit.

4.1.3 Plant Crist Emission Monitoring Requirements

Mercury continuous emission monitoring systems for Plant Crist Units 4 through 7 and the common scrubber stack were included as part of Gulf's original CAIR, CAMR and CAVR compliance program approved by the Commission. In response to the CAMR vacatur, Gulf has delayed further mercury monitoring capital costs until new mercury regulation emerges.

4.1.4 Conclusions for Plant Crist

Based on previous economic assessments of Crist Units 4 through 7 and the Crist Unit 6 economic evaluation, the retrofit of Crist Units 4 through 7 with a single flue gas desulfurization scrubber and the addition of an SCR on Unit 6 are the best options for compliance with CAIR, CAVR, the anticipated 8-hour ozone nonattainment designation, potential mercury regulation, and a potential fine particulate NAAQS. These are the only technologies that offer the necessary emission reductions for SO₂ and NO_x and when used together, the scrubber and the SCRs on Units 6 and 7 will capture mercury.

4.2 Plant Daniel

Gulf Power's ownership interest at Plant Daniel is associated with two coal-fired electric generating units that each have a nameplate rating of 548.2 MW. Gulf Power and Mississippi Power Company each own 50 percent of Daniel Units 1 and 2. The plant is operated by Mississippi Power employees. The facility is located just north of Pascagoula, Mississippi, with direct transmission access across Alabama and into Florida. Both coal-fired units were affected under the Acid Rain Program and have operated on low-sulfur coals since the 1990s to lower SO₂ emissions. These New Source Performance Standards (NSPS) units are relatively low NO_x emitters, and as a result, Gulf and Mississippi Power have been able to delay installation of controls and associated costs required under the Acid Rain Program. Low NO_x burners were installed on Daniel Unit 2 during 2008 for CAIR annual and seasonal NO_x cap and trade allowance programs.

For compliance with CAIR and later with CAVR, Plant Daniel Units 1 and 2 need significant SO₂ and NO_x reductions. Only a few technologies have demonstrated the ability to provide the needed emission reductions at the commercial scale required for the coal units at Plant Daniel. For CAIR and CAVR requirements at Plant Daniel Units 1 and 2, an assessment was conducted to compare retrofit controls versus retirement and replacement options for compliance. As noted under Section 3.2, complete reliance on fuel switching and allowance purchases were eliminated as viable options for all of Gulf Power's units, including its share of Plant Daniel Units 1 and 2. Retrofit options, as well as retirement and replacement options, are each reviewed below specifically for Plant Daniel.

4.2.1 Plant Daniel Retrofit Options

Plant Daniel Unit 1 and Unit 2 Flue Gas Desulfurization Scrubber Project

Very high levels of SO₂ emission reductions can be achieved by flue gas desulfurization. There are no other commercially available options for SO₂ emission reductions at the level needed to assure compliance with CAIR and CAVR. The Daniel scrubber project will be an effective means of reducing SO₂ and mercury emissions. It is still anticipated that this scrubber project will be required for CAVR compliance, and is projected for compliance with CAIR and potential mercury regulation. These large, co-owned units are the most efficient units owned by Gulf Power. A wet scrubber has been determined to be the only viable SO₂ retrofit compliance option for Plant Daniel.

The Daniel scrubber project is designed to reduce SO₂ emissions by approximately 95%. With these reductions, Gulf Power will be able to reasonably manage compliance using its SO₂ allowance bank and some market purchases of allowances as required. The scrubber is currently scheduled for completion in 2014. For CAIR, the scrubber will minimize the reliance on the SO₂ allowance market and assure compliance for Plant Daniel Units 1 and 2.

Plant Daniel NOx Reduction Projects

The Daniel Unit 1 and 2 Low NOx burners were planned for CAIR annual and seasonal NOx cap and trade allowance programs. The Daniel Unit 2 Low NOx burners were installed during 2008. The Daniel Unit 1 Low NOx burner project that was originally scheduled to be placed in-service during 2009 had been delayed during 2008, pending the outcome of the CAIR decision. Now that the CAIR rule has been remanded to EPA and remains in effect, the Low NOx burner project at Daniel Unit 1 has been rescheduled to be placed in-service during 2010.

The Plant Daniel Units 1 and 2 SCRs are planned for operation in 2014 and 2015, respectively, to help meet the requirements of CAIR and the anticipated 8-hour ozone nonattainment designation. These SCRs, along with the Unit 1 and 2 scrubber, also provide a co-benefit of significantly reducing mercury emissions. While CAMR compliance is no longer required, it is anticipated that EPA will adopt a rule for MACT for power plant mercury emissions. The Plant Daniel SCRs are the first Phase II components of Gulf's compliance program for which Gulf has requested approval. These projects have progressed from the "flexible" planning stage to the implementation stage.

4.2.2 Plant Daniel Comparison of Retrofit versus Retirement and Replacement

Selection between retrofit and retirement/replacement options for Plant Daniel was based upon a financial assessment and analysis to determine the least cost option for Gulf Power and its customers. The analysis examined the relative cost of (a) completing the retrofit project and operating the retrofitted unit with (b) retiring the Daniel units without making the retrofit and instead, replacing them with capacity from another generation source.

This analysis was run using a detailed site specific methodology, as previously discussed in Section 3.3.4. The analysis focused on a comparison of continued operation versus unit replacement by two combined cycle units. This evaluation included refined commitment and energy value modeling and cost implications to the transmission system. Changes in energy value, capital and other fixed costs were captured in the comparison analysis to help determine the most economical option. The economic results showed that for thirteen of the sixteen scenarios it would be more beneficial to Gulf's customers to retrofit Plant Daniel Units 1 and 2, rather than replacing them with CC units.

4.2.3 Plant Daniel Emission Monitoring Requirements

Based on the 2008 CAMR vacatur, the Daniel mercury monitors have been removed from the compliance schedule and the budget. This decision will be re-examined as new mercury regulation emerges.

4.2.4 Conclusions for Plant Daniel

Based on this assessment, the retrofit of Daniel Units 1 and 2 with a flue gas desulfurization scrubber, the installation of Low-NOx combustion controls, and the addition of SCRs on both units are the best options for compliance with CAIR, CAVR, and the anticipated 8-hour ozone nonattainment designation. These technologies offer the necessary emission reductions for SO₂, NOx, and when used together, the scrubber and the SCRs will also capture mercury. The scrubber may also be required as part of the CAVR "reasonable progress program." Fuel switching alone will not reduce emissions to the required level. Allowance purchases are too uncertain and risky as a sole compliance option. The economic analysis indicated that retirement and replacement of the units with two combined cycle units is not economically feasible relative to retrofit of the existing units under thirteen of the sixteen scenarios analyzed.

4.3 Plant Smith

Plant Smith includes two coal-fired electric generating units (Unit 1 and Unit 2) along with an oil-fired combustion turbine and a natural gas-fired combined cycle unit. The facility is located just north of Panama City, Florida. Plant Smith Unit 1 has a nameplate rating of 149.6 MW, and Unit 2 has a nameplate rating of 190.4 MW. Both coal-fired units were affected under the Acid Rain Program, and the plant has operated on low-sulfur coals since the 1990s to lower SO₂ emissions. Both units are also equipped with low-NOx combustion systems. Unit 1 has special low-NOx burner tips, and Unit 2 has low-NOx burners and separated overfired air.

Installation of SNCRs for Plant Smith Units 1 and 2 were needed for Phase I CAIR compliance in 2009. In addition to CAIR compliance, the SNCRs were needed to assist in maintaining local compliance with the anticipated 8-hour ozone nonattainment designation. The Smith Unit 2 SNCR was placed in-service in the fall of 2008, and the Smith Unit 1 SNCR was placed in-service during May of 2009.

For CAIR and CAVR requirements at Plant Smith, an assessment was conducted to compare retrofit controls versus retirement and replacement options for compliance. As noted under Section 3.2 exclusive reliance on fuel switching and allowance purchases were eliminated as viable options for Gulf Power. Retrofit options and retirement and replacement options are each reviewed below specifically for Plant Smith.

4.3.1 Plant Smith Retrofit Options

Plant Smith Units 1 and 2 Flue Gas Desulfurization Scrubber Project

The Plant Smith scrubber project has been included in the Gulf Power environmental compliance program because the requirements of CAVR will likely lead to a scrubber being required for Plant Smith Units 1 and 2. This decision is based upon anticipated CAVR command and control requirements. In addition, the scrubber will provide the added benefit of reducing mercury emissions. The scrubber project is currently planned for operation in 2017. This schedule and decisions about the Plant Smith scrubber remain very flexible. This scrubber would offer the same benefits as the scrubbers previously discussed for Plant Daniel.

Plant Smith Unit 2 Baghouse

The Plant Smith Unit 2 baghouse project has been included in the Gulf Power environmental compliance program because potential mercury regulation will likely lead to additional controls being required for Plant Smith. The baghouse project is currently planned for operation in 2018. The schedule and decisions about the Plant Smith Unit 2 baghouse remain very flexible.

4.3.2 Plant Smith Comparison of Retrofit versus Retirement and Replacement

The Plant Smith economic analysis has not been updated because Gulf has not made any changes to the Plant Smith compliance strategy, other than delaying completion of the mercury monitor installation. In addition, the majority of the expenditures for Phase I environmental projects at Plant Smith were incurred prior to 2009. An updated analysis will be performed before Gulf moves forward with the Plant Smith scrubber and baghouse projects. Both of these projects are included in Phase II of Gulf's compliance program which has not yet been approved for ECRC recovery.

4.3.3 Plant Smith Emission Monitoring Requirements

The CAIR required the installation of a parametric emission monitoring system on the Plant Smith combustion turbine during 2007. Gulf will continue to incur future maintenance expenditures to ensure accurate accounting of emissions. In response to the CAMR vacatur, Gulf has delayed further mercury monitoring capital costs until new mercury regulation emerges.

4.3.4 Conclusions for Plant Smith

The retrofit of Smith Units 1 and 2 with SNCR, a flue gas desulfurization scrubber, and a baghouse are the best options for compliance with CAIR, CAVR, and potential mercury regulation at Plant Smith. These technologies offer the necessary emission reductions for SO₂ and NO_x. Fuel switching alone will not reduce emissions to the required level.

