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ORIGINAL



March 31, 2000

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 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 is filed pursuant to Order No. PSC-93-1376-FOF-EI.

Sincerely,

Susan D. Ritenour
Assistant Secretary and Assistant Treasurer

lw

Enclosures

- AFA _____
- APP _____
- CAF _____
- CMU _____
- CTR _____
- EAG *[Handwritten initials]*
- LEG _____
- MAS _____
- OPC _____
- RRR _____
- SEC 1
- WAW _____
- OTH _____

cc: Beggs and Lane
Jeffrey A. Stone, Esquire

DOCUMENT NUMBER-DATE

04043 APR-38

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
Division of Electric and Gas**

APRIL 1, 2000

DOCUMENT NUMBER-DATE

04043 APR-38

FPSC-RECORDS/REPORTING

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GULF POWER COMPANY

TEN-YEAR SITE PLAN

Executive Summary

The Gulf Power Company 2000 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 2000 Ten-Year Site Plan for Gulf Power Company is being filed in compliance with the Commission's rules.

The 2000 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, as the Company participates along with the other Southern 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 of the plan 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 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. Due to the decreasing availability of firm power purchases, it is not feasible to replace the existing purchased power contracts when they expire in 2001. Gulf Power Company has determined that the most cost-effective way in which to meet its 2002 capacity obligations will be with the installation of a 574 MW natural gas-fired combined cycle generating unit at its existing Lansing Smith Generating Plant. This unit will be designated as Smith Unit 3. Smith Unit 3 is subject to the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes. Gulf's petition to the FPSC for a determination of need for the project under Section 403.519, Florida Statutes was approved in its Order No. PSC-99-1478-FOF-EI dated August 2, 1999. The location of the proposed 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.

After the installation of Smith Unit 3, the Company currently plans to meet its future capacity needs by participating with sister companies in installing several "F" class combustion turbines (CT). Gulf's expected portion of these units will be 60 MW in 2006, 60 MW in 2007, and 30 MW in 2008.

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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, has a 50% ownership in Mississippi Power Company's Daniel Electric Generating Facility, and has a 25% ownership in Georgia Power Company's Scherer Electric Generating Facility Unit #3. This 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 352 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 combustion turbines associated with an existing customer's cogeneration facility, adding another 14 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 2,252 MW and a total net winter generating capability of 2,260 MW. In addition to the Company's installed generating resources, Gulf has a contract with Solutia Corporation 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, 1999

(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	6	7/59	12/14	93,750	78.0	78.0
	5		FS	C	NG	WA	PL	3	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	1	8/73	12/18	578,000	477.0	477.0
Lansing Smith		Bay County 36/2S/15W									<u>381,850</u>	<u>384.0</u>	<u>392.0</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	190.0	190.0
	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	12/27	274,125	261.0	261.0
	2		FS	C	HO	RR	TK	--	6/81	12/31	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>14.4</u>	<u>14.4</u>
	1		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.8	4.8
	2		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.8	4.8
	3		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.8	4.8
Total System 12/31/99												<u>2,252.2</u>	<u>2,260.2</u>

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Abbreviations:

