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ORIGINAL



March 30, 2001

undocketed

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0870

Dear Ms. Bayo:

Enclosed are an original and twenty-five copies of Gulf Power Company's 2000 Ten Year Site Plan, and it is filed pursuant to Rule No. 25-22.071. Included in the Ten Year Site Plan is the Company's Clean Air Act Compliance update, and it is filed pursuant to Order No. PSC-93-1376-FOF-EI.

Sincerely,

Susan D. Ritenour

Susan D. Ritenour
Assistant Secretary and Assistant Treasurer

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Enclosures

- APP _____
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- CMP _____
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- CTR _____
- ECR _____
- LEG _____
- OPC _____
- PAI _____
- RGO _____
- SEC _____
- SER _____
- OTH _____

cc: Beggs and Lane
Jeffrey A. Stone, Esquire

DOCUMENT NUMBER-DATE

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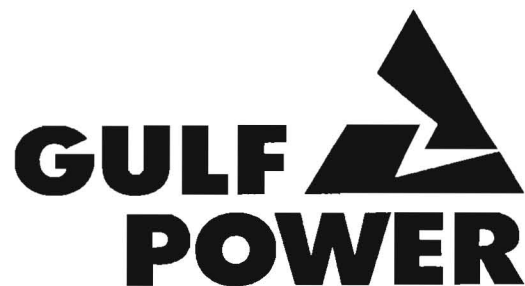
FPSC-RECORDS/REPORTING

ORIGINAL

TEN YEAR SITE PLAN 2001-2010

FOR ELECTRIC GENERATING FACILITIES
AND
ASSOCIATED TRANSMISSION LINES

APRIL 2001



A **SOUTHERN COMPANY**

DOCUMENT NUMBER-DATE

04050 APR-20

FPSC-RECORDS/REPORTING

**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 1, 2001

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GULF POWER COMPANY

TEN-YEAR SITE PLAN

Executive Summary

The Gulf Power Company 2001 Ten-Year Site Plan (TYSP) 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. That revision replaced the Florida Department of Community Affairs with the FPSC as the responsible agency for the TYSP's. This 2001 Ten-Year Site Plan for Gulf Power Company is being filed in compliance with the Commission's rules.

The 2001 TYSP contains documentation of assumptions, load forecast, fuel forecasts, the planning processes, existing resources, and future capacity needs and resources. The planning process for Gulf is tightly coordinated within the Southern electric system Integrated Resource Planning (IRP) process. Gulf participates in the Southern electric system IRP process along with the other Southern operating companies, Alabama Power, Georgia Power, Mississippi Power, and Savannah Electric & Power. Gulf Power Company shares in the benefits gained from planning a large system such as Southern, without the costs of a large planning staff of its own.

The capacity resource needs set forth within the Southern IRP are driven by the demand forecast which already

includes the projected demand-side measures embedded into it 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 resource plans from which to select the best, most cost-effective plan for the system. The resulting Southern system resource needs are appropriately allocated among the operating companies based on reserve requirements, whereby each company chooses the best way in order to meet its capacity and reliability needs.

Gulf plans to use existing power purchases and reliance on Southern system resources, exclusively, until the year 2002. In 2002, a 574 MW natural gas-fired combined cycle generating unit currently under construction at Gulf's existing Lansing Smith Generating Plant will begin commercial operation. This unit will be designated as Smith Unit 3. Smith Unit 3, pursuant to the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes, was the subject of a petition to the FPSC for a determination of need under Section 403.519, Florida Statutes. The need for Smith Unit 3 was approved by the FPSC in Order No. PSC-99-1478-FOF-EI dated August 2, 1999. The location of the new unit in the Panama City area eliminates the need for additional transmission to integrate the unit into the Northwest Florida electric grid, and the unit will provide needed voltage support in the eastern portion of Gulf's service territory.

The Company currently plans to meet its future capacity needs after the installation of Smith Unit 3 by installing a 157 MW CT at Smith Plant and participating with sister companies in installing several "F" class combustion turbines (CT) throughout the remainder of the planning horizon. These additions are tabulated in further detail on Schedule 8 of this document.

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CHAPTER I

DESCRIPTION OF EXISTING FACILITIES

DESCRIPTION OF EXISTING FACILITIES

Gulf Power Company owns and operates three fossil - fueled generating facilities in Northwest Florida (Plants Crist, Smith, and Scholz). Gulf also owns a 50% undivided ownership interest in Unit 1 and Unit 2 at Mississippi Power Company's Daniel Electric Generating Facility, and has a 25% ownership in Unit 3 at Georgia Power Company's Scherer Electric Generating Facility. This fleet of generating units consists of fourteen fossil steam units and one combustion turbine. Schedule 1 shows 1,020 MW of steam generation is located at the Crist Electric Generating Facility near Pensacola, Florida. The Lansing Smith Electric Generating Facility near Panama City, Florida includes 351 MW of steam generation and 32 MW (summer rating) of combustion turbine facilities. The Scholz Electric Generating Facility, near Sneeds, Florida consists of 92 MW of steam generation. In May of 1998, the Company took ownership of three new combustion turbines associated with an existing customer's cogeneration facility, adding another 12 MW to Gulf's existing capacity.

Including Gulf's ownership interest in Daniel fossil steam units 1 and 2 and Scherer fossil steam unit 3, Gulf has a total net summer generating capability of 2,249 MW and a total net winter generating capability of 2,259 MW. In addition to the Company's installed generating resources, Gulf has a contract with Solutia Corporation (sucessor to

Monsanto) for 19 MW of firm capacity that will be in effect until May 31, 2005.

The existing Gulf system in Northwest Florida including generating plants, substations, transmission lines and service area is shown on the system map on page 9. Data regarding Gulf's existing generating facilities is presented on Schedule 1.

UTILITY: GULF POWER COMPANY

SCHEDULE 1
EXISTING GENERATING FACILITIES
AS OF DECEMBER 31, 2000

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit No.	Location	Unit Type	Fuel		Fuel Transp		Alt. Fuel Days Use	Com'l In-Service Mo/Yr	Exptd Retrmnt Mo/Yr	Gen Max Nameplate KW	Net Capability	
				Pri	Alt	Pri	Alt					Summer MW	Winter MW
Crist		Escambia County 25/1N/30W									<u>1,229,000</u>	<u>1,020.0</u>	<u>1,020.0</u>
	1		FS	NG	HO	PL	TK	--	1/45	12/11	28,125	24.0	24.0
	2		FS	NG	HO	PL	TK	--	6/49	12/11	28,125	24.0	24.0
	3		FS	NG	HO	PL	TK	--	9/52	12/11	37,500	35.0	35.0
	4		FS	C	NG	WA	PL	1	7/59	12/14	93,750	78.0	78.0
	5		FS	C	NG	WA	PL	0	6/61	12/16	93,750	80.0	80.0
	6		FS	C	NG	WA	PL	1	5/70	12/15	369,750	302.0	302.0
	7		FS	C	NG	WA	PL	0	8/73	12/18	578,000	477.0	477.0
Lansing Smith		Bay County 36/2S/15W									<u>381,850</u>	<u>383.0</u>	<u>391.0</u>
	1		FS	C	--	WA	--	--	6/65	12/15	149,600	162.0	162.0
	2		FS	C	--	WA	--	--	6/67	12/17	190,400	189.0	189.0
	A		CT	LO	--	TK	--	--	5/71	12/06	41,850	32.0	40.0
Scholz		Jackson County 12/3N/7W									<u>98,000</u>	<u>92.0</u>	<u>92.0</u>
	1		FS	C	--	RR	WA	--	3/53	12/11	49,000	46.0	46.0
	2		FS	C	--	RR	WA	--	10/53	12/11	49,000	46.0	46.0
(A) Daniel		Jackson County, MS 42/5S/6W									<u>548,250</u>	<u>523.0</u>	<u>523.0</u>
	1		FS	C	HO	RR	TK	--	9/77	12/22	274,125	261.0	261.0
	2		FS	C	HO	RR	TK	--	6/81	12/26	274,125	262.0	262.0
(A) Scherer	3	Monroe County, GA	FS	C	--	RR	--	--	1/87	12/42	222,750	218.8	218.8
Pea Ridge		Santa Rosa County 15/1N/29W									<u>14,250</u>	<u>12.0</u>	<u>13.8</u>
	1		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.0	4.6
	2		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.0	4.6
	3		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.0	4.6
Total System 12/31/00											<u>2,248.8</u>	<u>2,258.6</u>	

7

Abbreviations:

Fuel

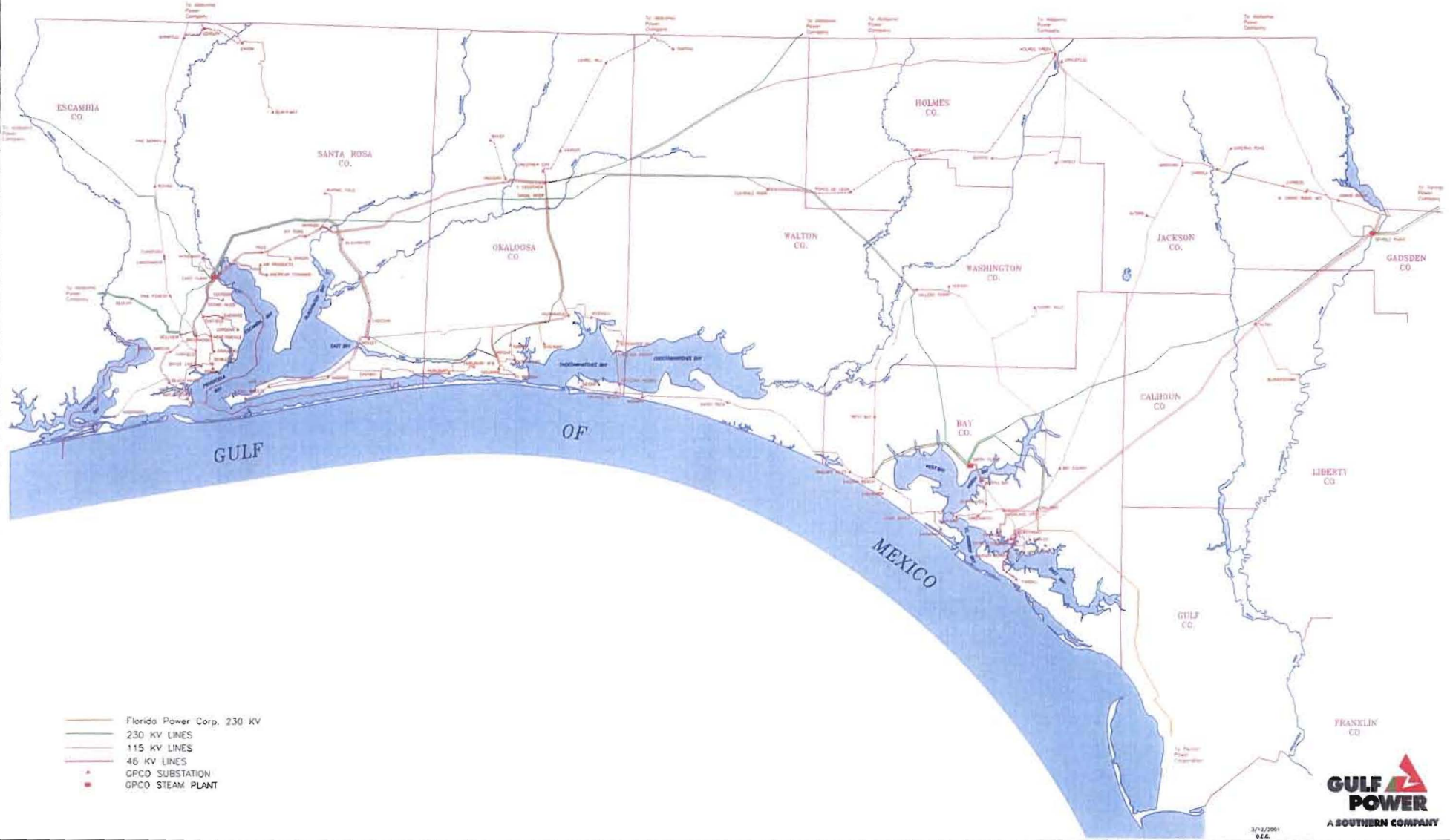
FS - Fossil Steam
CT - Combustion Turbine
NG - Natural Gas
C - Coal
LO - Light Oil
HO - Heavy Oil

Fuel Transportation

PL - Pipeline
WA - Water
TK - Truck
RR - Railroad

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

GULF POWER COMPANY TRANSMISSION SYSTEM MAP



CHAPTER II

FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION

FORECASTING DOCUMENTATION

GULF POWER COMPANY
LOAD FORECASTING METHODOLOGY
OVERVIEW

Gulf Power Company views the forecasting effort as a dynamic process requiring ongoing efforts to yield results which 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 marketing 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 Power Company 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. Since that time, the GoodCents Home program has seen many enhancements, and has been widely accepted not only by our customers, but by builders, contractors, consumers, and other electric utilities throughout the nation, providing clear evidence that selling efficiency to customers can be done successfully.

The Marketing Services section of the Marketing and Load Management 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

Gulf's projections assume the growth in the U. S. economy (Real Gross Domestic Product, GDP) will slow to near 2.4% in 2001 from its 1999 growth of 4.2%. The Federal Reserve is expected to maintain its policy of restricting economic growth in order to control inflation. This environment of moderate growth (2000-4.4%, 2001-2.4%, 2002-2.9%) will result in inflation of about 2.6% for 2000, decreasing to about 2.4% by 2003. Current labor force projections indicate that the supply of labor in the work force is becoming limited, and this shortage will slow business investment and add inflationary pressure unless offsetting productivity gains can be achieved. Other inflationary pressures are developing as well. Oil prices have more than doubled since the start of the year and prices for a range of other commodities are rising quickly.

B. TERRITORIAL ECONOMIC OUTLOOK

Gulf's projections reflect the current economic outlook for our service area as provided by Regional Financial Associates (RFA), a renowned economic service provider. Gulf's forecast assumes that service area population growth will continue to exceed the nation's growth and closely track the rate of growth for the state of Florida. Gulf's projections incorporate electric price assumptions derived from the 2000 Gulf Power Official long-range Forecast and include estimated capital costs associated with the May, 2002 Lansing Smith Unit 3 capacity addition. Fuel price projections were provided by Southern Company Fuel

Services. The following tables provide a summary of the assumptions associated with Gulf's forecast:

TABLE 1

**ECONOMIC SUMMARY
(2000-2005)**

	<u>Base Case Forecast</u>
GDP Growth	4.4% - 2.8%
Real Interest Rate	7.8% - 6.2%
Inflation	2.6% - 2.3%

TABLE 2

**AREA DEMOGRAPHIC SUMMARY
(2000-2005)**

	<u>Base Case Forecast</u>
Population Gain	69,750
Net Migration	49,350
Average Annual Population Growth	1.3%
Average Annual Labor Force Growth	1.8%
Share of Population Served	85.8%

II. CUSTOMER FORECAST

A. RESIDENTIAL CUSTOMER FORECAST

The immediate short-term forecast (0-2 years) of customers is based primarily on projections prepared by district personnel. The districts remain abreast of local market and economic conditions within their service territories through direct contact with economic development agencies, developers, builders, lending institutions and other key contacts. The projections prepared by the districts are based upon recent historical trends in customer gains and their knowledge of locally planned construction projects from which they are able to estimate the near-term anticipated customer gains. These projections are then analyzed for consistency and the incorporation of major construction projects and business developments is reviewed for completeness and accuracy. The end result is a near-term forecast of residential customers.