Allowance purchases are too uncertain and risky as a sole compliance option.

The Smith Unit 2 SNCR was placed in-service in the fall of 2008 and the Smith Unit 1 SNCR was placed in-service during May of 2009. The Plant Smith mercury monitoring project has been delayed until new mercury regulation emerges. The schedule and decisions regarding the Plant Smith scrubber and baghouse, Phase II projects, remain very flexible. These projects are included in Gulf's compliance program for future review and approval.

4.4 Plant Scholz

Plant Scholz consists of two coal-fired electric generating units that each have a nameplate rating of 49 MW. The facility is located in Jackson County, Florida. Both units were affected under the Acid Rain Program, and the plant has operated on low-sulfur coals since the 1990s to lower SO₂ emissions. Because these units are small and older, NO_x averaging was used to achieve compliance with the NO_x requirements under the Acid Rain Program without the installation of emission control equipment.

For CAIR and CAVR requirements at Plant Scholz, a thorough assessment was conducted to compare retrofit controls versus retirement and replacement options for compliance. Because this small plant is nearing retirement, significant investments in capital equipment to reduce emissions cannot be justified economically. The plant will utilize Company-wide allowance trading options to comply up until the Scholz units are retired, repowered, or replaced.

4.4.1 Plant Scholz Emission Monitoring Requirements

The Scholz mercury emission monitoring system was being installed during February of 2008 when the court issued an opinion vacating the CAMR. Gulf completed the Scholz installation but postponed certification of the system due to pending regulatory uncertainty regarding quality assurance and reference testing protocols required for certification. Gulf's 2010 ECRC budget projection includes general O&M expenses for the Plant Scholz mercury monitor.

4.4.2 Conclusions for Plant Scholz

For CAIR and CAVR requirements at Plant Scholz, a thorough assessment was conducted to compare the various options for compliance. Fuel switching, allowance purchases, and emission control retrofit versus retirement and replacement were all evaluated as options for compliance. The plant will utilize Company-wide allowance trading options to comply until it is retired, repowered, or replaced.

4.5 GULF'S ALLOWANCE PURCHASES

Although the retrofit installations set forth in Gulf's compliance program significantly reduce emissions, they will not result in Gulf achieving CAIR compliance levels without the purchase of some emission allowances. Thus, Gulf's environmental compliance program calls for the purchase of allowances. The emission allowances Gulf Power projects it needs to purchase, along with estimated costs, are shown in Table 4.5-1. The purchase of allowances in conjunction with the retrofit projects comprises the most reasonable, cost-effective means for Gulf to meet CAIR and CAVR requirements.

Table 4.5-1
Gulf Power Allowance Projection and Costs
(2010-2018)

Annual Emissions in Excess of Allocations									
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
SO ₂	2,373	7,034	6,270	7,541	8,909	(4,077)	(3,835)	(5,365)	(16,241)
Seasonal NOx	1,102	906	482	658	436	1,229	653	732	768
Annual NOx	2,745	2,343	1,554	1,823	1,430	1,870	747	908	876
	A	B	C	D	E	F	G	H	
Cost of Emissions in Excess of Allocations (\$ in thousands)*									
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
1 SO ₂	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Seasonal NOx	\$0								
2 Annual NOx	\$6,513								
3 Total Cost	\$6,513								
* Projected cost is at forecasted prices of the spot market in a given year; forecast includes pending transactions and commitments to purchase. No costs for SO ₂ are projected beginning in 2010 due to banked SO ₂ allowances.									
Oct 09 EB									

TRADE SECRET

5.0 POTENTIAL NEW ENVIRONMENTAL REGULATIONS

5.1 New 8-Hour Ozone Standard

The EPA regulates ground level ozone through implementation of an eight-hour ozone air quality standard. No area within the Company's service area is currently designated as nonattainment under the eight-hour ozone standard. In March 2008, however, the EPA issued a final rule establishing a more stringent 8-hour ozone standard. In March 2009, state agencies provided recommendation to EPA that a number of counties in the Southern Company service territory be designated nonattainment for the 2008 ozone ambient air quality standard, including several around the Gulf coast which had not previously been in nonattainment. However, on September 16, 2009, EPA announced its intent to reconsider the 2008 ozone standard, potentially resulting in a more stringent standard and designation of additional nonattainment areas within Southern Company's service territory. In January 2010, EPA announced a proposed revision to the 8-hour ozone standard, lowering the level from 0.075 ppm to a level in the range 0.060 to 0.070 ppm. The EPA is expected to issue a final rule by August 31, 2010 and require SIPs for any nonattainment areas by 2013.

These SIPs will prescribe emission control measures designed to bring areas into attainment. Although designation of a number of new nonattainment areas is anticipated, specific designations and any subsequent SIP control measures will be based in part on future air quality measurements. The ultimate outcome of this matter cannot be determined at this time and will depend on subsequent legal action and/or future nonattainment designations and regulatory plans. The control strategy for further reducing emissions of ozone will be affected by the strategy implemented for compliance with the CAIR as discussed in Section 2.1.

5.2 New Fine Particulate Standard

During 2005, the EPA's 1997 fine particulate matter nonattainment designations became effective for several areas within Southern Company's service area in Alabama and Georgia and the EPA published its final rule for implementation of the fine particulate matter standard in April 2007. Plans for addressing the nonattainment designations under the existing standard were due by April 2008, but have not been finalized due to delays in issuing the final implementation rule. These state plans could require further reductions in SO₂ and NO_x emissions from power plants.

In September 2006, the EPA published a final rule which retained the primary standard for annual fine particulate matter, but increased the stringency of the 24-hour fine particulate matter air quality standard. Actual EPA designations of areas which fail to meet this newly revised standard were issued in December 2008. EPA's decision to retain the primary standard for annual fine particulate matter in its 2006 rulemaking was challenged in the D.C. Circuit by environmental groups. In February 2009, the Court ruled that EPA failed to adequately explain why the annual standard was protective of human health, and remanded

the rule back to the agency for further action, but did not vacate the current standards. The ultimate outcome of this matter depends on further EPA action and the development and submittal of the required state plans and, therefore, cannot be determined at this time.

5.3 Global Climate Issues

Federal legislative proposals that would impose mandatory requirements related to greenhouse gas emissions, renewable energy standards, and energy efficiency standards continue to be considered in Congress, and the reduction of greenhouse gas emissions has been identified as a high priority by the current Administration. The greenhouse gas proposals have generally taken the form of a cap-and-trade program that would impose an overall cap on emissions throughout the economy, including the combustion of fossil fuels for the generation of electricity. On June 26, 2009, the American Clean Energy and Security Act of 2009 (ACES), which would impose mandatory greenhouse gas restrictions through implementation of a cap and trade program, a renewable energy standard, and other measures, was passed by the House of Representatives. ACES would require reductions of greenhouse gas emissions on a national basis to a level that is 17% below 2005 levels by 2020, 42% below 2005 levels by 2030, and 83% below 2005 levels by 2050. In addition, ACES would provide for renewable energy standards of 6% by 2012 and 20% by 2020. Similar legislation is being considered by the Senate. The financial and operational impact of such legislation, if enacted, will depend on a variety of factors. These factors include the specific greenhouse gas emissions limits or renewable energy requirements, the timing of implementation of these limits or requirements, the level of emissions allowances allocated and the level that must be purchased, the purchase price of emissions allowances, the development and commercial availability of technologies for renewable energy and for the reduction of emissions, the degree to which offsets may be used for compliance, provisions for cost containment (if any), the impact on coal and natural gas prices, and cost recovery through regulated rates. There can be no assurance that any legislation will be enacted or as to the ultimate form of any legislation. Additional or alternative legislation may be adopted as well.

In April 2007, the U.S. Supreme Court ruled that the EPA has authority under the Clean Air Act to regulate greenhouse gas emissions from new motor vehicles. On December 15, 2009, the EPA published a final determination, which became effective on January 14, 2010, that certain greenhouse gas emissions from new motor vehicles endanger public health and welfare due to climate change. On September 28, 2009, the EPA published a proposed rule regulating greenhouse gas emissions from new motor vehicles under the Clean Air Act. The EPA has stated that once this rule is effective, it will cause carbon dioxide and other greenhouse gases to become regulated pollutants under the Prevention of Significant Deterioration (PSD) preconstruction permit program and the Title V operating permit program, which both apply to power plants. As a result, the construction of new facilities or the major modification of existing facilities could trigger the requirement for a PSD permit and the installation of the best available control technology for carbon dioxide and other greenhouse gases. On October 27, 2009, the EPA also published a proposed rule governing how these programs would be applied to stationary sources, including power plants. The

EPA has stated that it expects to finalize these proposed rules in March 2010. The ultimate outcome of the endangerment finding and these proposed rules cannot be determined at this time and will depend on additional regulatory action and any legal challenges.

International climate change negotiations under the United Nations Framework Convention on Climate Change also continue. A nonbinding agreement was announced during the most recent round of negotiations in December 2009 that included a pledge from both developed and developing countries to reduce their greenhouse gas emissions. The outcome and impact of the international negotiations cannot be determined at this time.

Although the outcome of federal, state, or international initiatives cannot be determined at this time, mandatory restrictions on the Company's greenhouse gas emissions or requirements relating to renewable energy or energy efficiency on the federal or state level are likely to result in significant additional compliance costs, including significant capital expenditures. These costs could affect future unit retirement and replacement decisions, and could result in the retirement of a significant number of coal-fired generating units.

