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GULF POWER
A SOUTHERN COMPANY

March 31, 2011

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

Dear Ms. Cole:

RE: Docket No. 110007-EI

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

Sincerely,

Terry A. Davis

vm

Enclosures

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: **Environmental Cost Recovery Clause**)
)
)

Docket No.: **110007-EI**

CERTIFICATE OF SERVICE

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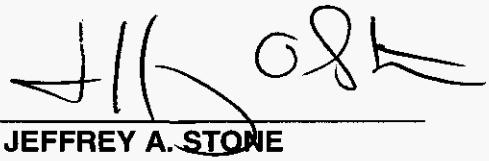

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GULF POWER COMPANY
ENVIRONMENTAL COMPLIANCE PROGRAM UPDATE

for the

Clean Air Interstate Rule
Clean Air Visibility Rule

GULF POWER
A SOUTHERN COMPANY

April 1, 2011

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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 fourth update of Gulf's original environmental compliance program[1] 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 asked the court to enter a consent decree that required the EPA to issue a proposed Electric Generating Unit (EGU) Maximum Achievable Control Technology (MACT) rule by March 16, 2011, and a final rule by November 16, 2011. The proposed rule was signed by EPA on March 16, 2011 and would impose stringent hazardous air pollutant (HAP) emission limits from coal- and oil-fired EGUs.

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. On August 2, 2010, the EPA published a proposed rule, referred to as the Transport Rule, to replace CAIR. The proposed rule addresses interstate transport of NOx and SO_2 emissions by requiring emission reductions from power plants in 31 states, including Florida and Mississippi. Once implemented, the Transport Rule will completely replace CAIR and its compliance obligations. The EPA expects to finalize the Transport Rule in June 2011 and require compliance beginning in 2012. The Acid Rain SO_2 program will continue as a separate program.

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; implementation of new and/or revised ambient air quality standards; the result of EPA's promulgation of the MACT and Transport rules; 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 and the Daniel Selective Catalytic Reduction (SCR) projects have been approved. On April 1, 2010, Gulf filed its second supplemental petition to update its compliance program to include the first component of Phase II, the Plant Daniel Units 1-2 SCRs. The remaining Phase II components of Gulf's compliance program, the Plant Smith Units 1 and 2 scrubber and the Plant Smith baghouse project, remain in the planning phase and the schedule and decisions about these 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, and one hour SO_2 standards may still result in the Pensacola area or other areas of Florida and Mississippi being designated as nonattainment. The EPA is expected to finalize a new eight-hour ozone standard in July 2011, with state implementation plans for any nonattainment areas due in mid-2014. The EPA finalized the new one hour SO_2 standard during 2010 with state nonattainment designations due in 2012.

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 (NOx) and sulfur dioxide (SO_2) reductions. However, many of these anticipated requirements are not yet fully developed. With the vacatur of CAMR, it is anticipated that EPA will finalize the recently proposed MACT rule for power plant mercury emissions and other hazardous air pollutants during November 2011. As mentioned earlier, EPA has stated that it expects to finalize the Transport Rule in June 2011 and require compliance beginning in 2012. In addition, there are multiple state, federal and international initiatives regarding greenhouse gases (GHG), particularly carbon dioxide (CO_2), 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 2011-2019 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	171	0	192	0
Daniel*	355	248	32	28
Smith	0.2	242	19	8
Scholz	0	0	0.1	0
TOTAL	526	490	243	36

*Costs for Gulf Power's ownership portion of Plant Daniel in Mississippi.
Note: Phase II projects include the Smith Scrubber, Smith Baghouse, and Daniel SCRs
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 and Transport Rule, National Ambient Air Quality Standards (NAAQS), the CAVR, as well as the CAMR and EGU MACT regulation of hazardous air pollutants.

2.1 CLEAN AIR INTERSTATE RULE / TRANSPORT RULE

In March 2005, the EPA published the final CAIR, a rule that addresses transport of SO_2 and NOx emissions that contribute to nonattainment of the ozone and fine particulate matter NAAQS in the eastern United States. This cap and trade rule addresses power plant SO_2 and NOx 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 NOx and SO_2 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
SO_2	50% (2010)	66% (2015)
NOx	50% (2009)	65% (2015)

In July 2008 and December 2008, the U.S. Court of Appeals for the District of Columbia Circuit issued decisions invalidating certain aspects of CAIR, but left CAIR compliance requirements in place while the EPA develops a revised rule. The states of Florida and Mississippi have completed plans to implement CAIR, and emissions reductions are being accomplished by the installation and operation of 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.