For the remaining forecast horizon (3-25 years), the Gulf Economic Model, a competition-based econometric model developed by Regional Financial Associates (RFA), is used in the development of residential customer projections. Projections of births, deaths, and population by age groups are determined by past and projected trends. Migration is determined by economic growth relative to surrounding areas.

The forecast of residential customers is an outcome of the final section of the migration/demographic element of the model. The number of residential customers Gulf expects to serve is calculated by multiplying the total number of households located in

the eight counties in which Gulf provides service by the percentage of customers in these eight counties for which Gulf currently provides service.

The number of households referred to above is computed by applying a household formation trend to the previously mentioned population by age group, and then by summing the number of households in each of five adult age categories. As indicated, there is a relationship between households, or residential customers, and the age structure of the population of the area, as well as household formation trends. The household formation trend is the product of initial year household formation rates in the Gulf service area and projected U.S. trends in household formation.

B. COMMERCIAL CUSTOMER FORECAST

The immediate short-term forecast (0-2 years) of commercial customers, as in the residential sector, is prepared by the districts in similar fashion utilizing recent historical customer gains information and their knowledge of the local area economies and upcoming construction projects. A review of the assumptions, techniques and results for each district is undertaken, with special attention given to the incorporation of major commercial development projects.

Beyond the immediate short-term period, commercial customers are forecast as a function of residential customers, reflecting the growth of commercial services to meet the needs of new residents. Implicit in the commercial customer forecast is the relationship between growth in total real disposable income and growth in the commercial sector.

III. ENERGY SALES FORECAST

A. RESIDENTIAL SALES FORECAST

The short-term (0-2 year) residential energy sales forecast is developed utilizing multiple regression analyses. Monthly class energy use per customer per billing day is estimated based upon recent historical data, expected normal weather and projected price. The model output is then multiplied by the projected number of customers and billing days by month to expand to the total residential class.

The long-term residential energy sales forecast is prepared using the Residential End-Use Energy Planning System (REEPS), a model developed for the Electric Power Research Institute (EPRI) by Cambridge Systematics, Incorporated, under Project RP1211-2. The REEPS model integrates elements of both econometric and engineering end-use approaches to energy forecasting. Market penetrations and energy consumption rates for major appliance end-uses are treated explicitly. REEPS produces forecasts of appliance installations, operating efficiencies and utilization patterns for space heating, water heating, air conditioning and cooking, as well as other major end-uses. Each of these decisions is responsive to energy prices and demand-side initiatives, as well as household/dwelling characteristics and geographical variables.

The major behavioral responses in the simulation model have been estimated statistically from an analysis of household survey data. Surveys provide the data source required to identify the responsiveness of

household energy decisions to prices and other variables.

The REEPS model forecasts energy decisions for a large number of different population segments. These segments represent households with different demographic and dwelling characteristics. Together, the population segments reflect the full distribution of characteristics in the customer population. The total service area forecast of residential energy decisions is represented as the sum of the choices of various segments. This approach enhances evaluation of the distributional impacts of various demand-side initiatives.

For each of the major end-uses, REEPS forecasts equipment purchases, efficiency and utilization choices. The model distinguishes among appliance installations in new housing, retrofit installations and purchases of portable units. Within the simulation, the probability of installing a given appliance in a new dwelling depends on the operating and performance characteristics of the competing alternatives, as well as household and dwelling features. The installation probabilities for certain end-use categories are highly interdependent.

The functional form of the appliance installation models is the multinomial logit or its generalization, the nested logit. The parameters of these models quantify the sensitivity of appliance installation choices to costs and other characteristics. The magnitudes of these parameters have been estimated statistically from household survey data.

Appliance operating efficiency and utilization rates are simulated in the REEPS model as interdependent decisions. Efficiency choice is dependent on operating

cost at the planned utilization rate, while actual utilization depends on operating cost given the appliance efficiency. Appliance and building standards affect efficiency directly by mandating higher levels than those otherwise expected.

The sensitivity of efficiency and utilization decisions to costs, climate, household and dwelling size, and income has been estimated from historical survey data. Energy prices, income, and household and dwelling size significantly affect space conditioning and residual energy use. Household and dwelling size also influence water heating usage. Climate significantly impacts space heating and air conditioning.

Major appliance base year unit energy consumption (UEC) estimates are based on data developed by Regional Economic Research, Inc. (RER), the current EPRI contractor, from metered appliance data or conditioned energy demand regression analysis. The latter is a technique employed in the absence of metered observations of individual appliance usage, and involves the disaggregation of total household demand for electricity into appliance specific demand functions. All of the weather sensitive UEC estimates were adjusted for Gulf Power's weather conditions.

The residential sales forecast reflects the continued impacts of Gulf Power's GoodCents Home program and efficiency improvements undertaken by customers as a result of the GoodCents Energy Survey program, as well as conversions to higher efficient outdoor lighting. The residential sales forecast also reflects the anticipated incremental impacts of Gulf's DSM plan, approved in April, 2000, designed to meet the

Commission-approved demand and energy reduction goals established in October, 1999. Additional information on the residential conservation programs and program features are provided in the Conservation section.

B. COMMERCIAL SALES FORECAST

The short-term (0-2 year) commercial energy sales forecast is also developed utilizing multiple regression analyses. Monthly class energy use per customer per billing day is estimated based upon recent historical data, expected normal weather and projected price. The model output is then multiplied by the projected number of customers and billing days by month to expand to the total commercial class.

COMMEND, a commercial end-use model developed by the Georgia Institute of Technology through EPRI Project RP1216-06, serves as the basis for Gulf's long-term commercial energy sales forecast.

The COMMEND model is an extension of the capital-stock approach used in most econometric studies. This approach views the demand for energy as a product of three factors. The first of these factors is the physical stock of energy-using capital, the second factor is base year energy use, and the third is a utilization factor representing utilization of equipment relative to the base year.

Changes in equipment utilization are modeled using short-run econometric fuel price elasticities. Fuel choice is forecast with a life-cycle cost/behavioral microsimulation submodel, and changes in equipment efficiency are determined using engineering and cost information for space heating, cooling and ventilation

equipment and econometric elasticity estimates for the other end-uses (lighting, water heating, ventilation, cooking, refrigeration, and others).

Three characteristics of COMMEND distinguish it from traditional modeling approaches. First, the reliance on engineering relationships to determine future heating and cooling efficiency provides a sounder basis for forecasting long-run changes in space heating and cooling energy requirements than a pure econometric approach can supply. Second, the simulation model uses a variety of engineering data on the energy-using characteristics of commercial buildings. Third, COMMEND provides estimates of energy use detailed by end-use, fuel type and building type.

DRI McGraw Hill's annual building data and Gulf's most recent Commercial Market Survey provided much of the input data required for the COMMEND model. The model produces forecasts of energy use for the end-uses mentioned above, within each of the following business categories:

- | | |
|---------------------------------|---------------------------------|
| 1. Food Stores | 7. Elementary/Secondary Schools |
| 2. Offices | 8. Colleges/Trade Schools |
| 3. Retail and Personal Services | 9. Hospitals/Health Services |
| 4. Public Utilities | 10. Hotels/Motels |
| 5. Automotive Services | 11. Religious Organizations |
| 6. Restaurants | 12. Miscellaneous |

The commercial sales forecast reflects the continued impacts of Gulf Power's Commercial GoodCents building program and efficiency improvements undertaken by customers as a result of Commercial Energy Audits and Technical Assistance Audits, as well as conversions to higher efficient outdoor lighting. The commercial sales forecast also reflects the anticipated incremental

impacts of Gulf's DSM plan, approved in April, 2000, designed to meet the Commission-approved demand and energy reduction goals established in October, 1999. Additional information on the Commercial Conservation programs and program features are provided in the Conservation section.

C. INDUSTRIAL SALES FORECAST

The short-term industrial energy sales forecast is developed using a combination of on-site surveys of major industrial customers, trending techniques, and multiple regression analysis. Fifty of Gulf's largest industrial customers are interviewed to identify load changes due to equipment addition, replacement or changes in operating characteristics.

The short-term forecast of monthly sales to these major industrial customers is a synthesis of the detailed survey information and historical monthly load factor trends. The forecast of short-term sales to the remaining smaller industrial customers is developed using multiple regression analysis.

The long-term forecast of industrial energy sales is based on econometric models of the chemical, pulp and paper, other manufacturing, and non-manufacturing sectors. The industrial forecast is further refined by accounting for expected self generation installations, and a supplemental energy rate. The industrial sales forecast also reflects the anticipated incremental impacts of Gulf's DSM plan, approved in April, 2000, designed to meet the Commission-approved demand and energy reduction goals established in October, 1999. Additional information on the conservation programs and

program features are provided in the Conservation section.

D. STREET LIGHTING SALES FORECAST

The forecast of monthly energy sales to street lighting customers is based on projections of the number of fixtures in service, for each of the following fixture types:

<u>HIGH PRESSURE SODIUM</u>	<u>MERCURY VAPOR</u>
5,400 Lumen	3,200 Lumen
8,800 Lumen	7,000 Lumen
20,000 Lumen	9,400 Lumen
25,000 Lumen	17,000 Lumen
46,000 Lumen	48,000 Lumen

The projected number of fixtures by fixture type are developed from analyses of recent historical fixture data to discern the patterns of fixture additions and deletions. The estimated monthly kilowatt-hour consumption for each fixture type is multiplied by the projected number of fixtures in service to produce total monthly sales for a given type of fixture. This methodology allows Gulf to explicitly evaluate the impacts of lighting programs, such as mercury vapor to high pressure sodium conversions.

E. WHOLESALE ENERGY FORECAST

The short-term forecast of energy sales to wholesale customers is based on interviews with these customers, as well as recent historical data. A forecast of total monthly energy requirements at each wholesale delivery

point is produced utilizing multiple regression analyses.

The long-term forecast is based on estimates of annual growth rates for each delivery point, according to future growth potential.

F. COMPANY USE & INTERDEPARTMENTAL ENERGY

The annual forecast for Company and Interdepartmental energy usage was based on recent historical values, with appropriate adjustments to reflect short-term increases in energy requirements for anticipated new Company facilities. The monthly spreads were derived using historical relationships between monthly and annual energy usage.

IV. PEAK DEMAND FORECAST

The peak demand forecast is prepared using the Hourly Electric Load Model (HELM), developed by ICF, Incorporated, for EPRI under Project RP1955-1. The model forecasts hourly electrical loads over the long-term.

Load shape forecasts have always provided an important input to traditional system planning functions. Forecasts of the pattern of demand have acquired an added importance due to structural changes in the demand for electricity and increased utility involvement in influencing load patterns for the mutual benefit of the utility and its customers.

HELM represents an approach designed to better capture changes in the underlying structure of electricity consumption. Rapid increases in energy prices during the 1970's and early 1980's brought about changes in the efficiency of energy-using equipment. Additionally, sociodemographic and microeconomic developments have changed the composition of electricity consumption, including changes in fuel shares, housing mix, household age and size, construction features, mix of commercial services, and mix of industrial products.

In addition to these naturally occurring structural changes, utilities have become increasingly active in offering customers options which result in modified consumption patterns. An important input to the design of such demand-side programs is an assessment of their likely impact on utility system loads.

HELM has been designed to forecast electric utility load shapes and to analyze the impacts of factors such as alternative weather conditions, customer mix changes, fuel share changes, and demand-side programs. The structural detail of HELM provides forecasts of hourly class and

system load curves by weighting and aggregating load shapes for individual end-use components.

Model inputs include energy forecasts and load shape data for the user-specified end-uses. Inputs are also required to reflect new technologies, rate structures and other demand-side programs. Model outputs include hourly system and class load curves, load duration curves, monthly system and class peaks, load factors and energy requirements by season and rating period.

The methodology embedded in HELM may be referred to as a "bottom-up" approach. Class and system load shapes are calculated by aggregating the load shapes of component end-uses. The system demand for electricity in hour i is modeled as the sum of demands by each end-use in hour i :

$$L_i = \sum_{R=1}^{N_R} L_{R,i} + \sum_{C=1}^{N_C} L_{C,i} + \sum_{I=1}^{N_I} L_{I,i} + \text{Misc}_i$$

Where: L_i = system demand for electricity in hour i ;
 N_R = number of residential end-use loads;
 N_C = number of commercial end-use loads;
 N_I = number of industrial end-use loads;
 $L_{R,i}$ = demand for electricity by residential end-use R in hour i ;
 $L_{C,i}$ = demand for electricity by commercial end-use C in hour i ;
 $L_{I,i}$ = demand for electricity by industrial end-use I in hour i ;
 Misc_i = other demands (wholesale, street lighting, losses, company use) in hour i .

V. DATA SOURCES

Gulf utilizes Company historical customer, energy and revenue data by rate and class, and historical hourly load data coupled with weather information from WDAS and NOAA to drive the energy and demand models. Individual customer historical data is utilized in developing the projections for Gulf's largest Commercial and Industrial customers.

Gulf's models also utilize economic projections provided by Regional Financial Associates (RFA), a renowned economic services provider. RFA utilizes the Bureau of Labor Statistics for data on employment, unemployment rate and labor force. Personal Income data is obtained from the Bureau of Economic Analysis. Population and Population by Age Cohort, Households and Housing Permit information is obtained from the U.S. Bureau of Census.

VI. CONSERVATION PROGRAMS

As previously mentioned, Gulf's forecast of energy sales and peak demand reflect the continued impacts of our conservation programs. The following provides a listing of the conservation programs and program features in effect and estimates of reductions in peak demand and net energy for load reflected in the forecast as a result of these programs. These reductions also reflect the anticipated impacts of the new programs submitted in Gulf's Demand Side Management plan filed December 29, 1999 (Docket No. 991790-EG) as approved by the FPSC on April 17, 2000. These programs were designed to meet the incremental impacts of the Commission-approved demand and energy reduction DSM goals established in Order No.PSC-99-1942-FOF-EG on October 1,1999.

A. RESIDENTIAL CONSERVATION

In the residential sector, Gulf's GoodCents Home/Energy Star program is designed to make cost effective increases in the efficiencies of the new home construction market. This is being achieved by placing greater requirements on cooling and water heating equipment efficiencies, proper HVAC sizing, increased insulation levels in walls, ceilings, and floors, and tighter restrictions on glass area and infiltration reduction practices. In addition, Gulf monitors proper quality installation of all the above energy features. This program also provides the opportunity to offer the Energy Star Home Program to Gulf's builders and customers and correlates the performance of GoodCents Homes to the nationally recognized Energy Star

efficiency label. In many cases, a standard GoodCents Home will also qualify as an Energy Star home.

Further conservation benefits are achieved in the existing home market with Gulf's GoodCents Energy Survey program which is designed to provide existing residential customers with cost-effective energy conserving recommendations and options that increase comfort and reduce energy operating costs. The goal of this program is to upgrade the customer's home by providing specific whole house recommendations and a list of qualified companies who provide installation services. The benefits of this program are also made available to our customers through the GoodCents Mail-In Energy Survey program as well as a recently added on-line version.

In Concert With The Environment[®] is an environmental and energy awareness program that was being implemented in the 8th and 9th grade science classes in Gulf Power Company's service area. The program shows students how everyday energy use impacts the environment and how using energy wisely increases environmental quality. *In Concert With The Environment*[®] is brought to students who are already making decisions which impact our country's energy supply and the environment. Wise energy use today can best be achieved by linking environmental benefits to wise energy-use activities and by educating both present and future consumers on how to live "in concert with the environment". The program encourages participation by all household members through a take-home Energy Survey, Energy Survey Results, and student educational handbook and is considered an extension of Gulf's Residential Audit Program. Although Gulf ceased actively pursuing

implementation of this program in 1998, it is still available upon request for presentation in the schools within our service area.