6.0 SUMMARY OF GULF'S COMPLIANCE PROGRAM

Gulf Power's environmental compliance program reflects a comprehensive assessment of requirements Gulf and its customers face in meeting CAIR, CAVR and potential mercury, SO₂ and NO_x regulations. CAIR requires significant reductions in SO₂ and NO_x. CAVR may also require the installation of retrofit equipment at certain facilities. In assessing the most cost-effective means of meeting these significant regulatory requirements, Gulf Power considered four primary compliance options: fuel switching, purchase of allowances, retrofit installations, and retirement and replacement of existing units. Fuel switching alone could not meet the requirements of these programs. Given the uncertainty of emerging allowance markets, it was highly questionable whether mature stable allowance markets would emerge in time for an all allowance purchase option to be implemented. There was a fundamental question of whether sufficient allowances would even be available. In addition, given the historic volatility in existing allowance markets, the potential cost of an all-allowance option could be significant. Therefore, risks regarding availability and costs of allowances resulted in an unacceptable level of risk for an all-allowance compliance approach for Gulf and its customers. As a result, Gulf assessed the best means of meeting plant-by-plant emission requirements through retrofit measures supplemented by allowance purchases and compared those options to retiring and replacing existing units. That analysis led to the selection of Gulf Power's environmental compliance program set forth in Tables 3.1-1 and 3.1-2. Gulf Power's environmental compliance program, which is based upon analytically sound technical and economic evaluations of alternatives, is the most reasonable, cost effective compliance program available to Gulf and its customers under current planning assumptions. Gulf Power's environmental compliance program assures environmental compliance and preserves flexibility for dealing with ever changing requirements and assumptions.

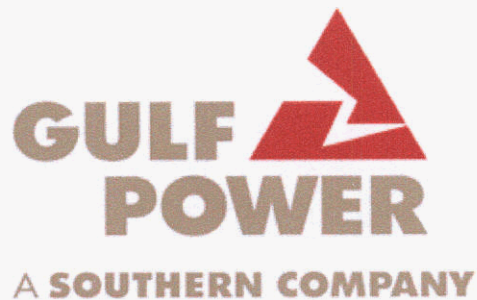
CONTAINS CONFIDENTIAL INFORMATION

Exhibit A

**GULF POWER COMPANY
ENVIRONMENTAL COMPLIANCE
PROGRAM UPDATE**

for the

**Clean Air Interstate Rule
Clean Air Visibility Rule**



April 1, 2010

CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	REGULATORY AND LEGISLATIVE UPDATE	4
2.1	Clean Air Interstate Rule	4
2.2	Clean Air Mercury Rule.....	5
2.3	Clean Air Visibility Rule	6
3.0	GULF'S COMPLIANCE PROGRAM.....	7
3.1	Gulf Power's Electric Generating System	7
3.2	Compliance Options.....	10
3.3	Gulf's Evaluation of Compliance Options.....	11
4.0	PLANT-BY-PLANT COMPLIANCE PROGRAM	17
4.1	Plant Crist.....	17
4.2	Plant Daniel	18
4.3	Plant Smith	20
4.4	Plant Scholz	22
4.5	Gulf's Allowance Purchases.....	23
5.0	POTENTIAL NEW ENVIRONMENTAL REGULATIONS	24
5.1	New 8-Hour Ozone Standard.....	24
5.2	New Fine Particle Standard	24
5.3	Global Climate Issues	25
6.0	SUMMARY OF GULF'S COMPLIANCE PROGRAM.....	27

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1.0-1	Projected 2010-2018 Compliance Program Capital and O&M Costs by Plant	3
2.1-1	CAIR Emission Reduction Requirements	4
3.1-1	Compliance Program Capital Expenditures	8
3.1-2	Compliance Program Plant O&M Expenses	9
3.3-1	Net Replacement Costs - Crist Unit 6	14
3.3-2	Net Replacement Costs - Daniel Units 1 and 2	16
4.5-1	Gulf Power Allowance Projection and Costs (2010-2018)	23

1.0 EXECUTIVE SUMMARY

Since the Clean Air Act Amendments (CAAA) were passed by Congress in 1990, Gulf Power Company (Gulf Power or Gulf) has reviewed and updated its environmental compliance planning as needed on an on-going basis. The goal of this process is to identify reasonable, cost-effective compliance strategies that will minimize the impact on Gulf Power's customers while achieving environmental objectives and assuring compliance with all environmental requirements.

On June 22, 2007, the Office of Public Counsel (OPC), the Florida Industrial Power Users' Group (FIPUG) and Gulf filed a petition for approval of a stipulation regarding the substantive provisions of Gulf's compliance plan. That stipulation identified 10 specific components, Phase I, of Gulf's program as being reasonable and prudent for implementation and set forth a process for review in connection with the three remaining components of the program. On August 14, 2007, the Commission voted to approve the stipulation with the proviso that Gulf provide an annual status report regarding cost-effectiveness and prudence of the phases in its program into which the Company is moving.

This document is the third update of Gulf's original environmental compliance program¹ approved by the Florida Public Service Commission (Commission or FPSC) in Order No. PSC-07-0721-S-EI. That program: (a) addressed the requirements of the Clean Air Interstate Rule (CAIR), Clean Air Mercury Rule (CAMR), and the Clean Air Visibility Rule (CAVR); (b) reviewed the decision process for assuring compliance at Gulf Power; and (c) provided cost estimates for incorporating these requirements at Gulf Power. The document reviewed the specific issues, timing, alternatives, process, and costs necessary for compliance with the new federal rules and the corresponding implementation programs developed by the Florida Department of Environmental Protection (FDEP) and the Mississippi Department of Environmental Quality (MDEQ).

Since the Commission's approval of Gulf's compliance program in 2007, there have been a number of developments. Gulf has addressed in several of its intervening filings, as well as in the annual updates, changes to schedules of approved projects, such as the addition and cancellation of Activated Carbon Injection (ACI) at Plant Daniel and other compliance program changes. However, there have been three significant court decisions that have had and will have further impact on Gulf's compliance program. In February 2008, the U.S. Court of Appeals for the District of Columbia Circuit ("DC Circuit") issued an opinion vacating the Environmental Protection Agency's (EPA) CAMR. In a separate proceeding in the U.S. District Court for the District of Columbia, the EPA has asked the court to enter a consent decree that would require the EPA to issue a proposed Maximum Achievable Control Technology (MACT) rule by March 16, 2011, and a final rule by November 16, 2011. The EPA is currently developing a MACT rule for coal and oil-fired electric generating units, which will likely address numerous Hazardous Air Pollutants (HAPs), including mercury.

1- The title of Gulf's compliance environmental program has been revised since the original filing in March of 2007. CAMR was removed from the document title when projected capital costs for mercury monitoring were removed from the program.

In July 2008, in response to petitions brought by certain states and regulated industries challenging particular aspects of CAIR, the DC Circuit issued a decision vacating CAIR in its entirety and remanding it to the EPA for further action consistent with its opinion. On December 23, 2008, however, the Court altered its July decision in response to a rehearing petition and remanded CAIR to the EPA without vacatur, thereby leaving CAIR compliance requirements in place while the EPA develops a revised rule. Florida and Mississippi currently have EPA-approved plans to implement this rule. The EPA is expected to issue a proposed CAIR replacement rule in July 2010.

This document addresses Gulf's ongoing compliance projects and the reasons Gulf plans to continue these projects. Florida and Mississippi's EPA approved CAIR implementation plans must be met. Gulf Power's compliance program will be impacted by factors such as: implementation of these rules; the result of EPA's promulgation of the MACT rule and a CAIR replacement rule; FDEP's, and the MDEQ's responses to court decisions vacating CAMR; changes to existing environmental laws and regulations, the cost of emissions allowances, performance of emission control equipment; and any change in the use of coal. Based on these factors, future environmental compliance costs will continue to be incurred, and projections will be revised. The timing of the requirements and costs incurred will be a function of the compliance options selected, fuel burn, energy demand, fuel sulfur content, availability and prices for allowance purchases, natural gas prices, performance of emission control equipment, and other variables.

A capital and operations and maintenance (O&M) cost summary for Gulf's compliance program is provided in Table 1.0-1. Detailed capital and O&M costs are provided in Section 3 of this document.

As noted in the Commission's approval of Gulf's original environmental compliance program, the program would likely evolve over time, so, at present, only Phase I projects have been approved. The remaining components of Gulf's compliance program were in the planning phase when the Commission approved the Phase I projects for Environmental Cost Recovery Clause (ECRC) recovery, subject to ongoing review of costs within the annual review process. The remaining Phase II components include the Plant Daniel Units 1 and 2 Selective Catalytic Reduction (SCR) systems, the Plant Smith Units 1 and 2 scrubber, and the Plant Smith baghouse project. The Plant Daniel Units 1 and 2 SCRs are the first Phase II components of Gulf's compliance program for which Gulf is requesting approval. The Plant Daniel SCRs have progressed from the "flexible" planning stage to the implementation stage. The Plant Daniel Units 1 and 2 SCRs are scheduled to be placed in-service in 2014 and 2015, respectively to meet the requirements of CAIR, the anticipated 8-hour ozone nonattainment designation, and anticipated mercury MACT requirements. The SCRs, along with the Plant Daniel scrubber, provide a co-benefit of significantly reducing mercury emissions. The schedule and decisions about the Plant Smith scrubber and baghouse projects remain very flexible. The Plant Smith scrubber and baghouse projects are included in Gulf's compliance program for future review and approval.

Gulf Power has remained in compliance with all requirements of the CAAA and has addressed local concerns regarding potential ozone nonattainment in Pensacola and along the Gulf Coast. Implementation of the program described in this document will help assure continued compliance; however, new ozone standards may still result in the Pensacola area being designated as nonattainment. The FDEP recently released a list of nonattainment areas for ozone to EPA that included both the Pensacola Metropolitan area and Bay County. EPA is expected to make the final designations early next year.

Beyond CAIR and CAVR, many of the future regulatory requirements, especially those needed to attain current and future ozone and fine-particulate ambient standards, will be aimed at further nitrogen oxide (NO_x) and sulfur dioxide (SO₂) reductions. However, many of these anticipated requirements are not yet fully developed. With the vacatur of CAMR, it is anticipated that EPA will adopt a rule for MACT for power plant mercury emissions and other hazardous air pollutants. As mentioned earlier, the EPA has been ordered to promulgate a new rule addressing the issues in the D.C. Circuit's 2008 CAIR decision. In addition, there are multiple state, federal and international initiatives regarding greenhouse gases (GHG), particularly carbon dioxide (CO₂), pending. If adopted, these rules could further impact Gulf's compliance program. All of this uncertainty reinforces the need for a flexible, robust compliance plan. Accordingly, as decision dates for equipment purchases approach, and as regulatory and economic drivers become better defined, the analysis will be updated as needed to enable the selection of the most reasonable and cost-effective compliance alternatives while maintaining future flexibility in the plan.

