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March 30, 2012

Ms. Ann Cole, Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee FL 32399-0870

120000-07

Dear Ms. Cole:

Enclosed is an original and twenty-five copies of Gulf Power Company's 2012 Ten Year Site Plan, and it is filed pursuant to Rule No. 25-22.071.

Sincerely,

wb

**Enclosures** 

Beggs & Lane cc:

APA **ECR** GCL

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(RAD) SRC **ADM** 

OPC CLK I roughal Jeffrey A. Stone, Esq.

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FPSC-COMMISSION CLERK

### TEN YEAR SITE PLAN 2012-2021

# FOR ELECTRIC GENERATING FACILITIES AND ASSOCIATED TRANSMISSION LINES

**APRIL 2012** 



UCCOMENT NUMBER - PATE

01935 APR-2 º

FPSC-COMMISSION CLERK

## GULF POWER COMPANY TEN YEAR SITE PLAN

# FOR ELECTRIC GENERATING FACILITIES AND ASSOCIATED TRANSMISSION LINES

Submitted To The
State of Florida
Public Service Commission

**APRIL 2, 2012** 

O 1 9 3 5 APR -2 2 FPSC-COMMISSION CLERK

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#### **GULF POWER COMPANY**

#### **TEN-YEAR SITE PLAN**

#### **Executive Summary**

The Gulf Power Company 2012 Ten-Year Site Plan is filed with the Florida Public Service Commission (FPSC) in accordance with the requirements of Chapter 186.801, Florida Statutes, as revised by the Legislature in 1995. The revision replaced the Florida Department of Community Affairs with the FPSC as the state agency responsible for the oversight of the Ten-Year Site Plan (TYSP). The 2012 TYSP for Gulf Power Company (Gulf) is being filed in compliance with the applicable FPSC rules.

Gulf's 2012 TYSP contains the documentation of assumptions used for Gulf's load forecast, fuel forecasts, the planning processes, existing resources, and future capacity needs and resources. The resource planning process utilized by Gulf to determine its future capacity needs is coordinated within the Southern electric system Integrated Resource Planning (IRP) process. Gulf participates in the IRP process along with other Southern electric system retail operating companies, Alabama Power Company, Georgia Power Company, and Mississippi Power Company, (collectively, the "Southern electric system" or SES), and it shares in a number of benefits gained from planning in conjunction with a large system such as the SES. These benefits include the economic sharing of SES generating reserves, the ability to install large, efficient generating units, and reduced requirements for operating reserves.

The capacity resource needs set forth in the SES IRP are driven by the demand forecast that includes the load reduction effects of projected demand-side measures that are embedded into the forecast prior to entering the generation mix process. The generation mix process uses PROVIEW® to screen the available technologies in order to produce a listing of preferred capacity resources from which to select the most cost-effective plan for the system. The resulting SES resource needs are then allocated among the operating companies based on reserve requirements, and each company then determines the resources that will best meet its capacity and reliability needs.

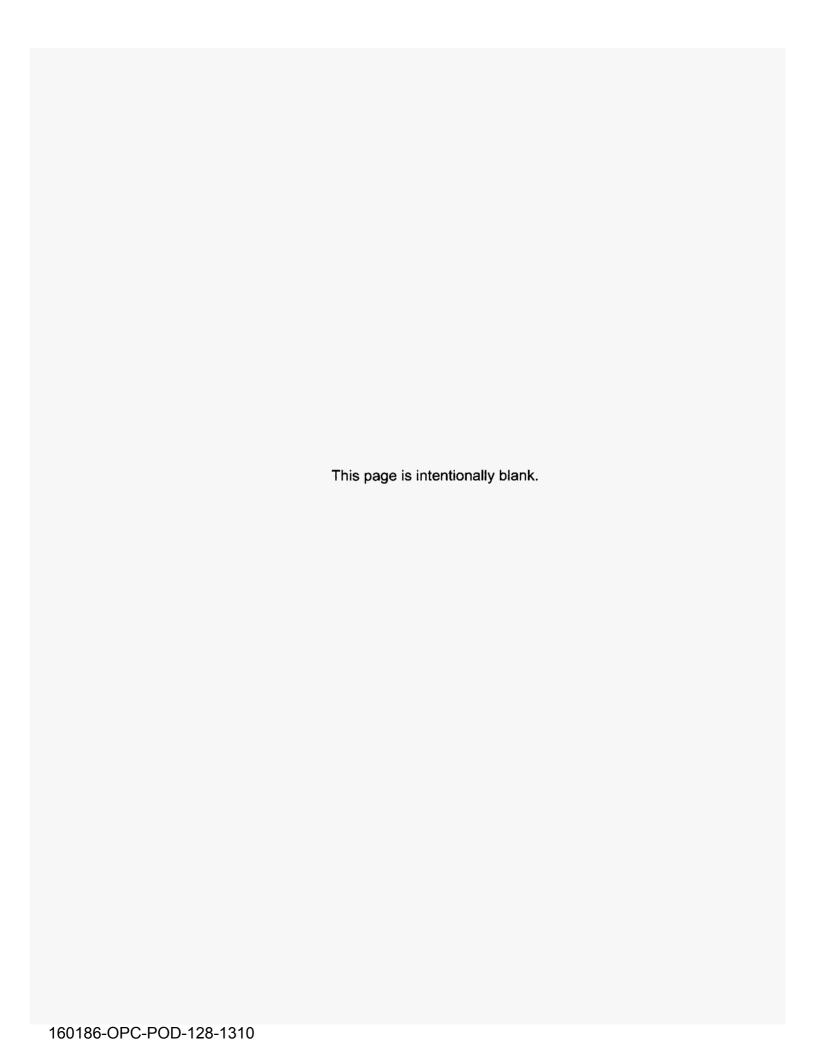
During the 2012 TYSP cycle, Gulf will continue to utilize the two purchased power agreements (PPAs) that currently supply 496 megawatts (MW) of peaking power from two existing regional market facilities to serve customers' electrical needs until their expiration on May 31, 2014. To meet its capacity requirements following the expiration of the peaking PPAs, Gulf executed a PPA with Shell Energy North America (Shell PPA) on March 16, 2009 for 885 MWs from an existing gas-fired combined cycle generating unit located in Alabama. This PPA resource has been utilized by Gulf to serve its customers on a non-firm basis since November 2009, and it is scheduled to meet Gulf's firm capacity requirements no later than June 2014 until it expires in May 2023.

The Shell PPA capacity combined with Gulf's diverse fleet of existing coal, natural gas, oil, and renewable generating units that is shown on Schedule 1 of this TYSP would enable Gulf to meet its reserve margin requirements for the duration of the 2012-2021 planning cycle under pre-2012 environmental regulations. Given this assumption, Gulf's next capacity need would begin to

develop in 2022 and increase to approximately 900 MWs following the expiration of the Shell PPA.

However, compliance with unit specific emission limits contained in the Environmental Protection Agency's (EPA) newly released Mercury and Air Toxics Standards (MATS) rule may severely restrict Gulf's coal-fired generation or completely eliminate the generation produced by Gulf's coal-fired units at Plants Smith and Scholz as early as 2015. Even if Gulf were to develop cost effective emission control solutions to meet MATS requirements, the additional costs to comply with the final versions of the EPA's proposed water quality and coal combustion by-products rules may result in total combined compliance costs that render controlled coal-fired operations uneconomical in the long term. The Company is currently assessing the potential costs of complying with the MATS rule and the other proposed EPA rules. Gulf is developing a compliance strategy in coordination with other SES operating companies that may include changing fuel sources for certain units, installation of emission control equipment, and/or unit retirements and replacements with new generating units, market capacity purchases, and/or additional transmission facilities. Preliminary analyses indicate that potential incremental capital expenditures for compliance may be substantial. Therefore, until the combined effects of all currently proposed EPA air, water, and coal combustion by-products regulations on the future coal-fired operations at Plants Crist, Smith, and Scholz are more fully evaluated, Gulf will assume that these units will be available to operate on coal throughout the 2012-2021 planning cycle. A final decision to control and/or replace any Gulf coal-fired capacity with new generating resources and/or additional transmission facilities will be based on a careful assessment of the impacts to Gulf's customers.





#### **DESCRIPTION OF EXISTING FACILITIES**

Gulf owns and operates generating facilities at five sites in Northwest Florida (Plants Crist, Smith, Scholz, Pea Ridge, and Perdido). Gulf also owns a 50% undivided ownership interest in Unit 1 and Unit 2 at Mississippi Power Company's Daniel Electric Generating Facility. Gulf has a 25% ownership in Unit 3 at Georgia Power Company's Scherer Electric Generating Facility which is completely dedicated to wholesale power sales contracts. This fleet of generating units consists of eleven fossil steam units, one combined cycle unit, four combustion turbines, and two internal combustion engine units fueled by landfill gas. Schedule 1 shows 906 MW of steam generation located at the Crist Electric Generating Facility near Pensacola, Florida. The Lansing Smith Electric Generating Facility near Panama City, Florida, includes 357 MW of steam generation, 556 MW (summer rating) of combined cycle generation, and 32 MW (summer rating) of combustion turbine facilities. The Scholz Electric Generating Facility, near Sneads, Florida, consists of 92 MW of steam generation. Gulf's Pea Ridge Facility, in Pace, Florida, consists of three combustion turbines associated with an existing customer's cogeneration facility, which adds 12 MW (summer rating) to Gulf's existing capacity. The Perdido Landfill Gas-to-Energy Facility in Escambia County, Florida provides 3 MW from two internal combustion generating units.

Including Gulf's ownership interest in the Daniel fossil steam Units 1 and 2 and the Scherer fossil steam Unit 3, Schedule 1, as of December 31, 2011,

shows Gulf's total net summer generating capability to be 2,686 MW and its total net winter generating capability to be 2,725 MW.

The existing Gulf system in Northwest Florida, including major generating plants, substations, transmission lines, are shown on the system map on page 9 of this TYSP. Data related to Gulf's existing generating facilities is presented on Schedule 1 of this TYSP.

#### **GULF POWER COMPANY**

#### SCHEDULE 1 EXISTING GENERATING FACILITIES AS OF DECEMBER 31, 2011

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14)

Page 1 of 2

(1)	(2)	(3)	(4)	(3)	(0)	(1)	(0)	(9)	(10)	(11)	(12)	(13)	(14)
								Alt.					
	11-4		1.1 = 14	_	1	F ( 7		Fuel	Com'l in-	Exptd	Gen Max		pability
Diam's Name	Unit	1	Unit		uel		ransp	Days	Service	Retrmnt	Nameplate	Summer	
Plant Name	No.	Location	Type	<u>Pri</u>	Alt	<u>Pri</u>	<u>Alt</u>	<u>Use</u>	Mo/Yr	Mo/Yr	KW	<u>MW</u>	<u>MW</u>
Crist		Escambia County 25/1N/30W									1.135,250	906.0	906.0
	4		FS	С	NG	WA	PL	1	07/59	12/24	93,750	75.0	75.0
	5		FS	С	NG	WA	PL	1	06/61	12/26	93,750	75.0	75.0
	6		FS	С	NG	WA	PL	1	05/70	12/35	369,750	291.0	291.0
	7		FS	С	NG	WA	PL	1	08/73	12/38	578,000	465.0	465.0
Lansing Smith		Bay County 36/2S/15W									<u>1,001,500</u>	945.0	<u>981.0</u>
	1		FS	С	4.	WA			06/65	12/30	149,600	162.0	162.0
	2		F\$	С		WA			06/67	12/32	190,400	195.0	195.0
	3		CC	NG		PL			04/02	12/42	619,650	556.0	584.0
	Α		CT	LO		TK			05/71	12/27	41,850	32.0	40.0
(A)													
Scholz		Jackson County 12/3N/7W									98,000	92.0	92.0
	1		FS	С		RR	WA		03/53	Note A	49,000	46.0	46.0
	2		FS	С	••	RR	WA		10/53	Note A	49,000	46.0	46.0
(B)													
Daniel		Jackson County, MS 42/5S/6W									<u>548,250</u>	<u>510.0</u>	<u>510.0</u>
	1		FS	С	HO	RR	TK		09/77	12/42	274,125	255.0	255.0
	2		FS	С	но	RR	TK		06/81	12/46	274,125	255.0	255.0
(B)													
Scherer	3	Monroe County, GA	FS	С		RR			01/87	12/52	222,750	218.0	218.0
Pea Ridge		Santa Rosa County 15/1N/29W									14,250	12.0	<u>15.0</u>
	1		CT	NG		PL			05/98	12/18	4,750	4.0	5.0
	2		CT	NG		PL			05/98	12/18	4,750	4.0	5.0
	3		CT	NG		PL			05/98	12/18	4,750	4.0	5.0

~

#### **GULF POWER COMPANY**

#### SCHEDULE 1

**EXISTING GENERATING FACILITIES** AS OF DECEMBER 31, 2011

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit No.	Location	Unit Type	<u>Fri</u>	uel <u>Alt</u>	Fuel T <u>Pri</u>	ransp <u>Alt</u>	Alt. Fuel Days <u>Use</u>	Com'l In- Service Mo/Yr	Exptd Retrmnt Mo/Yr	Gen Max Nameplate KW	Net Ca Summer <u>MW</u>	pability Winter <u>MW</u>
Perdido LFG		Escambia County									<u>3.2</u>	<u>3.0</u>	3.0
	1 2		IC IC	LFG LFG	 	PL PL	 		10/10 10/10	12/29 12/29	1.6 1.6	1.5 1.5	1.5 1.5

Abbreviations:

œ

Fuel Fuel Transportation

FS - Fossil Steam

CT - Combustion Turbine

CC - Combined Cycle

NG - Natural Gas

C - Coal

LO - Light Oil

HO - Heavy Oil

IC - Internal Combustion

LFG - Landfill Gas

Page 2 of 2

2,686.0 2,725.0

Total System

PL - Pipeline

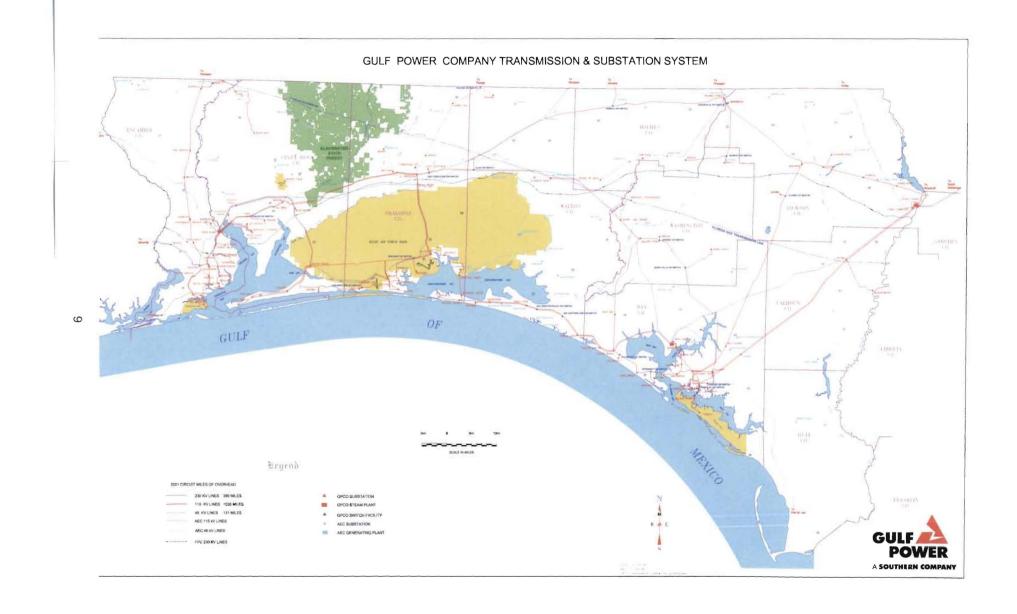
WA - Water

TK - Truck

RR - Railroad

NOTE: (A) Scholz Units 1 & 2 will continue to operate on coal beyond 2011.