On August 2, 2010, the EPA published a proposed rule, referred to as the Transport Rule, to replace CAIR. This proposed rule would require 31 eastern states and the District of Columbia (D.C.) to reduce power plant emissions of SO_2 and NOx that contribute to downwind states' nonattainment of federal ozone and/or fine particulate matter ambient air quality standards. To address fine particulate matter standards, the proposed Transport Rule would require D.C. and 27 eastern states, including Florida, to reduce annual emissions of SO_2 and NOx from power plants. To address ozone standards, the proposed Transport Rule

would also require D.C. and 25 states, including Florida and Mississippi, to achieve additional reductions of NOx emissions from power plants during the ozone season.

The proposed Transport Rule contains a "preferred option" that would allow limited interstate trading of emissions allowances; however, the EPA also requested comment on two alternative approaches that would not allow interstate trading of emissions allowances. The EPA stated that it also intends to develop a second phase of the Transport Rule in 2011 to address the more stringent ozone air quality standards after they are finalized. The EPA expects to finalize the Transport Rule in June 2011 and require compliance beginning in 2012.

2.2 NATIONAL AMBIENT AIR QUALITY STANDARDS

Final revisions to the National Ambient Air Quality Standard for SO_2, including the establishment of a new one-hour standard, became effective on August 23, 2010. Since the EPA intends to rely on both monitoring data and computer modeling for implementation of the SO_2 standard, the identification of potential nonattainment areas remains uncertain and could ultimately include areas within the Company's service territory. Implementation of the revised SO_2 standard could result in additional required reductions of SO_2 emissions and increased compliance and operation costs.

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 the application of Best Available Retrofit Technology (BART) to certain sources built between 1962 and 1977 and any additional emissions reductions necessary for each designated area to achieve reasonable progress toward the natural conditions goal by 2018 and for each 10-year planning period thereafter. For power plants, the CAVR allows states to determine that the CAIR satisfies BART requirements for SO_2 and NOx. States have completed or are currently completing implementation plans 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 MDEQ submitted a Regional Haze State Implementation Plan (SIP) to EPA which concluded that CAIR was sufficient to address both SO_2 and NOx BART as well as Reasonable Progress for Plant Daniel, and that no additional PM controls were warranted under BART. EPA has not acted on the MDEQ SIP. With the upholding of the CAIR-BART, the remand of CAIR to EPA by the court, and with the proposed Transport Rule as a replacement, the ultimate outcome of the MDEQ regional haze SIP is uncertain.

2.4 CLEAN AIR MERCURY RULE/ EGU MACT

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 EGU 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 asked the Court to enter a proposed consent decree that required the EPA to issue a proposed MACT rule by March 16, 2011, and a final rule by November 16, 2011. During January 2010, Southern Company received an Information Collection Request (ICR) from the EPA in the form of a Section 114 letter. The ICR required the company to submit existing data and conduct emissions testing in order to gather data to support a MACT rule.

On March 16, 2011 EPA signed a proposed EGU MACT rule, which would impose stringent HAP emission limits and requirements from coal- and oil-fired EGUs. For coal-fired units, the proposal would require stringent emission limits for mercury, acid gases, and total particulate matter, as well as work practice standards for organic and dioxin emissions. Meeting the emission limits for mercury, acid gases, and total particulate matter may require additional emission control equipment at many facilities. The proposal would also require the installation of continuous emission monitors. EPA, according to the court approved consent decree, is required to issue a final rule by November 16, 2011. Compliance for existing sources would begin 3 years after the effective date of the final rule, or early 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/Transport Rule, CAMR/EGU MACT Rule, and/or CAVR is 2,783 megawatts (MW).

A summary of the compliance program capital projects and associated expenditures through 2019 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.

Table 3.1-1
Compliance Program Capital Expenditures
$ in Thousands

	Prior Years**
By Plant	
Plant Crist	
Mercury Monitoring	
Unit 6 SCR	63,547
Units 4-7 Scrubber	619,870
Plant Scholz	
Mercury Monitoring	644
Plant Smith	
Unit 2 Baghouse*	
Unit 1 SNCR	8,363
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	2,966
Unit 1 Low NOx Burners	3,186
Unit 2 Low NOx Burners	3,586
By Project	
Mercury Monitoring	2,077
SCRs	63,547
Scrubbers	622,836
SNCRs	11,268
Baghouse	
CAIR Parametric Monitor	230
Low Nox Burners	6,772
Annual Total	**706,730**