The Duct Leakage Repair Program provides Gulf Power Company's residential customers a means to identify house air duct leakage and recommend repairs that can reduce customer energy usage and kW demand. Potential program participants are identified through the Residential Energy Audit Program as well as through educational and promotional activities. After identification of the leakage sites and quantities, the customer is given a written summary of the test findings and the potential for savings, along with a list of approved repair contractors. The program also provides duct leakage testing on new construction duct systems to ensure maximum efficiency and comfort in these new homes. This testing is available to the Builder, HVAC contractor, or homeowner. This program builds upon the Residential Energy Audit process by revealing additional energy efficiency and comfort measures available to the customer. Although Gulf discontinued actively promoting this program in 1998, it is still available upon request.

The GoodCents Environmental Home Program provides Gulf Power Company's residential customers with guidance concerning energy and environmental efficiency in new construction. The program promotes energy-efficient and environmentally sensitive home construction techniques by evaluating over 500 components in six categories of design and construction practices. The GoodCents Environmental Home consists of energy and environmental components. The energy components evaluate the building envelope and mechanical systems of the home with respect

to energy efficiency. The environmental components of the program include measures which also evaluate thermal energy loss, alternative energy sources, embodied energy and design strategies that affect energy usage in the home.

The Residential Geothermal Heat Pump Program reduces the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced and emerging geothermal systems. Geothermal heat pumps also provide significant benefits to participating customers in the form of reduced operating costs and increased comfort levels, and are superior to other available heating and cooling technologies with respect to source efficiency and environmental impacts. Gulf Power's Geothermal Heat Pump program is designed to overcome existing market barriers, specifically, lack of consumer awareness, knowledge and acceptance of this technology. The program additionally promotes efficiency levels well above current market conditions.

The GoodCents Select Program, an advanced energy management (AEM) program, provides Gulf Power's customers with a means of conveniently and automatically controlling and monitoring their energy purchases in response to prices that vary during the day and by season in relation to the Company's cost of producing or purchasing energy. The GoodCents Select System allows the customer to control more precisely the amount of electricity purchased for heating, cooling, water heating, and other selected loads; to purchase electric energy on a variable spot price rate; and to monitor at any time, and as often as desired, the use of electricity and its cost in dollars, both for the

billing period to date and on a forecast basis to the end of the period. The various components of the GoodCents Select system installed in the customer's home, as well as the components installed at Gulf Power, provide constant communication between customer and utility. The combination of the GoodCents Select system and Gulf's innovative variable rate concept will provide consumers with the opportunity to modify their usage of electricity in order to purchase energy at prices that are somewhat lower to significantly lower than standard rates a majority of the time. Further, the communication capabilities of the GoodCents Select system allow Gulf to send a critical price signal to the customer's premises during extreme peak load conditions. The signal results in a reduction attributable to predetermined thermostat and relay settings chosen by the individual participating customer. The customer's pre-programmed instructions regarding their desired comfort levels adjust electricity use for heating, cooling, water heating and other appliances automatically. Therefore, the customer's control of their electric bill is accomplished by allowing them to choose different comfort levels at different price levels in accordance with their individual lifestyles.

Additional conservation benefits are realized in the residential sector through Gulf's Outdoor Lighting program by conversion of existing, less efficient mercury vapor outdoor lighting to higher efficient high pressure sodium lighting.

B. COMMERCIAL/INDUSTRIAL CONSERVATION

In the commercial sector, Gulf's GoodCents Building program is designed to make cost effective increases in efficiencies in both new and existing commercial buildings with requirements resulting in energy conserving investments that address the thermal efficiency of the building envelope, interior lighting, heating and cooling equipment efficiency, and solar glass area. Additional recommendations are made, where applicable, on energy conserving options that include thermal storage, heat recovery systems, water heating heat pumps, solar applications, energy management systems, and high efficiency outdoor lighting.

The Tier I and Tier II Commercial Energy Analysis Programs and the Technical Assistance Audit (TAA) programs are designed to provide commercial customers with assistance in identifying cost effective energy conservation opportunities and introduce them to various technologies which will lead to improvements in the energy efficiency level of their business.

The Tier I program is a direct mail energy audit program that provides customers with recommendations that, if implemented, would move the customer beyond the efficiency level typically found in the marketplace. The Tier II program is an interactive program that consists of an on-site review by a Gulf Power Company Commercial Energy Consultant of the customer's facility operation, equipment and energy usage pattern. The customer is provided with energy management strategies that enhance their overall business operation, and customer specific recommendations, including

introduction to new technologies, for improving profitability by lowering energy cost.

The Technical Assistance Audit Program is designed with enough flexibility to allow a detailed economic evaluation of potential energy improvements through a more in-depth process which includes equipment energy usage monitoring, computer energy modeling, life cycle equipment cost analysis, and feasibility studies.

Gulf's Real Time Pricing (RTP) program is designed to take advantage of customer price response to achieve peak demand reductions. Customer participation is voluntary. Due to the nature of the pricing arrangement included in this program, there are some practical limitations to customers' ability to participate. These limitations include the ability to purchase energy under a pricing plan which includes price variation and unknown future prices; the transaction costs associated with receiving, evaluating, and acting on prices received on a daily basis; customer risk management policy; and other technical/economic factors.

Gulf also has an Interruptible Service program which provides the Company with a contracted and callable resource. Participating customers are notified in advance for the need to curtail consumption. Under preset terms and conditions, the customer must reduce demand and energy for the designated period or risk assessment of monetary penalties for noncompliance.

Gulf's Energy Services Program is designed to offer advanced energy services and energy efficient end-use equipment to meet the individual needs of large customers. These energy services include comprehensive audits, design, construction and financing of demand

reduction or efficiency improvement energy conservation projects.

C. STREET LIGHTING CONVERSION

Gulf's Street Lighting program is designed to achieve additional conservation benefits by conversion of existing less efficient mercury vapor street and roadway lighting to higher efficient high pressure sodium lighting.

D. CONSERVATION RESULTS SUMMARY

The following tables provide direct estimates of the energy savings (reductions in peak demand and net energy for load) realized by Gulf's conservation programs. These reductions are verified through on-going monitoring in place on Gulf's major conservation programs and reflect estimates of conservation undertaken by customers as a result of Gulf Power Company's involvement. The conservation without Gulf's involvement has contributed to further unquantifiable reductions in demand and net energy for load. These unquantifiable additional reductions are captured in the time series regressions in our demand and energy forecasts.

HISTORICAL
TOTAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	262,751	299,462	571,585,888

2001 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	13,713	19,907	27,146,312
2001	16,875	19,205	27,951,873
2002	18,550	21,108	29,165,634
2003	18,483	20,894	29,048,244
2004	18,450	20,866	28,785,409
2005	18,618	21,118	29,019,517
2006	18,585	21,101	28,973,923
2007	18,651	21,177	29,303,164
2008	18,618	21,159	29,331,564
2009	18,607	21,183	29,400,653
2010	18,628	21,220	29,430,183

2001 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	276,464	319,369	598,732,199
2001	293,339	338,574	626,684,072
2002	311,889	359,682	655,849,706
2003	330,372	380,576	684,897,950
2004	348,822	401,442	713,683,359
2005	367,440	422,560	742,702,876
2006	386,024	443,660	771,676,799
2007	404,675	464,838	800,979,962
2008	423,293	485,997	830,311,527
2009	441,900	507,179	859,712,178
2010	460,529	528,399	889,142,362

HISTORICAL
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	119,511	177,010	286,530,794

2001 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	12,363	15,540	11,245,340
2001	14,188	17,714	12,640,905
2002	15,864	19,617	13,805,348
2003	15,796	19,403	13,626,827
2004	15,919	19,531	13,742,463
2005	16,138	19,834	14,007,179
2006	16,158	19,869	14,038,195
2007	16,171	19,894	14,060,207
2008	16,190	19,927	14,087,221
2009	16,232	20,003	14,153,257
2010	16,252	20,040	14,184,273

2001 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	131,874	192,550	297,776,133
2001	146,062	210,264	310,417,038
2002	161,926	229,881	324,222,386
2003	177,722	249,284	337,849,213
2004	193,641	268,815	351,591,676
2005	209,779	288,649	365,598,855
2006	225,936	308,517	379,637,050
2007	242,107	328,412	393,697,257
2008	258,297	348,339	407,784,479
2009	274,529	368,341	421,937,735
2010	290,782	388,381	436,122,008

HISTORICAL
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	143,240	122,452	274,015,415

2001 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	1,350	4,367	15,542,279
2001	2,687	1,491	15,009,580
2002	2,686	1,491	15,142,698
2003	2,687	1,491	15,279,809
2004	2,531	1,335	14,945,590
2005	2,480	1,284	14,932,571
2006	2,427	1,232	14,923,915
2007	2,480	1,283	15,236,715
2008	2,428	1,232	15,237,183
2009	2,375	1,180	15,242,420
2010	2,376	1,180	15,242,421

2001 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	144,590	126,819	289,557,694
2001	147,277	128,310	304,567,274
2002	149,963	129,801	319,709,972
2003	152,650	131,292	334,989,780
2004	155,181	132,627	349,935,370
2005	157,661	133,911	364,867,941
2006	160,088	135,143	379,791,856
2007	162,568	136,426	395,028,570
2008	164,996	137,658	410,265,753
2009	167,371	138,838	425,508,173
2010	169,747	140,018	440,750,594

HISTORICAL
TOTAL OTHER DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	0	0	11,039,679

2001 BUDGET FORECAST
TOTAL OTHER DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	0	0	358,693
2001	0	0	301,388
2002	0	0	217,588
2003	0	0	141,608
2004	0	0	97,356
2005	0	0	79,767
2006	0	0	11,813
2007	0	0	6,242
2008	0	0	7,160
2009	0	0	4,976
2010	0	0	3,489

2001 BUDGET FORECAST
TOTAL OTHER DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	0	0	11,398,372
2001	0	0	11,699,760
2002	0	0	11,917,348
2003	0	0	12,058,957
2004	0	0	12,156,313
2005	0	0	12,236,080
2006	0	0	12,247,893
2007	0	0	12,254,135
2008	0	0	12,261,295
2009	0	0	12,266,270
2010	0	0	12,269,760

HISTORICAL
TOTAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	218,814	261,584	525,708,551

2001 BUDGET FORECAST
TOTAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	1,827	2,824	3,594,613
2001	1,858	2,880	3,585,333
2002	1,740	2,667	3,318,436
2003	1,484	2,206	2,847,245
2004	1,419	2,089	2,701,939
2005	1,450	2,145	2,732,376
2006	1,470	2,181	2,695,438
2007	1,484	2,206	2,711,879
2008	1,502	2,238	2,739,811
2009	1,544	2,315	2,803,663
2010	1,564	2,351	2,833,192

2001 BUDGET FORECAST
TOTAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	220,641	264,408	529,303,163
2001	222,499	267,288	532,888,496
2002	224,239	269,955	536,206,932
2003	225,723	272,161	539,054,177
2004	227,142	274,250	541,756,116
2005	228,592	276,395	544,488,492
2006	230,061	278,575	547,183,930
2007	231,545	280,782	549,895,808
2008	233,047	283,020	552,635,620
2009	234,591	285,334	555,439,281
2010	236,156	287,685	558,272,474

HISTORICAL
RESIDENTIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	109,185	159,306	277,776,684

2001 BUDGET FORECAST
RESIDENTIAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	1,568	2,565	2,443,517
2001	1,599	2,621	2,491,542
2002	1,481	2,408	2,308,445
2003	1,225	1,947	1,913,234
2004	1,160	1,830	1,812,180
2005	1,191	1,886	1,860,206
2006	1,211	1,922	1,891,222
2007	1,225	1,947	1,913,234
2008	1,243	1,979	1,940,248
2009	1,285	2,056	2,006,284
2010	1,305	2,092	2,037,300

2001 BUDGET FORECAST
RESIDENTIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	110,753	161,871	280,220,200
2001	112,352	164,492	282,711,742
2002	113,833	166,900	285,020,187
2003	115,058	168,847	286,933,421
2004	116,218	170,677	288,745,601
2005	117,409	172,563	290,605,807
2006	118,619	174,484	292,497,029
2007	119,844	176,432	294,410,263
2008	121,087	178,411	296,350,512
2009	122,372	180,466	298,356,795
2010	123,678	182,558	300,394,095

HISTORICAL
COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	109,629	102,278	236,892,188

2001 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	259	259	792,403
2001	259	259	792,403
2002	259	259	792,403
2003	259	259	792,403
2004	259	259	792,403
2005	259	259	792,403
2006	259	259	792,403
2007	259	259	792,403
2008	259	259	792,403
2009	259	259	792,403
2010	259	259	792,403

2001 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	109,888	102,537	237,684,591
2001	110,147	102,796	238,476,994
2002	110,406	103,055	239,269,397
2003	110,665	103,314	240,061,799
2004	110,924	103,573	240,854,202
2005	111,183	103,832	241,646,605
2006	111,442	104,091	242,439,008
2007	111,701	104,350	243,231,410
2008	111,960	104,609	244,023,813
2009	112,219	104,868	244,816,216
2010	112,478	105,127	245,608,619

HISTORICAL
OTHER EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	0	0	11,039,679

2001 BUDGET FORECAST
OTHER EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	0	0	358,693
2001	0	0	301,388
2002	0	0	217,588
2003	0	0	141,608
2004	0	0	97,356
2005	0	0	79,767
2006	0	0	11,813
2007	0	0	6,242
2008	0	0	7,160
2009	0	0	4,976
2010	0	0	3,489

2001 BUDGET FORECAST
OTHER EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	0	0	11,398,372
2001	0	0	11,699,760
2002	0	0	11,917,348
2003	0	0	12,058,957
2004	0	0	12,156,313
2005	0	0	12,236,080
2006	0	0	12,247,893
2007	0	0	12,254,135
2008	0	0	12,261,295
2009	0	0	12,266,270
2010	0	0	12,269,760

HISTORICAL
TOTAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	43,937	37,878	45,877,337

2001 BUDGET FORECAST
TOTAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	11,886	17,083	23,551,699
2001	15,017	16,325	24,366,540
2002	16,810	18,441	25,847,198
2003	16,999	18,688	26,200,999
2004	17,031	18,777	26,083,470
2005	17,168	18,973	26,287,141
2006	17,115	18,920	26,278,485
2007	17,167	18,971	26,591,285
2008	17,116	18,921	26,591,753
2009	17,063	18,868	26,596,990
2010	17,064	18,869	26,596,991

2001 BUDGET FORECAST
TOTAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	55,823	54,961	69,429,036
2001	70,840	71,286	93,795,576
2002	87,650	89,727	119,642,774
2003	104,649	108,415	145,843,773
2004	121,680	127,192	171,927,243
2005	138,848	146,165	198,214,384
2006	155,963	165,085	224,492,869
2007	173,130	184,056	251,084,154
2008	190,246	202,977	277,675,907
2009	207,309	221,845	304,272,897
2010	224,373	240,714	330,869,888

HISTORICAL
RESIDENTIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	10,326	17,704	8,754,110

2001 BUDGET FORECAST
RESIDENTIAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	10,795	12,975	8,801,823
2001	12,589	15,093	10,149,363
2002	14,383	17,209	11,496,903
2003	14,571	17,456	11,713,593
2004	14,759	17,701	11,930,283
2005	14,947	17,948	12,146,973
2006	14,947	17,947	12,146,973
2007	14,946	17,947	12,146,973
2008	14,947	17,948	12,146,973
2009	14,947	17,947	12,146,973
2010	14,947	17,948	12,146,973

2001 BUDGET FORECAST
RESIDENTIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	21,121	30,679	17,555,933
2001	33,710	45,772	27,705,296
2002	48,093	62,981	39,202,199
2003	62,664	80,437	50,915,792
2004	77,423	98,138	62,846,075
2005	92,370	116,086	74,993,048
2006	107,317	134,033	87,140,021
2007	122,263	151,980	99,286,994
2008	137,210	169,928	111,433,967
2009	152,157	187,875	123,580,940
2010	167,104	205,823	135,727,913

HISTORICAL
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	33,611	20,174	37,123,227

2001 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	1,091	4,108	14,749,876
2001	2,428	1,232	14,217,177
2002	2,427	1,232	14,350,295
2003	2,428	1,232	14,487,406
2004	2,272	1,076	14,153,187
2005	2,221	1,025	14,140,168
2006	2,168	973	14,131,512
2007	2,221	1,024	14,444,312
2008	2,169	973	14,444,780
2009	2,116	921	14,450,017
2010	2,117	921	14,450,018

2001 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	34,702	24,282	51,873,103
2001	37,130	25,514	66,090,280
2002	39,557	26,746	80,440,575
2003	41,985	27,978	94,927,981
2004	44,257	29,054	109,081,168
2005	46,478	30,079	123,221,336
2006	48,646	31,052	137,352,848
2007	50,867	32,076	151,797,160
2008	53,036	33,049	166,241,940
2009	55,152	33,970	180,691,957
2010	57,269	34,891	195,141,975

HISTORICAL
OTHER NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	0	0	0

2001 BUDGET FORECAST
OTHER NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

2001 BUDGET FORECAST
OTHER NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	0	0	0

VII. SMALL POWER PRODUCTION / RENEWABLE ENERGY

The current forecasts also consider Gulf's active position in the promotion of renewable energy resources. Following is a list of the cumulative small power producer capability anticipated in the base case forecast. This includes both waste-to-energy projects and other renewable fuel projects.