Fuel

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

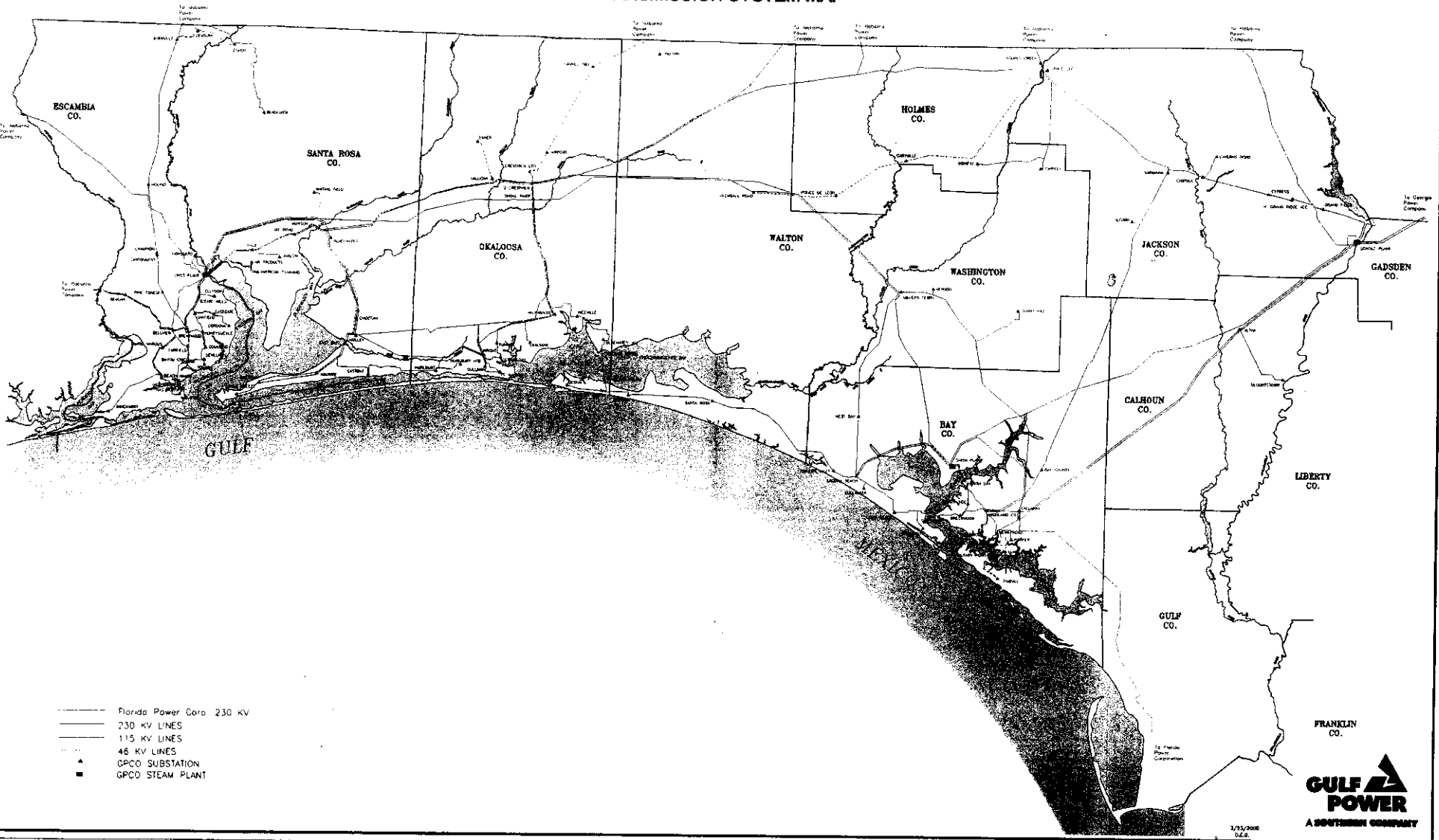
Fuel Transportation

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%).

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GULF POWER COMPANY TRANSMISSION SYSTEM MAP



- Florida Power Corp 230 kV
- 230 KV LINES
- 115 KV LINES
- 48 KV LINES
- ▲ OPCC SUBSTATION
- GPCC STEAM PLANT

FRANKLIN
CO.

**GULF
POWER**
A SOUTHERN COMPANY

7/23/2006
1:250,000

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 Good Cents 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 Good Cents 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 will slow to near 3.1% in 1999 from its 1998 growth of 3.9%. The Federal Reserve is expected to maintain its policy of restricting economic growth in order to control inflation. This environment of moderate growth (1999-3.1%, 2000-1.9%, 2001-2.9%) will result in inflation of about 1.9% for 1999, increasing to about 3% by 2002. 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.

B. TERRITORIAL ECONOMIC PROJECTION

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 exceed the nation's growth for the first two years (1999 and 2000), slow to below the national rate for 2001, and then return to the national growth rate thereafter. Additionally, Gulf's projections incorporate electric price assumptions derived from the 1999 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
(1999-2004)

	<u>Base Case Forecast</u>
GDP Growth	3.1 - 2.6%
Real Interest Rate	5.4 - 3.7%
Inflation	1.0 - 2.6%

TABLE 2
AREA DEMOGRAPHIC SUMMARY
(1999-2004)

	<u>Base Case Forecast</u>
Population Gain	67,800
Net Migration	45,250
Average Annual Population Growth	1.1%
Average Annual Labor Force Growth	1.2%
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 Good Cents Home program and efficiency improvements undertaken by customers as a result of Centsable Energy Check audits and the Gulf Express Loan 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 1995, designed to meet the Commission-approved demand and energy reduction goals established in October 1994. 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
2. Offices
3. Retail and Personal Services
4. Public Utilities
5. Automotive Services
6. Restaurants
7. Elementary/Secondary Schools
8. Colleges/Trade Schools
9. Hospitals/Health Services
10. Hotels/Motels
11. Religious Organizations
12. Miscellaneous

The commercial sales forecast reflects the continued impacts of Gulf Power's Commercial Good cents 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 1995, designed to meet the Commission-approved demand and energy reduction goals established in October 1994. 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. Forty-four 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 1995, designed to meet the Commission-approved demand and energy reduction goals established in October 1994. 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. 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 February 22, 1995 (Docket No. 941172-EI) as approved by the FPSC. These programs were designed to meet the incremental impacts of the Commission-approved demand and energy reduction DSM goals established in October 1994. The demand and energy reductions associated with these new programs reflect the results of a revised implementation schedule for the Advanced Energy Management (AEM) program in the residential sector.

A. RESIDENTIAL CONSERVATION

In the residential sector, Gulf's Good Cents New Home 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.

Gulf's Heat Pump Upgrade program and the Resistance Heating to Heat Pump Upgrade programs are designed to make

cost effective increases in efficiencies in the existing home market by requiring improvements in the heating and cooling systems.

Further conservation benefits are achieved in the existing home market with Gulf's Residential Energy Audit 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.

In Concert With The Environment® is an environmental and energy awareness program that is 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.

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 are 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.

The Good Cents 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 Good Cents 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 Good Cents 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 Good Cents 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 Good Cents 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 Good Cents 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 Good Cents 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 Good Cents 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 Commercial Energy Audit (EA) and 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 program is designed with enough flexibility to allow for a simple walk through analysis (EA) or a detailed economic evaluation of potential energy improvements through a more in-depth audit process (TAA) 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.

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)
1998	251,907	287,953	543,281,297

**2000 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	7,976	18,726	20,557,372
1999	19,664	14,184	21,707,831
2000	26,855	32,063	28,997,435
2001	28,710	34,493	30,118,254
2002	32,439	39,305	32,792,172
2003	29,375	35,241	30,308,554
2004	23,266	30,311	22,481,749
2005	21,515	27,346	20,668,342
2006	18,156	22,873	17,917,143
2007	17,140	22,879	17,923,254
2008	13,527	18,362	15,131,761
2009	13,217	18,388	15,180,549

**2000 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	271,571	302,136	564,989,127
2000	298,426	334,199	593,986,562
2001	327,137	368,692	624,104,816
2002	359,576	407,997	656,896,989
2003	388,950	443,239	687,205,544
2004	412,217	473,550	709,687,293
2005	433,731	500,896	730,355,636
2006	451,887	523,769	748,272,779
2007	469,027	546,648	766,196,033
2008	482,553	565,010	781,327,794
2009	495,770	583,397	796,508,342