> Unit capabilities shown represent Gulf's portion of Daniel Units 1 & 2 (50%) and Scherer Unit 3 (25%).



#### CHAPTER II

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION



## GULF POWER COMPANY FORECASTING METHODOLOGY OVERVIEW

Gulf views the forecasting effort as a dynamic process requiring ongoing activities to yield results that allow informed planning and decision-making. The total forecast is an integration of different techniques and methodologies, each applied to the task for which it is best suited. Many of the techniques take advantage of the extensive data made available through the Company's customer service efforts, which are predicated on the philosophy of knowing and understanding the needs, perceptions and motivations of our customers and actively promoting wise and efficient uses of energy which satisfy customer needs. Gulf has been a pacesetter in the energy efficiency market since the development and implementation of the GoodCents Home program in the mid-70's. This program brought customer awareness, understanding and expectations regarding energy efficient construction standards in Northwest Florida to levels unmatched elsewhere.

The Market Research and Planning section of Gulf's Marketing and Customer Care Department is responsible for preparing forecasts of customers, energy and peak demand. A description of the assumptions and methods used in the development of these forecasts follows.

#### I. ASSUMPTIONS

#### A. ECONOMIC OUTLOOK

The economic assumptions used to develop Gulf's forecast of customers, energy sales and peak demand for this Ten Year Site Plan were derived from the May 2011 economic projection provided by Moody's Analytics. This economic projection incorporates the national recession which started in December 2007 and officially ended in June 2009.

The May 2011 economic projection indicated that the national economy was recovering. National real GDP was expected to grow at approximately 5.0% annualized during the latter part of 2011. National job growth was projected to be strong and full employment was expected by the end of 2014.

#### B. NORTHWEST FLORIDA ECONOMIC OUTLOOK

Gulf's retail service area encompasses three Metropolitan Statistical Areas (MSAs): Pensacola-Ferry Pass-Brent, Crestview-Fort Walton Beach-Destin, and Panama City-Lynn Haven-Panama City Beach. The Northwest Florida economy, by comparison to the national economy, was impacted by the recession before the nation-wide downturn and beyond the official end date of the national recession. A number of economic indicators for Gulf's service area, namely income, employment, housing starts and population, were in decline at the end of 2006 or beginning of 2007 and either continued to decline or leveled off at a low point through 2008, 2009 and 2010. Northwest Florida's real disposable personal income only grew 2.6% in 2011, significantly below the pre-recession average annual growth rate of 4.3%. Real disposable personal income was projected to grow over the next five years at

an average annual rate of 3.8%. The region's employment, which had a prerecession average annual growth rate of 3.4%, bottomed out in 2010 and grew
slightly at 1.4% in 2011. Employment was projected to grow at an average annual
rate of 3.0% over the next five years. Housing stock vacancy rate was projected to
decline from a peak of 20.3% in 2009 to 15.5% by 2014. Population growth in
Northwest Florida was 1.1% before the recession, was nearly flat at 0.3% during the
recession through 2010, and was projected to return to historical growth rates by
2012, growing at an average annual rate of 1.7% for the next five years. Over the
long-run, out through the full 25 years of the forecast period, Northwest Florida
growth was projected at an average annual rate of 2.9% for income and 2.3% for
employment.

Gulf's projections incorporate electric price assumptions derived from the 2011 Gulf Power Official Long-Range Forecast. Fuel price projections for gas and oil are developed by Southern Company Services (SCS) Fuel Procurement staff with input from outside consultants. The following tables provide a 5-year summary of assumptions associated with Gulf's forecast:

#### TABLE 1

#### NATIONAL ECONOMIC SUMMARY AVERAGE ANNUAL GROWTH RATES (2011-2016)

GDP Growth	3.1 %
Interest Rate (30 Year AAA Bonds)	5.9 %
Inflation	2.3 %

#### TABLE 2

### AREA DEMOGRAPHIC SUMMARY (2011-2016)

Population Gain	71,810
Net Migration	10,610
Average Annual Population Growth	1.7 %
Average Annual Labor Force Growth	2.8 %

#### II. CUSTOMER FORECAST

## A. RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL CUSTOMER FORECAST

The short-term forecasts of residential, commercial and industrial non-lighting customers were based primarily on projections prepared by Gulf's field Marketing Managers with the assistance of their field employees. The resulting projections reflect recent historical trends in net customer gains as well as anticipated effects of changes in the local economy, the real estate market, planned construction projects. and factors affecting population such as military personnel movements and changes in local industrial production. Forecasters reviewed the one-year-out customer projections by rate schedule, checking for consistency with historical trends, consistency with economic outlooks, and consistency across the three MSAs in Gulf's service area. Forecasters then supplied field managers with draft secondyear-out customer projections based on number of households from Moody's Analytics, which the field managers reviewed and modified as necessary. Gulf utilized growth in the number of households to extend the short-term residential forecast of customers to the long-term horizon. Beyond the short-term period, commercial customers were forecast as a function of residential customers, reflecting the growth of commercial services to meet the needs of new residents.

#### B. OUTDOOR LIGHTING CUSTOMER FORECAST

Gulf projected the number of outdoor lighting customers by rate and class based on historical growth rates. Forecasters reviewed historical outdoor lighting

data with Gulf's lighting team to gain insight into future trends before finalizing outdoor lighting growth rate projections.

#### III. ENERGY SALES FORECAST

#### A. RESIDENTIAL SALES FORECAST

The short-term non-lighting residential energy sales forecast was developed utilizing multiple linear regression analyses. Monthly class energy use per customer per billing day was estimated based on recent historical data, normal weather, income, housing stock vacancy rate and projected price of electricity. The model output was then multiplied by the projected number of customers and billing days by month to expand to the total residential class.

Long term projections of residential sales were developed utilizing the Residential End-Use Energy Planning System (REEPS) model, an electric utility end-use forecasting tool. REEPS forecasts end-use or appliance-specific residential energy demand using a variety of demographic, housing, economic, energy, and weather information. Gulf utilized growth rates from the REEPS projection to extend the short-term residential sales forecast to the long-term horizon.

The residential sales forecast was adjusted to reflect the expected impacts of conservation programs approved in Gulf's most recent DSM plan. Additional information on the residential conservation programs and program features are provided in the <u>Conservation Programs</u> section of this document. The residential sales forecast was also adjusted to reflect the anticipated impact of the introduction of electric vehicles to the market.

#### B. <u>COMMERCIAL SALES FORECAST</u>

The short-term non-lighting commercial energy sales forecast was also developed utilizing multiple linear regression analyses. Monthly energy use per customer per billing day for small commercial customers (rate GS) was estimated based on recent historical data, normal weather, employment and projected price of electricity. Similarly, monthly energy use per customer per billing day for large commercial customers (all other commercial rates) was estimated based on recent historical data, normal weather, employment, and projected price of electricity. These regression model outputs were then multiplied by the projected number of small and large commercial customers, respectively, and billing days by month, then summed to the total commercial class.

Long-term projections of commercial sales were developed utilizing the Commercial End-Use Planning System (COMMEND) model, an electric utility end-use forecasting tool that provides a conceptual framework for organizing commercial market building-type and end-use information. Gulf utilized growth rates from the COMMEND projection to extend the short-term commercial sales forecast to the long-term horizon.

The commercial sales forecast was adjusted to reflect the expected impacts of conservation programs approved in Gulf's most recent DSM plan. Additional information on the commercial conservation programs and program features are provided in the <u>Conservation Programs</u> section of this document.

#### C. INDUSTRIAL SALES FORECAST

The short-term industrial energy sales forecast was developed using a combination of on-site surveys of major industrial customers and historical average consumption per customer per billing day. Gulf's largest industrial customers were interviewed to identify expected load changes due to equipment additions, replacements or changes in operating schedules and characteristics. The short-term forecast of monthly sales to these major industrial customers was a synthesis of the detailed survey information and historical monthly to annual energy ratios. The forecast of sales to the remaining smaller industrial customers was developed by rate schedule and month using historical averages. The resulting estimates of energy purchases per customer per billing day were multiplied by the expected number of customers and billing days by month to expand to the rate level totals. The sum of the energy sales forecast for the major industrial customers and the remaining smaller industrial customers resulted in the total industrial energy sales forecast.

#### D. OUTDOOR LIGHTING SALES FORECAST

Outdoor lighting energy forecasts were developed by rate and class using historical growth rates. Forecasters reviewed historical outdoor lighting data with Gulf's lighting team to gain insight into future trends before finalizing outdoor lighting growth rate projections.

#### E. WHOLESALE ENERGY FORECAST

The forecast of energy sales to wholesale customers was developed utilizing multiple linear regression analyses. Monthly energy purchases per day for each of Gulf's wholesale customers were estimated based on recent historical data, normal

weather and income. The model output was then multiplied by the projected number of days by month to expand to the individual customer totals, which were then summed to develop the wholesale class total.

#### F. <u>COMPANY USE FORECAST</u>

The forecast of company energy use was based on recent historical averages by month.

#### IV. PEAK DEMAND FORECAST

The short-term annual system peak demand forecast was prepared using average historical annual territorial load factors and projected annual territorial supply. The annual system peak demand projection for 2012 was based on the average of the historical annual load factors for the period 2008 through 2010 to reflect the continuing impact of the recession. The annual system peak demand projections for 2013 and beyond reflect a gradual return to non-recessionary annual load factors. Gulf's annual system peak demand typically occurs in the month of July. Monthly system peak demands were developed using monthly-peak to annual-peak ratios.

The long-term peak demand forecast was prepared using the Hourly Electric Load Model (HELM), developed by ICF, Incorporated, for EPRI under Project RP1955-1. The resulting output from the model was hourly electrical loads over the forecast horizon. HELM forecasts electric utility system loads using a "bottom up" approach. Model inputs include energy forecasts by rate and by individual large customer as well as load shapes by class, rate and individual large customer. The

results are hourly system load shapes where the system demand for electricity in any hour is the sum of demands for each class for that hour.

The resulting short-term and long-term monthly system peak demand projections were adjusted to reflect the anticipated impacts of conservation programs approved in Gulf's most recent DSM plan. Additional information on the peak demand impacts of Gulf's conservation programs are provided in the Conservation Programs section of this document.

#### V. DATA SOURCES

Gulf utilized historical customer, energy and revenue data by rate and class, and historical hourly load data coupled with weather information from The National Oceanic and Atmospheric Administration (NOAA) to support the energy and demand models. Individual customer historical data was utilized in developing projections for Gulf's largest industrial customers.

Gulf's models also utilized economic projections provided by Moody's Analytics, a renowned economic services provider. Moody's relies on the Bureau of Labor Statistics for data on employment, unemployment rate and labor force. Moody's obtains personal income data from the Bureau of Economic Analyses. Moody's obtains population, households and housing permit information from the U.S. Census Bureau.

#### VI. CONSERVATION PROGRAMS

Gulf's forecast of energy sales and peak demand reflect the continued impacts of energy efficiency and conservation activities, including the impacts of programs proposed by Gulf in its most recent DSM plan, which was approved by the Commission in Order No. PSC-11-0114-PAA-EG on February 11, 2011. Gulf's conservation programs were designed to meet the goals established by the Commission in Order No. PSC-09-0855-FOF-EG in December of 2009. Following is a brief description of the currently approved programs and tables indicating the historical and projected conservation impacts of Gulf's ongoing conservation efforts.

#### A. RESIDENTIAL CONSERVATION

- Residential Energy Audit and Education This program is the primary educational program to help customers improve the energy efficiency of their new or existing home through energy conservation advice and information that encourages the implementation of efficiency measures and behaviors resulting in energy and utility bill savings.
- 2. <u>EnergySelect</u> This program is designed to provide the customer with a means of conveniently and automatically controlling and monitoring energy purchases in response to prices that vary during the day and by season in relation to Gulf's cost of producing or purchasing energy. The <u>EnergySelect</u> system includes field units utilizing a communication gateway, major appliance load control relays, and a programmable thermostat, all operating at the customer's home.
- EnergySelect LITE Program EnergySelect LITE provides for expanded price responsive load management program participation from residential

customers who do not have land-line telephone service and will be available to multi-family customers. The program is designed to provide the customer with a means of conveniently and automatically controlling and monitoring energy purchases in response to prices that vary during the day and by season in relation to Gulf's cost of producing or purchasing energy.

- 4. <u>Community Energy Saver Program</u> This program is designed to assist low-income families with escalating energy costs through the direct installation of conservation measures at no cost to them. The program will also educate families on energy efficiency techniques and behavioral changes to help control their energy use and reduce their utility operating costs.
- HVAC Efficiency Improvement Program This program is designed to increase energy efficiency and improve HVAC cooling system performance for new and existing homes through maintenance, early retirement, upgrades and duct repair.
- 6. <u>Landlord/Renter Custom Incentive Program</u> This program will promote the installation of various energy efficiency measures available through other programs including HVAC, insulation, windows, water heating, lighting, appliances, etc. including additional incentives as appropriate to overcome the split-incentive barrier which exists in a landlord/renter situation.

- 7. <u>Heat Pump Water Heater Program</u> This program will provide incentives directly to the customer for the installation of high-efficiency Heat Pump Water Heating equipment for domestic hot water production.
- 8. <u>Ceiling Insulation Program</u> This program will provide incentives to encourage customers to install or increase high efficiency insulation in new or existing residential homes to reduce heat loss and heat gain from both conductive and convective means.
- High Performance Window Program This program will provide incentives
  to install high-efficiency windows or window films in existing or new
  residential homes to reduce solar heat gain which, in turn, leads to reduced
  HVAC loads and operating costs.
- 10. <u>Reflective Roof Program</u> This program will provide incentives to promote the installation of ENERGY STAR qualified cool/reflective roofing products when constructing a new home or replacing the roof on an existing home to decrease the amount of heat transferred through roof assemblies and into vented attic spaces which, in turn, decreases the transfer of heat into the home's conditioned living area.
- 11. <u>Variable Speed/Flow Pool Pump Program</u> This program will provide an incentive to encourage the installation of high-efficiency variable speed or variable flow pool pumping and control equipment in both new and existing residential homes to reduce the energy, demand, and costs associated with swimming pool operation.
- 12. <u>Self-Install Energy Efficiency Program</u> This program promotes the purchase and installation of ENERGY STAR rated appliances, lighting and

other self-installed energy saving measures for residential customers by focusing on increasing customer awareness of the benefits of energy efficient technologies and products through customer education, retail partnerships, promotional distribution of compact fluorescent light bulbs (CFLs), on-line store, energy audits and seasonal promotional campaigns.

13. Refrigerator Recycling Program – This program is designed to increase customer awareness of the economic and environmental costs associated with running inefficient, older appliances in a household, and to provide eligible customers with free refrigerator and freezer pick-up services in addition to a cash incentive.