Small Power Producers
Net Capability

<u>Year</u>	<u>MW</u>
2000	30
2001	30
2002	30
2003	30
2004	30
2005	11
2006	11
2007	11
2008	11
2009	11
2010	11

Additionally, Gulf initiated implementation of a "Green Pricing" pilot program, *Solar for Schools*, to obtain funding for the installation of solar technologies in participating school facilities combined with energy conservation education of students. Initial solicitation began in September, 1996 and has resulted in participation of over 270 customers contributing \$30,961 through November, 2000. A prototype installation at a local middle

school has been completed and the experience gained at this site will be used to design future Solar for Schools installations.

Gulf Power Company customers also now have the opportunity to participate in a recent Florida Public Service Commission approved solar energy project. EarthCents was developed as a renewable energy program that will include a portfolio of renewable energy choices. The EarthCents Solar Program gives customers an opportunity to help pay for the construction of a photovoltaic generating facility. This project is a Southern Company-wide effort; with Gulf Power Company and her sister company Alabama Power the first to roll out their programs. The facility will be built within Southern's territory or the power will be purchased from other photovoltaic generating facilities. Approximately 10,000 customers are initially needed to sign up in order to begin construction of a 1 MW generating facility.

District heating and cooling plants are an older fundamental application of large central station heating and cooling equipment for service to multiple premises in close proximity. These systems are typically located in college or school settings as well as some military bases and industrial plants. Within Gulf's service area there exists a number of these systems which were appropriate or seemed appropriate at the time of their installation. Current day considerations for energy pricing, operating and maintenance expenses have resulted in many of these systems becoming uneconomical and decommissioned. Future installations of district heating and cooling plants of any consequence hinge primarily upon the opportunity for optimum application of this technology. The very dispersed construction of low rise buildings which are characteristic

of the building demographics in Gulf Power's service area yield no significant opportunities for district heating and cooling that are economically viable on the planning horizon.

GULF POWER COMPANY

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						Commercial		
<u>Year</u>	<u>Population</u> *	<u>Members per Household</u>	<u>GWH</u>	<u>Average No. of Customers</u>	<u>Average KWH Consumption Per Customer</u>	<u>GWH</u>	<u>Average No. of Customers</u>	<u>Average KWH Consumption Per Customer</u>
1991	694,222	2.68	3,455	259,395	13,320	2,273	34,372	66,120
1992	709,743	2.67	3,597	265,374	13,553	2,369	36,009	65,796
1993	731,974	2.70	3,713	271,594	13,671	2,433	38,477	63,242
1994	754,002	2.71	3,752	278,215	13,486	2,549	39,989	63,739
1995	757,367	2.67	4,014	283,717	14,148	2,708	41,007	66,043
1996	774,609	2.69	4,160	287,752	14,457	2,809	42,381	66,271
1997	797,652	2.69	4,119	296,497	13,894	2,898	43,955	65,928
1998	815,977	2.68	4,438	304,413	14,577	3,112	45,510	68,379
1999	835,189	2.67	4,471	312,283	14,318	3,223	47,292	68,141
2000	856,070	2.68	4,790	319,506	14,992	3,379	47,584	71,021
2001	873,939	2.66	4,733	328,136	14,424	3,351	48,640	68,896
2002	890,381	2.65	4,846	335,518	14,442	3,462	49,954	69,300
2003	903,139	2.65	4,909	341,418	14,378	3,560	51,054	69,728
2004	916,555	2.64	4,977	346,942	14,344	3,620	52,085	69,498
2005	930,240	2.64	5,049	352,644	14,317	3,688	53,149	69,397
2006	944,216	2.63	5,142	358,460	14,345	3,752	54,232	69,177
2007	958,539	2.63	5,233	364,359	14,361	3,807	55,328	68,816
2008	973,677	2.63	5,339	370,360	14,415	3,868	56,442	68,536
2009	989,938	2.63	5,446	376,606	14,462	3,925	57,593	68,146
2010	1,006,141	2.63	5,565	382,968	14,532	3,987	58,767	67,839
CAAG								
91-00	2.4%	0.0%	3.7%	2.3%	1.3%	4.5%	3.7%	0.8%
00-05	1.7%	-0.3%	1.1%	2.0%	-0.9%	1.8%	2.2%	-0.5%
00-10	1.6%	-0.2%	1.5%	1.8%	-0.3%	1.7%	2.1%	-0.5%

* Historical and projected figures include portions of Escambia, Santa Rosa, Okaloosa, Bay, Walton, Washington, Holmes, and Jackson counties served by Gulf Power Company.

GULF POWER COMPANY

Schedule 2.2

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Year	Industrial			Railroads and Railways GWH	Street & Highway Lighting GWH	Other Sales to Public Authorities GWH	Total Sales to Ultimate Consumers GWH
	GWH	Average No. of Customers	Average KWH Consumption Per Customer				
1991	2,117	260	8,143,878	0	16	0	7,861
1992	2,179	262	8,318,456	0	16	0	8,161
1993	2,030	268	7,574,388	0	16	0	8,192
1994	1,847	280	6,596,837	0	16	0	8,164
1995	1,795	276	6,502,731	0	16	0	8,534
1996	1,808	281	6,434,470	0	17	0	8,794
1997	1,903	277	6,870,216	0	17	0	8,938
1998	1,834	263	6,971,767	0	18	0	9,401
1999	1,846	251	7,357,969	0	18	0	9,558
2000	1,925	270	7,128,700	0	18	0	10,112
2001	2,007	319	6,291,916	0	20	0	10,111
2002	2,050	328	6,249,204	0	20	0	10,377
2003	2,051	331	6,197,202	0	21	0	10,541
2004	2,048	334	6,131,544	0	21	0	10,665
2005	2,044	337	6,065,477	0	21	0	10,802
2006	2,055	340	6,043,842	0	21	0	10,970
2007	2,040	343	5,948,579	0	22	0	11,102
2008	2,025	346	5,852,892	0	22	0	11,254
2009	2,009	349	5,756,991	0	22	0	11,402
2010	1,992	352	5,658,453	0	22	0	11,566
CAAG							
91-00	-1.1%	0.4%	-1.5%	0.0%	1.4%	0.0%	2.8%
00-05	1.2%	4.5%	-3.2%	0.0%	3.1%	0.0%	1.3%
00-10	0.3%	2.7%	-2.3%	0.0%	2.1%	0.0%	1.4%

GULF POWER COMPANY

Schedule 2.3

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

(1)	(2)	(3)	(4)	(5)	(6)
<u>Year</u>	Sales for Resale <u>GWH</u>	Utility Use & Losses <u>GWH</u>	Net Energy for Load <u>GWH</u>	Other Customers (Average No.)	Total No. of Customers
1991	296	547	8,704	68	294,095
1992	299	389	8,849	74	301,719
1993	317	565	9,074	79	310,419
1994	316	487	8,967	93	318,578
1995	336	582	9,452	119	325,119
1996	347	521	9,662	157	330,571
1997	342	607	9,887	215	340,944
1998	356	645	10,402	262	350,447
1999	348	558	10,464	286	360,113
2000	363	629	11,105	380	367,740
2001	353	673	11,137	470	377,564
2002	359	691	11,428	565	386,365
2003	366	703	11,610	660	393,463
2004	373	713	11,751	755	400,116
2005	379	724	11,905	850	406,979
2006	386	736	12,093	926	413,957
2007	393	747	12,242	976	421,005
2008	400	759	12,413	1,010	428,157
2009	407	770	12,580	1,034	435,581
2010	415	783	12,764	1,051	443,138
<u>CAAG</u>					
91-00	2.3%	1.6%	2.7%	21.1%	2.5%
00-05	0.9%	2.8%	1.4%	17.5%	2.0%
00-10	1.3%	2.2%	1.4%	10.7%	1.9%

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

GULF POWER COMPANY

Schedule 3.1

History and Forecast of Summer Peak Demand - MW
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	Residential Load <u>Management</u>	Residential Conservation	Comm/Ind Load <u>Management</u>	Comm/Ind Conservation	<u>Net Firm Demand</u>
1991	1,923	64	1,860	0	0	83	0	92	1,748
1992	2,018	71	1,947	0	0	86	0	97	1,836
1993	2,096	76	2,021	0	0	88	0	102	1,906
1994	1,999	72	1,927	0	0	92	0	104	1,803
1995	2,265	82	2,183	0	0	96	0	122	2,048
1996	2,196	79	2,118	0	0	100	0	127	1,969
1997	2,283	75	2,208	0	0	107	0	136	2,040
1998	2,422	82	2,340	16	0	115	0	138	2,154
1999	2,432	84	2,347	0	0	120	0	143	2,169
2000	2,583	86	2,496	17	0	132	0	145	2,289
2001	2,558	77	2,482	26	0	146	0	147	2,265
2002	2,634	78	2,556	26	0	162	0	150	2,322
2003	2,652	79	2,573	26	0	178	0	153	2,322
2004	2,690	80	2,609	26	0	194	0	155	2,341
2005	2,731	82	2,650	26	0	210	0	158	2,364
2006	2,783	83	2,700	26	0	226	0	160	2,397
2007	2,828	85	2,743	22	0	242	0	163	2,423
2008	2,879	86	2,793	18	0	258	0	165	2,456
2009	2,930	88	2,842	14	0	275	0	167	2,488
2010	2,987	90	2,897	10	0	291	0	170	2,526
CAAG									
91-00	3.3%	3.4%	3.3%	100.0%	0.0%	5.2%	0.0%	5.1%	3.0%
00-05	1.1%	-1.0%	1.2%	100.0%	0.0%	9.7%	0.0%	1.7%	0.6%
00-10	1.5%	0.4%	1.5%	100.0%	0.0%	8.2%	0.0%	1.6%	1.0%

NOTE 1: Includes contracted capacity and energy allocated to certain Resale customers by Southeastern Power Administration (SEPA)

NOTE 2: The forecasted interruptible amounts shown in col (5) are included here for information purposes only. The projected demands shown in column (2), column (4) and column (10) do not reflect the impacts of interruptible. Gulf treats interruptible as a supply side resource.

GULF POWER COMPANY

Schedule 3.2

History and Forecast of Winter Peak Demand - MW
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	<u>Residential Load Management</u>	<u>Residential Conservation</u>	<u>Comm/Ind Load Management</u>	<u>Comm/Ind Conservation</u>	<u>Net Firm Demand</u>
90-91	1,649	50	1,600	0	0	126	0	98	1,425
91-92	1,772	60	1,712	0	0	132	0	99	1,541
92-93	1,820	61	1,759	0	0	140	0	100	1,579
93-94	2,055	72	1,983	0	0	145	0	101	1,809
94-95	1,993	71	1,922	0	0	150	0	102	1,740
95-96	2,404	82	2,322	0	0	157	0	103	2,144
96-97	2,208	80	2,127	0	0	163	0	105	1,939
97-98	1,981	61	1,919	0	0	171	0	118	1,692
98-99	2,392	79	2,313	0	0	177	0	122	2,093
99-00	2,230	75	2,155	0	0	193	0	127	1,911
00-01	2,404	64	2,340	27	0	210	0	128	2,065
01-02	2,509	65	2,444	27	0	230	0	130	2,149
02-03	2,542	66	2,476	27	0	249	0	131	2,161
03-04	2,572	67	2,505	27	0	269	0	133	2,171
04-05	2,607	68	2,538	27	0	289	0	134	2,184
05-06	2,649	70	2,579	27	0	309	0	135	2,205
06-07	2,685	71	2,614	23	0	328	0	136	2,220
07-08	2,727	72	2,655	19	0	348	0	138	2,241
08-09	2,767	73	2,694	15	0	368	0	139	2,260
09-10	2,812	75	2,738	11	0	388	0	140	2,284
CAAG									
91-00	3.4%	4.7%	3.4%	0.0%	0.0%	4.8%	0.0%	2.9%	3.3%
00-05	3.2%	-1.9%	3.3%	0.0%	0.0%	8.4%	0.0%	1.1%	2.7%
00-10	2.3%	-0.1%	2.4%	0.0%	0.0%	7.3%	0.0%	1.0%	1.8%

NOTE 1: Includes contracted capacity and energy allocated to certain Resale customers by Southeastern Power Administration (SEPA)

NOTE 2: The forecasted interruptible amounts shown in col (5) are included here for information purposes only. The projected demands shown in column (2), column (4) and column (10) do not reflect the impacts of interruptible. Gulf treats interruptible as a supply side resource.