Table 1.0-1
Projected 2010-2018 Compliance Program
Capital and O&M Costs by Plant

Plant	Phase I Capital Expenditures (\$ in millions)	Phase II Capital Expenditures (\$ in millions)	Phase I O&M Expenses (\$ in millions)	Phase II O&M Expenses (\$ in millions)
Crist	239	0	183	0
Daniel*	278	238	48	27
Smith	0.2	306	18	4
Scholz	0	0	0.2	0
TOTAL	517	544	249	31

*Costs for Gulf Power's ownership portion of Plant Daniel in Mississippi.
Note: Allowance cost projections are not included in Table 1.0-1

2.0 REGULATORY AND LEGISLATIVE UPDATE

This section provides a regulatory and legislative update and review of the CAIR, CAMR and other potential mercury regulations, and CAVR.

2.1 CLEAN AIR INTERSTATE RULE

In March 2005, the EPA published the final CAIR, a rule that addresses transport of SO₂ and NO_x emissions that contribute to nonattainment of the ozone and fine particulate matter National Ambient Air Quality Standards (NAAQS) in the Eastern United States. This cap and trade rule addresses power plant SO₂ and NO_x emissions that were found to contribute to nonattainment of the 8-hour ozone and fine particulate matter standards in downwind states. Twenty-eight eastern states, including Florida and Mississippi, are subject to the requirements of the rule. The rule calls for additional reductions of NO_x and SO₂ to be achieved in two phases, 2009/2010 and 2015, as shown in Table 2.1-1.

Table 2.1-1

CAIR Emission Reduction Requirements

Emissions	Phase I reduction from acid rain allocations or current emissions	Phase II reduction from current allocations or current emissions
SO₂	50 % (2010)	66% (2015)
NO_x	50 % (2009)	65% (2015)

On July 11, 2008, in response to petitions brought by certain states and regulated industries challenging particular aspects of CAIR, the D.C. Circuit issued a decision vacating CAIR in its entirety, and remanding it to EPA for further action consistent with its opinion. In December 2008, however, the Court altered its July 2008 decision in response to a rehearing petition and remanded CAIR to the EPA without vacatur, thereby leaving CAIR compliance requirements in place while EPA develops a revised rule. The States of Florida and Mississippi have EPA-approved plans to implement this rule. Compliance with these plans will be accomplished by the installation of additional emission controls at the Company's coal-fired facilities and/or by the purchase of emission allowances. Decisions regarding Gulf's CAIR compliance strategy were made jointly with the CAMR and CAVR compliance plans due to co-benefits of proposed controls.

Gulf Power's overall compliance strategy has been developed in response to numerous federal and state regulatory requirements, many of which remain unaffected by the court's ruling. The court's decision has the potential to impact future decision making regarding capital expenditures, the installation and operation of pollution control equipment, the purchase of emissions allowances, and the carrying cost of the existing emissions allowances. The ultimate impact of this decision, if any, cannot be determined at this time and will

depend on subsequent legal action, including future EPA and State rulemaking. However, what is clear for the present is that *Gulf* must comply with Florida and Mississippi's EPA approved CAIR implementation plans. The EPA is expected to issue a proposed CAIR replacement rule in July 2010.

2.2 CLEAN AIR MERCURY RULE

In March 2005, the EPA published the final CAMR, a cap and trade program for the reduction of mercury emissions from coal-fired power plants. The rule set caps on mercury emissions to be implemented in two phases, 2010 and 2018, and provided for an emission allowance trading market.

The final CAMR was challenged in the D.C. Circuit. The petitioners alleged that the EPA was not authorized to establish a cap-and-trade program for mercury emissions and instead the EPA must establish MACT standards for coal-fired electric utility steam generating units. In February 2008, the court issued an opinion vacating the CAMR. The vacatur became effective with the issuance of the court's mandate on March 14, 2008, nullifying CAMR mercury emission control obligations and monitoring requirements.

In a separate proceeding in the U.S. District Court for the District of Columbia, the EPA has asked the Court to enter a proposed consent decree that would require the EPA to issue a proposed MACT rule by March 16, 2011, and a final rule by November 16, 2011. The EPA is currently developing a MACT rule for coal and oil-fired electric generating units greater than 25 megawatts under Section 112 of the Clean Air Act that will likely address numerous HAPs, including mercury. On January 4, 2010, Southern Company received an Information Collection Request (ICR) from the EPA in the form of a Section 114 letter. The ICR requires the company to submit existing data and conduct emissions testing to support an electric generating unit MACT rule. Costs for the ICR testing are included under an ECRC O&M program that is not part of the compliance program. The 2010 projected costs for the MACT-ICR project are approximately \$466,000. These costs were approved for ECRC recovery in Order PSC-09-0759-FOF-EI.

Pursuant to the Clean Air Act, Section 112(i)(3)(A), an existing electric generating unit must achieve compliance with the new HAPs MACT standard no later than three years after the effective date of the new rules. *Gulf* is expected to be required to comply with the new HAPs MACT rules by early 2015. The HAPs MACT rulemaking could require emission reductions more stringent than those required by the CAMR. The CAMR court decision does not impact state rules that may continue to be developed in Florida.

2.3 CLEAN AIR VISIBILITY RULE

The Clean Air Visibility Rule (formerly called the Regional Haze Rule) was finalized in July 2005, with a goal of restoring natural visibility conditions in certain areas (primarily national parks and wilderness areas) by 2064. The rule involves (1) the application of Best Available Retrofit Technology (BART) to certain sources built between 1962 and 1977, and (2) the application of any additional emissions reductions which may be deemed necessary for each designated area to achieve reasonable progress by 2018 toward the natural conditions goal. Thereafter, for each 10-year planning period, additional emissions reductions will be required to continue to demonstrate reasonable progress in each area during that period. For power plants, the CAVR allows states to determine that the CAIR satisfies BART requirements for SO₂ and NO_x. States have completed or are currently completing implementation plans that contain strategies for BART compliance and any other measures required to achieve the first phase of reasonable progress. The Florida Regional Haze rule, Chapter 62 Part 296.340, F.A.C., requires BART compliance as expeditiously as practicable, but not later than December 31, 2013. The State of Mississippi Regional Haze State Implementation Plan (SIP) was submitted to MDEQ in September 2009 and the EPA has not formally responded, commented or requested information from MDEQ. The regulatory timeline for EPA disapproval (45 days) has passed; therefore, it is assumed that all MPC facilities are currently in compliance with CAVR through 2015. It is expected, however, that scrubbers and SCRs will be a major consideration for compliance with CAVR beyond 2015.

3.0 GULF'S COMPLIANCE PROGRAM

3.1 GULF POWER'S ELECTRIC GENERATING SYSTEM

Gulf Power owns and operates three fossil-fueled generating facilities in Northwest Florida (Plants Crist, Smith and Scholz). Gulf also owns a 50 percent undivided ownership interest in Unit 1 and Unit 2 at Mississippi Power Company's Plant Daniel. This fleet of generating units consists of ten fossil steam units, one combined cycle (CC) unit, and one combustion turbine (CT). The name plate generating capacity of Gulf's generating fleet affected by CAIR and/or CAVR is 2,783 Megawatts (MW).

A summary of the compliance program capital projects and associated expenditures through 2018 is provided in Table 3.1-1. The projected plant O&M expenses associated with the capital projects are included in Table 3.1-2. The cost information is provided by plant and by project.

A
B
C
D
E
F
G
H
I
J

Table 3.1-1
 Compliance Program Capital Expenditures
 \$ in Thousands

Prior Years**											
By Plant											
Plant Crist											
Mercury Monitoring											
Unit 6 SCR	13,187										
Units 4-7 Scrubber	594,260										
Plant Scholz											
Mercury Monitoring	644										
Plant Smith											
Unit 2 Baghouse*											
Unit 1 SNCR	8,362										
Unit 2 SNCR	2,905										
Mercury Monitoring	1,433										
Units 1-2 Scrubber *											
CAIR Parametric Monitor	230										
Plant Daniel											
Mercury Monitoring											
Unit 1 SCR*											
Unit 2 SCR*											
Units 1 & 2 Scrubber	2,929										
Unit 1 SNCR											
Unit 1 Low NOx Burners	1,511										
Unit 2 SNCR											
Unit 2 Low NOx Burners	3,670										
By Project											
Mercury Monitoring	2,077										
SCRs	13,187										
Scrubbers	597,189										
SNCRs	11,267										
Baghouse											
CAIR Parametric Monitor	230										
Low Nox Burners	5,181										
Annual Total	629,131										

* Phase II projects that have not been approved for ECRC recovery

**2006-2009 expenditures

Expenditures presented for Plant Daniel represent Gulf's ownership portion.

Allowance cost projections are not included in Table 3.1-1

C
D
E
F
G
H
I
J

A **B** **Table 3.1-2** **Compliance Program Plant O&M Expenses**
\$ in Thousands

By Plant	
Plant Crist	
Mercury Monitoring	
Unit 6 SCR	
Units 4-7 Scrubber	
Plant Scholz	
Mercury Monitoring	
Plant Smith	
Unit 2 Baghouse*	
Unit 1 SNCR	
Unit 2 SNCR	
Mercury Monitoring	
Units 1-2 Scrubber*	
CAIR Parametric Monitor	
Plant Daniel	
Mercury Monitoring	
Unit 1 SCR*	
Unit 2 SCR*	
Units 1&2 Scrubber	
Units 1 & 2 SNCR(s)	
Unit 1 Low NOx Burners	
Unit 2 Low NOx Burners	
By Project	
Mercury Monitoring	
SCRs	
Scrubbers	
SNCRs	
Baghouse	
CAIR Parametric Monitor	
Low NOx Burners	
Annual Total	

* Phase II projects that have not been approved for ECRC recovery
 Expenses presented for Plant Daniel represent Gulf's ownership portion.
 Allowance cost projections are not included in Table 3.1-2

3.2 COMPLIANCE OPTIONS

As part of Gulf's environmental compliance planning evaluation Gulf considered four major options for environmental compliance:

- Dependence on allowance purchases
- Fuel switching
- Retrofit of environmental emission controls to existing generating units
- Retirement of existing generating units and replacement with new or purchased generation

Combinations of these options were also considered.