#### B. <u>COMMERCIAL/INDUSTRIAL CONSERVATION</u>

- Commercial/Industrial (C/I) Energy Analysis This is an interactive program that provides commercial and industrial customers assistance in indentifying energy conservation opportunities. The program is a prime tool for the Gulf Power Company C/I Energy Specialists to personally introduce a customer to conservation measures, including low or no-cost improvements or new electro-technologies to replace old or inefficient equipment.
- Commercial HVAC Retrocommissioning Program This program offers
  basic retrocommissioning at a reduced cost for qualifying commercial and
  industrial customers designed to diagnose the performance of the HVAC
  cooling unit(s) with the support of an independent computerized quality

- control process and make improvements to the system to bring it to its full efficiency.
- 3. Commercial Building Efficiency Program This program is designed as an umbrella efficiency program for existing commercial and industrial customers to increase awareness and customer demand for high-efficiency, energy-saving equipment; increase availability and market penetration of energy efficient equipment; and contribute toward long-term energy savings and peak demand reductions.
- 4. Occupancy Sensor HVAC Control The purpose of this program is to promote the installation of occupancy sensors to reduce energy waste in hotel rooms by providing hotel owners the opportunity to automatically control temperature settings when the rooms are unoccupied.
- High Efficiency Motor Program The purpose of this program is to reduce demand and energy associated with electric motors by encouraging the replacement of worn out, inefficient motors with high efficiency motors.
- 6. Food Service Efficiency Program This program encourages the installation of ENERGY STAR qualified or equivalent energy efficient commercial and industrial food service equipment to reduce energy consumption and demand as well as operating costs for the customer.
- 7. Commercial/Industrial Custom Incentive This program is designed to establish the capability and process to offer advanced energy services and energy efficient end-user equipment (including comprehensive audits, design, and construction of energy conservation projects) not offered through other programs to Commercial or Industrial customers.

8. Real Time Pricing (RTP) – The objective of this program, available to large Commercial and Industrial customers of Gulf Power, is to encourage customers to reduce demand on Gulf's system during peak times when the marginal cost of generating or purchasing electricity is at its highest by providing hourly prices on a day-ahead basis.

#### C. CONSERVATION RESULTS SUMMARY

The following tables provide estimates of the reductions in peak demand and net energy for load realized by Gulf's customers as a result of participation in Gulf's conservation programs.

# HISTORICAL TOTAL CONSERVATION PROGRAMS CUMULATIVE ANNUAL REDUCTIONS AT GENERATOR

SUMMER	WINTER	NET ENERGY
PEAK	PEAK	FOR LOAD
(KW)	(KW)	(KWH)
383,994	454.612	778.573.000

#### 2012 BUDGET FORECAST TOTAL CONSERVATION PROGRAMS INCREMENTAL ANNUAL REDUCTIONS AT GENERATOR

2011

	SUMMER	WINTER	<b>NET</b> ENERGY
	PEAK	PĒAK	FOR LOAD
	(KW)	(KW)	(KWH)
0040	40.700	40.000	45 700 000
2012	12,700	12,600	45,700,000
2013	16,500	15,900	62,300,000
2014	20,600	19,000	66,900,000
2015	23,500	21,000	76,100,000
2016	23,500	20,600	75,300,000
2017	21,900	19,100	71,300,000
2018	22,300	20,000	74,600,000
2019	21,600	19,500	72,100,000
2020	20,500	19,000	68,800,000
2021	20,500	19,000	68,800,000

#### 2012 BUDGET FORECAST TOTAL CONSERVATION PROGRAMS CUMULATIVE ANNUAL REDUCTIONS AT GENERATOR

	SUMMER	WINTER	<b>NET ENERGY</b>
	PEAK	PEAK	FOR LOAD
	(KW)	(KW)	(KWH)
2012	396,694	467,212	824,273,000
2013	413,194	483,112	886,573,000
2014	433,794	502,112	953,473,000
2015	457,294	523,112	1,029,573,000
2016	480,794	543,712	1,104,873,000
2017	502,694	562,812	1,176,173,000
2018	524,994	582,812	1,250,773,000
2019	546,594	602,312	1,322,873,000
2020	567,094	621,312	1,391,673,000
2021	587,594	640,312	1,460,473,000

# HISTORICAL RESIDENTIAL CONSERVATION CUMULATIVE ANNUAL REDUCTIONS AT GENERATOR

	SUMMER	WINTER	NET ENERGY
	PEAK	PEAK	FOR LOAD
	(KW)	(KW)	(KWH)
2011	186.314	297,457	417,492,000
2011	100,514	201,701	+ 11,402,000

#### 2012 BUDGET FORECAST RESIDENTIAL CONSERVATION INCREMENTAL ANNUAL REDUCTIONS AT GENERATOR

	SUMMER	WINTER	<b>NET ENERGY</b>
	PEAK	PEAK	FOR LOAD
	(KW)	(KW)	(KWH)
2012	10,600	11,500	40,100,000
2013	13,600	14,500	54,500,000
2014	17,000	17,200	57,300,000
2015	19,400	19,000	65,100,000
2016	18,900	18,600	63,200,000
2017	17,000	17,000	58,500,000
2018	17,500	17,900	61,800,000
2019	16,700	17,500	59,200,000
2020	16,000	17,100	56,800,000
2021	16,000	17,100	56,800,000

#### 2012 BUDGET FORECAST RESIDENTIAL CONSERVATION CUMULATIVE ANNUAL REDUCTIONS AT GENERATOR

	SUMMER	WINTER	NET ENERGY
	PEAK	PEAK	FOR LOAD
	(KW)	(KW)	(KWH)
2012	196,914	308,957	457,592,000
2013	210,514	323,457	512,092,000
2014	227,514	340,657	569,392,000
2015	246,914	359,657	634,492,000
2016	265,814	378,257	697,692,000
2017	282,814	395,257	756,192,000
2018	300,314	413,157	817,992,000
2019	317,014	430,657	877,192,000
2020	333,014	447,757	933,992,000
2021	349,014	464,857	990,792,000

# HISTORICAL COMMERCIAL/INDUSTRIAL CONSERVATION CUMULATIVE ANNUAL REDUCTIONS AT GENERATOR

SUMMER	WINTER	NET ENERGY
PEAK	PEAK	FOR LOAD
(KW)	(KW)	(KWH)
197,680	157,155	361,081,000

#### 2012 BUDGET FORECAST COMMERCIAL/INDUSTRIAL CONSERVATION INCREMENTAL ANNUAL REDUCTIONS AT GENERATOR

2011

	SUMMER	WINTER	NET ENERGY
	PEAK	PEAK	FOR LOAD
	(KW)	(KW)	(KWH)
2012	2,100	1,100	5,600,000
2013	2,900	1,400	7,800,000
2014	3,600	1,800	9,600,000
2015	4,100	2,000	11,000,000
2016	4,600	2,000	12,100,000
2017	4,900	2,100	12,800,000
2018	4,800	2,100	12,800,000
2019	4,900	2,000	12,900,000
2020	4,500	1,900	12,000,000
2021	4,500	1,900	12.000.000

#### 2012 BUDGET FORECAST COMMERCIAL/INDUSTRIAL CONSERVATION CUMULATIVE ANNUAL REDUCTIONS AT GENERATOR

	SUMMER	WINTER	NET ENERGY
	PEAK	PEAK	FOR LOAD
	(KW)	(KW)	(KWH)
2012	199,780	158,255	366,681,000
2013	202,680	159,655	374,481,000
2014	206,280	161,455	384,081,000
2015	210,380	163,455	395,081,000
2016	214,980	165,455	407,181,000
2017	219,880	167,555	419,981,000
2018	224,680	169,655	432,781,000
2019	229,580	171,655	445,681,000
2020	234,080	173,555	457,681,000
2021	238,580	175,455	469,681,000

#### VII. SMALL POWER PRODUCTION / RENEWABLE ENERGY

The current forecasts also consider Gulf's active promotion of customer-sited renewable energy resources. Gulf initiated implementation of four new solar programs in 2011 in compliance with the Commission's Order No. PSC-10-0608-PAA-EG approved in October 2010. The Solar PV program, the Solar Thermal Water Heating program, the Solar for Schools program and the Solar Thermal Water Heating for Low Income Housing program are expected to result in demand and energy reductions that have been incorporated in the conservation estimates provided elsewhere in this document.

Please refer to the Capacity Resource Alternatives section of this TYSP for additional information concerning Gulf's efforts to promote and develop supply-side renewable energy resources.

Schedule 2.1
History and Forecast of Energy Consumption and Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Rural and Residential					Commercia	ıl
		Members		Average	Average KWH		Average	Average KWH
		per		No. of	Consumption		No. of	Consumption
<u>Year</u>	Population*	Household*	<u>GWH</u>	<u>Customers</u>	Per Customer	<u>GWH</u>	<u>Customers</u>	Per Customer
2002	757,550	2.59	5,144	331,637	15,510	3,553	49,139	72,304
2003	768,450	2.59	5,101	338,631	15,064	3,614	50,420	71,683
2004	781,980	2.60	5,215	345,467	15,096	3,695	51,981	71,093
2005	790,040	2.59	5,320	350,404	15,181	3,736	52,916	70,599
2006	791,940	2.59	5,425	360,930	15,032	3,843	53,479	71,862
2007	791,770	2.60	5,477	371,213	14,755	3,971	53,791	73,821
2008	794,530	2.58	5,349	374,709	14,274	3,961	53,810	73,610
2009	797,290	2.58	5,254	374,010	14,049	3,896	53,414	72,942
2010	801,980	2.58	5,651	375,847	15,036	3,997	53,349	74,912
2011	806,620	2.57	5,305	378,157	14,028	3,911	53,409	73,235
2012	819,910	2.56	5,612	381,056	14,727	4,043	53,714	75,269
2013	833,760	2.56	5,731	385,255	14,877	4,112	54,140	75,950
2014	848,150	2.55	5,888	391,365	15,044	4,216	54,790	76,940
2015	863,110	2.54	6,019	398,306	15,111	4,317	55,536	77,741
2016	878,430	2.54	6,137	405,112	15,148	4,404	56,270	78,265
2017	893,980	2.53	6,244	411,665	15,167	4,473	56,982	78,493
2018	909,640	2.53	6,350	417,966	15,193	4,540	57,673	78,721
2019	925,400	2.53	6,454	424,017	15,222	4,617	58,343	79,136
2020	940,550	2.53	6,592	429,665	15,341	4,694	58,977	79,590
2021	954,610	2.53	6,707	434,615	15,432	4,760	59,550	79,928
CAAG								
02-11	0.7%	-0.1%	0.3%	1.5%	-1.1%	1.1%	0.9%	0.1%
11-16	1.7%	-0.2%	3.0%	1.4%	1.5%	2.4%	1.0%	1.3%
11-21	1.7%	-0.2%	2.4%	1.4%	1.0%	2.0%	1.1%	0.9%

<sup>\*</sup> Historical and projected figures include Pensacola, Crestview, and Panama City MSAs

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Schedule 2.2
History and Forecast of Energy Consumption and
Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Industrial			Street &	Other Sales	Total Sales
		Average	Average KWH	Railroads	Highway	to Public	to Ultimate
		No. of	Consumption	and Railways	Lighting	Authorities	Consumers
<u>Year</u>	<u>GWH</u>	<u>Customers</u>	Per Customer	<u>GWH</u>	<u>GWH</u>	<u>GWH</u>	<u>GWH</u>
2002	2,054	272	7,552,563	0	21	0	10,772
2003	2,147	285	7,526,577	0	22	0	10,885
2004	2,113	279	7,569,053	0	23	0	11,046
2005	2,161	295	7,332,898	0	23	0	11,239
2006	2,136	294	7,260,626	0	24	0	11,429
2007	2,048	303	6,769,670	0	24	0	11,521
2008	2,211	291	7,592,204	0	23	0	11,543
2009	1,727	280	6,164,567	0	25	0	10,903
2010	1,686	275	6,133,961	0	26	0	11,359
2011	1,799	273	6,586,591	0	25	0	11,040
2012	1,915	275	6,968,484	0	26	0	11,595
2013	1,925	276	6,962,930	0	26	0	11,794
2014	1,925	277	6,943,199	0	26	0	12,054
2015	1,925	278	6,925,585	0	26	0	12,287
2016	1,926	279	6,903,662	0	26	0	12,492
2017	1,926	280	6,882,897	0	26	0	12,668
2018	1,926	281	6,863,685	0	26	0	12,842
2019	1,927	281	6,846,435	0	26	0	13,024
2020	1,927	282	6,828,837	0	26	0	13,239
2021	1,927	283	6,808,503	0	26	0	13,420
CAAG							
02-11	-1.5%	0.0%	-1.5%	0.0%	1.9%	0.0%	0.3%
11-16	1.4%	0.4%	0.9%	0.0%	0.1%	0.0%	2.5%
11-21	0.7%	0.4%	0.3%	0.0%	0.1%	0.0%	2.0%

Schedule 2.3
History and Forecast of Energy Consumption and Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)	
	Sales for	Utility Use	Net Energy	Other	Total	
	Resale	& Losses	for Load	Customers	No. of	
<u>Year</u>	<u>GWH</u>	<u>GWH</u>	<u>GWH</u>	(Average No.)	<u>Customers</u>	
2002	384	754	11,910	474	381,522	
2003	383	685	11,952	473	389,809	
2004	389	727	12,162	474	398,200	
2005	418	666	12,322	472	404,086	
2006	415	743	12,586	482	415,185	
2007	417	733	12,671	486	425,793	
2008	398	676	12,617	493	429,302	
2009	390	682	11,975	502	428,206	
2010	409	750	12,518	559	430,030	
2011	382	663	12,086	564	432,403	
2012	378	712	12,685	568	435,612	
2013	373	717	12,883	573	440,244	
2014	382	730	13,167	578	447,010	
2015	391	742	13,421	583	454,703	
2016	401	753	13,646	589	462,249	
2017	408	762	13,838	594	469,521	
2018	418	771	14,031	599	476,519	
2019	429	780	14,232	605	483,246	
2020	441	793	14,473	610	489,535	
2021	451	804	14,675	616	495,064	
CAAG						
02-11	-0.1%	-1.4%	0.2%	1.9%	1.4%	
11-16	1.0%	2.6%	2.5%	0.9%	1.3%	
11-21	1.7%	1.9%	2.0%	0.9%	1.4%	

Note: Sales for Resale and Net Energy for Load include contracted energy allocated to certain customers by Southeastern Power Administration (SEPA).

Schedule 3.1
History and Forecast of Summer Peak Demand - MW
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>W</b>	T-(-)	Marie	<b>5</b> ( )		Residential Load	Residential	Comm/Ind Load	Comm/Ind	Net Firm
<u>Year</u>	<u>Total</u>	Wholesale	<u>Retail</u>	Interruptible	<u>Management</u>	Conservation	<u>Management</u>	Conservation	Demand 2.462
2002	2,755	89	2,666	0	0	145	0	148	2,462
2003	2,582	85	2,498	0	0	152	0	155	2,275
2004	2,752	89	2,663	0	0	161	0	159	2,431
2005	2,768	94	2,674	0	0	167	0	164	2,436
2006	2,828	93	2,734	0	0	171	0	173	2,483
2007	2,989	99	2,891	0	0	175	0	180	2,634
2008	2,898	91	2,807	0	0	176	0	182	2,541
2009	2,909	92	2,817	0	0	177	0	186	2,546
2010	2,896	88	2,807	0	0	178	0	192	2,525
2011	2,919	89	2,830	0	0	186	0	198	2,535
2012	2,998	75	2,922	0	0	197	0	200	2,601
2013	3,041	77	2,965	0	0	211	0	203	2,628
2014	3,098	78	3,019	0	0	228	0	206	2,664
2015	3,152	80	3,072	0	0	247	0	210	2,695
2016	3,199	81	3,117	0	0	266	0	215	2,718
2017	3,256	83	3,173	0	0	283	0	220	2,753
2018	3,312	85	3,227	0	0	300	0	225	2,787
2019	3,369	86	3,282	0	0	317	0	230	2,822
2020	3,438	88	3,350	0	0	333	0	234	2,871
2021	3,501	90	3,410	0	0	349	0	239	2,913
CAAG									
02-11	0.6%	0.0%	0.7%	0.0%	0.0%	2.8%	0.0%	3.3%	0.3%
11-16	1.8%	-1.8%	2.0%	0.0%	0.0%	7.4%	0.0%	1.7%	1.4%
11-21	1.8%	0.1%	1.9%	0.0%	0.0%	6.5%	0.0%	1.9%	1.4%

NOTE: Wholesale and total columns include contracted capacity allocated to certain Resale customers by Southeastern Power Administration (SEPA).