**HISTORICAL
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	114,831	170,519	281,079,278

**2000 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	7,980	7,198	9,821,294
1999	10,228	11,099	11,434,502
2000	22,876	28,978	18,681,924
2001	24,809	31,408	19,860,048
2002	28,883	36,298	22,836,951
2003	25,275	32,234	20,429,313
2004	22,614	29,276	18,669,390
2005	19,972	26,337	16,946,634
2006	16,135	21,864	14,263,389
2007	16,140	21,869	14,275,071
2008	12,286	17,379	11,555,721
2009	12,311	17,404	11,606,693

**2000 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	125,059	181,618	292,513,779
2000	147,935	210,596	311,195,703
2001	172,745	242,004	331,055,751
2002	201,628	278,302	353,892,702
2003	226,902	310,536	374,322,015
2004	249,517	339,812	392,991,405
2005	269,488	366,149	409,938,039
2006	285,623	388,013	424,201,428
2007	301,763	409,882	438,476,499
2008	314,048	427,261	450,032,220
2009	326,359	444,664	461,638,913

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

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	137,076	117,434	251,478,850

**2000 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	(4)	11,528	10,440,589
1999	9,436	3,086	9,956,818
2000	3,979	3,085	9,956,818
2001	3,901	3,085	9,956,818
2002	3,556	3,007	9,737,633
2003	4,100	3,007	9,737,633
2004	652	1,035	3,715,003
2005	1,543	1,009	3,641,941
2006	2,021	1,009	3,641,941
2007	1,000	1,010	3,641,941
2008	1,241	983	3,568,880
2009	906	984	3,568,880

**2000 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	146,512	120,518	261,435,669
2000	150,491	123,603	271,392,487
2001	154,392	126,688	281,349,305
2002	157,948	129,695	291,086,939
2003	162,048	132,703	300,824,572
2004	162,700	133,738	304,539,575
2005	164,243	134,747	308,181,517
2006	166,264	135,756	311,823,458
2007	167,264	136,766	315,465,399
2008	168,505	137,749	319,034,279
2009	169,411	138,733	322,603,159

HISTORICAL
TOTAL OTHER DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	0	0	10,723,169

2000 BUDGET FORECAST
TOTAL OTHER DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	0	0	295,489
1999	0	0	316,511
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

2000 BUDGET FORECAST
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
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

**HISTORICAL
TOTAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	222,941	270,753	528,317,561

**2000 BUDGET FORECAST
TOTAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	9,169	7,262	14,776,374
1999	8,723	7,910	14,062,591
2000	5,987	7,734	10,325,565
2001	5,762	7,508	9,806,324
2002	5,713	7,482	9,601,152
2003	5,725	7,494	9,548,534
2004	4,737	6,506	6,485,719
2005	4,739	6,516	6,464,132
2006	4,754	6,531	6,426,973
2007	4,759	6,536	6,433,084
2008	4,744	6,529	6,394,961
2009	4,769	6,554	6,443,749

**2000 BUDGET FORECAST
TOTAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	231,664	278,662	542,380,151
2000	237,651	286,396	552,705,716
2001	243,414	293,904	562,512,040
2002	249,127	301,386	572,113,193
2003	254,851	308,881	581,661,728
2004	259,589	315,387	588,147,447
2005	264,327	321,903	594,611,580
2006	269,081	328,434	601,038,553
2007	273,840	334,970	607,471,637
2008	278,583	341,499	613,866,598
2009	283,352	348,052	620,310,346

**HISTORICAL
RESIDENTIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	112,606	166,952	278,267,540

**2000 BUDGET FORECAST
RESIDENTIAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	7,273	5,969	8,941,406
1999	6,923	6,703	8,491,952
2000	4,187	6,527	4,712,744
2001	3,962	6,301	4,250,808
2002	3,952	6,291	4,230,631
2003	3,964	6,303	4,253,993
2004	3,960	6,299	4,246,560
2005	3,975	6,314	4,276,294
2006	3,990	6,329	4,307,089
2007	3,995	6,334	4,318,771
2008	3,993	6,332	4,313,461
2009	4,018	6,357	4,364,433

**2000 BUDGET FORECAST
RESIDENTIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	119,529	173,655	286,759,491
2000	123,716	180,182	291,472,235
2001	127,679	186,483	295,723,043
2002	131,631	192,774	299,953,674
2003	135,594	199,077	304,207,667
2004	139,555	205,376	308,454,227
2005	143,529	211,690	312,730,521
2006	147,519	218,019	317,037,610
2007	151,514	224,353	321,356,381
2008	155,506	230,685	325,669,842
2009	159,524	237,041	330,034,275

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

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	110,335	103,801	239,326,852

**2000 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	1,896	1,293	5,539,479
1999	1,800	1,207	5,254,128
2000	1,800	1,207	5,254,128
2001	1,800	1,207	5,254,128
2002	1,761	1,191	5,152,933
2003	1,761	1,191	5,152,933
2004	777	207	2,141,803
2005	764	202	2,108,071
2006	764	202	2,108,071
2007	764	202	2,108,071
2008	751	197	2,074,340
2009	751	197	2,074,340

**2000 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	112,135	105,007	244,580,981
2000	113,935	106,214	249,835,109
2001	115,735	107,421	255,089,237
2002	117,496	108,612	260,242,171
2003	119,257	109,804	265,395,104
2004	120,034	110,011	267,536,907
2005	120,798	110,213	269,644,979
2006	121,562	110,415	271,753,050
2007	122,326	110,617	273,861,121
2008	123,077	110,814	275,935,461
2009	123,828	111,011	278,009,801

HISTORICAL
OTHER EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	0	0	10,723,169

2000 BUDGET FORECAST
OTHER EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	0	0	295,489
1999	0	0	316,511
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

2000 BUDGET FORECAST
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
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