GULF POWER COMPANY

Schedule 3.3

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>Year</u>	<u>Total</u>	<u>Residential Conservation</u>	<u>Comm/Ind Conservation</u>	<u>Retail</u>	<u>Wholesale</u>	<u>Utility Use & Losses</u>	<u>Net Energy for Load</u>	<u>Load Factor %</u>
1991	9,128	233	191	7,861	296	547	8,704	56.8%
1992	9,291	239	202	8,161	299	389	8,849	54.9%
1993	9,537	247	216	8,192	317	565	9,074	54.3%
1994	9,443	254	222	8,164	316	487	8,967	56.8%
1995	9,942	263	227	8,534	336	582	9,452	52.7%
1996	10,167	273	232	8,794	347	521	9,662	55.9%
1997	10,407	282	239	8,938	342	607	9,887	55.3%
1998	10,950	292	257	9,401	356	645	10,402	55.1%
1999	11,036	298	274	9,558	348	558	10,464	55.1%
2000	11,704	309	290	10,112	363	629	11,105	55.2%
2001	11,764	322	305	10,111	353	673	11,137	56.1%
2002	12,084	336	320	10,377	359	691	11,428	56.2%
2003	12,295	350	335	10,541	366	703	11,610	57.1%
2004	12,464	364	350	10,665	373	713	11,751	57.3%
2005	12,648	378	365	10,802	379	724	11,905	57.5%
2006	12,864	392	380	10,970	386	736	12,093	57.6%
2007	13,043	406	395	11,102	393	747	12,242	57.7%
2008	13,243	420	410	11,254	400	759	12,413	57.7%
2009	13,440	434	426	11,402	407	770	12,580	57.7%
2010	13,653	448	441	11,566	415	783	12,764	57.7%
<u>CAAG</u>								
91-00	2.8%	3.2%	4.7%	2.8%	2.3%	1.6%	2.7%	-0.3%
00-05	1.6%	4.1%	4.7%	1.3%	0.9%	2.8%	1.4%	0.8%
00-10	1.6%	3.8%	4.3%	1.4%	1.3%	2.2%	1.4%	0.4%

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

GULF POWER COMPANY

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)
	2000 Actual		2001 Forecast		2002 Forecast	
<u>Month</u>	<u>Peak Demand</u> <u>MW</u>	<u>NEL</u> <u>GWH</u>	<u>Peak Demand</u> <u>MW</u>	<u>NEL</u> <u>GWH</u>	<u>Peak Demand</u> <u>MW</u>	<u>NEL</u> <u>GWH</u>
January	1,911	813	2,065	878	2,149	945
February	1,646	739	1,885	766	1,945	794
March	1,358	738	1,616	774	1,711	820
April	1,443	722	1,517	756	1,530	762
May	2,001	999	1,965	964	1,986	974
June	2,059	1,075	2,156	1,137	2,247	1,188
July	2,289	1,220	2,265	1,170	2,322	1,224
August	2,258	1,196	2,214	1,196	2,271	1,212
September	2,051	990	2,090	998	2,119	1,014
October	1,841	833	1,702	832	1,715	838
November	1,793	819	1,586	774	1,576	769
December	2,160	960	1,886	891	1,866	887

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

Utility Gulf Power Company

Schedule 5
Fuel Requirements

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
<u>Fuel Requirements</u>			<u>Units</u>	<u>Actual 1999</u>	<u>Actual 2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
(1)	Nuclear		Trillion BTU	None	None	None	None	None	None	None	None	None	None	None	None
(2)	Coal		1000 TON	5,871	5,794	5,215	5,493	5,318	5,480	5,351	5,370	5,245	5,385	5,350	5,332
(3)	Residual	Total	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(4)		Steam	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(5)		CC	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(6)		CT	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(7)		Diesel	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(8)	Distillate	Total	1000 BBL	42	41	48	39	22	21	20	14	10	9	9	9
(9)		Steam	1000 BBL	16	12	10	10	11	10	13	9	10	9	9	9
(10)		CC	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(11)		CT	1000 BBL	26	29	38	29	11	11	7	5	0	0	0	0
(12)		Diesel	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(13)	Natural Gas	Total	1000 MCF	3,684	2,319	2,771	13,597	21,021	24,781	30,888	29,110	30,256	29,762	29,437	29,385
(14)		Steam	1000 MCF	3,684	2,319	2,771	2,576	2,485	2,514	2,642	2,399	2,365	2,371	2,636	2,443
(15)		CC	1000 MCF	None	None	None	11,021	18,536	22,267	27,667	25,861	26,653	26,289	25,553	25,316
(16)		CT	1000 MCF	None	None	None	None	None	None	579	850	1,238	1,102	1,248	1,626
(17)	Other		Trillion BTU	None	None	None	None	None	None	None	None	None	None	None	None

Utility: Gulf Power Company

Schedule 6.1
Energy Sources

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Energy Sources			Units	Actual 1999	Actual 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
(1)	Annual Firm Interchange		GWH	(2,787)	(1,888)	(1,358)	(3,260)	(3,740)	(4,578)	(4,940)	(4,497)	(4,208)	(4,296)	(3,967)	(3,449)
(2)	Nuclear		GWH	None	None	None	None	None	None	None	None	None	None	None	None
(3)	Coal		GWH	12,751	12,627	12,159	12,833	12,439	12,845	12,534	12,588	12,299	12,623	12,536	12,218
(4)	Residual	Total	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(5)		Steam	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(6)		CC	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(7)		CT	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(8)		Diesel	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(9)	Distillate	Total	GWH	11	12	16	12	5	5	3	2	0	0	0	0
(10)		Steam	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(11)		CC	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(12)		CT	GWH	11	12	16	12	5	5	3	2	0	0	0	0
(13)		Diesel	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(14)	Natural Gas	Total	GWH	333	227	204	1,728	2,794	3,366	4,262	4,000	4,151	4,086	4,011	3,995
(15)		Steam	GWH	226	136	193	180	175	177	185	169	167	167	186	173
(16)		CC	GWH	None	None	None	1,538	2,612	3,182	4,015	3,745	3,861	3,810	3,701	3,661
(17)		CT	GWH	107	91	11	10	7	7	62	86	123	109	124	161
(18)	NUGs		GWH	156	127	116	115	112	113	46	0	0	0	0	0
(19)	Net Energy for Load		GWH	10,464	11,105	11,137	11,428	11,610	11,751	11,905	12,093	12,242	12,413	12,580	12,764

NOTE: Includes energy generated and sold under existing power sales contracts, and energy from projected short term firm purchases.

Utility: Gulf Power Company

Schedule 6.2
Energy Sources

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Energy Sources		Units	Actual 1999	Actual 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
(1)	Annual Firm Interchange		%	(26.63)	(17.00)	(12.19)	(28.53)	(32.21)	(38.96)	(41.50)	(37.19)	(34.37)	(34.61)	(31.53)	(27.02)
(2)	Nuclear		%	None	None	None	None	None	None	None	None	None	None	None	None
(3)	Coal		%	121.86	113.71	109.18	112.29	107.14	109.31	105.28	104.09	100.47	101.69	99.65	95.72
(4)	Residual	Total	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(5)		Steam	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(6)		CC	%	None	None	None	None	None	None	None	None	None	None	None	None
(7)		CT	%	None	None	None	None	None	None	None	None	None	None	None	None
(8)		Diesel	%	None	None	None	None	None	None	None	None	None	None	None	None
(9)	Distillate	Total	%	0.11	0.11	0.14	0.11	0.04	0.04	0.03	0.02	0.00	0.00	0.00	0.00
(10)		Steam	%	None	None	None	None	None	None	None	None	None	None	None	None
(11)		CC	%	None	None	None	None	None	None	None	None	None	None	None	None
(12)		CT	%	0.11	0.11	0.14	0.11	0.04	0.04	0.03	0.02	0.00	0.00	0.00	0.00
(13)		Diesel	%	None	None	None	None	None	None	None	None	None	None	None	None
(14)	Natural Gas	Total	%	3.18	2.04	1.83	15.12	24.07	28.64	35.80	33.08	33.91	32.92	31.88	31.30
(15)		Steam	%	2.16	1.22	1.73	1.58	1.51	1.51	1.55	1.40	1.36	1.35	1.48	1.36
(16)		CC	%	None	None	None	None	22.50	27.08	33.73	30.97	31.54	30.69	29.42	28.68
(17)		CT	%	1.02	0.82	0.10	0.09	0.06	0.06	0.52	0.71	1.00	0.88	0.99	1.26
(18)	NUGs		%	1.49	1.14	1.04	1.01	0.96	0.96	0.39	0.00	0.00	0.00	0.00	0.00
(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

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CHAPTER III

PLANNING ASSUMPTIONS AND PROCESSES

THE INTEGRATED RESOURCE PLANNING PROCESS

Gulf Power Company participates in the Southern electric system's Integrated Resource Planning (IRP) process. The IRP process begins with a team of experts from within and outside the Southern electric system that meets to discuss current and historical economic trends and conditions as well as future expected economic conditions and most probable occurrences which would impact the Southern electric system's business over the next twenty to twenty-five years. This economic panel decides what the various escalation and inflation rates will be for the various components that impact the financial condition of the Company. This group is the source for the assumptions surrounding general inflation and escalation regarding fuel, construction costs, labor rates and variable O&M.

In addition to this activity, there are a number of activities which are conducted in parallel with one another in the IRP process. These activities include the energy and demand forecasting, fuel price forecasting, technology screening analysis and evaluation, technology engineering cost estimation modeling, and miscellaneous issues and assumptions determinations. In addition to the changes of these assumptions, utilities have become increasingly active in offering customers options which result in modified consumption patterns. An important input to the design of

such demand-side programs is an assessment of their likely impact on utility system loads.

As mentioned earlier, Gulf's forecast of energy sales and peak demand reflect the continued impacts of our 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 in the integration process.

A number of existing generating units on the Southern electric system 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. The repowering evaluation is particularly important as a possible competing technology with the other unit addition technologies. The evaluations are extremely important in order to maximize the benefit of existing investment from both a capital and an operating and maintenance expense basis.

Additionally, an analysis of the market for power purchases is performed in order to determine the cost-effectiveness in comparison to the available supply-side and demand-side options. Power purchases are looked at from both a near-term and long-term basis as a possible means of meeting the system's demand requirements. It is important

to remember that power purchases can be procured from utility sources as well as non-utility generators.

Up to this point, the supply side of the integrated resource planning process is focusing on the Southern electric system as a whole which has as its planning criterion a 15.0% reserve margin target for the year 2004 and beyond. This reserve margin is the optimum economic point where the system can meet its energy and demand requirements taking into account load forecast error, abnormal weather conditions, and unit-forced outage conditions. It also takes into account the cost of adding additional generation balanced with the societal cost of not serving all the energy requirements of the customer.

Once the necessary assumptions are determined, the technologies are screened to the most acceptable candidates, the necessary planning inputs are defined and the generation mix analysis is initiated. The supply-side technology candidates are input into PROVIEW®, the generation mix model, in specific MW block sizes for selection over the planning horizon for the entire Southern electric system. The main optimization tool used in the mix analysis is the PROVIEW® model. Although this model uses many data inputs and assumptions in the process of optimizing system generation additions, the key assumptions are load forecasts, DSOs, candidate units, reserve margin, 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 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 with each other. A least cost resource plan is developed only after reviewing many construction options.

PROVIEW® produces a number of different combinations over the planning horizon which evaluates 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 (objective function) 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 out of the PROVIEW® program are for the entire Southern electric system and are reflective of the various technology candidates selected.

After the Southern electric system 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 matches the system need, the system base supply-side plan is complete. The result of this allocation is an individual operating company supply plan as it would fit within the Southern electric system 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. After the incorporation of the cost effective demand-side impacts, a final integrated resource plan for the individual operating companies is produced.

Finally, a sanity check of the plan as well as a financial analysis of the impact of the plan are performed. The plan is analyzed for changes in load forecast as well as fuel price variations, as sensitivities, in order 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 personnel.

In summary, the Southern electric system's integrated resource planning 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, we are continually looking at a broad range of alternatives in order to meet the system's projected demand and energy requirements. The result of the Southern electric system's integrated resource planning process is an integrated plan which can meet the needs of our customers in a cost-effective and reliable manner.

The Integrated Resource Planning process is a very manpower-intensive activity. The Southern electric system has recently decided that it would only perform a "full-blown" IRP on every third year with what are called "updates" for the interim years. These updated plans merely take the changes in the demand and energy forecast and any major changes to other assumptions and remixes to assure the companies that the IRP is still valid. Likewise, most sensitivities are suspended for the update plans in an effort to conserve manpower and costs. The main reason we have chosen to perform updates rather than put forth the effort to do a full-blown IRP is that we have not observed things to be changing such in recent years to make a significant difference from year to year. The costs of performing full-blown IRPs on an annual basis with such little change would not be justifiable.

TRANSMISSION PLANNING PROCESS

The transmission system is not studied as a part of the Integrated Resource Planning (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 consumption under a number of system conditions, known as contingencies. The results of the IRP, particularly with regard to location of future generating units, is factored into transmission studies in order to determine what the impacts of various generation site options have on the transmission system. The 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 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 it is concluded which solution is chosen to correct the problem, a capital budget expenditure request is prepared for executive approval. It should be noted that not all thermal overloads or voltage limit violations warrant being corrected. 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.

The current IRP update calls for Gulf Power Company to make a series of purchased power arrangements until the end of the year 2001. The planned transmission is adequate to handle these purchased power transactions during the time of Gulf's needs. It has been and will continue to be Gulf's practice to perform a transmission analysis of all viable purchased power proposals to determine any transmission constraints and formulate a plan, if any, to most cost-effectively solve any problems prior to proceeding with negotiations for the agreement.

FUEL PRICE FORECAST PROCESS

FUEL PRICE FORECASTS

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

The delivered price of any fuel consists of two components, the commodity price and the transportation cost. Commodity prices are forecast as mine-mouth prices for coal or well-head prices for natural gas. Because mine-mouth coal prices vary by source, sulfur content and Btu level, Southern prepares commodity price forecasts for 26 different coal classifications used on the SES. Because natural gas and oil prices do not experience the same variations, Southern prepares a single commodity price forecast for each of these fuels. In the case of natural gas, a price basis is applied to the single commodity price forecast for the Henry Hub, a delivery pricing point in Louisiana, and the various pipelines serving SES's Plants. This price basis is based on historical averages between the various pipelines.

The level of detail with which transportation costs are projected depends on the purpose for which the forecast will be used. Generic transportation costs that reflect an average cost for delivery within SES's territory are used in the delivered price forecast used for modeling generic unit

additions in the Integrated Resource Planning (IRP) process. Site-specific transportation costs are developed for existing units to produce delivered price forecasts for use both in the IRP process and in fuel budgeting. Similarly, when site-specific unit additions are under consideration, site-specific transportation costs are developed for each option.

Given the proposed resource additions in this site plan, the following discussion will focus on the commodity price forecasts for coal and natural gas.

SOUTHERN GENERIC FORECAST

Each year, Southern develops a fuel price forecast for coal, oil, and natural gas, which extends through the Company's 10-year planning horizon. This forecast is developed by a fuel panel consisting of fuel procurement managers at each of the five operating companies, with input from Southern Company Services fuel staff and outside consultants ("Fuel Panel").

The fuel price forecasting process begins with an annual Fossil Fuel Price Workshop that is held with representatives from recognized leaders in energy-related economic forecasting and transportation-related industries. Presenters at the last fuel price workshop included representatives from Energy Ventures Analysis, Cambridge Energy Research Associates, Resource Data International, PIRA Energy Group, WEFA Energy Services, Hill and

Associates, Regional Financial Associates, Coal Ink Consultancy Ltd and Criton Company.

During the Fossil Fuel Price Workshop, each fuel procurement representative presents their "base case" forecast and assumptions, and high and low fuel price scenarios are discussed.

After the workshop, presentations by the SCS Fuel Services group reference the outside consultant forecasts and identify any major assumption differences. The Fuel Panel then consolidates both internal and external forecasts and assumptions to derive its commodity forecast for each type of fuel. The Fuel Panel's 2000 commodity price forecasts for 1.0% sulfur coal, oil, and natural gas are included in the table below.

SOUTHERN GENERIC FUEL PRICE FORECAST
(\$/MMBtu)

	<u>COAL*</u>	<u>NAT. GAS</u>	<u>OIL</u>
2001	1.024	4.87	5.21
2002	1.047	4.02	4.89
2003	1.057	3.68	5.28
2004	1.066	3.27	5.44
2005	1.076	2.69	5.60
2006	1.086	3.00	5.88
2007	1.095	2.97	6.17
2008	1.105	3.11	6.48
2009	1.115	3.14	6.74
2010	1.125	3.28	7.01

*Central Appalachia, 12000 BTU/lb., 1% Sulfur

COAL PRICE FORECAST

The information provided during the Fuel Price Workshop is used to develop the SES forecast of generic coal prices. In general, coal has experienced real price declines over the last several decades. There is an abundant supply of coal and the industry has experience downward price pressures from multiple sources. The primary sources of downward price pressure include environmental regulation, an over supply of available coal and import coal. Only in the latter part of 2000, continuing into 2001, have we seen real price increases in coal prices as a result of increased demand and short supply. We expect to see the market stabilize over the next 12 months and return to more normal prices.