### Schedule 3.2 History and Forecast of Winter Peak Demand - MW Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Residential		Comm/Ind		
					Load	Residential	Load	Comm/Ind	Net Firm
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	<u>Management</u>	Conservation	Management	Conservation	Demand
01-02	2,530	87	2,443	0	0	211	0	129	2,190
02-03	2,856	99	2,758	0	0	224	0	133	2,500
03-04	2,445	87	2,358	0	0	240	0	135	2,070
04-05	2,518	92	2,426	0	0	250	0	137	2,130
05-06	2,476	94	2,382	0	0	262	0	142	2,072
06-07	2,644	91	2,554	0	0	275	0	146	2,224
07-08	2,793	97	2,696	0	0	276	0	147	2,370
08-09	2,757	98	2,659	0	0	287	0	150	2,320
09-10	2,996	107	2,890	0	0	289	0	154	2,553
10-11	2,950	99	2,851	0	0	297	0	157	2,495
11-12	2,794	73	2,722	0	0	309	0	158	2,327
12-13	2,851	74	2,777	0	0	323	0	160	2,368
13-14	2,896	76	2,820	0	0	341	0	161	2,394
14-15	2,963	79	2,884	0	0	360	0	163	2,440
15-16	2,987	79	2,908	0	0	378	0	165	2,443
16-17	3,039	81	2,958	0	0	395	0	168	2,476
17-18	3,092	83	3,009	0	0	413	0	170	2,509
18-19	3,144	88	3,057	0	0	431	0	172	2,542
19-20	3,208	87	3,121	0	0	448	0	174	2,587
20-21	3,267	90	3,178	0	0	465	0	175	2,627
CAAG									
02-11	1.7%	1.4%	1.7%	0.0%	0.0%	3.9%	0.0%	2.2%	1.5%
11-16	0.3%	-4.3%	0.4%	0.0%	0.0%	4.9%	0.0%	1.0%	-0.4%
11-21	1.0%	-1.0%	1.1%	0.0%	0.0%	4.6%	0.0%	1.1%	0.5%

NOTE: Wholesale and total columns include contracted capacity allocated to certain Resale customers by Southeastern Power Administration (SEPA).

Schedule 3.3
History and Forecast of Annual Net Energy for Load - GWH
Base Case

(6)

(9)

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		Desidential	O !! d			1 (4994 - 1 )	Not Engage	المحط
V	Tatal	Residential	Comm/Ind	D-4-!!	\A/L -  -	Utility Use	Net Energy	Load
<u>Year</u>	Total	Conservation	Conservation	Retail	Wholesale	& Losses	for Load	Factor %
2002	12,520	323	288	10,772	384	754	11,910	55.2%
2003	12,584	335	297	10,885	383	685	11,952	54.6%
2004	12,813	348	303	11,046	389	727	12,162	57.0%
2005	12,998	357	319	11,239	418	666	12,322	57.7%
2006	13,273	365	322	11,429	415	743	12,586	57.9%
2007	13,373	375	327	11,521	417	733	12,671	54.9%
2008	13,326	378	331	11,543	398	676	12,617	56.5%
2009	12,704	384	345	10,903	390	682	11,975	53.7%
2010	13,256	388	350	11,359	409	750	12,518	56.0%
2011	12,864	417	361	11,040	382	663	12,086	54.4%
2012	13,509	458	367	11,595	378	712	12,685	55.5%
2013	13,770	512	374	11,794	373	717	12,883	56.0%
2014	14,120	569	384	12,054	382	730	13,167	56.4%
2015	14,450	634	395	12,287	391	742	13,421	56.8%
2016	14,751	698	407	12,492	401	753	13,646	57.2%
2017	15,014	756	420	12,668	408	762	13,838	57.4%
2018	15,282	818	433	12,842	418	771	14,031	57.5%
2019	15,555	877	446	13.024	429	780	14,232	57.6%
2020	15,864	934	458	13,239	441	793	14,473	57.4%
2021	16,135	991	470	13,420	451	804	14,675	57.5%
CAAG								
02-11	0.3%	2.9%	2.5%	0.3%	-0.1%	-1.4%	0.2%	-0.2%
11-16	2.8%	10.8%	2.4%	2.5%	1.0%	2.6%	2.5%	1.0%
11-21	2.3%	9.0%	2.7%	2.0%	1.7%	1.9%	2.0%	0.6%

NOTE: Wholesale and total columns include contracted capacity and energy allocated to certain Resale customers by Southeastern Power Administration (SEPA).

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(1)

Schedule 4
Previous Year Actual and Two Year Forecast of Peak Demand and Net Energy for Load by Month

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2011		_ 2012		_ 2013	
	Actua		Foreca		Foreca	
	Peak Demand	NEL	Peak Demand	NEL	Peak Demand	NEL
<u>Month</u>	<u>MW</u>	<u>GWH</u>	<u>MW</u>	<u>GWH</u>	<u>MW</u>	<u>GWH</u>
January	2,495	1,032	2,327	1,027	2,368	1,047
February	2,107	852	2,168	884	2,178	885
March	1,682	843	1,763	858	1,777	862
April	1,810	906	1,899	876	1,937	893
May	2,228	1,031	2,141	1,071	2,186	1,093
June	2,432	1,270	2,569	1,279	2,601	1,301
July	2,382	1,298	2,601	1,367	2,628	1,388
August	2,535	1,328	2,491	1,310	2,519	1,330
September	2,115	1,034	2,464	1,186	2,495	1,206
October	1,691	843	2,138	990	2,177	1,008
November	1,565	794	1,755	852	1,790	868
December	1,771	856	2,133	985	2,178	1,003

NOTE: Includes contracted capacity and energy allocated to certain Resale customers by Southeastern Power Administration (SEPA)

### Schedule 5 Fuel Requirements

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(1 <b>1</b> )	(12)	(13)	(14)	(15)	(16)
	Fuel Requi	rements	Units	Actual 2010	Actual 2011	2012	2013	2014	2015	_2016		2018	2019	2020	2021
(1)	Nuclear		Trillion BTU	None	None	None	None	None	None	None	None	None	None	None	None
(2)	Coal		1000 TON	5,179	4,114	2,512	3,469	3,623	4,714	4,780	4,941	4,943	5,274	5,368	5,476
(3) (4) (5) (6) (7)	Residual	Total Steam CC CT Diesel	1000 BBL 1000 BBL 1000 BBL 1000 BBL 1000 BBL	0 0 None None None	0 0 None None None	0 None None None	0 None None None	0 None None None	0 None None None	0 None None None	0 None None None	0 None None None	0 None None None	0 None None None	0 None None None
(8) (9) (10) (11) (12)		Total Steam CC CT Diesel	1000 BBL 1000 BBL 1000 BBL 1000 BBL	18 17 None 1 None	18 17 None 1 None	14 14 None 0 None	15 14 None 1 None	16 15 None 1 None	11 10 None 1 None	12 11 None 1 None	12 11 None 1 None	10 9 None 1 None	10 9 None 1 None	10 10 None 0 None	9 None 0 None
(13) (14) (15) (16)		Total Steam CC CT	1000 MCF 1000 MCF 1000 MCF 1000 MCF	34,320 0 31,715 2,605	51,048 0 48,800 2,248	64,220 0 63,307 913	55,097 0 54,182 915	56,418 0 55,609 809	45,399 0 44,657 742	43,244 0 42,500 744	37,135 0 36,393 742	40,167 0 39,425 742	40,260 0 40,260 0	38,437 0 38,437 0	39,274 0 39,274 0
(17)	Other (A)		Trillion BTU	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

<sup>(</sup>A) Perdido Units 1 and 2 landfill gas burn shown in Other

#### Schedule 6.1 Energy Sources

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Energy Sources	<u> </u>	Units	Actual 2010	Actual 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
(1)	Annual Firm Interchar	nge	GWH	(2,942)	(3,464)	(2,190)	(2,881)	(3,104)	(3,864)	(3,484)	(2,776)	(3,035)	(3,694)	(3,440)	(3,633)
(2)	Nuclear		GWH	None	None	None	None	None	None	None	None	None	None	None	None
(3)	Coal		GWH	10,531	8,090	5,531	7,739	8,074	10,679	10,823	11,191	11,210	11,983	12,212	12,493
(4) (5) (6) (7) (8)	Residual	Total Steam CC CT Diesel	GWH GWH GWH GWH	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None	0 0 None None None
(9) (10) (11) (12) (13)		Total Steam CC CT Diesel	GWH GWH GWH GWH	0.2 None None 0.2 None	0.2 None None 0.2 None	0 None None 0 None	0.2 None None 0.2 None	0.1 None None 0.1 None	0.3 None None 0.3 None	0.2 None None 0.2 None	0.3 None None 0.3 None	0.1 None None 0.1 None	0.4 None None 0.4 None	0 None None 0.0 None	0 None None 0.0 None
(14) (15) (16) (17)		Total Steam CC CT	GWH GWH GWH	4,811 6 4,485 320	7,195 0 6,885 310	9,078 0 9,012 66	7,755 0 7,688 67	7,949 0 7,892 57	6,390 0 6,339 51	6,087 0 6,036 51	5,199 0 5,148 51	5,628 0 5,577 51	5,711 0 5,711 0	5,465 0 5,465 0	5,575 0 5,575 0
, ,	NUGs Net Energy for Load		GWH GWH	118 12,518	265 12,086	266 12,685	270 12,883	248 13,167	216 13,421	220 13,646	224 13,838	228 14,031	232 14,232	236 14,473	240 14,675

NOTE: Line (18) includes energy purchased from Non-Renewable and Renewable resources. See Schedule 6.3 for details on Gulf's renewable resources.

#### Schedule 6.2 Energy Sources

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Energy Source	s	Units	Actual 2010	Actual 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
(1)	Annual Firm Interchar	nge	%	(23.50)	(28.66)	(17.26)	(22.36)	(23.57)	(28.79)	(25.53)	(20.06)	(21.63)	(25.96)	(23.77)	(24.76)
(2)	Nuclear		%	None											
(3)	Coal		%	84.13	66.94	43.60	60.07	61.32	79.57	79.31	80.87	79.89	84.20	84.38	85.13
(4) (5) (6) (7) (8)	Residual	Total Steam CC CT Diesel	% % % %	0.00 0.00 None None None											
(9) (10) (11) (12) (13)		Total Steam CC CT Diesel	% % % %	0.00 None None 0.00 None											
(14) (15) (16) (17)		Total Steam CC CT	% % %	38.43 0.05 35.83 2.56	59.53 0.00 56.97 2.56	71.56 0.00 71.04 0.52	60.20 0.00 59.68 0.52	60.37 0.00 59.94 0.43	47.61 0.00 47.23 0.38	44.61 0.00 44.23 0.37	37.57 0.00 37.20 0.37	40.11 0.00 39.75 0.36	40.13 0.00 40.13 0.00	37.76 0.00 37.76 0.00	37.99 0.00 37.99 0.00
(18)	NUGs		%	0.94	2.19	2.10	2.10	1.88	1.61	1.61	1.62	1.62	1.63	1.63	1.64
(19)	Net Energy for Load		%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

#### Schedule 6.3 Renewable Energy Sources

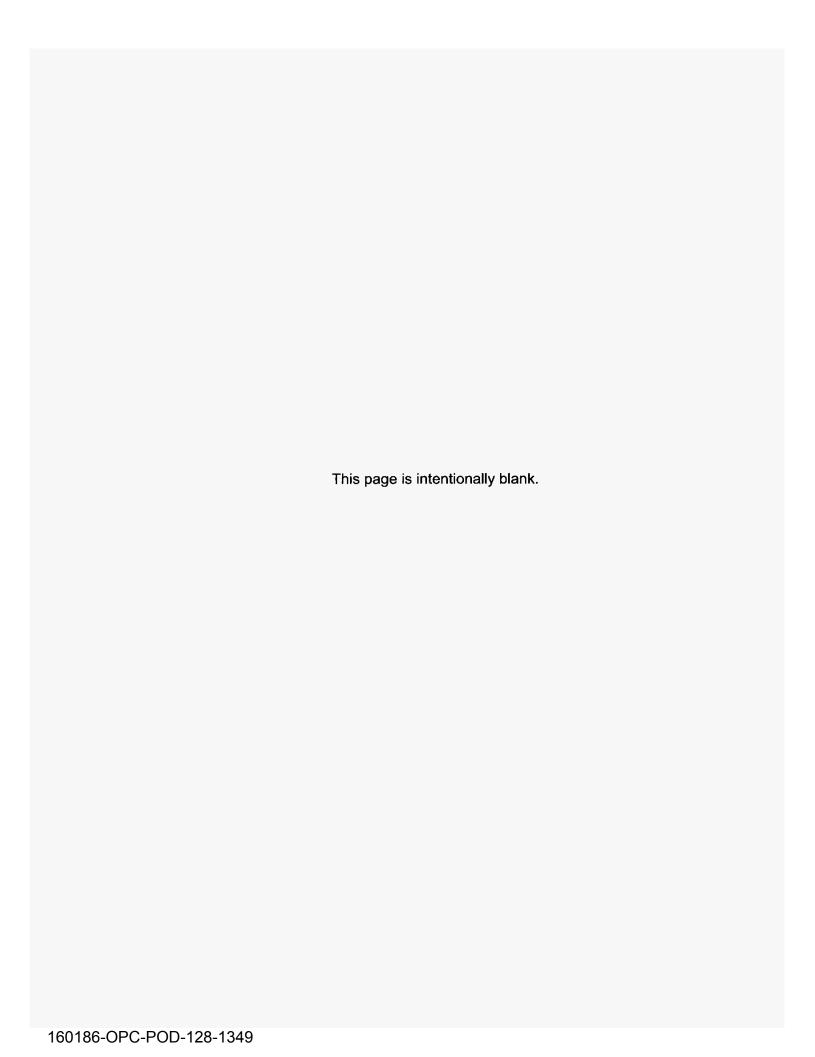
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
			Actuals										
	Renewable Energy Sources (A)		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
(1)	Renewable Generating Capacity												
		MW (B)	3	3	3	3	3	3	3	3	3	3	3
		MWh (C)	86,141	87,440	87,366	61,950	26,368	26,442	26,368	26,368	26,368	26,442	26,368
		% of Capacity Mix	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		% of NEL	0.7	0.7	0.7	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		% of Fuel Mix	0.6	0.6	0.6	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1
(2)	Self-Service Generation By												
	Renewable Generation	MW MWh <i>(D)</i>	68 varies										

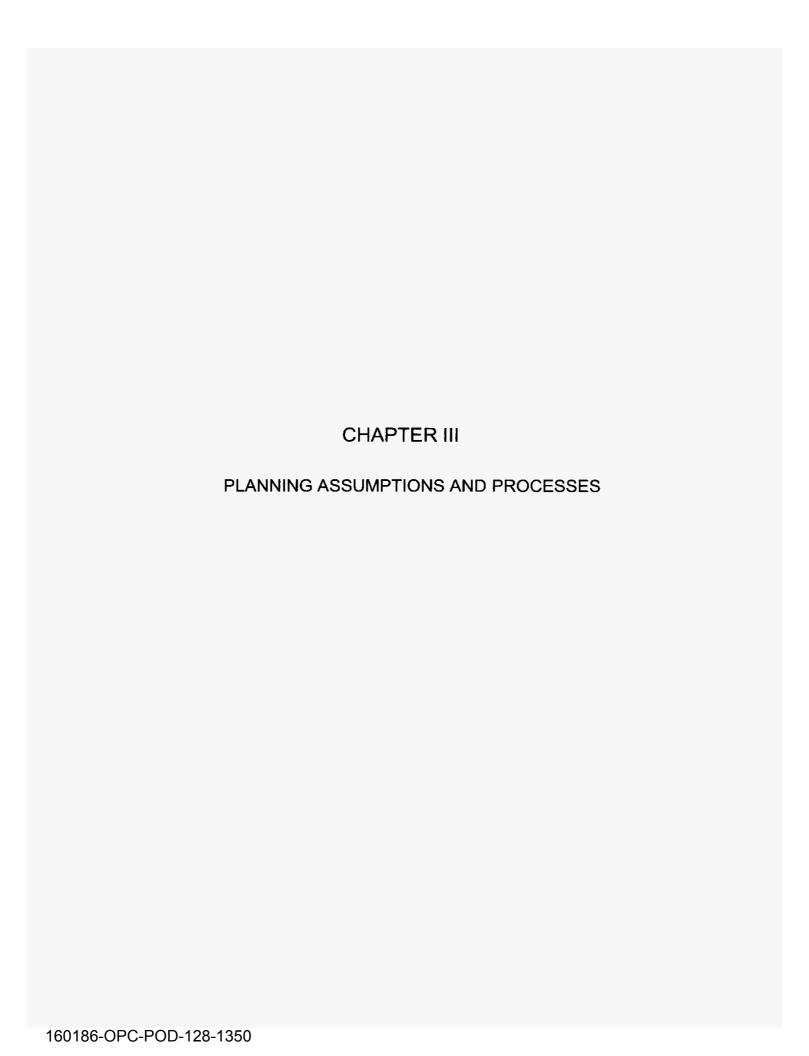
(A) Owned and/or Purchased by Gulf.