3.2.1 Allowance Purchase Option

In addition to the already existing SO₂ (acid rain) and seasonal NO_x (ozone) allowance markets, the CAIR introduced an additional allowance market for annual NO_x. Cap and trade programs use a market-based approach to reduce emissions. The program sets a cap, or limit, for each pollutant such as SO₂ and NO_x, which is then divided into emission allowances that are allocated to each affected source. Sources are allowed to determine the most reasonable, cost-effective way to comply. Facilities may install environmental emission controls, use fuel switching, replace the generating units, rely on the emission allowance market, or use some combination of these options.

3.2.2 Fuel Switching Option

Fuel switching refers to instances where an electric generating unit's primary fuel is changed to reduce emissions. For certain facilities, NO_x emissions can be reduced by burning high-moisture, low-Btu sub-bituminous coals, while mercury emissions can be reduced by utilizing coal lower in mercury content. In Gulf's case, fuel switching to lower sulfur coal was shown under the Acid Rain Program to be a cost effective means for reducing emissions of SO₂.

3.2.3 Retrofit Options

Retrofit options refer to additional environmental emission controls that can be installed on existing generating units. As discussed in Section 2, affected coal-fired electric generating units would be required to comply with SO₂ and NO_x limits under CAIR and CAVR, if the units are to continue to operate. These reductions may be met by installing additional SO₂ and NO_x emission controls on existing units. Currently, the proven control technology of choice for SO₂ reduction is wet scrubbing. For NO_x removal, there are a number of proven

emission controls available such as Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), and Low NO_x Burners (LNBs).

3.2.4 Retirement and Replacement Option

A retirement and replacement evaluation is used to compare retrofit compliance options to premature retirement and replacement of specific generating units in order to determine the most reasonable, cost-effective compliance option. The retirement option is typically more applicable to smaller, older, less efficient coal plants that cannot financially support the addition of environmental controls. The evaluation methodology and the evaluation results are discussed in Section 3.3.4.

3.3 GULF'S EVALUATION OF COMPLIANCE OPTIONS

3.3.1 Evaluation of Allowance Purchase Option

The SO₂ and seasonal NO_x allowance markets have proven to be fundamentally driven by supply and demand. However, over time, many speculative investors have begun entering the allowance markets, particularly the SO₂ market, introducing considerable volatility and uncertainty concerning the price and availability of allowances.

The costs of compliance with the SO₂ programs represent a major portion of Gulf Power's total environmental compliance program cost. With the high price volatility, the future price and availability of allowances cannot be treated as predictable; therefore, depending solely on the market for SO₂ compliance presents a large risk for Gulf Power's customers. Additionally, should allowances not be available, Gulf Power might be forced to operate higher cost units while curtailing operation of lower cost units in order to maintain compliance.

The CAIR program introduced an additional allowance market for annual NO_x. This market was expected to emerge as soon as the states finalized their implementation plans. Indeed, EPA has populated the annual NO_x accounts. Due to the December 2008 court decision leaving CAIR intact, these allowances are necessary for continued operation after January 1, 2009. In addition, the seasonal NO_x programs were implemented in Florida and Mississippi during 2009.

Total dependence on these commodity markets for compliance would be very risky and potentially costly for Gulf Power and its customers. The market does, however, provide realistic opportunities for reducing costs through selected and limited purchases of allowances in conjunction with other options to achieve cost effective compliance.

In summary, in order for the allowance market based approach to be an appropriate solution for Gulf Power's compliance shortfall, these allowance markets must be established, reasonably stable, and have sufficient quantities of allowances available. Furthermore, to avoid short-term supply and demand volatility, these conditions must be met with sufficient

lead time to allow time to pursue other options such as constructing emission controls. Given the timing of construction schedules and the compliance deadlines for the new rules, Gulf Power could not wait to see if stable allowance markets emerged. These overall uncertainties eliminated the exclusive use of an all allowance purchase option from consideration.

3.3.2 Evaluation of Fuel Switching Option

Fuel switching was shown under the Acid Rain Program to be cost effective for reducing emissions of SO₂. For certain facilities, NO_x emissions can be reduced by burning high-moisture, low-Btu sub-bituminous coals, and some coals are lower in mercury content than others. However, for the magnitude of emission reductions required by CAIR and CAVR, fuel switching alone is no longer a viable option.

3.3.3 Evaluation of Retrofit Options

Having determined that neither an all allowance compliance program nor an all fuel switching compliance program would be feasible or desirable, Gulf Power was left with the primary options of either retrofitting units or retiring and replacing units (and, if necessary, supplementing those options with allowance purchases or fuel switching). However, before making a comparison of retrofit and replacement options, Gulf Power first had to choose among competing retrofit options. Those selections of the best retrofit options were discussed in Gulf's original environmental compliance program and have not changed; therefore, they are not repeated here.

3.3.4 Evaluation of Retrofit versus Replacement Options

Selection between retrofit and replacement options is based upon a financial assessment of which option ultimately is expected to be the most reasonable, cost effective alternative for Gulf's customers. The analyses examine the relative cost of dispatching the System (a) with the retrofit technology in place and (b) with having retired the unit without making the retrofit and instead, replacing it with new capacity. The 2010 replacement analyses included Plant Crist Unit 6 and Plant Daniel Units 1 and 2.

The analyses were performed using a detailed site specific methodology. The detailed evaluation focused on a comparison of continued unit operation or replacement by a CC. The evaluation included hourly production cost modeling and cost implications to the transmission system. Changes in production cost, capital, and other fixed costs were captured in the comparison analysis to help determine the most economical option.

Methodology

The economic analyses focused on a comparison of continued operation with retrofit controls to replacement by a combined cycle unit. This evaluation included refined commitment and energy value modeling and cost implications to the transmission system. Changes in energy value, capital, and other fixed costs were captured in the comparison analysis to help determine the most economical option. Replacement energy costs were estimated using the Southern Electric System marginal replacement costs for both the continued coal operation and the replacement alternative. Marginal replacement costs were generated with the Pro-Sym® model. The marginal replacement costs were then used in the Southern Company GenVal model to dispatch both the coal unit and the combined cycle unit. The energy benefits (marginal replacement costs minus variable operating costs) were compared to determine the commitment and energy value to the Southern Electric System for both generating options. Fixed costs associated with the continued operation of the existing generating units were based on projections of annual O&M costs and the Net Present Value (NPV) of the revenue requirements associated with incremental capital investment necessary to keep the unit operational over the evaluation period. Replacement, installation capital, fixed O&M, and continue to operate capital are site specific costs. The NPV of the difference between replacement cost and unit operational cost is calculated to determine the overall net contribution.

The evaluation incorporated sixteen integrated scenarios in order to capture variations in the operating environments that would affect potential retirement of the units. The sixteen cases were developed around uncertainty in fuel prices and CO₂ legislation. The CO₂ price assumptions were \$0/ton, \$10/ton, \$20/ton and \$30/ton (in 2009 dollars), starting in 2015 and escalating at 5 percent above inflation. The fuel price sensitivities utilized variations in gas and coal prices based on a low, moderate, moderate with volatility, and high forecast which relied on Charles River Associates (CRA) fuel forecasts.

Plant Crist Unit 6

The purpose of the Plant Crist evaluation was to determine the economic benefits of retiring Crist Unit 6 in December of 2014 and replacing the unit with the lowest cost option. The evaluation included estimates of transmission cost implications associated with a potential retirement. It was assumed in this study that the replacement combined cycle unit would be placed on the Plant Crist site. The evaluation retired and replaced Crist Unit 6 with one 2x1 G series CC in January of 2015, avoiding the Crist 6 SCR installation in the fall of 2012.

Transmission Cost Assumptions

1
2
3
4
5



1
2

[REDACTED]

Results

An economic evaluation of the Plant Crist CC replacement option was performed to compare customer costs from 2010-2035. The CC replacement option was compared back to the cost of continuing operation of Crist Unit 6 with the SCR installed. Table 3.3-1 presents the NPV customer costs resulting from a comparison of costs of a replacement combined cycle minus the cost to continue to operate Crist Unit 6 with a SCR.

It showed that for fifteen of the sixteen scenarios considered, it is more beneficial to Gulf's customers to continue to operate Crist Unit 6 with the SCR installed rather than replacing Crist Unit 6 with a CC unit. This analysis does not attempt to monetize the fuel diversity benefits Gulf's customers receive from maintaining coal capacity and avoiding an undue system reliance on natural gas. This analysis clearly shows the better option to Gulf's customers is the installation of the Crist Unit 6 SCR.

Table 3.3-1
Net Replacement Costs – Crist Unit 6

Economic Retirement Study
Customer Costs for CC Replacement Option Relative to Continued Operation with the SCR
(NPV 2010 in millions)

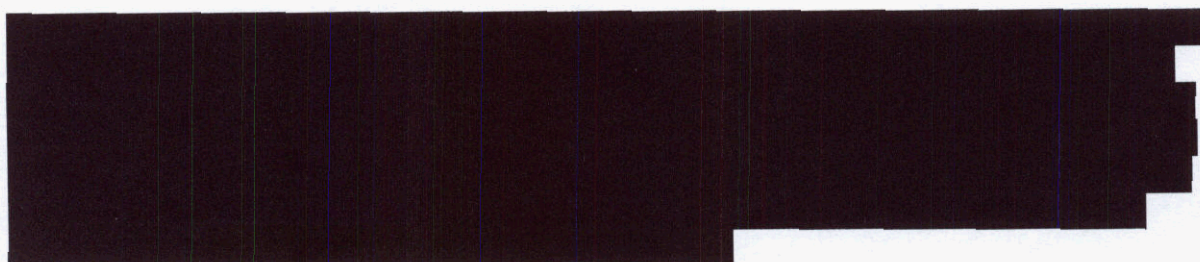
[REDACTED TABLE]

Plant Daniel Units 1 and 2

The purpose of the Plant Daniel evaluation was to determine the economic benefits of retiring Daniel Units 1 and 2 in December of 2014 and replacing the units with the lowest cost option. The evaluation included estimates of transmission cost implications and site closure costs associated with a potential retirement. The evaluation retired and replaced Daniel Units 1 and 2 with two 2x1 G series CCs in January of 2015, avoiding the Daniel Units 1 and 2 SCRs in the fall of 2014 and the spring of 2015, respectively, and the fall 2014 scrubber installation. It was assumed in this study that one replacement CC would be placed on the Plant Crist site and one replacement CC would be placed on the Plant Daniel site.