**HISTORICAL
TOTAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	28,966	17,200	14,963,736

**2000 BUDGET FORECAST
TOTAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	(1,193)	11,464	5,780,998
1999	10,941	6,274	7,645,240
2000	20,868	24,329	18,671,870
2001	22,948	26,985	20,311,930
2002	26,726	31,823	23,191,020
2003	23,650	27,747	20,760,020
2004	18,529	23,805	15,996,030
2005	16,776	20,830	14,204,210
2006	13,402	16,342	11,490,170
2007	12,381	16,343	11,490,170
2008	8,783	11,833	8,736,800
2009	8,448	11,834	8,736,800

**2000 BUDGET FORECAST
TOTAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	39,907	23,474	22,608,976
2000	60,775	47,803	41,280,846
2001	83,723	74,788	61,592,776
2002	110,449	106,611	84,783,796
2003	134,099	134,358	105,543,816
2004	152,628	158,163	121,539,846
2005	169,404	178,993	135,744,056
2006	182,806	195,335	147,234,226
2007	195,187	211,678	158,724,396
2008	203,970	223,511	167,461,196
2009	212,418	235,345	176,197,996

HISTORICAL
RESIDENTIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	2,225	3,567	2,811,738

2000 BUDGET FORECAST
RESIDENTIAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	707	1,229	879,888
1999	3,305	4,396	2,942,550
2000	18,689	22,451	13,969,180
2001	20,847	25,107	15,609,240
2002	24,931	30,007	18,606,320
2003	21,311	25,931	16,175,320
2004	18,654	22,977	14,422,830
2005	15,997	20,023	12,670,340
2006	12,145	15,535	9,956,300
2007	12,145	15,535	9,956,300
2008	8,293	11,047	7,242,260
2009	8,293	11,047	7,242,260

2000 BUDGET FORECAST
RESIDENTIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	5,530	7,963	5,754,288
2000	24,219	30,414	19,723,468
2001	45,066	55,521	35,332,708
2002	69,997	85,528	53,939,028
2003	91,308	111,459	70,114,348
2004	109,962	134,436	84,537,178
2005	125,959	154,459	97,207,518
2006	138,104	169,994	107,163,818
2007	150,249	185,529	117,120,118
2008	158,542	196,576	124,362,378
2009	166,835	207,623	131,604,638

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

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	26,741	13,633	12,151,998

**2000 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	(1,900)	10,235	4,901,110
1999	7,636	1,879	4,702,690
2000	2,179	1,878	4,702,690
2001	2,101	1,878	4,702,690
2002	1,795	1,816	4,584,700
2003	2,339	1,816	4,584,700
2004	(125)	828	1,573,200
2005	779	807	1,533,870
2006	1,257	807	1,533,870
2007	236	808	1,533,870
2008	490	786	1,494,540
2009	155	787	1,494,540

**2000 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR**

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1999	34,377	15,511	16,854,688
2000	36,556	17,389	21,557,378
2001	38,657	19,267	26,260,068
2002	40,452	21,083	30,844,768
2003	42,791	22,899	35,429,468
2004	42,666	23,727	37,002,668
2005	43,445	24,534	38,536,538
2006	44,702	25,341	40,070,408
2007	44,938	26,149	41,604,278
2008	45,428	26,935	43,098,818
2009	45,583	27,722	44,593,358

HISTORICAL
OTHER NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	0	0	0

2000 BUDGET FORECAST
OTHER NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1998	0	0	0
1999	0	0	0
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

2000 BUDGET FORECAST
OTHER NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

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

VI. 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>
1999	30
2000	30
2001	30
2002	30
2003	30
2004	30
2005	11
2006	11
2007	11
2008	11
2009	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 300 customers contributing \$26,494 through February 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)
Year	Rural and Residential					Commercial		
	Population *	Members per Household	GWH	Average No. of Customers	Average KWH Consumption Per Customer	GWH	Average No. of Customers	Average KWH Consumption Per Customer
1990	628,188	2.46	3,361	255,129	13,173	2,218	33,957	65,305
1991	634,819	2.45	3,455	259,395	13,320	2,273	34,372	66,120
1992	644,015	2.43	3,597	265,374	13,553	2,369	36,009	65,796
1993	660,001	2.43	3,713	271,594	13,671	2,433	38,477	63,242
1994	669,113	2.41	3,752	278,215	13,486	2,549	39,989	63,739
1995	672,820	2.37	4,014	283,717	14,148	2,708	41,007	66,043
1996	691,797	2.40	4,160	287,752	14,457	2,809	42,381	66,271
1997	711,853	2.40	4,119	296,497	13,894	2,898	43,955	65,928
1998	726,746	2.39	4,438	304,413	14,577	3,112	45,510	68,379
1999	743,501	2.38	4,471	312,283	14,318	3,223	47,292	68,141
2000	757,762	2.37	4,665	319,883	14,585	3,341	48,977	68,209
2001	767,246	2.35	4,784	326,907	14,635	3,472	50,375	68,922
2002	778,045	2.34	4,855	332,822	14,587	3,532	51,457	68,641
2003	789,742	2.33	4,917	338,496	14,525	3,593	52,498	68,445
2004	801,774	2.33	5,007	344,126	14,551	3,671	53,531	68,585
2005	813,971	2.33	5,098	349,831	14,572	3,745	54,576	68,620
2006	826,466	2.32	5,189	355,624	14,592	3,815	55,635	68,580
2007	839,139	2.32	5,284	361,464	14,619	3,883	56,703	68,475
2008	852,193	2.32	5,382	367,275	14,653	3,951	57,768	68,390
2009	865,811	2.32	5,506	373,177	14,755	4,033	58,845	68,542
CAAG								
90-99	1.9%	-0.4%	3.2%	2.3%	0.9%	4.2%	3.7%	0.5%
99-04	1.5%	-0.4%	2.3%	2.0%	0.3%	2.6%	2.5%	0.1%
99-09	1.5%	-0.3%	2.1%	1.8%	0.3%	2.3%	2.2%	0.1%