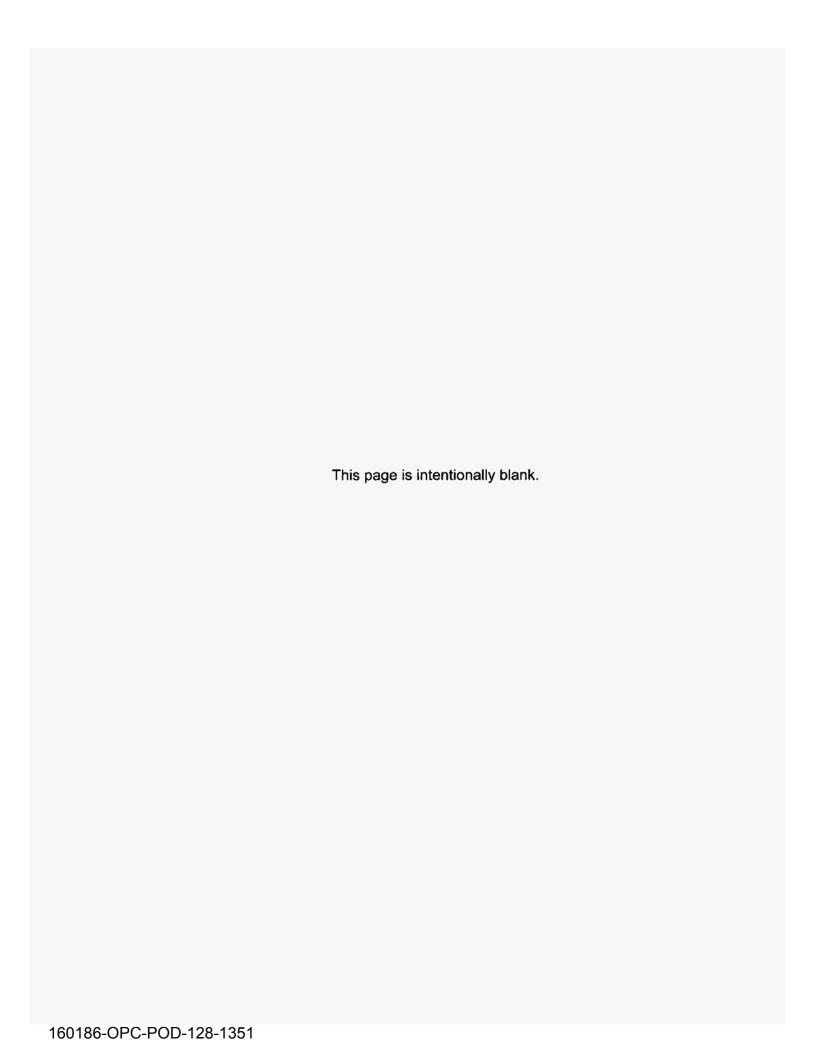
40

<sup>(</sup>B) Includes Firm MWs only.

<sup>(</sup>C) Energy produced by firm and non-firm resources.







#### THE INTEGRATED RESOURCE PLANNING PROCESS

As previously mentioned, Gulf participates in the SES IRP process. This process begins with a team of experts from within and outside the SES that meets to discuss current and historical economic trends and conditions, as well as future expected economic conditions which would impact the SES's business over the next twenty to twenty-five years. This economic panel determines the various escalation and inflation rates that will impact the financial condition of the SES. This determination acts as a basis for developing the general inflation and escalation assumptions that will affect fuel costs, construction costs, labor rates and variable O&M.

In addition to the work of the economic panel, there are a number of activities that are conducted in parallel with one another in the IRP process. These activities include energy and demand forecasting, fuel price forecasting, technology screening analysis and evaluation, engineering cost estimation modeling, evaluation of active and passive demand-side options, and other miscellaneous activities. The SES operating companies have also remained active in offering customers programs and options which result in modified consumption patterns. An important input into the design of such demand-side programs is an assessment of their likely impact on system loads.

Gulf's forecast of energy sales and peak demand reflects the continued impacts of its conservation programs. Furthermore, an update of demand-side

measure cost and benefits is conducted in order to perform cost-effectiveness evaluations against the selected supply-side technologies from the IRP process.

A number of existing generating units on the SES are also evaluated with respect to their currently planned retirement dates, as well as the economics and appropriateness of possible repowering over the planning horizon. These evaluations are extremely important in order to maximize the benefit of existing investment from both a capital and an operations and maintenance expense perspective.

Additionally, the market for potential power purchases is analyzed in order to determine its cost-effectiveness in comparison to the available supply-side and demand-side options. Power purchases are evaluated on both a near-term and long-term basis as a possible means of meeting the system's demand requirements. These power purchases can be procured from utility sources as well as from non-utility generators.

The supply side of the IRP process focuses on the SES as a whole, which has as its planning criterion a 15% reserve margin target for the year 2015 and beyond. This reserve margin is the optimum economic point at which the system can meet its energy and demand requirements after accounting for load forecast error, abnormal weather conditions, and unit forced outage conditions. It also balances the cost of adding additional generation with the societal cost of not serving all the energy requirements of the customer.

Once the above mentioned planning assumptions are determined, generating unit technologies are screened to determine the most acceptable

candidates, the necessary planning inputs are defined and the generation mix analysis is initiated. The main optimization tool used in the generation mix analysis is the PROVIEW® model. The supply-side technology candidates are input into PROVIEW® in specific MW block sizes for selection over the planning horizon for the entire SES. Although this model uses many data inputs and assumptions in the process of optimizing system generation additions, the key assumptions are load forecasts, demand-side options, candidate units, reserve margin requirements, cost of capital, and escalation rates.

PROVIEW® uses a dynamic programming technique to develop the optimum resource mix. This technique allows PROVIEW® to evaluate for every year all of the many combinations of generation additions that satisfy the reserve margin constraint. Annual system operating costs are simulated and are added to the construction costs required to build each combination of resource additions. A least cost resource addition schedule is developed by evaluating each year sequentially and comparing the results of each combination. A least cost resource plan is developed only after reviewing many construction options.

PROVIEW® produces a number of different combinations over the planning horizon, evaluating both the capital cost components for unit additions as well as the operating and maintenance cost of existing and future supply option additions. The program produces a report which ranks all of the different combinations with respect to the total net present value cost over the entire twenty-year planning horizon. The leading combinations from the program are then evaluated for reasonableness and validity. Once again, it is important to

note that supply option additions from the PROVIEW® program output are for the entire SES and are reflective of the various technology candidates selected.

After the SES results are verified, each individual operating company's specific needs over the planning horizon are evaluated. Each company is involved in recommending the type and timing of its unit additions. When all companies are satisfied with their capacity additions, and the sum of these additions matches the system need, the system base supply-side plan is complete. The result is an individual operating company supply plan that fits within the SES planning criteria.

Once the individual operating company supply plans are determined, it is necessary to evaluate demand-side options as a cost-effective alternative to the supply plan additions. After the incorporation of the cost effective demand-side impacts, a final integrated resource plan is produced.

Finally, a financial analysis of the plan is performed to assess the impact on the system's cost. Once the plan has proven to be robust and financially feasible, it is reviewed with and presented for approval to executive management.

In summary, the SES IRP process involves a significant amount of manpower and computer resources in order to produce a truly least-cost, integrated demand-side and supply-side resource plan. During the entire process, the SES is continually looking at a broad range of alternatives in order to meet the SES's projected demand and energy requirements. The SES updates its IRP each year to account for the changes in the demand and energy

forecast, as well as the other major assumptions previously mentioned in this section. A remix is then performed to insure that the IRP is the most economical and cost-effective plan. The resulting product of the SES IRP process is an integrated plan which meets the needs of the SES's customers in a cost-effective and reliable manner.

#### TRANSMISSION PLANNING PROCESS

The transmission system is not studied as a part of the IRP process, but it is studied, nonetheless, for reliability purposes. Commonly, a transmission system is viewed as a medium used to transport electric power from its generation source to the point of its conversion to distribution voltages under a number of system conditions known as contingencies. The results of the IRP are factored into transmission studies in order to determine the impacts of various generation site options upon the transmission system. The transmission system is studied under different contingencies for various load levels to insure that the system can operate adequately without exceeding conductor thermal and system voltage limits.

When the study reveals a potential problem with the transmission system that warrants the consideration of correction in order to maintain or restore reliability, a number of possible solutions are identified. These solutions and their costs are evaluated to determine which is the most cost-effective. Once a solution is chosen to correct the problem, a capital budget expenditure request is prepared for executive approval. However, not all thermal overloads or voltage

limit violations warrant correction. This may be due to the small magnitude of the problem or because the probability of occurrence is insufficient to justify the capital investment of the solution.

In prior years, Gulf has entered into a series of purchased power agreements to meet its needs, and it will continue this practice in the future when economically attractive opportunities are available. The planned transmission has proven adequate to handle these purchased power transactions during the periods when Gulf has needed additional capacity. It has been and will continue to be Gulf's practice to perform a transmission analysis of viable purchased power proposals to determine any transmission constraints. Gulf will formulate a plan, if needed, to resolve any transmission issues in a reasonable, cost effective manner prior to proceeding with negotiations for purchased power agreements.

#### **FUEL PRICE FORECAST PROCESS**

#### **FUEL PRICE FORECASTS**

Fuel price forecasts are used for a variety of purposes within the SES, including such diverse uses as long-term generation planning and short-term fuel budgeting. The SES fuel price forecasting process is designed to support these various uses.

The delivered price of any fuel consists of a variety of components. The main components are commodity price and transportation cost. Coal commodity domestic prices are forecast on either a mine-mouth basis or free on board (FOB) barge basis, while import coals are forecast on an FOB ship basis at the port of export. Natural gas prices are forecast at the Henry Hub, Louisiana benchmark delivery point. Because mine-mouth coal prices vary by source, sulfur content, and Btu level, SES prepares commodity price forecasts for sixteen different coal classifications used on the SES. Because natural gas does not possess the same quality variations as coal, SES prepares a single commodity price forecast for gas at Henry Hub, and applies a basis differential between Henry Hub and the various pipelines serving SES plants. Two price forecasts are developed for oil, based on grade of oil, sulfur, and heat content.

Transportation costs, to be used in the delivered price forecast, are developed for potential sites when modeling generic unit additions in the IRP process. Site-specific transportation costs are developed for existing units to produce delivered price forecasts for both the IRP process and the fuel budget process. Similarly, when site-specific unit additions are under consideration, site-specific transportation costs are developed for each option.

#### SES GENERIC FUEL FORECAST

SES develops short-term (current year +2) and long-term (year 4 and beyond) fuel price forecasts for coal, oil, and natural gas which extend through the Company's 10-year planning horizon. The short-term forecasts are developed by SCS Fuel Services for use in the system's fuel budgeting process and marginal pricing dispatch procedures.

The long-term forecasts are developed in early spring of each year for use in system planning activities. The long-term forecasts are governed by the SCS Executive Planning Coordination Team (Executive PCT). Charles River & Associates (CRA) is the modeling vendor used by the system to develop the long-term forecasts. This process is a collaborative effort between CRA and members of the cross-functional Planning Coordination Team (PCT) with final approval from the Executive PCT and/or Southern Company Management Council.

Fuel assumptions, provided by SES, are integrated into CRA's model to develop forecasted coal prices used in the IRP. These prices are developed for existing units and potential green field/brown field sites for future expansion, and include both commodity and transportation prices.

The 2012 commodity price forecasts for bituminous 1.0% sulfur coal, natural gas and low sulfur #2 oil are included in the table below.

### SES GENERIC FUEL PRICE FORECAST (\$/MMBtu)

,,,	COAL*	NAT. GAS**	OIL***
2012	3.400	3.172	22.40
2013	3.400	3.882	21.91
2014	3.600	4.313	21.16
2015	3.279	5.758	28.31
2016	3.379	7.203	29.46
2017	3.474	7.566	30.58
2018	3.566	7.931	31.68
2019	3.658	8.297	32.78
2020	3.750	8.670	33.90
2021	3.847	9.145	34.88

<sup>\*</sup>Central Appalachia Rail, 12,500 Btu/lb., 1% Sulfur

#### **COAL PRICE FORECAST**

In 2011, coal production in the United States reached 1.089 billion short tons, a slight increase over the 1.084 billion short tons for 2010. The Central Appalachian region in the U.S. experienced a 0.6% increase in production. The Interior region (Illinois Basin) of the U.S. recorded a 6.4% increase in production. The Western U.S. region (Powder River Basin, Colorado, Utah and Wyoming) experienced a 1.2% decline in production.

The global demand for coal has been increasing, especially in India and China, and may continue subject to the degree of recovery from the recent economic

<sup>\*\*</sup>Henry Hub

<sup>\*\*\*</sup>U.S. Gulf Coast LS No. 2 Oil, 0.05% Sulfur

recession. Colombia is currently the world's fifth largest coal exporter and has the largest coal reserves in South America. Asian demand for steam coal is high and is being supplied from South Africa, Australia, and others. It has forced Europe to look to Colombia and the U.S. for immediate coal supply.

From an overall global market perspective, coal prices continued to increase in 2011 from the levels experienced in 2010, but remained lower than the unprecedented high levels of 2008. The slowly recovering U.S. economy and global demand from coal importing countries drove the higher prices in 2011, with concerns over regulatory and environmental actions, such as permitting issues, and their negative impact on production also contributing upward pressure.