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

****2006-2010 expenditures**

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

Allowance cost projections are not included in Table 3.1-1

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	
Mercury Monitoring	
Units 1-2 Scrubber*	
CAIR Parametric Monitor	
Plant Daniel	
Mercury Monitoring	
Unit 1 SCR	
Unit 2 SCR	
Units 1&2 Scrubber	
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 SO_2 (acid rain) and seasonal NOx (ozone) allowance markets, the CAIR introduced an additional allowance market for annual NOx. Cap and trade programs use a market-based approach to reduce emissions. The program sets a cap, or limit, for each pollutant such as SO_2 and NOx, 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, NOx 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 SO_2.

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 SO_2 and NOx limits under CAIR and CAVR, if the units are to continue to operate. These reductions may be met by installing additional SO_2 and NOx emission controls on existing units. Currently, the proven control technology of choice for SO_2 reduction is wet scrubbing. For NOx removal, there are a number of proven

emission controls available such as Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), and Low NOx 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 SO_2 and seasonal NOx 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 SO_2 market, introducing considerable volatility and uncertainty concerning the price and availability of allowances.

The costs of compliance with the SO_2 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 SO_2 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 NOx. 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 NOx 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 SO_2. For certain facilities, NOx 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/Transport Rule 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 2011 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 combined cycle unit. 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 replacement costs are pro-rated to an equal capacity basis with the studied unit. The NPV of the difference between the pro-rated replacement cost and unit operational cost is calculated to determine the overall net contribution.

The evaluation incorporated twelve integrated scenarios in order to capture variations in the operating environments that would affect potential retirement of the units. The twelve cases were developed around uncertainty in fuel prices and CO_2 legislation. The CO_2 price assumptions were $0/ton, $10/ton, $20/ton and $30/ton (in 2008 dollars), escalated at inflation to 2015, then 5 percent above inflation thereafter. The fuel price sensitivities utilized variations in gas and coal prices based on a low, 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 2017, avoiding the Crist 6 SCR installation in the fall of 2012. A replacement combined cycle (CC) at Plant Crist cannot be placed in-service until 2017 due to transmission lead time constraints. For the period between December 31, 2014 and December 31, 2016, a market replacement capacity and energy purchase was assumed.

Transmission Cost Assumptions

[redacted]

[redacted]

Results

An economic evaluation of the Plant Crist CC replacement option was performed to compare customer costs from 2011-2035. The CC replacement option was compared 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 the twelve 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 continued 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 2011 in millions)

[redacted]

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, avoiding the Daniel Units 1 and 2 SCRs in the spring of 2016 and the fall of 2015, respectively, and the fall 2014 scrubber installations.

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. Due to the transmission lead time constraints discussed above, the Plant Crist CC could not be online until January 2017. Due to permitting and construction lead time constraints, the Plant Daniel CC could not be online until January 2016. Therefore, market replacement capacity and energy purchases were assumed from January 1, 2015 until the replacement units are available.

Transmission and Site Closure Cost Assumptions

Site closure cost estimates for Daniel Units 1 and 2 were based on a 2009 study. The results of the study indicate that for Daniel Units 1 and 2, the projected site closure cost is $25.5 million in 2009$, which includes closure of the ash pond. These costs are included for the early retirement of the unit in 2015 in the retire-and-replace case, as well as for the continue-to-operate case at the end of life of the unit, adjusted for inflation respectively.

Results

An economic evaluation of the Plant Daniel CC replacement option was performed to compare customer costs from 2011-2040. The CC replacement option was compared to the cost of continuing to operate Plant Daniel Units 1 and 2 with SCRs and scrubbers 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 scrubbers.

It showed that for ten of the twelve 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 are practical transmission lead time and permitting and construction lead time limitations that require market purchases for a 2015 replacement. 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 2011 in millions, reflects 50% Gulf ownership portion only)

[redacted]

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 93.75 MW and Units 6 and 7 have nameplate ratings of 370 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 SO_2 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 SO_2 emissions by approximately 95%. With these reductions, Gulf Power will be able to reasonably manage compliance with its SO_2 allowance bank. With the completion of the Crist Units 4 through 7 scrubber the plant now has the option of burning a higher sulfur coal. 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 on 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 mercury compliance. While CAMR compliance is no longer required, it is anticipated that EPA will finalize the recently proposed MACT rule for power plant mercury emissions and other hazardous air pollutants during November 2011. 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 2011, 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 the twelve 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 the new mercury and HAPs regulation is finalized.