* 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)
<u>Year</u>	<u>GWH</u>	<u>Industrial</u>		<u>Railroads and Railways GWH</u>	<u>Street & Highway Lighting GWH</u>	<u>Other Sales to Public Authorities GWH</u>	<u>Total Sales to Ultimate Consumers GWH</u>
		<u>Average No. of Customers</u>	<u>Average KWH Consumption Per Customer</u>				
1990	2,178	247	8,817,297	0	17	0	7,774
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	1,849	280	6,604,849	0	19	0	9,874
2001	1,881	286	6,575,456	0	20	0	10,157
2002	1,950	289	6,745,994	0	21	0	10,357
2003	1,950	292	6,677,225	0	21	0	10,481
2004	1,946	295	6,596,285	0	22	0	10,647
2005	1,957	298	6,567,553	0	23	0	10,823
2006	1,966	301	6,530,680	0	24	0	10,994
2007	1,947	304	6,403,731	0	24	0	11,138
2008	1,927	307	6,276,039	0	25	0	11,284
2009	1,908	310	6,153,891	0	25	0	11,473
CAAG							
90-99	-1.8%	0.2%	-2.0%	0.0%	0.6%	0.0%	2.3%
99-04	1.1%	3.3%	-2.2%	0.0%	3.8%	0.0%	2.2%
99-09	0.3%	2.1%	-1.8%	0.0%	3.2%	0.0%	1.8%

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 <u>(Average No.)</u>	Total No. of <u>Customers</u>
1990	294	545	8,612	68	289,400
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	350	655	10,879	293	369,433
2001	356	673	11,186	306	377,873
2002	362	687	11,406	316	384,883
2003	367	697	11,545	325	391,610
2004	373	709	11,729	333	398,284
2005	379	721	11,923	341	405,045
2006	385	733	12,112	349	411,908
2007	391	743	12,272	357	418,827
2008	398	753	12,435	365	425,714
2009	404	766	12,643	373	432,704
<u>CAAG</u>					
90-99	1.9%	0.3%	2.2%	17.3%	2.5%
99-04	1.4%	4.9%	2.3%	3.1%	2.0%
99-09	1.5%	3.2%	1.9%	2.7%	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>	<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>
1990	1,954	69	1,885	0	0	81	0	87	1,785
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	2,284	75	2,208	0	0	107	0	137	2,040
1998	2,422	82	2,340	16	0	115	0	137	2,154
1999	2,441	84	2,356	0	0	125	0	147	2,169
2000	2,522	75	2,447	28	0	148	0	150	2,224
2001	2,588	75	2,513	28	0	173	0	154	2,261
2002	2,632	76	2,556	28	0	202	0	158	2,272
2003	2,669	77	2,592	28	0	227	0	162	2,280
2004	2,717	78	2,639	28	0	250	0	163	2,305
2005	2,767	79	2,687	28	0	269	0	164	2,333
2006	2,818	81	2,737	28	0	286	0	166	2,366
2007	2,863	82	2,781	26	0	302	0	167	2,394
2008	2,910	83	2,826	21	0	314	0	169	2,427
2009	2,968	85	2,883	17	0	326	0	169	2,472
CAAG									
90-99	2.5%	2.3%	2.5%	100.0%	0.0%	4.9%	0.0%	5.9%	2.2%
99-04	2.2%	-1.5%	2.3%	100.0%	0.0%	14.8%	0.0%	2.1%	1.2%
99-09	2.0%	0.0%	2.0%	100.0%	0.0%	10.1%	0.0%	1.5%	1.3%

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>
89-90	2,038	57	1,980	0	0	120	0	97	1,821
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	2,128	0	0	163	0	106	1,939
97-98	1,980	61	1,918	0	0	171	0	117	1,692
98-99	2,395	79	2,316	0	0	182	0	121	2,093
99-00	2,420	62	2,358	0	0	211	0	124	2,086
00-01	2,541	64	2,477	0	0	242	0	127	2,172
01-02	2,624	65	2,559	0	0	278	0	130	2,216
02-03	2,657	66	2,591	0	0	311	0	133	2,214
03-04	2,700	67	2,632	0	0	340	0	134	2,226
04-05	2,743	68	2,675	0	0	366	0	135	2,242
05-06	2,785	69	2,715	0	0	388	0	136	2,261
06-07	2,813	71	2,742	0	0	410	0	137	2,266
07-08	2,840	72	2,768	0	0	427	0	138	2,275
08-09	2,878	73	2,806	0	0	445	0	139	2,295
CAAG									
90-99	1.8%	3.7%	1.8%	0.0%	0.0%	4.7%	0.0%	2.4%	1.6%
99-04	2.4%	-3.3%	2.6%	0.0%	0.0%	13.3%	0.0%	2.1%	1.2%
99-09	1.9%	-0.9%	1.9%	0.0%	0.0%	9.4%	0.0%	1.4%	0.9%