Transmission and Site Closure Cost Assumptions

1
2
3
4
5
6
7



Site closure cost estimates for Daniel Units 1 and 2 were based on a 2009 study. The results of that study indicated that for Daniel Units 1 and 2, the projected site closure cost is \$25.5 million in 2009\$, which included closure of the ash pond.

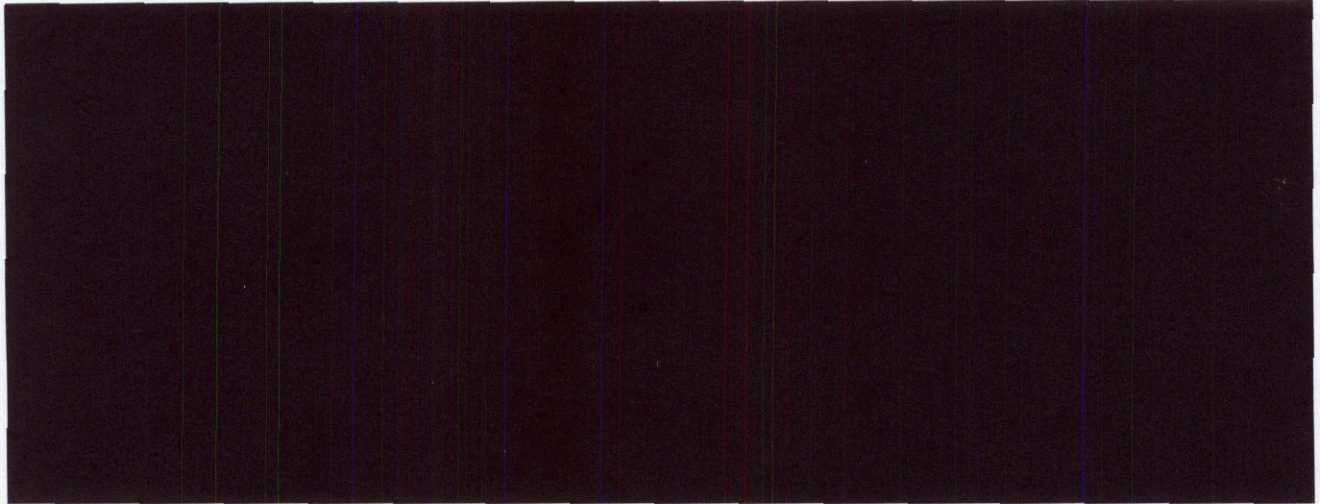
Results

An economic evaluation of the Plant Daniel CC replacement option was performed to compare customer costs from 2010-2039. The CC replacement option was compared back to the cost of continuing to operate Plant Daniel Units 1 and 2 with SCRs and a scrubber installed. Table 3.3.2 presents the NPV customer costs resulting from a comparison of costs of replacement combined cycle units minus the cost to continue to operate *Daniel Units 1 and 2* with SCRs and a scrubber.

It showed that for thirteen of the sixteen scenarios considered, it is more beneficial to Gulf's customers to retrofit Plant Daniel Units 1 and 2, as proposed, rather than replacing them with CC units. In addition, there may be practical transmission timeline limitations that would put a 2015 replacement date in question. Even without monetizing the fuel diversity benefits of retaining coal generation on its system, the analysis shows that the proposed retrofit of the Plant Daniels Units is preferable to their replacement.

Table 3.3-2
Net Replacement Costs – Daniel Units 1 and 2

Economic Retirement Study
Customer Costs for CC Replacement Option Relative to Continued Operation with SCRs and
Scrubber
(NPV 2010 in millions)



Results Reflect 50% ownership by Gulf

4.0 PLANT-BY-PLANT COMPLIANCE PROGRAM

4.1 Plant Crist

Plant Crist is a four-unit, coal-fired electric generating facility located just north of Pensacola, Florida. Three older natural gas and oil-fired units at the site have been retired. Units 4 and 5 each have a nameplate rating of 93.7 MW and Units 6 and 7 have nameplate ratings of 369 MW and 578 MW, respectively. All four units were affected under the Acid Rain Program, and the plant has operated on low-sulfur coals since the 1990s to lower SO₂ emissions. All four units are equipped with low-NOx burner systems. Plant Crist Units 4, 5 and 6 have SNCR systems, while Crist Unit 7 is equipped with an SCR system for NOx control.

The Plant Crist Units 4 through 7 flue gas desulfurization (FGD) scrubber became operational in December 2009 and is designed to reduce SO₂ emissions by approximately 95%. With these reductions, Gulf Power will be able to reasonably manage compliance with its SO₂ allowance bank and some market purchases of allowances as required. Mercury emission reductions are also expected to be met through the co-benefits of the scrubber and SCR installations.

4.1.1 Plant Crist Retrofit Options

Plant Crist Unit 6 SCR Project

The Plant Crist Unit 7 SCR became operational in 2005, significantly reducing emissions of NOx from the plant. This project was called for under an agreement with the FDEP. The agreement also called for additional NOx reductions at Plant Crist Units 4 through 6 up to and including an SCR for Unit 6. Additional NOx reductions are needed at Plant Crist, and only SCR technology will provide the additional increment needed. The SCR on Unit 6 will be important for Pensacola to achieve attainment with the anticipated 8-hour ozone non-attainment designation. In addition, the Crist Unit 6 SCR was also needed for CAIR and CAMR compliance. While CAMR compliance is no longer required, it is anticipated that EPA will adopt a rule for MACT for power plant mercury emissions. The Crist Unit 6 SCR will still be needed to satisfy FDEP requirements and the anticipated 8-hour ozone nonattainment designation. The Crist Unit 6 SCR is projected to be placed in-service in 2012.

4.1.2 Plant Crist Comparison of Retrofit versus Retirement and Replacement

During 2010, an analysis was run to determine the economic benefits of retiring Plant Crist Unit 6 in December 2014 and replacing the unit with the lowest cost option. The site specific analysis focused on a comparison of continued operation versus unit replacement by a combined cycle. This evaluation included refined commitment and energy value modeling and cost implications to the transmission system. Changes in energy value, capital and other fixed costs were captured in the comparison analysis to help determine the most economical

option. The economic results showed that for fifteen of the sixteen scenarios considered, it is more beneficial to Gulf's customers to continue to operate Crist Unit 6 with the SCR installed rather than replacing Crist Unit 6 with a CC unit.

4.1.3 Plant Crist Emission Monitoring Requirements

Mercury continuous emission monitoring systems for Plant Crist Units 4 through 7 and the common scrubber stack were included as part of Gulf's original CAIR, CAMR and CAVR compliance program approved by the Commission. In response to the CAMR vacatur, Gulf has delayed further mercury monitoring capital costs until new mercury regulation emerges.

4.1.4 Conclusions for Plant Crist

Based on previous economic assessments of Crist Units 4 through 7 and the Crist Unit 6 economic evaluation, the retrofit of Crist Units 4 through 7 with a single flue gas desulfurization scrubber and the addition of an SCR on Unit 6 are the best options for compliance with CAIR, CAVR, the anticipated 8-hour ozone nonattainment designation, potential mercury regulation, and a potential fine particulate NAAQS. These are the only technologies that offer the necessary emission reductions for SO₂ and NO_x and when used together, the scrubber and the SCRs on Units 6 and 7 will capture mercury.

4.2 Plant Daniel

Gulf Power's ownership interest at Plant Daniel is associated with two coal-fired electric generating units that each have a nameplate rating of 548.2 MW. Gulf Power and Mississippi Power Company each own 50 percent of Daniel Units 1 and 2. The plant is operated by Mississippi Power employees. The facility is located just north of Pascagoula, Mississippi, with direct transmission access across Alabama and into Florida. Both coal-fired units were affected under the Acid Rain Program and have operated on low-sulfur coals since the 1990s to lower SO₂ emissions. These New Source Performance Standards (NSPS) units are relatively low NO_x emitters, and as a result, Gulf and Mississippi Power have been able to delay installation of controls and associated costs required under the Acid Rain Program. Low NO_x burners were installed on Daniel Unit 2 during 2008 for CAIR annual and seasonal NO_x cap and trade allowance programs.

For compliance with CAIR and later with CAVR, Plant Daniel Units 1 and 2 need significant SO₂ and NO_x reductions. Only a few technologies have demonstrated the ability to provide the needed emission reductions at the commercial scale required for the coal units at Plant Daniel. For CAIR and CAVR requirements at Plant Daniel Units 1 and 2, an assessment was conducted to compare retrofit controls versus retirement and replacement options for compliance. As noted under Section 3.2, complete reliance on fuel switching and allowance purchases were eliminated as viable options for all of Gulf Power's units, including its share of Plant Daniel Units 1 and 2. Retrofit options, as well as retirement and replacement options, are each reviewed below specifically for Plant Daniel.

4.2.1 Plant Daniel Retrofit Options

Plant Daniel Unit 1 and Unit 2 Flue Gas Desulfurization Scrubber Project

Very high levels of SO₂ emission reductions can be achieved by flue gas desulfurization. There are no other commercially available options for SO₂ emission reductions at the level needed to assure compliance with CAIR and CAVR. The Daniel scrubber project will be an effective means of reducing SO₂ and mercury emissions. It is still anticipated that this scrubber project will be required for CAVR compliance, and is projected for compliance with CAIR and potential mercury regulation. These large, co-owned units are the most efficient units owned by Gulf Power. A wet scrubber has been determined to be the only viable SO₂ retrofit compliance option for Plant Daniel.

The Daniel scrubber project is designed to reduce SO₂ emissions by approximately 95%. With these reductions, Gulf Power will be able to reasonably manage compliance using its SO₂ allowance bank and some market purchases of allowances as required. The scrubber is currently scheduled for completion in 2014. For CAIR, the scrubber will minimize the reliance on the SO₂ allowance market and assure compliance for Plant Daniel Units 1 and 2.