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/Transport Rule, CAVR, the anticipated 8-hour ozone nonattainment designation, pending EGU MACT regulation, and new more stringent ambient air quality standards. These are the only technologies that offer the necessary emission reductions for SO_2 and NOx and when used together, the scrubber and the SCRs on Units 6 and 7 will capture mercury and other HAPs.

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 548.25 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 SO_2 emissions. These New Source Performance Standards (NSPS) units are relatively low NOx 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 NOx burners were installed on Daniel Units 1 and 2 during 2010 and 2008, respectively, for CAIR annual and seasonal NOx cap and trade allowance programs.

For compliance with CAIR/Transport Rule, the anticipated 8-hour ozone nonattainment designation, pending EGU MACT regulations, and new more stringent ambient air quality standards, and later with CAVR, Plant Daniel Units 1 and 2 need significant SO_2 and NOx 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. An assessment was conducted on Plant Daniel Units 1 and 2 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 SO_2 emission reductions can be achieved by flue gas desulfurization. There are no other commercially available options for SO_2 emission reductions at the level needed to assure compliance with the CAIR/Transport Rule, pending EGU MACT rule, the anticipated NAAQS, and CAVR. The Daniel scrubber projects will be an effective means of reducing SO_2 emissions. These large, co-owned units are the most efficient coal-fired units owned by Gulf Power. Wet scrubbing has been determined to be the only viable SO_2 retrofit compliance option for Plant Daniel.

The Daniel scrubber projects are designed to reduce SO_2 emissions by approximately 95%. With these reductions, Gulf Power will be able to reasonably manage compliance using its SO_2 allowance bank. The scrubber projects are currently scheduled for completion in 2014. The scrubbers will minimize the reliance on the SO_2 allowance market and assist Plant Daniel in complying with the EGU MACT rule.

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 and the Unit 1 Low NOx burners were placed in-service in 2010.

The Plant Daniel Units 1 and 2 SCRs are planned for operation in 2015 and 2016 to help meet the requirements of the CAIR/Transport Rule, the pending EGU MACT rule, and the anticipated 8-hour ozone nonattainment designation and NAAQS. These SCRs, along with the Unit 1 and 2 scrubbers, also provide a co-benefit of significantly reducing mercury emissions. While CAMR compliance is no longer required, it is anticipated that EPA will finalize the recently proposed MACT rule for power plant hazardous air pollutant (including mercury) emissions.

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 ten of the twelve 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 after the new mercury and other hazardous air pollutant regulation is finalized.

4.2.4 Conclusions for Plant Daniel

Based on this assessment, the retrofit of Daniel Units 1 and 2 with flue gas desulfurization scrubbers, the installation of Low-NOx combustion controls, and the addition of SCRs on both units are the best options for compliance with CAIR/Transport Rule, CAVR, the anticipated 8-hour ozone nonattainment designation and NAAQS, and the pending EGU MACT rule. These technologies offer the necessary emission reductions for SO_2, NOx, mercury and other HAPs. The scrubbers 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 ten of the twelve 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 SO_2 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 and other hazardous air pollutant 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 pending EGU MACT regulation will likely lead to additional controls being required for Plant Smith. The baghouse project is currently planned for operation in 2017. 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 and have 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 the new EGU MACT regulation is finalized.

4.3.4 Conclusions for Plant Smith

The retrofit of Smith Units 1 and 2 with SNCRs, a flue gas desulfurization scrubber, and a baghouse on Unit 2 are the best options for compliance with CAIR/Transport Rule, CAVR, and pending EGU MACT regulation. These technologies offer the necessary emission reductions for SO_2 and NOx. 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 the new EGU MACT regulation is finalized. 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 SO_2 emissions. Because these units are small and older, NOx averaging was used to achieve compliance with the NOx 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 2011 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
(2011-2019)

Annual Emissions in Excess of Allocations

	2011	2012	2013	2014	2015	2016	2017	2018	2019
SO_2	(6,634)	3,482	3,405	12,264	4,682	5,435	3,167	(8,884)	(8,062)
Seasonal NO_X	910	230	673	1,195	2,555	1,902	1,605	1,553	1,791
Annual NO_X	1,006	301	1,319	2,845	4,521	3,666	2,757	2,444	3,200

Cost of Emissions in Excess of Allocations ($ in thousands)*

	2011	2012	2013	2014	2015	2016	2017	2018	2019
SO_2	$0	$0	$0	$0	$0	$0	$0	$0	$0
Seasonal NO_X	$96								
Annual NO_X	$0								
Total Cost	$96								

* 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.