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>
1990	9,019	227	180	7,774	294	545	8,612	55.1%
1991	9,128	233	191	7,861	296	547	8,704	56.8%
1992	9,291	239	202	8,161	299	389	8,849	55.0%
1993	9,537	247	216	8,192	317	565	9,074	54.2%
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	56.0%
1997	10,410	282	241	8,938	342	607	9,887	55.2%
1998	10,945	292	251	9,401	356	645	10,402	55.1%
1999	11,029	304	261	9,558	348	558	10,464	55.1%
2000	11,473	323	271	9,874	350	655	10,879	55.8%
2001	11,810	343	281	10,157	356	673	11,186	56.5%
2002	12,063	366	291	10,357	362	687	11,406	57.3%
2003	12,232	386	301	10,481	367	697	11,545	57.8%
2004	12,438	405	305	10,647	373	709	11,729	58.1%
2005	12,653	422	308	10,823	379	721	11,923	58.3%
2006	12,860	436	312	10,994	385	733	12,112	58.4%
2007	13,039	451	315	11,138	391	743	12,272	58.5%
2008	13,216	462	319	11,284	398	753	12,435	58.5%
2009	13,439	474	323	11,473	404	766	12,643	58.4%
<u>CAAG</u>								
90-99	2.3%	3.3%	4.3%	2.3%	1.9%	0.3%	2.2%	0.0%
99-04	2.4%	5.9%	3.1%	2.2%	1.4%	4.9%	2.3%	1.1%
99-09	2.0%	4.6%	2.1%	1.8%	1.5%	3.2%	1.9%	0.6%

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)
	1999 Actual		2000 Forecast		2001 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	2,093	812	2,086	885	2,172	930
February	1,619	661	1,757	736	1,904	804
March	1,388	706	1,610	762	1,684	797
April	1,611	776	1,462	729	1,496	745
May	1,767	876	1,929	945	1,905	933
June	1,947	1,015	2,115	1,112	2,117	1,121
July	2,168	1,140	2,224	1,152	2,261	1,169
August	2,169	1,184	2,174	1,175	2,211	1,214
September	1,952	949	2,030	968	2,093	1,004
October	1,628	823	1,610	785	1,671	815
November	1,355	704	1,531	742	1,555	753
December	1,502	818	1,898	889	1,905	900

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 1998</u>	<u>Actual 1999</u>	<u>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>
(1)	Nuclear		Trillion BTU	None	None	None	None	None	None	None	None	None	None	None	None
(2)	Coal		1000 TON	5,540	5871	5,044	5,111	5,099	5,047	4,876	4,967	4,860	4,564	4,670	4,872
(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	64	42	19	18	15	11	11	11	15	19	21	23
(9)		Steam	1000 BBL	18	16	11	10	11	10	10	10	10	14	13	12
(10)		CC	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(11)		CT	1000 BBL	46	26	8	8	4	1	1	1	5	5	8	11
(12)		Diesel	1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(13)	Natural Gas	Total	1000 MCF	2,783	3,684	1,329	864	13,874	20,716	22,574	25,299	25,791	28,282	28,399	27,207
(14)		Steam	1000 MCF	2,783	3,684	1,329	864	451	270	233	354	407	383	448	375
(15)		CC	1000 MCF	None	None	None	None	13,423	20,446	22,341	24,945	25,384	27,899	27,951	26,832
(16)		CT	1000 MCF	None	None	None	None	None	None	None	None	None	None	None	None
(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 1998	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
(1)	Annual Firm Interchange		GWH	(1,730)	(2,787)	(1,287)	(1,168)	(2,830)	(3,603)	(3,305)	(3,682)	(3,267)	(2,776)	(2,860)	(2,983)
(2)	Nuclear		GWH	None	None	None	None	None	None	None	None	None	None	None	None
(3)	Coal		GWH	11,723	12,751	11,852	12,075	12,008	11,911	11,519	11,724	11,456	10,747	10,982	11,481
(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	19	11	4	4	2	1	1	1	3	3	4	6
(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	19	11	4	4	2	1	1	1	3	3	4	6
(13)		Diesel	GWH	None	None	None	None	None	None	None	None	None	None	None	None
(14)	Natural Gas	Total	GWH	242	333	193	160	2,119	3,133	3,410	3,840	3,920	4,298	4,309	4,139
(15)		Steam	GWH	172	226	91	58	30	17	15	24	27	25	30	25
(16)		CC	GWH	None	None	None	None	1,987	3,014	3,293	3,714	3,791	4,171	4,177	4,012
(17)		CT	GWH	70	107	102	102	102	102	102	102	102	102	102	102
(18)	NUGs		GWH	148	156	117	115	107	103	104	40	0	0	0	0
(19)	Net Energy for Load		GWH	10,402	10,464	10,879	11,186	11,406	11,545	11,729	11,923	12,112	12,272	12,435	12,643

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 1998	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
(1)	Annual Firm Interchange		%	(16.63)	(26.63)	(11.83)	(10.44)	(24.81)	(31.21)	(28.18)	(30.88)	(26.97)	(22.62)	(23.00)	(23.59)
(2)	Nuclear		%	None	None	None	None	None	None	None	None	None	None	None	None
(3)	Coal		%	112.70	121.86	108.94	107.95	105.28	103.17	98.21	98.33	94.58	87.57	88.32	90.81
(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	%	0.18	0.11	0.04	0.04	0.02	0.01	0.01	0.01	0.02	0.02	0.03	0.05
(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	%	0.18	0.11	0.04	0.04	0.02	0.01	0.01	0.01	0.02	0.02	0.03	0.05
(13)		Diesel	%	None	None	None	None	None	None	None	None	None	None	None	None
(14)	Natural Gas	Total	%	2.33	3.18	1.77	1.43	18.58	27.14	29.07	32.21	32.36	35.02	34.65	32.74
(15)		Steam	%	1.65	2.16	0.84	0.52	0.26	0.15	0.13	0.20	0.22	0.20	0.24	0.20
(16)		CC	%	None	None	None	None	17.42	26.11	28.08	31.15	31.30	33.99	33.59	31.73
(17)		CT	%	0.67	1.02	0.94	0.91	0.89	0.88	0.87	0.86	0.84	0.83	0.82	0.81
(18)	NUGs		%	1.42	1.49	1.08	1.03	0.94	0.89	0.89	0.34	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

CHAPTER III

PLANNING ASSUMPTIONS AND PROCESSES

THE INTEGRATED RESOURCE PLANNING PROCESS

Gulf Power Company's Integrated Resource Planning (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.