Plant Daniel NOx Reduction Projects

The Daniel Unit 1 and 2 Low NOx burners were planned for CAIR annual and seasonal NOx cap and trade allowance programs. The Daniel Unit 2 Low NOx burners were installed during 2008. The Daniel Unit 1 Low NOx burner project that was originally scheduled to be placed in-service during 2009 had been delayed during 2008, pending the outcome of the CAIR decision. Now that the CAIR rule has been remanded to EPA and remains in effect, the Low NOx burner project at Daniel Unit 1 has been rescheduled to be placed in-service during 2010.

The Plant Daniel Units 1 and 2 SCRs are planned for operation in 2014 and 2015, respectively, to help meet the requirements of CAIR and the anticipated 8-hour ozone nonattainment designation. These SCRs, along with the Unit 1 and 2 scrubber, also provide a co-benefit of significantly reducing mercury emissions. While CAMR compliance is no longer required, it is anticipated that EPA will adopt a rule for MACT for power plant mercury emissions. The Plant Daniel SCRs are the first Phase II components of Gulf's compliance program for which Gulf has requested approval. These projects have progressed from the "flexible" planning stage to the implementation stage.

4.2.2 Plant Daniel Comparison of Retrofit versus Retirement and Replacement

Selection between retrofit and retirement/replacement options for Plant Daniel was based upon a financial assessment and analysis to determine the least cost option for Gulf Power and its customers. The analysis examined the relative cost of (a) completing the retrofit project and operating the retrofitted unit with (b) retiring the Daniel units without making the retrofit and instead, replacing them with capacity from another generation source.

This analysis was run using a detailed site specific methodology, as previously discussed in Section 3.3.4. The analysis focused on a comparison of continued operation versus unit replacement by two combined cycle units. This evaluation included refined commitment and energy value modeling and cost implications to the transmission system. Changes in energy value, capital and other fixed costs were captured in the comparison analysis to help determine the most economical option. The economic results showed that for thirteen of the sixteen scenarios it would be more beneficial to Gulf's customers to retrofit Plant Daniel Units 1 and 2, rather than replacing them with CC units.

4.2.3 Plant Daniel Emission Monitoring Requirements

Based on the 2008 CAMR vacatur, the Daniel mercury monitors have been removed from the compliance schedule and the budget. This decision will be re-examined as new mercury regulation emerges.

4.2.4 Conclusions for Plant Daniel

Based on this assessment, the retrofit of Daniel Units 1 and 2 with a flue gas desulfurization scrubber, the installation of Low-NO_x combustion controls, and the addition of SCRs on both units are the best options for compliance with CAIR, CAVR, and the anticipated 8-hour ozone nonattainment designation. These technologies offer the necessary emission reductions for SO₂, NO_x, and when used together, the scrubber and the SCRs will also capture mercury. The scrubber may also be required as part of the CAVR "reasonable progress program." Fuel switching alone will not reduce emissions to the required level. Allowance purchases are too uncertain and risky as a sole compliance option. The economic analysis indicated that retirement and replacement of the units with two combined cycle units is not economically feasible relative to retrofit of the existing units under thirteen of the sixteen scenarios analyzed.

4.3 Plant Smith

Plant Smith includes two coal-fired electric generating units (Unit 1 and Unit 2) along with an oil-fired combustion turbine and a natural gas-fired combined cycle unit. The facility is located just north of Panama City, Florida. Plant Smith Unit 1 has a nameplate rating of 149.6 MW, and Unit 2 has a nameplate rating of 190.4 MW. Both coal-fired units were affected under the Acid Rain Program, and the plant has operated on low-sulfur coals since the 1990s to lower SO₂ emissions. Both units are also equipped with low-NO_x combustion systems. Unit 1 has special low-NO_x burner tips, and Unit 2 has low-NO_x burners and separated overfired air.

Installation of SNCRs for Plant Smith Units 1 and 2 were needed for Phase I CAIR compliance in 2009. In addition to CAIR compliance, the SNCRs were needed to assist in maintaining local compliance with the anticipated 8-hour ozone nonattainment designation. The Smith Unit 2 SNCR was placed in-service in the fall of 2008, and the Smith Unit 1 SNCR was placed in-service during May of 2009.

For CAIR and CAVR requirements at Plant Smith, an assessment was conducted to compare retrofit controls versus retirement and replacement options for compliance. As noted under Section 3.2 exclusive reliance on fuel switching and allowance purchases were eliminated as viable options for Gulf Power. Retrofit options and retirement and replacement options are each reviewed below specifically for Plant Smith.

4.3.1 Plant Smith Retrofit Options

Plant Smith Units 1 and 2 Flue Gas Desulfurization Scrubber Project

The Plant Smith scrubber project has been included in the Gulf Power environmental compliance program because the requirements of CAVR will likely lead to a scrubber being required for Plant Smith Units 1 and 2. This decision is based upon anticipated CAVR command and control requirements. In addition, the scrubber will provide the added benefit of reducing mercury emissions. The scrubber project is currently planned for operation in 2017. This schedule and decisions about the Plant Smith scrubber remain very flexible. This scrubber would offer the same benefits as the scrubbers previously discussed for Plant Daniel.

Plant Smith Unit 2 Baghouse

The Plant Smith Unit 2 baghouse project has been included in the Gulf Power environmental compliance program because potential mercury regulation will likely lead to additional controls being required for Plant Smith. The baghouse project is currently planned for operation in 2018. The schedule and decisions about the Plant Smith Unit 2 baghouse remain very flexible.

4.3.2 Plant Smith Comparison of Retrofit versus Retirement and Replacement

The Plant Smith economic analysis has not been updated because Gulf has not made any changes to the Plant Smith compliance strategy, other than delaying completion of the mercury monitor installation. In addition, the majority of the expenditures for Phase I environmental projects at Plant Smith were incurred prior to 2009. An updated analysis will be performed before Gulf moves forward with the Plant Smith scrubber and baghouse projects. Both of these projects are included in Phase II of Gulf's compliance program which has not yet been approved for ECRC recovery.

4.3.3 Plant Smith Emission Monitoring Requirements

The CAIR required the installation of a parametric emission monitoring system on the Plant Smith combustion turbine during 2007. Gulf will continue to incur future maintenance expenditures to ensure accurate accounting of emissions. In response to the CAMR vacatur, Gulf has delayed further mercury monitoring capital costs until new mercury regulation emerges.

4.3.4 Conclusions for Plant Smith

The retrofit of Smith Units 1 and 2 with SNCR, a flue gas desulfurization scrubber, and a baghouse are the best options for compliance with CAIR, CAVR, and potential mercury regulation at Plant Smith. These technologies offer the necessary emission reductions for SO₂ and NO_x. Fuel switching alone will not reduce emissions to the required level.

Allowance purchases are too uncertain and risky as a sole compliance option.

The Smith Unit 2 SNCR was placed in-service in the fall of 2008 and the Smith Unit 1 SNCR was placed in-service during May of 2009. The Plant Smith mercury monitoring project has been delayed until new mercury regulation emerges. The schedule and decisions regarding the Plant Smith scrubber and baghouse, Phase II projects, remain very flexible. These projects are included in Gulf's compliance program for future review and approval.

4.4 Plant Scholz

Plant Scholz consists of two coal-fired electric generating units that each have a nameplate rating of 49 MW. The facility is located in Jackson County, Florida. Both units were affected under the Acid Rain Program, and the plant has operated on low-sulfur coals since the 1990s to lower SO₂ emissions. Because these units are small and older, NO_x averaging was used to achieve compliance with the NO_x requirements under the Acid Rain Program without the installation of emission control equipment.

For CAIR and CAVR requirements at Plant Scholz, a thorough assessment was conducted to compare retrofit controls versus retirement and replacement options for compliance. Because this small plant is nearing retirement, significant investments in capital equipment to reduce emissions cannot be justified economically. The plant will utilize Company-wide allowance trading options to comply up until the Scholz units are retired, repowered, or replaced.

4.4.1 Plant Scholz Emission Monitoring Requirements

The Scholz mercury emission monitoring system was being installed during February of 2008 when the court issued an opinion vacating the CAMR. Gulf completed the Scholz installation but postponed certification of the system due to pending regulatory uncertainty regarding quality assurance and reference testing protocols required for certification. Gulf's 2010 ECRC budget projection includes general O&M expenses for the Plant Scholz mercury monitor.

4.4.2 Conclusions for Plant Scholz

For CAIR and CAVR requirements at Plant Scholz, a thorough assessment was conducted to compare the various options for compliance. Fuel switching, allowance purchases, and emission control retrofit versus retirement and replacement were all evaluated as options for compliance. The plant will utilize Company-wide allowance trading options to comply until it is retired, repowered, or replaced.

4.5 GULF'S ALLOWANCE PURCHASES

Although the retrofit installations set forth in Gulf's compliance program significantly reduce emissions, they will not result in Gulf achieving CAIR compliance levels without the purchase of some emission allowances. Thus, Gulf's environmental compliance program calls for the purchase of allowances. The emission allowances Gulf Power projects it needs to purchase, along with estimated costs, are shown in Table 4.5-1. The purchase of allowances in conjunction with the retrofit projects comprises the most reasonable, cost-effective means for Gulf to meet CAIR and CAVR requirements.