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TRADE SECRET

5.0 POTENTIAL NEW ENVIRONMENTAL REGULATIONS

5.1 New 8-Hour Ozone Standard

The EPA regulates ground level ozone concentrations 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 8-hour ozone standard. In March 2008, 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 along the Gulf Coast which had not previously been in nonattainment. However, in September 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. On January 6, 2010, EPA proposed further reductions, lowering the standard from 0.075 ppm to a level in the range 0.060 to 0.070 ppm. A final reconsideration of the 2008 ozone NAAQS was expected by December 31, 2010 as agreed to by EPA under a court order. EPA has asked for an extension of this deadline until July 2011. The eventual outcome of a reconsidered standard and whether the D.C. Circuit Court will stay the existing rule and/or nonattainment designations cannot be determined at this time. However, a lower ozone NAAQS could lead to additional nonattainment areas within the Company's service territory.

5.2 National Ambient Air Quality Standards

Revisions to the National Ambient Air Quality Standard for Nitrogen Dioxide (NO_2), which established a new one-hour standard, became effective on April 12, 2010. Although none of the areas within the Company's service territory are expected to be designated as nonattainment for the NO_2 standard, based on current ambient air quality monitoring data, the new NO_2 standard could result in significant additional compliance and operational costs for units that require new source permitting.

During 2005, the EPA's fine particulate matter nonattainment designations became effective for several areas within Southern Company's service area. State implementation plans demonstrating attainment with the annual standard for all areas have been submitted to EPA. EPA is expected to propose new annual and fine particulate matter standards during the summer of 2011.

5.3 Global Climate Issues

Although the U.S. House of Representatives passed the American Clean Energy and Security Act of 2009, with the goal of mandating renewable energy standards and reductions in greenhouse gas emissions, neither this legislation nor similar measures passed the U.S. Senate before the end of the 2010 session. Federal legislative proposals that would impose mandatory requirements related to greenhouse gas emissions, renewable energy standards, and/or energy efficiency standards are expected to continue to be considered in Congress.

The financial and operational impacts of climate or energy 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.

While climate legislation has yet to be adopted, the EPA is moving forward with regulation of greenhouse gases under the Clean Air Act. 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. In December 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 April 1, 2010, the EPA issued a final rule regulating greenhouse gas emissions from new motor vehicles under the Clean Air Act. The EPA has taken the position that when this rule became effective on January 2, 2011, carbon dioxide and other greenhouse gases became 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 and other commercial and industrial facilities. 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 May 13, 2010, the EPA issued a final rule, known as the Tailoring Rule, governing how these programs would be applied to stationary sources, including power plants. This rule establishes two phases for applying PSD and Title V requirements to greenhouse gas emissions sources. The first phase, which began on January 2, 2011, applies to sources and projects that would already be covered under PSD or Title V, whereas the second phase, which will begin on July 1, 2011, applies to sources and projects that would not otherwise trigger those programs but for their greenhouse gas emissions. However, EPA proposed a rule to defer for three years the application of PSD and Title V permitting for biogenic carbon dioxide emissions from bioenergy and biogenic stationary sources. In addition to these rules, the EPA has entered into a proposed settlement agreement to issue standards of performance for greenhouse gas emissions from new and modified fossil fuel-fired electric generating units and greenhouse gas emissions guidelines for existing sources. Under the proposed settlement agreement, the EPA commits to issue the proposed standards by July 2011 and the final standards by May 2012.

All of the EPA's final Clean Air Act rulemakings have been challenged in the U.S. Court of Appeals for the District of Colombia Circuit; however, the court declined motions to stay the rules pending resolution of those challenges. As a result, the rules may impact the amount of time it takes to obtain PSD permits for new generation and major modifications to existing generating units and the requirements ultimately imposed by those permits. The ultimate

outcome of these rules cannot be determined at this time and will depend on the content of the final rules and the outcome of any legal challenges.

International climate change negotiations under the United Nations Framework Convention on Climate Change also continue. The December 2009 negotiations resulted in a nonbinding agreement that included a pledge from both developed and developing countries to reduce their greenhouse gas emissions. The most recent round of negotiations took place in December 2010. 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/Transport Rule, CAVR, NAAQS, the pending EGU MACT rule, potential 8-hour ozone nonattainment designations, SO_2, and NOx regulations. CAIR/Transport Rule requires significant reductions in SO_2 and NOx. 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.