It is important to note, once again, that 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 2003 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.

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 problem with the transmission system that warrants the consideration of being corrected to restore its 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 the 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 electric system (SES), including such diverse uses as long-term generation planning and short-term fuel budgeting. Southern'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 13 different coal classifications used on the Southern system. Because natural gas and oil prices do not experience the same variations, Southern prepares a single commodity price forecast for each of these fuels.

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 Southern'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 Resource Data International, J. D. Energy Inc., Hill and Associates, Data Resource International, Fieldston Company, 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. A question and answer period allows for opposing views and debates on forecasts.

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 1999 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>
2000	1.072	2.57	3.50
2001	1.082	2.93	3.67
2002	1.091	3.10	3.87
2003	1.101	3.13	4.09
2004	1.111	3.16	4.21
2005	1.121	2.89	4.34
2006	1.131	2.79	4.55
2007	1.141	2.68	4.78
2008	1.151	2.72	5.02
2009	1.162	2.88	5.22

COAL PRICE FORECAST

The information provided during the Fuel Panel meeting is used to develop the SES forecast of generic coal prices. The major influences that drive the assumptions for the coal

forecast are relative expected demand for specific qualities of coal and transportation from the source. Since Phase II of the Clean Air Act of 1990 has commenced, the variety of suitable coal quality narrows and tends to have an upward pressure on coal commodity prices. However, as more substitution of natural gas for coal as an energy resource for new resource additions takes place, it is expected that coal prices will once again stabilize.

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 natural gas price forecast for wellhead natural gas reflects a "relaxed" view of the scarce resource theory. Past views by consultants and the U.S. Department of Energy (DOE) would suggest that natural gas resources were rapidly declining and that reserves would be more difficult and costly to find. However, new technological innovations have resulted in a paradigm shift in the "scarce resource"

theory. The new 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 past two years, success rates in drilling offshore exploration wells have improved from 25% to 90% for most producers. 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 plentiful supply of relatively inexpensive volumes of gas in the near future.

NATURAL GAS AVAILABILITY

Assuming the construction of additional pipeline facilities, there are sufficient natural gas supplies available in the Southeastern United States to support full load operation of Smith Unit 3. There are some near-term (2001-2004) demands in advance of new pipeline construction that will impose upward pressure on the price of natural gas. After the new pipelines are in place, natural gas prices are expected to stabilize.

During the winter months, U.S. natural gas demand can reach 100 billion cubic feet (Bcf) per day. Unfortunately, the current maximum natural gas supplied through imports and

domestic production volumes peaks at 56 to 60 Bcf per day. In order to offset this capacity shortage, storage delivery is necessary.

Since U.S. natural gas demand in the summertime is significantly less, only about 42 to 45 Bcf per day, large end users and local distribution companies, such as Alagasco, buy extra volumes to fill huge underground gas storage fields. Typically, the markets purchase from 10 to 12 Bcf per day to fill storage during the summer months. This activity results in average gas demand reaching usage levels of 52 to 57 Bcf per day. This allows producers to operate wells at 90-95% of capacity year round.

There are indicators that during the time period 2000 and 2005, gas supply in the SES region will improve substantially. Major producers and interstate pipelines have proposed wide-scale expansion of pipelines in the Louisiana, Mississippi, and Alabama offshore areas. 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 by 2 Bcf per day by 2000. These developments suggest that by 2005, U.S. gas supplies (specifically the SES region) should increase 15-16% above current levels. This translates into sufficient gas being ultimately available for all new gas-fired electric generation, including Smith Unit 3.

SITE-SPECIFIC FUEL PROJECTIONS

Although the generic fuel forecast is useful in the IRP process for determining the preferred type of generating unit additions, it is inappropriate for use when evaluating site specific generation alternatives. For site-specific reviews, it is necessary to develop a fuel projection that specifically addresses the fuel supply that would be available to that site. This was the process used during both the self-build and RFP evaluations leading to the ultimate selection by Gulf to build Smith Unit 3.

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 planned unit to be constructed 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. A recently completed evaluation of Gulf's available generation options has revealed that the most economical means to meet Gulf generation resource needs, is with the construction of a combined cycle unit. Currently this new generator is scheduled to be in service in the year 2002. This generator is also planned for 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 the participation in an SES oil-fired combustion turbine unit in 2006. 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 this new addition 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 in 1995, and are affected for NOx during 1996 through 1999 and are grandfathered under the Phase I NOx limits during Phase II. These units were again substituted in 1996 making them affected for SO2 during the year.

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 to be considered are 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.

The Company believes that Smith Unit 3 will be permitted for construction and operation under the conditions and strategy that Gulf has proposed in its SCA. From an environmental standpoint, the proposed facility will have net positive impacts. Additional environmental and land use information for the selected site is included in the appendix.

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 2000 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.

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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 has decided to proceed with constructing Smith Unit 3, for which the Company has received a Commission determination of need.

Environmental permits are expected to be granted by
September 2000.

FUTURE CONSIDERATIONS

Gulf will continue to evaluate its options in order to determine how to best meets its capacity obligations beyond 2002. After the installation of Smith Unit 3, the Company plans to participate with sister companies in installing several "F" class combustion turbines (CT). These additions are currently planned for 2006, 2007, and 2008.