Central Appalachian and Colombian coal prices have been steadily increasing since the beginning of 2011. This increase is less export driven and more attributable to depletion, environmental, safety and permitting issues. Further, if current demand levels were to be maintained (or if Central Appalachian coal demand were to increase), supply depletion could put additional upward pressure on prices because lower-cost mines would be replaced by increasingly higher-cost reserves.

In recent years, the production trend from the Illinois Basin has been increasing as a result of flat or declining Central Appalachia production and widespread use of scrubbers in eastern power stations. In the longer term, productivity is expected to improve as less productive mines are replaced by longwall operations.

Historically, Powder River Basin (PRB) regional coal production has grown at 5 percent per year over sustained periods, but recent production levels have been flat. Production costs have increased slightly as mining moves from East to West across the

basin and deeper reserves are accessed. Increased overburden and distance to rail loadouts have put upward pressure on costs, but the economics of surface mining in the region remain favorable, particularly relative to eastern coal options.

Demand for Western Bituminous coals is expected to decline as several coal generators in Colorado that currently consume Western Bituminous coal have announced that they will cease burning coal by 2015.

#### **NATURAL GAS PRICE FORECAST**

Natural gas supply continues to outpace demand, thus 2011 continued to see low prices. During the first quarter of 2011, Henry Hub prices maintained an average of \$4.16. Henry Hub prices increased to an average of \$4.54 in June, although this slight increase quickly moderated as Henry Hub maintained an average of \$3.99 throughout the year. A low price of \$2.80 was reached during late November 2011, as gas storage inventories reach record levels. Because of the mild winter weather, natural gas inventories continue to set new record seasonal highs and ended January 2012 at an estimated 2.86 trillion cubic feet (Tcf), about 24 percent above the same time last year. EIA's short-term energy outlook forecasted an annual average Henry Hub price of \$3.35 for 2012, a decline of about \$0.65 per MMBtu from the 2011 average gas price. The decreasing prices here in the U.S. led to lower LNG imports for 2011 as cargoes could be offloaded elsewhere for higher prices. Due to the abundant supply of shale gas through unconventional methods and the continued slump in the economy, the domestic price of natural gas is expected to remain low in the near term. The combination of

higher coal prices and lower natural gas prices contributed to increased use of natural gas-fueled generating units in 2011.

Analysts' predictions for 2012 prices continue to be in the sub \$4.00 range and the long-term prices are still indicating rising prices, just at a lesser rate than previously forecasted. Although carbon legislation is not assumed in these numbers, contributing factors for higher gas prices still include increased oil prices and unclear energy policies (especially with respect to hydraulic fracturing).

#### **NATURAL GAS AVAILABILITY**

All indications point to continued oversupply in the near-term of natural gas by unconventional methods in shale regions throughout the nation. There continues to be regulatory challenges to the hydraulic fracturing technology, which would severely dampen the production capability within the U.S. and would increase the price of production. LNG imports have waxed and waned over the last several years, but 2011 import levels were down slightly from 1.2 Bcfd in 2010 to 1.0 Bcfd. LNG imports are expected to decrease 40% to 0.6 Bcfd in 2012.

Due to moderated demand and increases in gas production, sufficient gas supply remains available to meet operating needs. Pricing will remain soft in the near term as a result of the oversupply of gas relative to demand and may remain soft as demand remains relatively flat.

#### STRATEGIC ISSUES

Gulf has successfully executed three PPAs that provide supply-side diversity and the flexibility for Gulf to adapt its future generation expansion plans to changing market conditions without negative financial impacts to the Company and its customers. Two of these PPAs currently supply 496 MW of firm peaking capacity from dual-fuel fired combustion turbines (CT), and they will continue to serve system load until their expiration on May 31, 2014. No later than June 2014, Gulf's third PPA, the Shell PPA, will provide 885 MW of firm capacity and energy from an existing gas-fired combined cycle (CC) generating unit that is interconnected with the SES in Alabama. The Shell PPA, approved by the FPSC in September 2009, will meet Gulf's capacity needs through the end of the 2012 TYSP planning cycle and will expire on May 24, 2023. This strategy of supplementing Gulf's development of long-term capacity resources with shorter-term power purchases has proven to be effective over the years, and Gulf will continue to follow this strategy in the future when appropriate and cost-effective to do so.

Another important strategic advantage for Gulf is its association with the SES as it relates to integrated planning and operations. Drawing on the planning resources of SCS to perform coordinated planning and having the capacity resources of the SES available to Gulf through the Intercompany Interchange Contract's (IIC) reserve sharing mechanism in times when Gulf is temporarily short of reserves are key benefits that Gulf and its customers realize through its

association with the SES. In addition, the SES's generation organization actively pursues firm energy market products at prices that can lead to significant savings to the SES and its customers.

Over the next decade, Gulf will face significant challenges in developing a generation expansion plan that serves not only its customers' load growth but its existing base need for capacity. As discussed in the Environmental Concerns section of this TYSP, compliance with additional environmental regulations that require lower emissions from power plants, may lead to accelerated retirements of Gulf's existing coal units and the addition of new gas-fired and nuclear units to replace this capacity. Gulf continues to monitor the development of state and national policy in the area of air and water regulations, and will consider its options for compliance with the resulting regulations while still fulfilling its obligation to serve the energy needs of its retail customers in Northwest Florida with reliable and reasonably priced electricity. With the addition of the three PPAs that provide 1381 MW of gas-fired capacity during the 2012-2021 planning cycle, Gulf is well positioned to meet current and future load requirements as proposed state and federal environmental compliance standards are finalized.

#### **ENVIRONMENTAL CONCERNS**

Gulf Power Company faces a number of issues and uncertainties associated with future environmental regulatory requirements that could significantly impact both the scope and cost of compliance over the next decade. The Company is currently assessing its options for compliance with the Environmental Protection Agency's (EPA) recently finalized Mercury and Air Toxics Standards (MATS) rule, as well as the agency's proposed air, water quality and coal combustion by-products rules. These rules could significantly impact the operations of Gulf's existing coal-fired units and lead to changing fuel sources for certain units, the addition of emission control equipment, and/or unit retirements and replacements with new generating units, market capacity purchases, and/or additional transmission facilities. Preliminary analyses indicate that potential incremental capital expenditures for compliance may be substantial.

Gulf will continue to take all necessary actions to fully comply with all environmental laws and regulations as they apply to the operation of its existing generation facilities and the installation of new generation. Until the evaluation of various compliance options is completed, continued operation of Gulf's existing generation facilities will be assumed for the 2012-2021 period. Gulf has developed and routinely updates its environmental compliance strategy to serve as a road map for a reasonable, least-cost compliance plan. This road map establishes general direction, but allows for individual decisions to be made based on specific information available at the time. This approach is an absolute

necessity in maintaining the flexibility to match a dynamic regulatory environment with the variety of available compliance options. The focus of the strategy updates is centered on compliance with the acid rain requirements and other significant clean air requirements, as well as potential new requirements. The following is a summary of Gulf's actions taken, or to be taken to comply with each major area of existing and emerging environmental law and regulations.

#### Clean Air Act Amendments of 1990

In 1990, Congress passed major revisions to the Clean Air Act requiring existing coal-fired generating plants to substantially reduce air emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>X</sub>) by 50 percent by the end of 2000. Compliance actions for SO<sub>2</sub> have included fuel switching to lower sulfur coals coupled with the use of banked emission allowances and the acquisition of additional allowances for future year compliance. Also, Gulf completed installation and began operating flue gas de-sulfurization equipment on Plant Crist Units 4 through 7 in December 2009 which is now achieving significant reductions of SO<sub>2</sub> emissions at these coal-fired units. In addition to reducing SO<sub>2</sub> emissions, Gulf has installed low NO<sub>X</sub> burners and additional post-combustion NO<sub>X</sub> control on all but two of its coal-fired units. The Company utilizes a system-wide NO<sub>X</sub> emissions averaging plan to meet the requirements of the Act.

#### Air Quality Standards for Ozone

In 1997, the EPA announced a stringent new eight-hour National Ambient Air Quality Standard (NAAQS) for ozone based on an eight-hour average. In 2002, Gulf entered into an agreement with the Florida Department of

Environmental Protection (FDEP) to reduce NO<sub>X</sub> emissions at Plant Crist in order to help ensure that the new ozone standard is attained in the Pensacola area. Gulf installed Selective Catalytic Reduction (SCR) controls on Crist Unit 7 in May 2005. In addition to the SCR control on Unit 7, the Company installed Selective Non-Catalytic Controls (SNCR) and over-fire air on Crist Unit 6 in February 2006 and SNCR controls on Crist Unit 4 and Unit 5 in April 2006. These controls have achieved the overall plant-wide NO<sub>X</sub> emissions average of 0.20 lbs/mmbtu as outlined in the FDEP Agreement. Gulf also retired Crist Unit 1 in March 2003 and Crist Units 2 and 3 in May 2006. The Crist 6 SNCR will be replaced with SCR technology by late April 2012 in order to further reduce NO<sub>X</sub> emissions. The combined operation of the Crist 6 and 7 SCRs and the Plant Crist scrubber will provide co-benefits through the reduction of SO<sub>X</sub>, NO<sub>X</sub>, and mercury emissions as required by current and proposed compliance standards.

In March 2008, the EPA issued new rules establishing a more stringent eight-hour ozone standard. In January 2011 the EPA proposed further reductions in the eight-hour standard which are expected to be finalized in the 2014 timeframe. The revised eight-hour ozone standard is expected to result in the designation of new nonattainment areas served by the Company, and could result in additional required reductions in NO<sub>x</sub> emissions.

#### Air Quality Standards for Fine Particulate Matter

The EPA's annual fine particulate matter nonattainment designations became effective for several geographical areas served by the Southern Company in 2005. State implementation plans that address attainment with the fine particulate standard for all areas have been submitted to the EPA. The EPA

is expected to propose new annual and 24-hour fine particulate matter standards by mid-2012. Compliance with these standards could require further reductions in  $SO_2$  and  $NO_x$  emissions from power plants, including plants owned in part by the Company.

#### Air Quality Standards for SO<sub>2</sub> and NO<sub>2</sub>

On December 8, 2009, the EPA also proposed revisions to the NAAQS for SO<sub>2</sub>. These revisions, which include the establishment of a new one-hour standard, became effective on August 23, 2010. Identification of potential non attainment areas are due in mid-2012 and could ultimately include geographical areas served by the Company. Implementation of the revised SO<sub>2</sub> standard could result in additional required reductions in SO<sub>2</sub> emissions and increased compliance and operation costs.

Revisions to the NAAQS for Nitrogen Dioxide (NO<sub>2</sub>), which established a new one-hour standard, became effective on April 12, 2010. Although none of the geographical areas served by the Company were designated as non attainment for the NO<sub>2</sub> standard, based on current ambient air quality monitoring data, the new NO<sub>2</sub> standard could result in significant additional compliance and operational costs for units that require new source permitting.

#### Clean Air Interstate Rule

The EPA issued its final Clean Air Interstate Rule (CAIR) in March 2005. This cap-and-trade rule addresses power plant SO<sub>2</sub> and NO<sub>X</sub> emissions that were found to contribute to non attainment of the eight-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<sub>X</sub> and/or SO<sub>2</sub> to be achieved in two phases, 2009/2010 and 2015, respectively. In 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 developed a revised rule. The states of Florida and Mississippi have completed plans to implement CAIR, and compliance with this rule is being accomplished by the installation and operation of emission controls at Gulf's coal-fired facilities and/or by the purchase of emission allowances.

On August 8, 2011, the EPA adopted the Cross State Air Pollution Rule (CSAPR) to replace CAIR effective January 1, 2012. Like CAIR, the CSAPR was intended to address interstate emissions of SO<sub>2</sub> and NO<sub>x</sub> that interfere with downwind states' ability to meet or maintain national ambient air quality standards for ozone and/or particulate matter. On December 30, 2011, after numerous parties filed appeals and requests to stay CSAPR pending judicial review, the U.S. Court of Appeals for the District of Columbia Circuit stayed the CSAPR in its entirety and ordered the EPA to continue administration of CAIR pending a final decision. Before the stay was granted, the EPA published proposed technical revisions to the CSAPR, including adjustments to certain state emissions budgets and a delay in implementation of the emissions trading limitations until January 2014. On February 7, 2012, the EPA released the final technical revisions to the CSAPR and at the same time issued a direct final rule which together provide increases to certain state emissions budgets, including the States of Florida, Georgia, and Mississippi.

#### Clean Air Visibility Rule

The Clean Air Visibility Rule (CAVR) was finalized in July 2005 in order to restore 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 emission reductions necessary for each designated area to achieve reasonable progress by 2018 and for each 10-year period thereafter. On December 30, 2011, the EPA issued a proposed rule providing that compliance with the CSAPR satisfies BART obligations under the CAVR. Given the pending legal challenge to the CSAPR, it remains uncertain whether additional controls may be required for CAVR and BART compliance.

#### **Mercury and Air Toxics Standards**

In March 2005, the EPA published the final Clean Air Mercury Rule (CAMR), a cap-and-trade program for the reduction of mercury emissions from coal-fired power plants. In February 2008, however, the U.S. Court of Appeals for the District of Columbia Circuit issued an opinion vacating the federal CAMR, thus eliminating requirements for generating facilities to install mercury controls to meet the CAMR cap and trade emission limits.

The EPA then entered into a proposed consent decree that required it to develop a Maximum Achievable Control Technologies (MACT) rule that would limit the emission of numerous hazardous air pollutants, including mercury, from power plants. On February 16, 2012, the EPA published the MATS rule (formerly referred to as the MACT rule) which imposes stringent emissions limits for acid gases, mercury, and particulate matter on coal- and oil-fired electric

utility steam generating units. Gulf is currently evaluating potential MATS compliance options. Compliance for existing sources is required by April 16, 2015 and is likely to require substantial capital expenditures and compliance costs at many of Gulf's facilities which could affect unit retirement and replacement decisions.

#### Clean Water Act

In July 2004, the EPA published final regulations under the Clean Water Act to reduce impingement and entrainment of fish, shellfish and other forms of aquatic life at existing power plant cooling water intake structures. On April 1, 2009, the U.S. Supreme Court held that the EPA could consider costs in arriving at its standards and in providing variances from those standards for existing intake structures. This ruling allowed the EPA to proceed with its rule making action.

On April 20, 2011 the EPA published a proposed rule that establishes standards for reducing effects on fish and other aquatic life caused by cooling water intake structures at existing power plants and manufacturing facilities. The rule also addresses cooling water intake structures for new units at existing facilities. The EPA has agreed in a settlement agreement to issue a final rule by July 27, 2012. Compliance with the final rule may require changes to existing cooling water intake structures at certain Gulf generating facilities, and new generating units constructed at existing plants would be required to install closed cycle cooling towers. Given these requirements, the Company may be subject to significant additional compliance costs and capital expenditures that could affect future unit retirement and replacement decisions.

On December 28, 2009, the EPA determined that revision of the current effluent guidelines for steam electric power plants was warranted, and it now proposes to adopt such revisions by January 2014. New wastewater treatment requirements are expected and may result in the installation of additional controls on Company facilities. In addition to this federal action, the State of Florida is finalizing nutrient water quality standards to limit the amount of nitrogen and phosphorous allowed in state waters. The ultimate impact of these federal and state guidelines and standards will depend on the studies conducted in connection with the rulemaking, as well as the specific requirements of the final rule.