The generic coal price used in the IRP process is based on an average expectation of coal commodity cost combined with average transportation fees. This serves as a basis for the fuel costs associated with the pulverized coal candidate technology in the mix analyses. This generic fuel commodity price is also used with plant specific transportation fees in combination with a plant's contract coal prices to develop the existing fuel price projection for the Company's budget process.

NATURAL GAS PRICE FORECAST

The consensus is that gas resources are sufficient to meet the growing demand with moderate nominal dollar increases in price during the planning period. Dramatic improvements in producers' ability to find and develop natural gas reserves have prompted suppliers to have a bullish outlook on future markets. In the few years, success rates in drilling offshore exploration wells have improved dramatically. In addition, new completion techniques such as horizontal drilling have increased production per well substantially. Lastly, new production methods are allowing producers to drill in very deep water at a lower cost. The result is expected to be a sufficient supply of volumes of gas in the near future.

NATURAL GAS AVAILABILITY

Gas supplies in the SES region will improve substantially over the next five years. Producers have announced major discoveries in the Gulf of Mexico. Suppliers forecast that an additional 4 Bcf per day should be available by the year 2005. Additionally, Canadian producers and pipelines have announced their plans to increase gas imports from both Eastern and Western Canada. Finally, liquefied natural gas (LNG) imports at Elba Island, GA and Lake Charles, Louisiana will increase gas supply about 1.5 Bcf per day by May of 2002. These developments

suggest that by 2005, U.S. gas supplies (specifically the SES region) should increase 15-16% above current levels.

Near-term (2001-2004), demands in advance of new offshore pipeline construction, deepwater Gulf of Mexico development, increased LNG imports, Alaskan and/or Far North Canadian and Eastern Canadian development that will impose upward pressure on the price of natural gas. After the new pipelines and developments are in place, natural gas prices are expected to stabilize.

Assuming the construction of additional pipeline facilities and continuing development of new production, sufficient natural gas supplies are available in the Southeastern United States to support full load operation of SES's Gas-based Power Plants.

STRATEGIC ISSUES

As mentioned earlier, Gulf's immediate needs for additional supply-side resources will come from purchased power arrangements which afford the Company a great deal of flexibility and less risk exposure. The flexibility of purchases allows the Company to react quickly to changes that may occur over the next few years without serious negative financial impacts. Gulf fully expects to build new generating capacity in the future to maintain reliability. Upon expiration of the purchase power arrangements in 2002, Gulf plans to utilize a combined cycle unit currently under construction at its Lansing Smith Generating Plant.

Another important strategic advantage for Gulf is its association and planning as a part of the Southern electric system. Being able to draw on the planning services of Southern Company Services to perform the bulk of the planning and to use the pool of resources of the Southern electric system in times that the Company is short of reserves provides Gulf and its customers with many benefits. In addition, Southern's Wholesale Energy section has secured firm energy at prices that are leading to significant savings to the Southern electric system.

ENVIRONMENTAL CONCERNS

As mentioned before, Gulf is looking to power purchases to meet its generating capacity needs until it constructs the next generation addition. Currently this new combined cycle unit is scheduled to be in service in the year 2002. This generator is under construction at an existing site, the Smith Electric Generating Plant, and as such would not be considered a greenfield site that would need extensive environmental studies leading to obtaining construction and operating permits for this unit.

The next planned resource addition after the above mentioned unit is a 157 MW combustion turbine in 2005 at the Smith Plant. Then Gulf plans to participate with sister companies in installing several "F" class combustion turbines. Since the site has not been chosen, it would not be appropriate to conduct extensive environmental studies leading to obtaining construction and operating permits for these new additions at this time. It has been and will continue to be Gulf's intent to always comply with all environmental laws and regulations as they apply to the Company's operation.

Gulf Power's clean air compliance strategy serves as a road map for a 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 environment with the variety of available compliance options.

Gulf Power completed its initial Clean Air Act Amendments (CAAA) strategy in December 1990 and has produced updates or reviews in subsequent years following this initial strategy. Due to the relatively minor changes in assumptions since the last review and the lack of new information or developments on the regulatory front, this status review serves as a confirmation of the general direction of Gulf Power Company's compliance strategy.

The focus of the strategy updates has, to date, centered around compliance with the acid rain requirements while considering other significant clean air requirements, and potential new requirements of the CAAA. There is increasing uncertainty associated with future regulatory requirements which could significantly impact both the scope and cost of compliance over the next decade. However, there is insufficient information at this time to warrant incorporating these scenarios into a revised strategy. Gulf Power will continue its involvement in future clean air requirements. These requirements will be incorporated into future strategy updates as appropriate.

Phase I of Title IV of the CAAA became effective for SO₂ on January 1, 1995. Fuel procurement and equipment installation efforts to support Gulf Power's Phase I fuel

switching strategy are complete. Gulf Power has also completed installation of low-NOx burners on two large coal-fired units to support compliance with Title IV NOx requirements. In addition, Gulf Power brought 4 Phase II units into Phase I as 1995 substitution units. All of these units were affected for SO2 and NOx starting in 1995 and are grandfathered at the Phase I NOx limits during Phase II.

With respect to Phase II sulfur dioxide compliance, Gulf Power is using additional fuel switching coupled with the use of emission allowances banked during Phase I and the acquisition of additional allowances to meet compliance. Only minor differences in the fuel selection at several plants is needed during Phase II. The updated strategy recommends that plant Scholz switch to 1.0% sulfur coal during Phase II. The previous strategy showed a Phase II switch to 1.5% sulfur coal.

In addition, potential future regulatory requirements, especially under ozone non-attainment or revised ambient standards, are aimed at further NOx and SO2 reductions. All of this uncertainty reinforces the need for a flexible, robust compliance plan. Accordingly, as decision dates for fuel and equipment purchases approach or as better information becomes available relative to regulatory and economic drivers, the analysis will be updated to determine the most cost-effective decisions while maintaining future flexibility.

SMITH UNIT 3 ENVIRONMENTAL CONSIDERATIONS

On June 7, 1999, the Company filed its Site Certification Application (SCA) with the Florida Department of Environmental Protection under the Florida Electrical Power Plant Siting Act (PPSA). Smith Unit 3 will be operated in compliance with all applicable federal and state environmental laws and regulations. Two principal environmental issues considered were air emissions and any thermal impacts due to the discharge of cooling water from Smith Unit 3.

As mentioned above, Smith Unit 3 will be fueled by natural gas only and therefore, the only major air emission issue is that of NO_x. Gulf is pursuing an air emission strategy that will reduce NO_x emissions from one of the existing Smith generating units leading to a net reduction in total NO_x emissions for the entire plant. Additional environmental and land use information for the selected site is included in the appendix which is an excerpt from the SCA. Environmental permits were approved on July 25, 2000.

AVAILABILITY OF SYSTEM INTERCHANGE

Gulf Power Company coordinates its planning and operation with the other operating companies of the Southern electric System: Alabama Power Company, Georgia Power Company, Mississippi Power Company, and Savannah Electric 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 planned generating capacity to its load and reserve responsibility. Each company buys or sells its temporary deficit or surplus capacity from or to the pool. This is done through the mechanism of an Intercompany Interchange Contract among the companies, that is reviewed and updated annually.

OFF-SYSTEM SALES

Gulf Power Company, along with the other Southern electric operating companies; have negotiated the sales of capacity and energy to several utilities outside the Southern System. The term of the contracts started prior to 2001 and extends into 2010. Gulf's share of the capacity and energy sales is reflected in the reserves on Schedules 7.1 and 7.2 and the energy and fuel use on Schedules 5 and 6.1.

CHAPTER IV

FORECAST OF FACILITIES REQUIREMENTS

CAPACITY RESOURCE ALTERNATIVES

POWER PURCHASES

Gulf has entered into short-term purchased power arrangements that will meet its needs through the year 2001. Beyond that time, purchased power will be economically evaluated against internal construction and other opportunities to meet our customer needs in the least cost manner.

CAPACITY ADDITIONS

Gulf performed a number of economic evaluations of various potential supply options in order to determine the Company's most cost-effective means of meeting its 2002 capacity obligation. Prior to June 1998, the Company completed its evaluations that determined that construction of a combined cycle unit at its Lansing Smith Generating Plant was its best internal choice for meeting the 2002 needs. Prior to moving forward with the certification of this unit under the rules of the state's Power Plant Siting Act (PPSA), the Company issued a Request for Proposals (RFP) in order to solicit possible cost-effective alternatives to Gulf's own construction of this combined cycle unit. After performing the evaluations of the proposals, Gulf decided to proceed with constructing Smith Unit 3, for which the Company has received a Commission determination of need.

Environmental permits were approved on July 25, 2000 and construction is proceeding on schedule.

FUTURE CONSIDERATIONS

Gulf will continue to evaluate its options in order to determine how to best meet its capacity obligations beyond 2002. After the installation of Smith Unit 3, the Company plans to install a 157 MW combustion turbine (CT) in 2005 at the Smith Plant and then participate with sister companies in installing several "F" class combustion turbines (CT). These additions are currently planned as outlined in Schedule 8 of this document. The Company will continue to review all available capacity resources in order to make sure that its customer's electricity needs are met, but in the most economical manner as well.

UTILITY: GULF POWER COMPANY

SCHEDULE 7.1
FORECAST OF CAPACITY, DEMAND, AND SCHEDULED MAINTENANCE AT TIME OF SUMMER PEAK (A)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	TOTAL INSTALLED CAPACITY MW	FIRM CAPACITY IMPORT MW (B)	FIRM CAPACITY EXPORT MW	NUG MW	TOTAL CAPACITY AVAILABLE MW	FIRM PEAK DEMAND MW	RESERVE MARGIN BEFORE MAINTENANCE		SCHEDULED MAINTENANCE MW	RESERVE MARGIN AFTER MAINTENANCE	
							MW	% OF PEAK		MW	% OF PEAK
2001	2249	470	(212)	19	2526	2265	261	11.5%	NONE	261	11.5%
2002	2823	26	(210)	19	2658	2322	336	14.5%		336	14.5%
2003	2816	26	(210)	19	2651	2322	329	14.2%		329	14.2%
2004	2803	55	(210)	19	2667	2341	326	13.9%		326	13.9%
2005	2954	26	(210)	0	2770	2364	406	17.2%		406	17.2%
2006	2954	26	(210)	0	2770	2397	373	15.6%		373	15.6%
2007	2982	22	(210)	0	2794	2423	371	15.3%		371	15.3%
2008	2982	18	(210)	0	2790	2456	334	13.6%		334	13.6%
2009	2982	14	(210)	0	2786	2488	298	12.0%		298	12.0%
2010	2982	10	0	0	2992	2526	466	18.4%		466	18.4%

NOTE: (A) CAPACITY ALLOCATIONS AND CHANGES MUST BE MADE BY JUNE 30 TO BE CONSIDERED IN EFFECT AT THE TIME OF THE SUMMER PEAK. ALL VALUES ARE SUMMER NET MW.

(B) INCLUDES FIRM PURCHASES AND ESTIMATED DEMAND SIDE OPTIONS.

UTILITY: 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)
YEAR	TOTAL INSTALLED CAPACITY MW	FIRM CAPACITY IMPORT MW (A)	FIRM CAPACITY EXPORT MW	NUG MW	TOTAL CAPACITY AVAILABLE MW	FIRM PEAK DEMAND MW	RESERVE MARGIN BEFORE MAINTENANCE		SCHEDULED MAINTENANCE MW	RESERVE MARGIN AFTER MAINTENANCE	
							MW	% OF PEAK		MW	% OF PEAK
2000-01	2259	320	(219)	19	2379	2065	314	15.2%	NONE	314	15.2%
2001-02	2259	320	(219)	19	2379	2149	230	10.7%		230	10.7%
2002-03	2833	27	(217)	19	2662	2161	501	23.2%		501	23.2%
2003-04	2826	27	(210)	19	2662	2171	491	22.6%		491	22.6%
2004-05	2813	27	(210)	19	2649	2184	465	21.3%		465	21.3%
2005-06	2964	27	(210)	0	2781	2205	576	26.1%		576	26.1%
2006-07	2964	23	(210)	0	2777	2220	557	25.1%		557	25.1%
2007-08	2984	19	(210)	0	2793	2241	552	24.6%		552	24.6%
2008-09	2984	15	(210)	0	2789	2260	529	23.4%		529	23.4%
2009-10	2984	11	(210)	0	2785	2284	501	21.9%		501	21.9%

NOTE: (A) INCLUDES FIRM PURCHASES AND ESTIMATED DEMAND SIDE OPTIONS.

UTILITY: GULF POWER COMPANY

SCHEDULE 8
 PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<u>Plant Name</u>	<u>Unit No.</u>	<u>Location</u>	<u>Unit Type</u>	<u>Fuel</u>		<u>Fuel Transport</u>		<u>Const Start Mo/Yr</u>	<u>Com'l In-Service Mo/Yr</u>	<u>Expected Retirement Mo/Yr</u>	<u>Gen Max Nameplate KW</u>	<u>Net Capability</u>		<u>Status</u>
				<u>Pri</u>	<u>Alt</u>	<u>Pri</u>	<u>Alt</u>					<u>Summer MW</u>	<u>Winter MW</u>	
Lansing Smith	3	Bay County 36/2S/15W	CC	NG	--	PL	--	11/00	06/02			574.0	574.0	U
Lansing Smith	4	Bay County 36/2S/15W	CT	NG	LO	PL	TK	07/04	06/05			157.0	157.0	P
Lansing Smith	A	Bay County 36/2S/15W	CT	LO	--	TK	--	--	--	12/06	41,850	(32.0)	(40.0)	R
Unlocated		Unlocated	CT	NG	LO	PL	TK	07/06	06/07			60.0	60.0	P

Abbreviations: CT - Combustion Turbine
 CC - Combined Cycle

NG - Natural Gas
 LO - Light Oil

PL - Pipeline
 TK - Truck

UNK - Unknown

P - Planned, but not authorized by utility

R - To be retired

U - Under construction, less than or equal to 50% complete

Utility: Gulf Power Company

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number:	Lansing Smith Unit 3
(2)	Capacity	
	a. Summer:	574 MW
	b. Winter:	574 MW
(3)	Technology Type:	Combined Cycle
(4)	Anticipated Construction Timing	
	a. Field construction start - date:	11/00
	b. Commercial in-service date:	06/02
(5)	Fuel	
	a. Primary fuel:	Natural Gas
	b. Alternate fuel:	None
(6)	Air Pollution Control Strategy:	Dry low NOx combustor
(7)	Cooling Method:	Cooling Tower
(8)	Total Site Area:	1340 acres (total plant site)
(9)	Construction Status:	Under construction, less than 50% complete
(10)	Certification Status:	Certified
(11)	Status with Federal Agencies:	Approved
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF):	3.8%
	Forced Outage Factor (FOF):	3.4%
	Equivalent Availability Factor (EAF):	92.0%
	Resulting Capacity Factor (%):	62.0%
	Average Net Operating Heat Rate (ANOHR):	6,924 For 566 MW - average @ 69 deg F
		7,271 For 574 MW - peaking @ 95 deg F
(13)	Projected Unit Financial Data	
	Book Life (Years):	40
	Total Installed Cost (In-Service Year \$/kW):	386
	Direct Construction Cost ('01 \$/kW):	359
	AFUDC Amount (\$/kW):	26
	Escalation (\$/kW):	1
	Fixed O&M (\$/kW - Yr):	3.23
	Variable O&M (\$/MWH):	0.68
	K Factor:	1.588