**Table 4.5-1
Gulf Power Allowance Projection and Costs
(2010-2018)**

Annual Emissions in Excess of Allocations									
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
SO ₂	2,373	7,034	6,270	7,541	8,909	(4,077)	(3,835)	(5,365)	(16,241)
Seasonal NOx	1,102	906	482	658	436	1,229	653	732	768
Annual NOx	2,745	2,343	1,554	1,823	1,430	1,870	747	908	876
		A	B	C	D	E	F	G	H
Cost of Emissions in Excess of Allocations (\$ in thousands)*									
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
SO ₂	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1 Seasonal NOx	\$0								
2 Annual NOx	\$6,513								
3 Total Cost	\$6,513								
* Projected cost is at forecasted prices of the spot market in a given year; forecast includes pending transactions and commitments to purchase. No costs for SO ₂ are projected beginning in 2010 due to banked SO ₂ allowances.									
Oct 09 EB									

TRADE SECRET

5.0 POTENTIAL NEW ENVIRONMENTAL REGULATIONS

5.1 New 8-Hour Ozone Standard

The EPA regulates ground level ozone through implementation of an eight-hour ozone air quality standard. No area within the Company's service area is currently designated as nonattainment under the eight-hour ozone standard. In March 2008, however, the EPA issued a final rule establishing a more stringent 8-hour ozone standard. In March 2009, state agencies provided recommendation to EPA that a number of counties in the Southern Company service territory be designated nonattainment for the 2008 ozone ambient air quality standard, including several around the Gulf coast which had not previously been in nonattainment. However, on September 16, 2009, EPA announced its intent to reconsider the 2008 ozone standard, potentially resulting in a more stringent standard and designation of additional nonattainment areas within Southern Company's service territory. In January 2010, EPA announced a proposed revision to the 8-hour ozone standard, lowering the level from 0.075 ppm to a level in the range 0.060 to 0.070 ppm. The EPA is expected to issue a final rule by August 31, 2010 and require SIPs for any nonattainment areas by 2013.

These SIPs will prescribe emission control measures designed to bring areas into attainment. Although designation of a number of new nonattainment areas is anticipated, specific designations and any subsequent SIP control measures will be based in part on future air quality measurements. The ultimate outcome of this matter cannot be determined at this time and will depend on subsequent legal action and/or future nonattainment designations and regulatory plans. The control strategy for further reducing emissions of ozone will be affected by the strategy implemented for compliance with the CAIR as discussed in Section 2.1.

5.2 New Fine Particulate Standard

During 2005, the EPA's 1997 fine particulate matter nonattainment designations became effective for several areas within Southern Company's service area in Alabama and Georgia and the EPA published its final rule for implementation of the fine particulate matter standard in April 2007. Plans for addressing the nonattainment designations under the existing standard were due by April 2008, but have not been finalized due to delays in issuing the final implementation rule. These state plans could require further reductions in SO₂ and NO_x emissions from power plants.

In September 2006, the EPA published a final rule which retained the primary standard for annual fine particulate matter, but increased the stringency of the 24-hour fine particulate matter air quality standard. Actual EPA designations of areas which fail to meet this newly revised standard were issued in December 2008. EPA's decision to retain the primary standard for annual fine particulate matter in its 2006 rulemaking was challenged in the D.C. Circuit by environmental groups. In February 2009, the Court ruled that EPA failed to adequately explain why the annual standard was protective of human health, and remanded

the rule back to the agency for further action, but did not vacate the current standards. The ultimate outcome of this matter depends on further EPA action and the development and submittal of the required state plans and, therefore, cannot be determined at this time.

5.3 Global Climate Issues

Federal legislative proposals that would impose mandatory requirements related to greenhouse gas emissions, renewable energy standards, and energy efficiency standards continue to be considered in Congress, and the reduction of greenhouse gas emissions has been identified as a high priority by the current Administration. The greenhouse gas proposals have generally taken the form of a cap-and-trade program that would impose an overall cap on emissions throughout the economy, including the combustion of fossil fuels for the generation of electricity. On June 26, 2009, the American Clean Energy and Security Act of 2009 (ACES), which would impose mandatory greenhouse gas restrictions through implementation of a cap and trade program, a renewable energy standard, and other measures, was passed by the House of Representatives. ACES would require reductions of greenhouse gas emissions on a national basis to a level that is 17% below 2005 levels by 2020, 42% below 2005 levels by 2030, and 83% below 2005 levels by 2050. In addition, ACES would provide for renewable energy standards of 6% by 2012 and 20% by 2020. Similar legislation is being considered by the Senate. The financial and operational impact of such legislation, if enacted, will depend on a variety of factors. These factors include the specific greenhouse gas emissions limits or renewable energy requirements, the timing of implementation of these limits or requirements, the level of emissions allowances allocated and the level that must be purchased, the purchase price of emissions allowances, the development and commercial availability of technologies for renewable energy and for the reduction of emissions, the degree to which offsets may be used for compliance, provisions for cost containment (if any), the impact on coal and natural gas prices, and cost recovery through regulated rates. There can be no assurance that any legislation will be enacted or as to the ultimate form of any legislation. Additional or alternative legislation may be adopted as well.

In April 2007, the U.S. Supreme Court ruled that the EPA has authority under the Clean Air Act to regulate greenhouse gas emissions from new motor vehicles. On December 15, 2009, the EPA published a final determination, which became effective on January 14, 2010, that certain greenhouse gas emissions from new motor vehicles endanger public health and welfare due to climate change. On September 28, 2009, the EPA published a proposed rule regulating greenhouse gas emissions from new motor vehicles under the Clean Air Act. The EPA has stated that once this rule is effective, it will cause carbon dioxide and other greenhouse gases to become regulated pollutants under the Prevention of Significant Deterioration (PSD) preconstruction permit program and the Title V operating permit program, which both apply to power plants. As a result, the construction of new facilities or the major modification of existing facilities could trigger the requirement for a PSD permit and the installation of the best available control technology for carbon dioxide and other greenhouse gases. On October 27, 2009, the EPA also published a proposed rule governing how these programs would be applied to stationary sources, including power plants. The

EPA has stated that it expects to finalize these proposed rules in March 2010. The ultimate outcome of the endangerment finding and these proposed rules cannot be determined at this time and will depend on additional regulatory action and any legal challenges.

International climate change negotiations under the United Nations Framework Convention on Climate Change also continue. A nonbinding agreement was announced during the most recent round of negotiations in December 2009 that included a pledge from both developed and developing countries to reduce their greenhouse gas emissions. The outcome and impact of the international negotiations cannot be determined at this time.

Although the outcome of federal, state, or international initiatives cannot be determined at this time, mandatory restrictions on the Company's greenhouse gas emissions or requirements relating to renewable energy or energy efficiency on the federal or state level are likely to result in significant additional compliance costs, including significant capital expenditures. These costs could affect future unit retirement and replacement decisions, and could result in the retirement of a significant number of coal-fired generating units.

6.0 SUMMARY OF GULF'S COMPLIANCE PROGRAM

Gulf Power's environmental compliance program reflects a comprehensive assessment of requirements Gulf and its customers face in meeting CAIR, CAVR and potential mercury, SO₂ and NO_x regulations. CAIR requires significant reductions in SO₂ and NO_x. CAVR may also require the installation of retrofit equipment at certain facilities. In assessing the most cost-effective means of meeting these significant regulatory requirements, Gulf Power considered four primary compliance options: fuel switching, purchase of allowances, retrofit installations, and retirement and replacement of existing units. Fuel switching alone could not meet the requirements of these programs. Given the uncertainty of emerging allowance markets, it was highly questionable whether mature stable allowance markets would emerge in time for an all allowance purchase option to be implemented. There was a fundamental question of whether sufficient allowances would even be available. In addition, given the historic volatility in existing allowance markets, the potential cost of an all-allowance option could be significant. Therefore, risks regarding availability and costs of allowances resulted in an unacceptable level of risk for an all-allowance compliance approach for Gulf and its customers. As a result, Gulf assessed the best means of meeting plant-by-plant emission requirements through retrofit measures supplemented by allowance purchases and compared those options to retiring and replacing existing units. That analysis led to the selection of Gulf Power's environmental compliance program set forth in Tables 3.1-1 and 3.1-2. Gulf Power's environmental compliance program, which is based upon analytically sound technical and economic evaluations of alternatives, is the most reasonable, cost effective compliance program available to Gulf and its customers under current planning assumptions. Gulf Power's environmental compliance program assures environmental compliance and preserves flexibility for dealing with ever changing requirements and assumptions.

EXHIBIT "C"

Line-by-Line/Field-by-Field Justification

<u>Line(s)/Field(s)</u>	<u>Justification</u>
Table 3.1-1 Page 8 Columns A-J	This information is entitled to confidential classification pursuant to §366.093(3) (d) and (e), Florida Statutes. The basis for this information being designated as confidential is more fully set forth in paragraph 2.
Table 3.1.-2 Page 9 Columns A-J	
Table 3.3-1 Page 14 Confidential in its entirety	This information is entitled to confidential classification pursuant to §366.093(3) (d) and (e), Florida Statutes. The basis for this information being designated as confidential is more fully set forth in paragraph 3.
Table 3.3-2 Page 16 Confidential in its entirety	
Table 4.5-1 Page 23 Columns A-H, Lines 1-3	This information is entitled to confidential classification pursuant to §366.093(3) (d) and (e), Florida Statutes. The basis for this information being designated as confidential is more fully set forth in paragraph 4.
Page 13 Lines 1-5	This information is entitled to confidential classification pursuant to §366.093(3) (d) and (e), Florida Statutes. The basis for this information being designated as confidential is more fully set forth in paragraph 5.
Page 14 Lines 1-2	
Page 15 Lines 1-7	

COMMISSIONERS:
NANCY ARGENZIANO, CHAIRMAN
LISA POLAK EDGAR
NATHAN A. SKOP
DAVID E. KLEMENT
BEN A. "STEVE" STEVENS III

STATE OF FLORIDA



OFFICE OF COMMISSION CLERK
ANN COLE
COMMISSION CLERK
(850) 413-6770

Public Service Commission

ACKNOWLEDGEMENT

DATE: April 1, 2010

TO: Susan D. Ritenour, Gulf Power Company

FROM: Ruth Nettles, Office of Commission Clerk

RE: Acknowledgement of Receipt of Confidential Filing

This will acknowledge receipt of a **CONFIDENTIAL DOCUMENT** filed in Docket Number 100007 or, if filed in an undocketed matter, concerning certain portions of its Compliance Programs, and filed on behalf of Gulf Power Company. The document will be maintained in locked storage.

If you have any questions regarding this document, please contact Kim Peña, Records Management Assistant, at (850) 413-6393.

DOCUMENT NUMBER-DATE
02375 APR-1 0
FPSC-COMMISSION CLERK

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD • TALLAHASSEE, FL 32399-0850
An Affirmative Action/Equal Opportunity Employer

PSC Website: <http://www.floridapsc.com>

Internet E-mail: contact@psc.state.fl.us