#### **Coal Combustion Byproducts**

The EPA is currently evaluating whether additional regulation of coal combustion byproducts is merited under federal solid and hazardous waste laws. The EPA has collected information from the electric utility industry on surface impoundment safety and conducted on-site inspections at three Southern Company system facilities as part of its evaluation. On June 21, 2010, the EPA issued a proposal rule and requested comments on two options regarding the management and disposal of coal combustion byproducts. Adoption of either option, to further regulate coal combustion byproducts as either hazardous or non-hazardous, could have a significant impact on the Company's management, beneficial use, and disposal of such byproducts. This could result in significant additional compliance costs that could affect future unit retirement and replacement decisions.

#### Global Climate Issues

Many proposals considered by the U.S. Congress to reduce greenhouse gas emissions and mandate renewable or clean energy have failed to be passed in past legislative sessions. Although Federal legislative proposals that would impose mandatory requirements related to greenhouse gas emissions (GHG) may continue to be considered in Congress, the EPA is moving forward with regulation of greenhouse gases under the Clean Air Act.

On April 1, 2010, the EPA issued a final rule regulating GHG emissions from new motor vehicles under the Clean Air Act. The EPA has stated that because this rule became effective in January 2011, it causes carbon dioxide and other GHGs to become regulated pollutants under EPA programs which both apply to power plants. As a result, the construction of new facilities or the major modification of existing facilities could require the installation of the best available control technology for carbon dioxide and other GHGs.

The EPA issued its final rule, known as the Tailoring Rule, governing how these programs would be applied to stationary sources, including power plants, on May 13, 2010. This rule establishes two phases for applying Prevention of Significant Deterioration (PSD) and Title V requirements to greenhouse gas emissions sources. In addition to these rules, the EPA has entered into a 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 by May 2012. EPA's final Clean Air Act rulemakings have been challenged in the U.S. Court of Appeals for the District of Columbia Circuit, but 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.

Although the ultimate outcome of these federal and state rulemaking activities cannot be determined at this time, Gulf has made substantial investments in environmental controls to comply with current and pending laws regulations. Any future mandatory restrictions on the Company's power plant emissions could result in significant additional compliance costs that could affect future unit retirement and replacement decisions.

Gulf will continue its involvement in the development of strategies to address any future clean air, water, or other requirements in order to minimize the uncertainty related to the scope and cost of compliance. As new initiatives emerge, Gulf will support any proposal that would help it meet environmental goals and objectives in a logical and cost effective way, provided that the standards are based on sound science and economics which allow for adequate time to comply without compromising the safe, reliable and affordable supply of electricity to Gulf's customers.

#### **AVAILABILITY OF SYSTEM INTERCHANGE**

Gulf coordinates its operations with the other operating companies of the SES: Alabama Power Company, Georgia Power Company, Mississippi Power Company, and Southern Power Company. In any year, an individual operating company may have a temporary surplus or deficit in generating capacity, depending on the relationship of its generating capacity to its load and reserve responsibility. Each SES operating company either buys or sells its temporary deficit or surplus capacity from or to the pool in order to satisfy its reserve responsibility requirement. This is accomplished through the reserve sharing provisions of the SES Intercompany Interchange Contract (IIC) that is reviewed and updated annually.

#### **OFF-SYSTEM SALES**

Gulf and other SES operating companies have negotiated the sale of firm capacity and energy from specific generating units to several utilities outside the SES. Three contracts have been executed, and became effective in June 2010. Two of the contracts end in December 2015, while the other contract will end in December 2019. Gulf's share of the capacity sales is included in the reserve calculation on Schedules 7.1 and 7.2, while the fuel use and the energy associated with Gulf's portion of these sales are included on Schedules 5 and 6.1 respectively.







#### **CAPACITY RESOURCE ALTERNATIVES**

#### **POWER PURCHASES**

Gulf's use of purchased power arrangements in previous years has proven to be a successful approach to meeting its reliability needs. As Gulf considers resources that can potentially meet its future need for capacity, longer-term purchased power from the market will be factored into expansion studies in order to evaluate its effect on supply flexibility and reduced commitment risk during periods in which environmental regulations (with considerable economic impacts) and legislative initiatives focusing on generation additions are in various stages of development.

Gulf will continue to utilize both short-term and longer-term purchased power in the future to balance its approach to supply side resource development. In efforts to further diversify its generation fuel mix, Gulf has secured the supply of capacity and/or energy from several renewable facilities. Gulf successfully negotiated a PPA for renewable energy produced by a municipal solid waste facility in 2008 and constructed a landfill gas-fired generating facility that began providing capacity and energy in 2010. Gulf is prepared to secure renewable resources in the future as conditions warrant. If future solicitations ultimately result in projects that are competitive with resources that Gulf would otherwise develop, the Company will secure this renewable capacity and energy through a PPA or construct the facility itself.

Gulf also has access to possible purchases of renewable energy through its Renewable Standard Offer Contract (RSOC) on file with the FPSC.

Consistent with state law, Gulf updates its pricing for the RSOC as needed so that a standard offer for the purchase of renewable energy is continually available to developers of renewable resources. Gulf may also negotiate a PPA with a renewable energy supplier if the terms and conditions of the RSOC are not suitable for a particular renewable project.

#### **CAPACITY ADDITIONS**

In conjunction with the SES, Gulf will conduct economic evaluations of its potential supply options in order to determine the most cost-effective means of meeting its future capacity obligations. Gulf will evaluate its internal construction options versus external development of capacity resources in order to determine how to best meet its future capacity obligations. All commercially available generating technologies such as gas combustion turbine and combined cycle, conventional pulverized coal, and nuclear will be included in future SES IRP mix studies. In addition, emerging Integrated Gasification Combined Cycle (IGCC) technologies, such as air blown IGCC, will be added to the future generation mix studies so that their potential economic and technical viabilities may be evaluated. The SES will gain valuable operational experience that aids in approximating the economic and performance characteristics of full-scale air blown IGCC facilities when the Mississippi Power Company IGCC facility in Kemper County, Mississippi facility begins operation in 2014. The potential benefits of this technology include greater efficiency and lower environmental emissions.

If subsequent mix studies or RFPs identify alternative power supply technologies or purchased power options that are more economical or that deliver more desirable results, Gulf will modify its expansion plan to reflect the proposed procurement of these resources. Gulf will continue to review all available capacity resource possibilities in order to serve the energy needs of its retail customers in Northwest Florida with reliable and reasonably priced electricity.



## PREFERRED AND POTENTIAL SITES FOR CAPACITY ADDITIONS

Gulf Power Company will not need to construct new generating facilities or purchase additional generating capacity during the 2012-2021 planning cycle due to the firm capacity provided by its 885 MW Shell PPA. Because the Company's next need for capacity does not begin to develop until 2022, Gulf will consider its existing Florida sites at Plant Crist in Escambia County, Plant Smith in Bay County, and Plant Scholz in Jackson County, as well as its greenfield Florida sites at Shoal River in Walton County and its Caryville site in Holmes County as potential sites for locating future generating unit(s) in Northwest Florida.

Each of these potential sites has unique characteristics that offer construction and/or operational advantages related to the potential installation of natural gas-fired CTs, which is the next potential type of capacity needed. Site selection for Gulf's next planned generating unit will be based on existing infrastructure, available acreage and land use, transmission, fuel facilities, environmental factors including evolving ozone standards, and overall project economics. The required environmental and land use information for each potential site is set forth below.

## Potential Site #1: Plant Crist, Escambia County

The project site would be located on Gulf's existing Plant Crist property in Escambia County, Florida. If a future project is ultimately located on this property, detailed studies must first be completed to determine the exact size and location of the project site within the plant property's boundaries in order to meet Gulf's needs while insuring full compliance with local, state, and federal requirements. The plant property, approximately 10 miles north of Pensacola, Florida, can be accessed via county roads from nearby U. S. Highway 29. As shown on Schedule 1, the existing Plant Crist facility consists of 906 MW of steam generation.

## U. S. Geological Survey (USGS) Map

A USGS map showing the general location of the Plant Crist property is found on page 77 of this chapter.

## **Land Uses and Environmental Features**

The Plant Crist property is dedicated to industrial use. The land adjacent to the property is currently being used for residential, commercial, and industrial purposes. General environmental features of the undeveloped portion of the property include mixed scrub, mixed hardwood/pine forest, and some open grassy areas. This property is located on the Escambia River. There are no unique or significant environmental features on the property that would substantially affect project development.

#### **Water Supply Sources**

For industrial processing, cooling, and other water needs, Gulf would likely use a combination of groundwater from on-site wells, available surface water, and reclaimed water sources.

## Potential Site #2: Plant Smith, Bay County

The project site would be located on Gulf's existing Plant Smith property in Bay County, Florida. If a future project is ultimately located on this property, detailed studies must first be completed to determine the exact size and location of the project site within the plant property's boundaries in order to meet Gulf's needs while insuring full compliance with local, state, and federal requirements. The plant property, approximately 10 miles northwest of Panama City, Florida, is located on North Bay and can be accessed via a county road from nearby State Road 77. As shown on Schedule 1, the existing Plant Smith facility consists of 357 MW of steam generation, 556 MW of combined cycle generation, and 32 MW of CT generation.

## U. S. Geological Survey (USGS) Map

A USGS map showing the general location of the Plant Smith property is found on page 78 of this chapter.

#### Land Uses and Environmental Features

The Plant Smith property is dedicated to industrial use. The land adjacent to the property is rural and consists of planted pine plantations. General environmental features of the property include a mixture of upland and

wetland areas. This property is located on North Bay, which connects to St. Andrews Bay. The property has no unique or significant environmental features that would substantially affect project development.

### Water Supply Sources

For industrial processing, cooling, and other water needs, Gulf would likely use a combination of groundwater from on-site wells and available surface water.

## Potential Site #3: Plant Scholz, Jackson County

The project site would be located on Gulf's existing Plant Scholz property in Jackson County, Florida. If a future project is ultimately located on this property, detailed studies must first be completed to determine the exact size and location of the project site within the plant property's boundaries in order to meet Gulf's needs while insuring full compliance with local, state, and federal requirements. The plant property, approximately 3 miles southeast of Sneads, Florida, is located on the Apalachicola River and can be accessed via a private road from nearby U. S. Highway 90. As shown on Schedule 1, the existing Plant Scholz facility consists of 92 MW of steam generation.

#### U. S. Geological Survey (USGS) Map

A USGS map showing the general location of the Plant Scholz property is found on page 79 of this chapter.

## **Land Uses and Environmental Features**

The Plant Scholz property is dedicated to industrial use. The land adjacent to the property is primarily rural and in a natural state, but some agricultural development exists. General environmental features of the property include a mixture of hardwood and pine forest areas. This property is located on the Apalachicola River. Because the river is designated as Outstanding Florida Waters, certain criteria must be satisfied to ensure that the river is not significantly degraded. Water withdrawals for any future generation sited here would be limited to volumes currently permitted for Plant Scholz. There are no other unique or significant environmental features that would substantially affect project development.

## **Water Supply Sources**

For industrial processing, cooling, and other water needs, Gulf would likely use a combination of groundwater from on-site wells and available surface water.

#### Potential Site #4: Shoal River Property, Walton County

The project site would be located on undeveloped Gulf property in Walton County, Florida. If the project is ultimately located on this property, detailed studies will be required to determine the exact size and location of the project site within the property's boundaries in order to meet Gulf's needs, while insuring full compliance with local, state, and federal requirements. This property, also

referred to as the Mossy Head property, is approximately 3 miles northwest of Mossy Head, Florida. It is located on the Shoal River and can be accessed via a county road from nearby U. S. Highway 90.

## U. S. Geological Survey (USGS) Map

A USGS map showing the general location of the Shoal River property is found on page 80 of this chapter.

## **Land Uses and Environmental Features**

The Shoal River property is currently dedicated to agricultural and rural residential use. The northern part of the site, some 150 acres, is designated General Agricultural in Walton County's Comprehensive Future Land Use Plan. The land adjacent to the property is rural and in a natural state. General environmental features of the property mainly include wooded upland areas. This property is located on the Shoal River. Because the river is designated as Outstanding Florida Waters, certain criteria must be satisfied to ensure that the river is not significantly degraded. There are no other unique or significant environmental features on the property that would substantially affect project development.

### **Water Supply Sources**

For industrial processing, cooling, and other water needs, Gulf would likely use groundwater from on-site wells.

## Potential Site #5: Caryville Property, Holmes County

The project site would be located on undeveloped Gulf property that is bisected by the Holmes/Washington County, Florida line. If the project is ultimately located on this property, detailed studies will be required to determine the exact size and location of the project site within the property's boundaries in order to meet Gulf's needs, while insuring full compliance with local, state, and federal requirements. This property is approximately 1.5 miles northeast of Caryville, Florida. It is located just east of the Choctawhatchee River and can be accessed via County Road 179 from nearby U. S. Highway 90.

## U. S. Geological Survey (USGS) Map

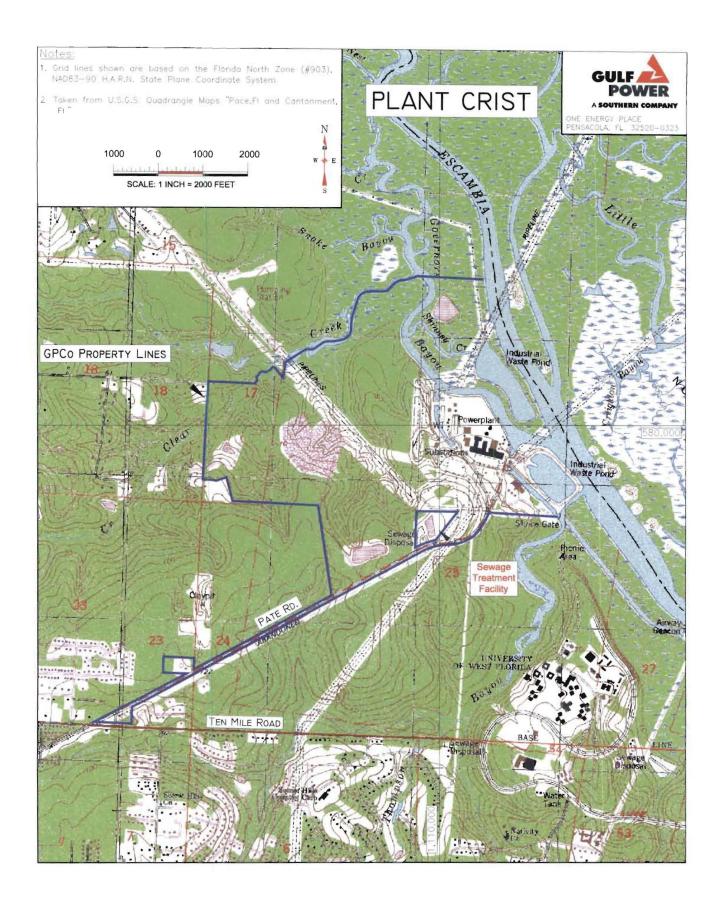
A USGS map showing the general location of the Caryville property is found on page 81 of this chapter.