Schedule 9
 Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number:	Lansing Smith Unit 4
(2)	Capacity	
	a. Summer:	157 MW
	b. Winter:	157 MW
(3)	Technology Type:	Combustion Turbine
(4)	Anticipated Construction Timing	
	a. Field construction start - date:	07/04
	b. Commercial in-service date:	06/05
(5)	Fuel	
	a. Primary fuel:	Natural Gas
	b. Alternate fuel:	Distillate
(6)	Air Pollution Control Strategy:	Dry low NOx combustor for natural gas Water injection for NOx control for distillate
(7)	Cooling Method:	Evaporative cooling
(8)	Total Site Area:	1340 acres (total plant site)
(9)	Construction Status:	This facility is planned but not authorized
(10)	Certification Status:	Not applied
(11)	Status with Federal Agencies:	Not applied
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF):	3.8%
	Forced Outage Factor (FOF):	2.5%
	Equivalent Availability Factor (EAF):	95.8%
	Resulting Capacity Factor (%):	13.7%
	Average Net Operating Heat Rate (ANOHR):	10,750
(13)	Projected Unit Financial Data	
	Book Life (Years):	40
	Total Installed Cost (In-Service Year \$/kW):	340
	Direct Construction Cost ('01 \$/kW):	311
	AFUDC Amount (\$/kW):	0
	Escalation (\$/kW):	29
	Fixed O&M (\$/kW - Yr):	2.27
	Variable O&M (\$/MWH):	15.14
	K Factor:	1.5328

Schedule 9
 Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number:	Unlocated
(2)	Capacity	
	a. Summer:	60 MW
	b. Winter:	60 MW
(3)	Technology Type:	Combustion Turbine
(4)	Anticipated Construction Timing	
	a. Field construction start - date:	07/06
	b. Commercial in-service date:	06/07
(5)	Fuel	
	a. Primary fuel:	Natural Gas
	b. Alternate fuel:	Distillate
(6)	Air Pollution Control Strategy:	Dry low NOx combustor for natural gas Water injection for NOx control for distillate
(7)	Cooling Method:	Evaporative cooling
(8)	Total Site Area:	Unknown
(9)	Construction Status:	This facility is planned but not authorized
(10)	Certification Status:	Not applied
(11)	Status with Federal Agencies:	Not applied
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF):	3.8%
	Forced Outage Factor (FOF):	2.5%
	Equivalent Availability Factor (EAF):	95.8%
	Resulting Capacity Factor (%):	13.7%
	Average Net Operating Heat Rate (ANOHR):	10,750
(13)	Projected Unit Financial Data	
	Book Life (Years):	40
	Total Installed Cost (In-Service Year \$/kW):	370
	Direct Construction Cost ('01 \$/kW):	323
	AFUDC Amount (\$/kW):	0
	Escalation (\$/kW):	47
	Fixed O&M (\$/kW - Yr):	2.38
	Variable O&M (\$/MWH):	15.83
	K Factor:	1.5328

Utility: Gulf Power Company

Schedule 10

Status Report and Specifications of Proposed Directly Associated Transmission Lines

(1) Point of Origin and Termination:	Lansing Smith Unit 3 - Smith 230 kV bus Reconductor: Smith - Highland City 115 kV line Smith - Greenwood 115 kV line Highland City - Callaway 115 kV line
(2) Number of Lines:	4
(3) Right-of-Way:	None
(4) Line Length:	1,000 feet (new) 19.1 miles (reconductor)
(5) Voltage:	230 kV (new) 115 kV (reconductor)
(6) Anticipated Construction Timing:	6 months
(7) Anticipated Capital Investment:	\$4,430,000
(8) Substations:	1
(9) Participation with Other Utilities:	N/A

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APPENDIX

EXECUTIVE SUMMARY

Gulf Power Company (Gulf) plans to construct, own, and operate a new electric power generating plant in Bay County, Florida. The Smith Unit 3 Project (Smith Unit 3 or the Project) will be capable of producing up to 574 megawatts (MW) of electricity using state-of-the-art technology and clean, natural gas fuel.

Gulf, which is a wholly-owned subsidiary of Southern Company, serves approximately 350,000 customers in northwest Florida. Gulf has determined that in order to continue providing reliable, cost-effective service to its customers, it must add at least 427 MW of new generating resources to its system by summer of 2002. The most cost-effective means to meet this need is construction of Smith Unit 3 at Gulf's existing Lansing Smith Electric Generating Plant north of Panama City, Florida.

On March 15, 1999, Gulf filed a petition with the Florida Public Service Commission to demonstrate that the Project is needed to meet the growing demand for power in the Florida panhandle. The need petition shows that the Project will be a reliable, cost-effective, and environmentally friendly power generation resource in Florida.

ES.1 THE SITE CERTIFICATION APPLICATION

The licensing of electrical power plants in Florida requires compliance with applicable federal, state, and local laws, regulations, and ordinances. The most comprehensive state law governing the licensing of the Smith Unit 3 Project is the Florida Electrical Power Plant Siting Act (FEPPSA). The FEPPSA establishes the State's policy to balance the need for new power plant facilities with the potential effects of the facility's construction and operation on human health, welfare, and environmental resources of the state. To implement this policy, the FEPPSA establishes a centrally coordinated permitting process. The FEPPSA proceedings are initiated when the applicant files a site certification application (SCA) with the Florida Department of Environmental Protection (FDEP), which administers and coordinates the process with affected agencies, governmental entities, other parties, and the applicant. The process concludes with the approval or certification of the power plant by the Governor and Cabinet, sitting as the Siting Board.

The FDEP procedures for implementing the FEPPSA are contained in Chapter 62-17, Florida Administrative Code (F.A.C.). In this case, the SCA for the Project has been prepared in compliance with the requirements contained in the FDEP *Instruction Guide For Certification Applications* (FDEP Form 62-1.211[1], F.A.C.). The SCA demonstrates that the Project will comply with all applicable laws, regulations, and standards.

ES.2 SITE AND VICINITY CHARACTERISTICS

The proposed site for the Project is located at Gulf's existing Lansing Smith Plant in central Bay County, northwest of Panama City (T2S, R15W, Section 36). The site is owned by Gulf, as is all the surrounding property to the site.

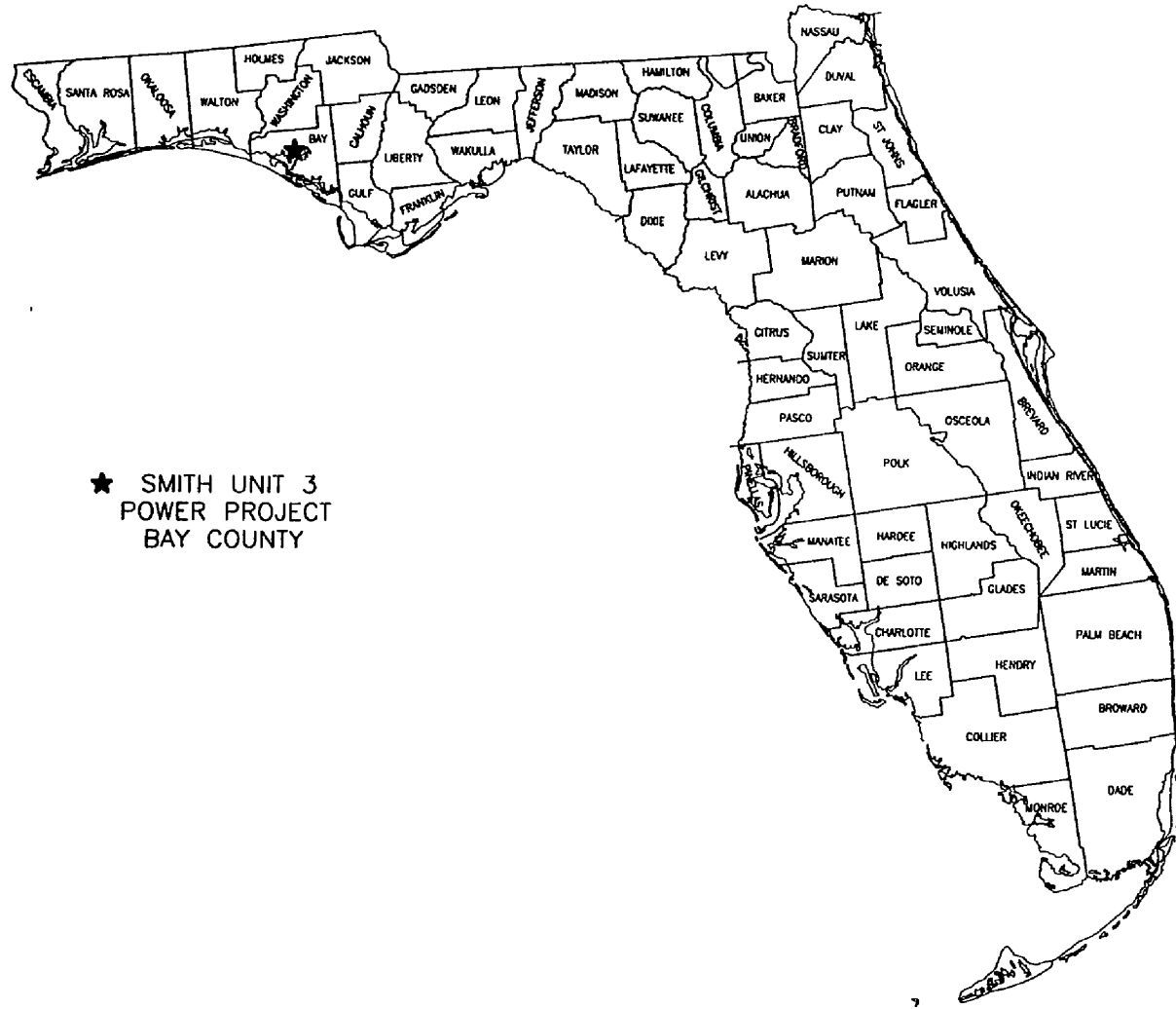
Figures ES-1 and ES-2 show the location of the Project within the State of Florida and within Bay County, respectively. Figure ES-3 shows the location of the proposed 50.1-acre site relative to the existing Smith Plant. The site is located at the end of County Road (CR) 2300 which connects to State Road (SR) 77.

The site is currently in silvicultural operations, with planted pine dominating the site. The existing Smith plant is an industrial land use, but otherwise the surrounding vicinity is rural and in a natural state. No residential development is found within a 2-mile radius.

ZONING AND LAND USE REGULATIONS

The Project site is currently located in the Agricultural land use classification as depicted on Bay County's 1990 Adopted Comprehensive Plan Future Land Use Map (FLUM). Power plants are not an allowable use in this land use designation.

To be consistent with the adopted comprehensive plan, Gulf has submitted a large-scale plan amendment application to change the FLUM from Agriculture to Industrial. The Industrial category will allow for development of the Project and will be consistent with the existing designation for the adjacent Lansing Smith Plant (Units 1 and 2). The plan amendment was submitted in May 1999 and is expected to be adopted in Fall 1999.



★ SMITH UNIT 3
POWER PROJECT
BAY COUNTY

ES-3

FIGURE ES-1.
SITE LOCATION

Source: ECT, 1999.

ECT
Environmental Consulting & Technology, Inc.

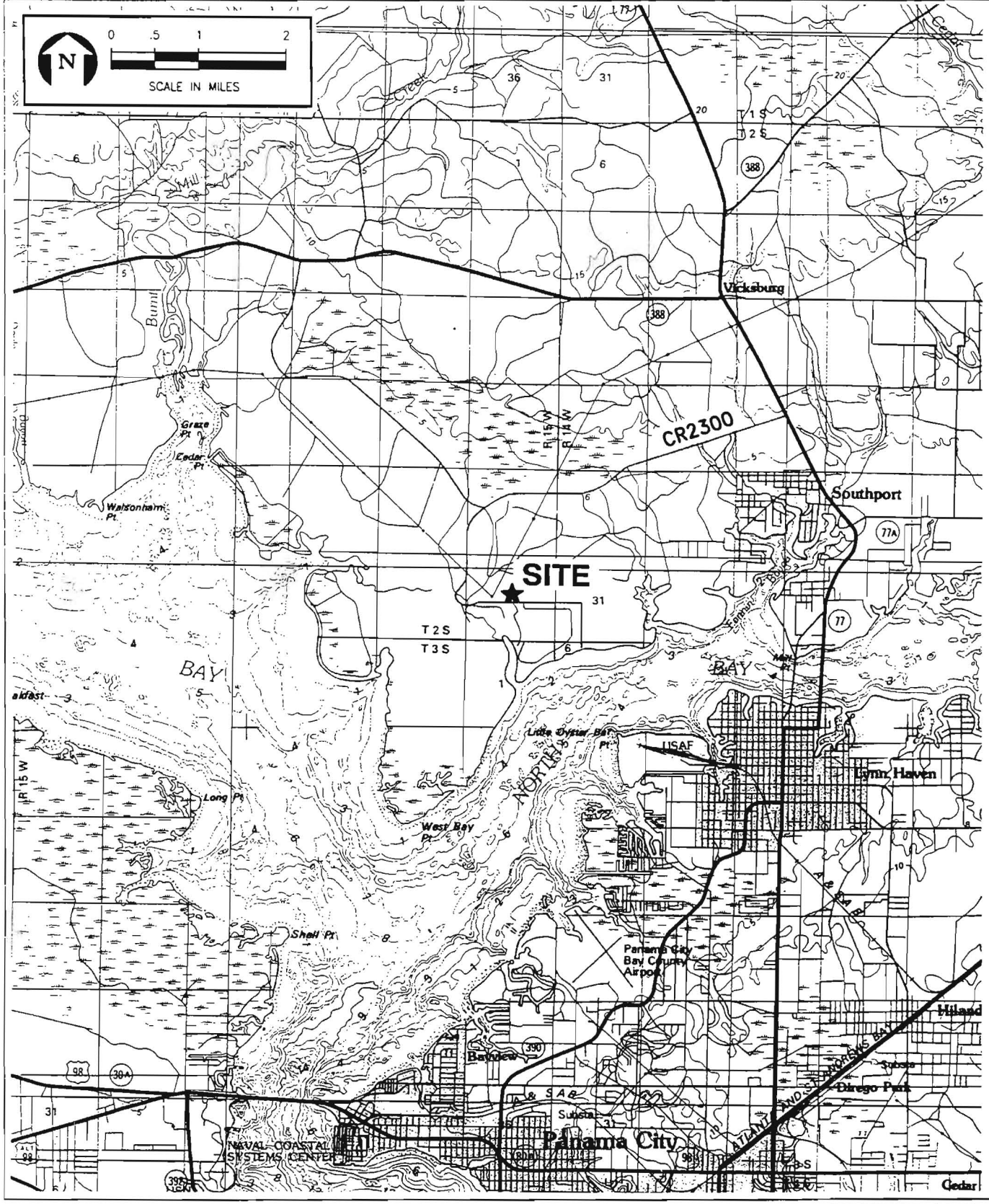


FIGURE ES-2.
SITE LOCATION WITHIN BAY COUNTY

Sources: USGS 30x60-minute topo map: Panama City, FL, 1981.

ECT
 Environmental Consulting & Technology, Inc.

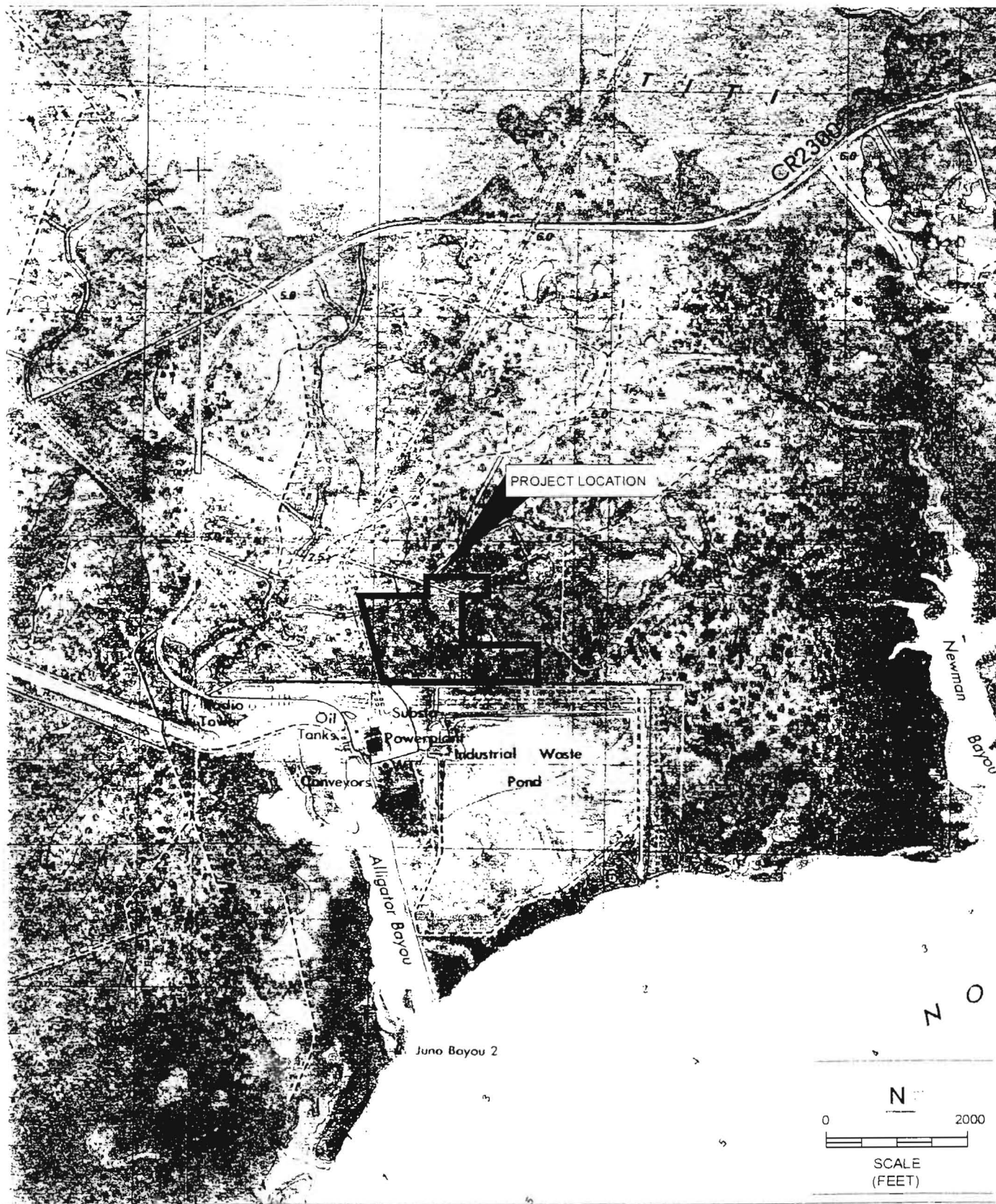


FIGURE ES-3.

PROJECT SITE LOCATION RELATIVE TO LANSING SMITH PLANT

Sources: USGS topo map of Southport, Fl., 1992; ECT, 1999.

ECT
 Environmental Consulting & Technology, Inc.

In Bay County, zoning is consistent with the land use plan designations. Therefore, when the FLUM is approved, so will the corresponding zoning for the site.

No sensitive natural resource, scenic, or cultural lands are located on the proposed site. No known archaeological or historic resources are located on the site.

GEOLOGICAL FEATURES

The Project site is located on the Pamlico Terrace in an area of low relief between elevation 5 and 8 feet above mean sea level. The site is underlain by a thick sequence of Tertiary-age sediments that generally dip to the southwest. Formations range from the Pleistocene marine terraces (loose, permeable silts and sands) that extend to 20 feet below land surface, to the Bruce Creek Limestone formation (a limestone dominated by macrofossils) that is approximately 300 feet thick.

No geologic faults have been mapped for the site; therefore, faults pose no hazard to site development. Karst development and sinkhole potential are low. Geotechnical investigations performed on the site indicate it can be safely used for the intended Project, providing standard engineering practices are employed.

GROUND WATER

The Smith Unit 3 Project is located in the Econfinia Creek Basin. Four hydrogeologic units define the regional system:

- The surficial aquifer system.
- The intermediate system.
- The Floridan aquifer system.
- The sub-Floridan confining unit.

The Floridan aquifer system provides over 90 percent of the ground water supplies for northwest Florida. The surficial aquifer system is of poor quality and is only used for irrigation and surface water recharge.

SURFACE WATER

There are numerous fresh water wetlands intermixed with the pine plantations of the site vicinity. No natural lakes, ponds, streams, or rivers are found on the site. Most of these wetlands drain to the southwest or west, eventually to West Bay.

The marine environment of St. Andrew Bay is the major surface water feature in the site vicinity. This system has been well studied by Gulf and others. Currently, the Lansing Smith Plant uses surface water from North Bay for once-through cooling at Units 1 and 2. The cooling water is ultimately discharged through a nearly 2-mile-long canal to West Bay, where the thermal mixing zone occurs. The current discharge meets all applicable water quality standards for the Bay which is a Class II water.

ECOLOGICAL FEATURES

Approximately 95 percent of the site is vegetated. Wetlands cover approximately 50 percent of the site but most of these are wet, planted pine plantations. Cypress-titi swamps represent the higher quality wetlands found onsite.

No unique habitats are found onsite. No listed wildlife species were observed onsite and none are likely to depend on the site's resources for their habitat needs. Four listed plant species were found onsite, one of which, the panhandle spiderlily, is endangered. Several specimens of this rare plant were observed in wetlands onsite and offsite.

Existing stresses to terrestrial systems include the presence of the existing Lansing Smith units, logging practices, and prescribed burning. Existing stresses to the marine systems include storm water runoff, pollution from non-point sources, and the thermal discharge of the existing Lansing Smith cooling system.

AIR RESOURCES AND NOISE

Climate in the site vicinity is characteristic of the upper Gulf Coast with mild winters and summer heat, tempered by breezes off the Gulf of Mexico. Prevailing winds are from the north.

The Smith Unit 3 site is located in an area that has been classified as attainment for all criteria air pollutants, which means the site meets all applicable state and federal air standards. The only major air emissions sources in the area are the Smith Units 1 and 2 and a few industrial facilities around St. Andrew Bay.

Ambient noise at the proposed site is dominated by the day-to-day operations of Smith Units 1 and 2. Noise surveys performed by Gulf indicate noise levels around the property boundary currently fall well below the Bay County noise code.

ES.3 PROJECT DESCRIPTION

The Smith Unit 3 Project will utilize state-of-the-art combined cycle (CC) design concepts and equipment to achieve a high level of efficiency in electrical power production. The Project will employ two General Electric Model PG 7241 (FA) gas turbine units which have a proven operating record around the world. These machines will utilize the latest developments in dry low-nitrogen oxides (NO_x) combustion technology to achieve low emissions.

Each combustion turbine generator (CTG) will exhaust into a heat recovery steam generator (HRSG), which will produce steam-generated electricity to supplement the CTGs. Typical plant operation is expected to produce 519 MW when operating at full load. When Gulf employs power augmentation, the unit will be capable of generating up to 574 MW.

Cooling of Smith Unit 3 will feature a creative and environmentally sound combination of utilizing existing Smith Units 1 and 2 cooling water discharge with a cooling tower. This means the Project will actually use hot water from the existing cooling system and discharge cooler water back to the existing discharge canal. The average annual water requirements for this cooling system will be approximately 7.5 million gallons per day (MGD) obtained from the existing 274 MGD hot water discharge from Units 1 and 2.

Other uses of the existing Lansing Smith infrastructure will include the uses of ground water from Gulf's onsite wells, use of the existing domestic wastewater treatment pack-

age plant, use of existing electric transmission and road access, and use of the existing potable water system.

Air pollution control equipment utilizing clean-burning natural gas as a fuel and low-NO_x burners will benefit the air quality in the region. Use of low-sulfur natural gas will limit emissions of particulate matter including particulate matter less than or equal to 10 micrometers diameter. Carbon monoxide and volatile organic compound emissions will be controlled by the use of advanced combustion equipment and operational practices. Dry low-NO_x combustors and low-NO_x burner technology will abate NO_x emissions. Sulfur dioxide and sulfuric acid mist emissions will be controlled by the use of low-sulfur natural gas. Drift eliminators will be employed to limit cooling tower drift to no more than 0.001 percent of the circulating water.

Gulf will require a natural gas supply to the site via a new pipeline lateral. However, Gulf will not own, build, or operate the pipeline. A gas pipeline route will be permitted and licensed separately by the supplier.

No new electric transmission line corridors are required to place Smith Unit 3 into service. A 1,000-foot wire bus connecting Smith Unit 3 to the existing Lansing Smith 230-kilovolt (kV) substation will be constructed across already developed plant property. Smith Unit 3 will require replacement of existing conductors (wires) on approximately 20 miles of existing Gulf 115-kV transmission lines in the Panama City vicinity. However, no new right-of-way, access roads, structures, dredging, or filling will be required for these upgrades. No environmental or land use impacts are anticipated from these upgrades.

ES.4 IMPACTS OF PROJECT CONSTRUCTION

The Smith Unit 3 Project will be located on a 50.1-acre site with development occurring on 32.7 acres of that total. Construction activities will include clearing, grading, development of storm water ponds, power plant construction, final grading, and landscaping.

No explosives will be used in the construction of the facility. Construction impacts will be reduced by use of existing access roads to the site and the Lansing Smith barging terminal for delivery and offloading heavy equipment. Gulf is also proposing use of benign fly ash from the existing Lansing Smith Plant as a fill substitute to help reduce the volume of fill and corresponding truck traffic to the site. Trash and construction debris will be removed or recycled by a licensed contractor.

Construction impacts to surface water systems (including wetlands) will be minimized by developing a drainage plan to allow postconstruction drainage to match preconstruction drainage. Storm water basins will be used to minimize offsite runoff and sedimentation. Best management practices (BMPs) employed for Smith Units 1 and 2 will be modified to include Smith Unit 3 and to protect potential offsite aquatic resources.

Construction impacts on ground water resources are expected to be short term and minimal. Any site dewatering will include the use of storm water ponds to collect and treat the water before recharge or discharge. Construction will not impact any drinking water supplies or other uses of the Floridan aquifer.

Approximately 15.2 acres of wetlands will be impacted during construction. Gulf is submitting a joint FDEP/U.S. Army Corps of Engineers dredge-and-fill application to quantify these impacts. The application will contain a proposed mitigation plan for these lost resources. The remaining acreage (17.4) will be left as natural, vegetated communities (e.g., pine plantation and wetlands). Construction will have minimal impacts on flora and fauna. No impacts to regional populations of any listed species are expected. The panhandle spiderlily (a state-endangered plant) is proposed to be relocated out of construction areas to nearby undisturbed wetlands.

The socioeconomic impacts are largely beneficial. A maximum construction workforce of 325 people will be required, the great majority coming from the Panama City/Bay County area. An average of 180 employees will be used over the 21-month construction period. Construction payroll is expected to total over \$18.4 million, and the impact of

construction on industrial output in Bay County is estimated to be \$113.5 million. Numerous local contractors and vendors will be utilized.

Although traffic on SR 77 and CR 2300 will increase over the construction period due to construction employees and hauling fill to the site, levels are not expected to exceed existing level of service (LOS) on any access road (primarily SR 77) to the site. Gulf is further reducing traffic impacts by spreading out fill hauling over a longer period than the construction period, and by stockpiling fill at the existing Lansing Smith property. This will dilute the truck trips required per day to and from local borrow pits. Gulf is also proposing use of benign fly ash as an alternative fill material which will be used in combination with imported clean fill. Use of fly ash could reduce truck hauling by over 50 percent.

Existing services (schools, fire, police, medical, etc.) in Bay County and nearby communities are adequate to meet short-term demands of construction.

Noise will be generated during construction which will exceed ambient levels. However, noise will be below Bay County standards at Gulf's property boundary. The nearest residential receptor is nearly 2 miles away and will not be affected by construction noise.

ES.5 IMPACTS OF PROJECT OPERATION

Overall, the Project will be a highly efficient and environmentally clean method of producing electrical power. Two positive benefits will be produced over the existing Lansing Smith Generating Facility. First, the reuse of cooling water discharge will mean no additional surface water requirements for once-through cooling will be needed. With the use of the cooling tower, the net impact of operation of Smith Unit 3 will be no increase in the temperature of the existing discharge and a reduction in the discharge volume. Consequently, the heat rejection rate will be reduced by 1.3 percent which will slightly reduce the thermal impacts on the receiving waters of West Bay.

A second major benefit of Smith Unit 3 operations will be a net reduction in NO_x emissions from Lansing Smith due to installation of low-NO_x burner technology and a burner

management system on Smith Unit 1. This results in a significant increase in electrical generating capacity with no increase in NO_x emissions.

The limited use of ground water for process water needs at the Lansing Smith site including Smith Unit 3 will not adversely affect the surficial aquifer or Floridan aquifer at the site. No impacts to existing water supplies or water wells are expected.

During operations, the storm water management plan and BMPs will protect adjacent areas from any storm water runoff impacts. Solid wastes generated will be disposed offsite by licensed contractors.

The best available control technology and PSD review required for Smith Unit 3 will ensure emissions of air-borne pollutants will be minimized. The Project will not cause or contribute to any violation of ambient air quality standards or PSD increments. Secondary air impacts will be negligible. Types and concentrations of air pollutants will not adversely affect soil or vegetation.

No significant ecological effects are anticipated from plant operation. The plant will not affect regional plant and wildlife populations.

Noise impacts will be minimal and confined to the near-plant limits. Noise levels are calculated to be well below Bay County standards.

Existing infrastructure and facilities in Bay County will be sufficient to handle the relatively small increase in operational workforce (29). This workforce will most likely reside locally, but impacts to roads, schools, police, fire, and medical services will be negligible.

Socioeconomic benefits of the Project will be positive. In addition to providing additional inexpensive and reliable electricity to rate payers in Florida, the Project will generate approximately \$1.5 million in additional payroll to Bay County residents. Much of this money will be spent on goods and services. Additionally, Gulf expects to contract \$1.8

million per year to local suppliers of maintenance services/supplies. Traffic generated by the 29 employees will be insignificant on SR 77 and CR 2300. Existing LOSs will not be impacted on area roadways.

ES.6 ALTERNATIVES

The site selected for Smith Unit 3 was driven by the need to be in or close to Panama City and the objective to minimize environmental impacts by locating near existing power plant infrastructure. Smith Unit 3 accomplishes these needs.

The extensive technology and project alternatives analysis performed by Gulf showed that a CC unit located at Gulf's Lansing Smith site using natural gas fuel was the best and lowest cost alternative.

Location at the existing Smith Generating site maximizes use of existing power plant infrastructure (cooling discharge canal, wastewater, potable water, electric transmission, and roads). The site was located on Gulf's property at Lansing Smith to best utilize these infrastructure requirements and minimize onsite environmental impacts. The proposed location, while impacting some wetlands, will avoid wetland impacts associated with longer, interconnecting facility corridors if the site were further from the existing facilities on available Smith property. Moving the site elsewhere would also have the potential to fragment natural communities and wildlife habitat onsite.

ES.7 CONCLUSIONS

In summary, the Project will provide needed low-cost electrical power for Gulf Power rate payers, while minimizing the potential impacts of power generation. The Project will comply with all applicable land use and environmental regulations. The Project should be approved by the Siting Board because it meets pressing local and state needs for electrical power in an environmentally sound manner.

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