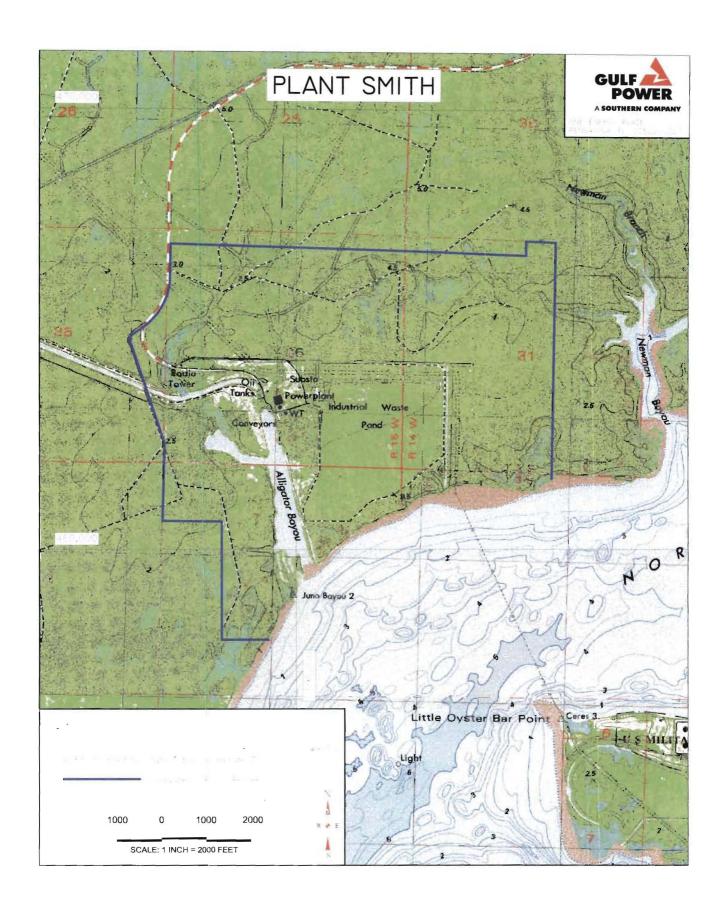
#### Land Uses and Environmental Features

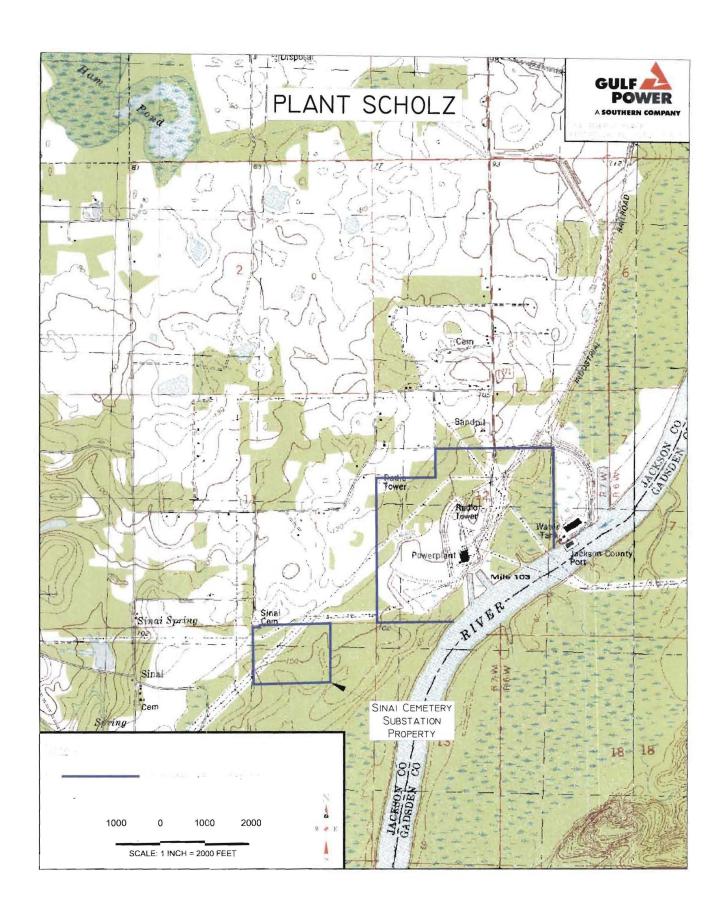
The Caryville property is certified under the Power Plant Siting Act for two 500 MW coal-fired units, but is also suitable for CT or CC generating units. The site is approximately 2,200 acres in size and is adjacent to a major railroad line on its southern boundary. The land surrounding the property is primarily rural and is used mainly for agriculture and timber harvesting. General environmental features of the property mainly include wooded upland areas, with areas of wetlands. There are no other unique or significant environmental features on the property that would substantially affect project development.

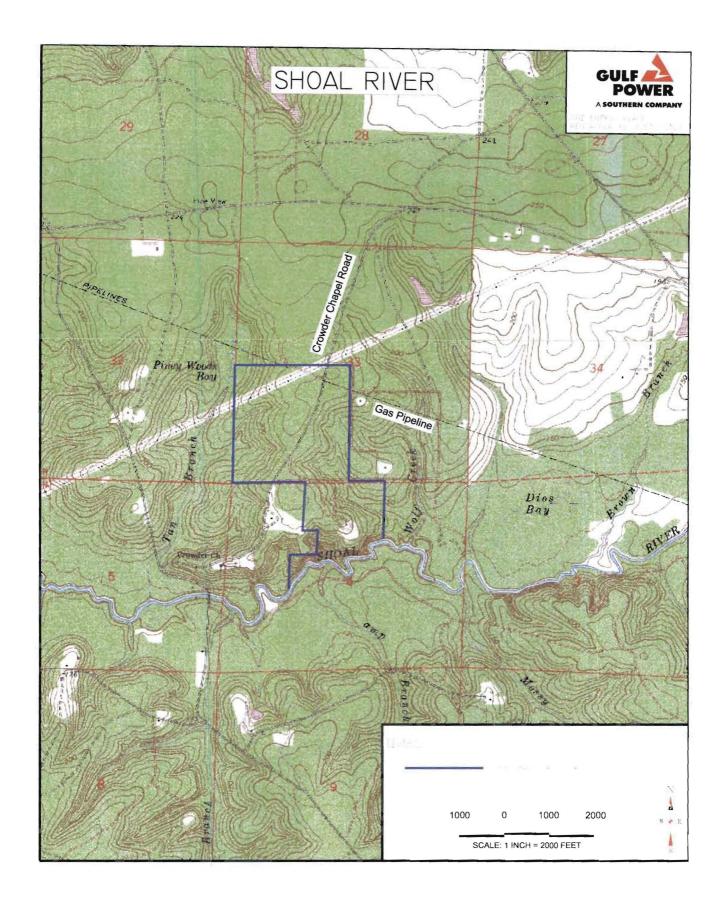
## **Water Supply Sources**

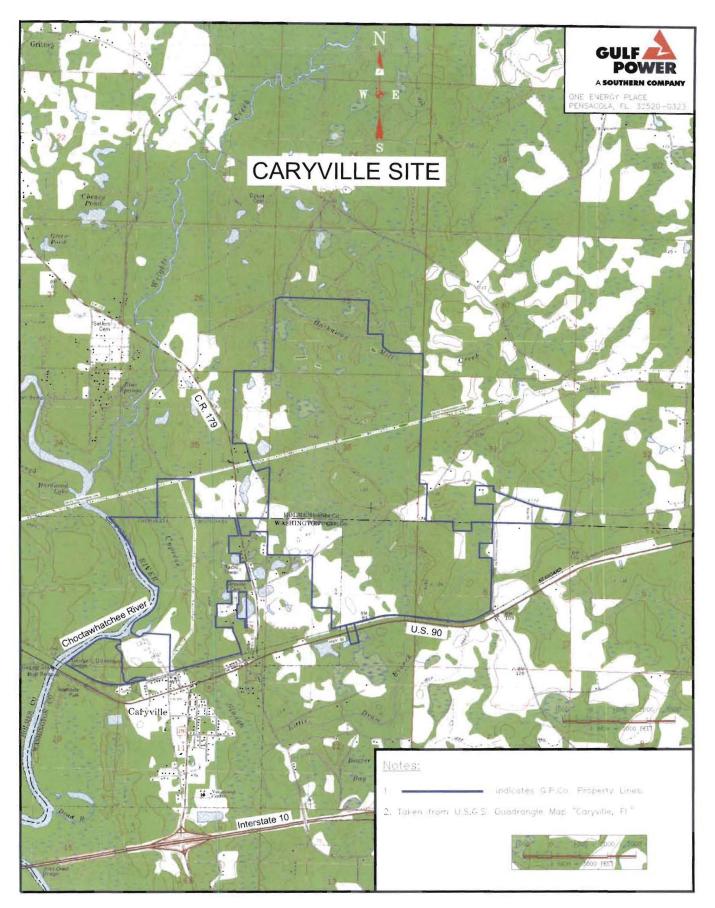
For industrial processing, cooling, and other water needs, Gulf would likely use groundwater from on-site wells and available surface water.











#### **GULF POWER COMPANY**

# SCHEDULE 7.1 FORECAST OF CAPACITY, DEMAND, AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
								ERVE BEFORE			SERVE GIN AFTER
	TOTAL	FIRM	FIRM		TOTAL	FIRM	MAINTENANCE			MAINTENANCE	
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	PEAK			SCHEDULED		
	CAPACITY	IMPORT	EXPORT	NUG	AVAILABLE	DEMAND		%	MAINTENANCE		%
YEAR	MW	MW	MW	MW	MW		MW	OF PEAK	MW	MW	OF PEAK
2012	2,683	496	(211)	0	2,968	2,601	367	14.1%	NONE	367	14.1%
2013	2,683	496	(211)	0	2,968	2,628	340	12.9%		340	12.9%
2014	2,683	885	(211)	0	3,357	2,664	693	26.0%		693	26.0%
2015	2,683	885	(211)	0	3,357	2,695	662	24.6%		662	24.6%
2016	2,679	885	(211)	0	3,353	2,718	635	23.4%		635	23.4%
2017	2,679	885	(211)	0	3,353	2,753	600	21.8%		600	21.8%
2018	2,677	885	(211)	0	3,351	2,787	564	20.2%		564	20.2%
2019	2,663	885	(211)	0	3,337	2,822	515	18.2%		515	18.2%
2020	2,663	885	(211)	0	3,337	2,871	466	16.2%		466	16.2%
2021	2.663	885	(211)	0	3.337	2.913	424	14.6%		424	14.6%

#### **GULF POWER COMPANY**

## SCHEDULE 7.2 FORECAST OF CAPACITY, DEMAND, AND SCHEDULED MAINTENANCE AT TIME OF WINTER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL	FIRM	FIRM		TOTAL	FIRM	RESERVE MARGIN BEFORE MAINTENANCE			RESERVE MARGIN AFTER MAINTENANCE	
	INSTALLED	CAPACITY	CAPACITY		CAPACITY	PEAK			SCHEDULED		~
	CAPACITY	IMPORT	EXPORT	NUG	AVAILABLE	DEMAND		%	MAINTENANCE		%
YEAR	MW	MW	MW	MW	MW	MW	_MW_	OF PEAK	MW	WW	OF PEAK
2011-12	2,725	496	(211)	0	3,010	2,327	683	29.4%	NONE	683	29.4%
2012-13	2,722	496	(211)	0	3,007	2,368	639	27.0%		639	27.0%
2013-14	2,722	496	(211)	0	3,007	2,394	613	25.6%		613	25.6%
2014-15	2,722	885	(211)	0	3,396	2,440	956	39.2%		956	39.2%
2015-16	2,718	885	(211)	0	3,392	2,443	949	38.8%		949	38.8%
2016-17	2,718	885	(211)	0	3,392	2,476	916	37.0%		916	37.0%
2017-18	2,716	885	(211)	0	3,390	2,509	881	35.1%		881	35.1%
2018-19	2,699	885	(211)	0	3,373	2,542	831	32.7%		831	32.7%
2019-20	2,699	885	(211)	0	3,373	2,587	786	30.4%		786	30.4%
2020-21	2.699	885	(211)	0	3.373	2.627	746	28.4%		746	28.4%

#### **GULF POWER COMPANY**

SCHEDULE 8
PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

Page 1 of 1

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Plant Name	Unit No.	Location	Unit Type	Fu Pri	iel <u>Alt</u>		uel sport <u>Alt</u>	Const Start Mo/Yr	Com'l In- Service Mo/Yr	Expected Retirement Mo/Yr	Gen Max Nameplate KW	Net Cap Summer MW	oability Winter <u>MW</u>	Status
r lant reame	140.	Location	- type	1.11	₩.	<u></u>	<u> All</u>	1410/11	1910/11	100/11	- 1744	IVIVY	IVIVY	Status
Crist	6	Escambia County 25/1N/30W	FS	С	NG	WA	PL	-	05/70	<b>04</b> /12	369,750	(3.0)	(3.0)	D
Daniel	1	Jackson Cnty, MS 42/5S/6W	FS	С	НО	RR	TK		09/77	12/15	274,125	(2.0)	(2.0)	D
Daniel	2	Jackson Cnty, MS 42/5S/6W	FS	C	НО	RR	тк		06/81	12/15	274,125	(2.0)	(2.0)	D
Daniel	1	Jackson Cnty, MS 42/5S/6W	FS	С	но	RR	ΤK		09/77	11/17	274,125	(2.0)	(2.0)	D
Daniel	2	Jackson Cnty, MS 42/5S/6W	FS	С	но	RR	ΤK		06/81	11/18	274,125	(2.0)	(2.0)	D
Pea Ridge	1 - 3	Santa Rosa County 15/1N/29W	СТ	NG		PL			05/98	12/18	14,250	(12.0)	(15.0)	R

Abbreviations: Unit Type Fuel <u>Status</u> Fuel Transportation FS - Fossil Steam C - Coal CR - Certified Rating change PL - Pipeline S - Steam NG - Natural Gas D - Environmental derate TK - Truck CT - Combustion Turbine LO - Light Oil P - Planned, but not authorized by utility RR - Railroad CC - Combined Cycle HO - Heavy Oil R - To be retired WA - Water IC - Internal Combustion LFG - Landfill Gas U - Under construction, less than or WDS - Wood Waste Solid equal to 50% complete V - Under construction, more than 50% complete

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#### Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number:	No Unit planned for 2012-2021
2)	Net Capacity a. Summer:	N/A
	b. Winter	N/A
	Gross Capacity	A1/A
	a. Summer: b. Winter	N/A N/A
(3)	Technology Type:	N/A
4)	Anticipated Construction Timing	
	a. Field construction start - date:	N/A
	b. Commercial in-service date:	N/A
5)	Fuel a. Primary fuel;	N/A
	b. Alternate fuel:	N/A N/A
	b. Alternate luel.	N/A
(6)	Air Pollution Control Strategy:	N/A
(7)	Cooling Method:	N/A
(8)	Total Site Area:	N/A
(9)	Construction Status:	N/A
10)	Certification Status:	N/A
11)	Status with Federal Agencies:	N/A
12)	Projected Unit Performance Data Planned Outage Factor (POF):	N/A
	Unplanned Outage Factor (UOF):	
	Equivalent Availability Factor (EAF):	
	Capacity Factor (%):	
	Average Net Operating Heat Rate (ANOHR):	
13)	Projected Unit Financial Data Book Life (Years):	N/A
	Total Installed Cost (In-Service Year \$/kW):	
	Direct Construction Cost (\$/kW):	
	AFUDC Amount (\$/kW):	
	Escalation (\$/kW):	
	Fixed O&M (\$/kW - Yr):	
	Variable O&M (\$/MWH):	
	K Factor:	

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## **Gulf Power Company**

# Schedule 10 Status Report and Specifications of Proposed Directly Associated Transmission Lines

N/A

(1) Point of Origin and Termination:	Unknown
(2) Number of Lines:	Unknown
(3) Right-of-Way:	Unknown
(4) Line Length:	Unknown
(5) Voltage:	Unknown
(6) Anticipated Construction Timing:	Unknown
(7) Anticipated Capital Investment:	Unknown
(8) Substations:	Unknown

(9) Participation with Other Utilities:

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