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	FIRM CAPACITY IMPORT	FIRM CAPACITY EXPORT	NUG MW	TOTAL CAPACITY AVAILABLE	FIRM PEAK DEMAND	RESERVE MARGIN BEFORE MAINTENANCE		% OF PEAK	SCHEDULED MAINTENANCE	RESERVE MARGIN AFTER MAINTENANCE		% OF PEAK
	MW	MW (B)	MW		MW	MW	MW	MW		MW	MW	MW	
2000	2252	434	(209)	19	2496	2224	272	12.2%	NONE	272	12.2%		
2001	2252	441	(209)	19	2503	2261	242	10.7%		242	10.7%		
2002	2826	29	(209)	19	2665	2272	393	17.3%		393	17.3%		
2003	2826	29	(209)	19	2665	2280	385	16.9%		385	16.9%		
2004	2826	29	(209)	19	2665	2305	360	15.6%		360	15.6%		
2005	2826	29	(209)	0	2646	2333	313	13.4%		313	13.4%		
2006	2886	29	(209)	0	2706	2366	340	14.4%		340	14.4%		
2007	2914	29	(209)	0	2734	2394	340	14.2%		340	14.2%		
2008	2944	25	(209)	0	2760	2427	333	13.7%		333	13.7%		
2009	2944	23	(209)	0	2758	2472	286	11.6%		286	11.6%		

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 (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
1999-00	2260	178	(209)	19	2248	2086	162	7.8%	NONE	162	7.8%
2000-01	2260	293	(209)	19	2363	2172	191	8.8%		191	8.8%
2001-02	2260	293	(209)	19	2363	2216	147	6.6%		147	6.6%
2002-03	2834	0	(209)	19	2644	2214	430	19.4%		430	19.4%
2003-04	2834	0	(209)	19	2644	2226	418	18.8%		418	18.8%
2004-05	2834	0	(209)	19	2644	2242	402	17.9%		402	17.9%
2005-06	2834	0	(209)	0	2625	2261	364	16.1%		364	16.1%
2006-07	2894	0	(209)	0	2685	2266	419	18.5%		419	18.5%
2007-08	2914	0	(209)	0	2705	2275	430	18.9%		430	18.9%
2008-09	2944	0	(209)	0	2735	2295	440	19.2%		440	19.2%

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

(B) INCLUDES FIRM PURCHASES.

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)
Plant Name	Unit No.	Location	Unit Type	Fuel		Fuel Transport		Const Start Mo/Yr	Com'l In-Service Mo/Yr	Expected Retirement Mo/Yr	Gen Max Nameplate KW	Net Capability		Status
				Pri	Alt	Pri	Alt					Summer MW	Winter MW	
Lansing Smith	3	Bay County 36/2S/15W	CC	NG	--	PL	--	11/00	06/02			574.0	574.0	T
Unlocated		Unlocated	CT	LO	--	UNK	--	07/05	06/06			60.0	60.0	P
Lansing Smith	A	Bay County 36/2S/15W	CT	LO	--	TK	--	--	--	12/06	41,850	(32.0)	(40.0)	R
Unlocated		Unlocated	CT	LO	--	UNK	--	07/06	06/07			60.0	60.0	P
Unlocated		Unlocated	CT	LO	--	UNK	--	07/07	06/08			30.0	30.0	P

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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
 T - Regulatory approval received but not under construction

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:	This facility is authorized
(10)	Certification Status:	Applied
(11)	Status with Federal Agencies:	Applied
(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):	373
	Direct Construction Cost ('99 \$/kW):	318
	AFUDC Amount (\$/kW):	41
	Escalation (\$/kW):	14
	Fixed O&M (\$/kW - Yr):	4.54
	Variable O&M (\$/MWH):	2.43
	K Factor:	1.588



Utility: Gulf Power Company

Schedule 9
 Status Report and Specifications of Proposed Generating Facilities

Page 2 of 4

(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:	07/05
	b. Commercial in-service date:	06/06
(5)	Fuel	
	a. Primary fuel:	No. 2 Distillate
	b. Alternate fuel:	None
(6)	Air Pollution Control Strategy:	Water injection for NOx control
(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):	93.7%
	Resulting Capacity Factor (%):	5% -10%
	Average Net Operating Heat Rate (ANOHR):	10,900
(13)	Projected Unit Financial Data	
	Book Life (Years):	40
	Total Installed Cost (In-Service Year \$/kW):	331
	Direct Construction Cost ('99 \$/kW):	289
	AFUDC Amount (\$/kW):	0
	Escalation (\$/kW):	42
	Fixed O&M (\$/kW - Yr):	3.51
	Variable O&M (\$/MWH):	7.75
	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:	No. 2 Distillate
	b. Alternate fuel:	None
(6)	Air Pollution Control Strategy:	Water injection for NOx control
(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):	93.7%
	Resulting Capacity Factor (%):	5% -10%
	Average Net Operating Heat Rate (ANOHR):	10,900
(13)	Projected Unit Financial Data	
	Book Life (Years):	40
	Total Installed Cost (In-Service Year \$/kW):	338
	Direct Construction Cost ('99 \$/kW):	289
	AFUDC Amount (\$/kW):	0
	Escalation (\$/kW):	49
	Fixed O&M (\$/kW - Yr):	3.59
	Variable O&M (\$/MWH):	7.93
	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:	30 MW
	b. Winter:	30 MW
(3)	Technology Type:	Combustion Turbine
(4)	Anticipated Construction Timing	
	a. Field construction start - date:	07/07
	b. Commercial in-service date:	06/08
(5)	Fuel	
	a. Primary fuel:	No. 2 Distillate
	b. Alternate fuel:	None
(6)	Air Pollution Control Strategy:	Water injection for NOx control
(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):	93.7%
	Resulting Capacity Factor (%):	5% -10%
	Average Net Operating Heat Rate (ANOHR):	10,900
(13)	Projected Unit Financial Data	
	Book Life (Years):	40
	Total Installed Cost (In-Service Year \$/kW):	346
	Direct Construction Cost ('99 \$/kW):	289
	AFUDC Amount (\$/kW):	0
	Escalation (\$/kW):	57
	Fixed O&M (\$/kW - Yr):	3.68
	Variable O&M (\$/MWH):	8.12
	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



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.

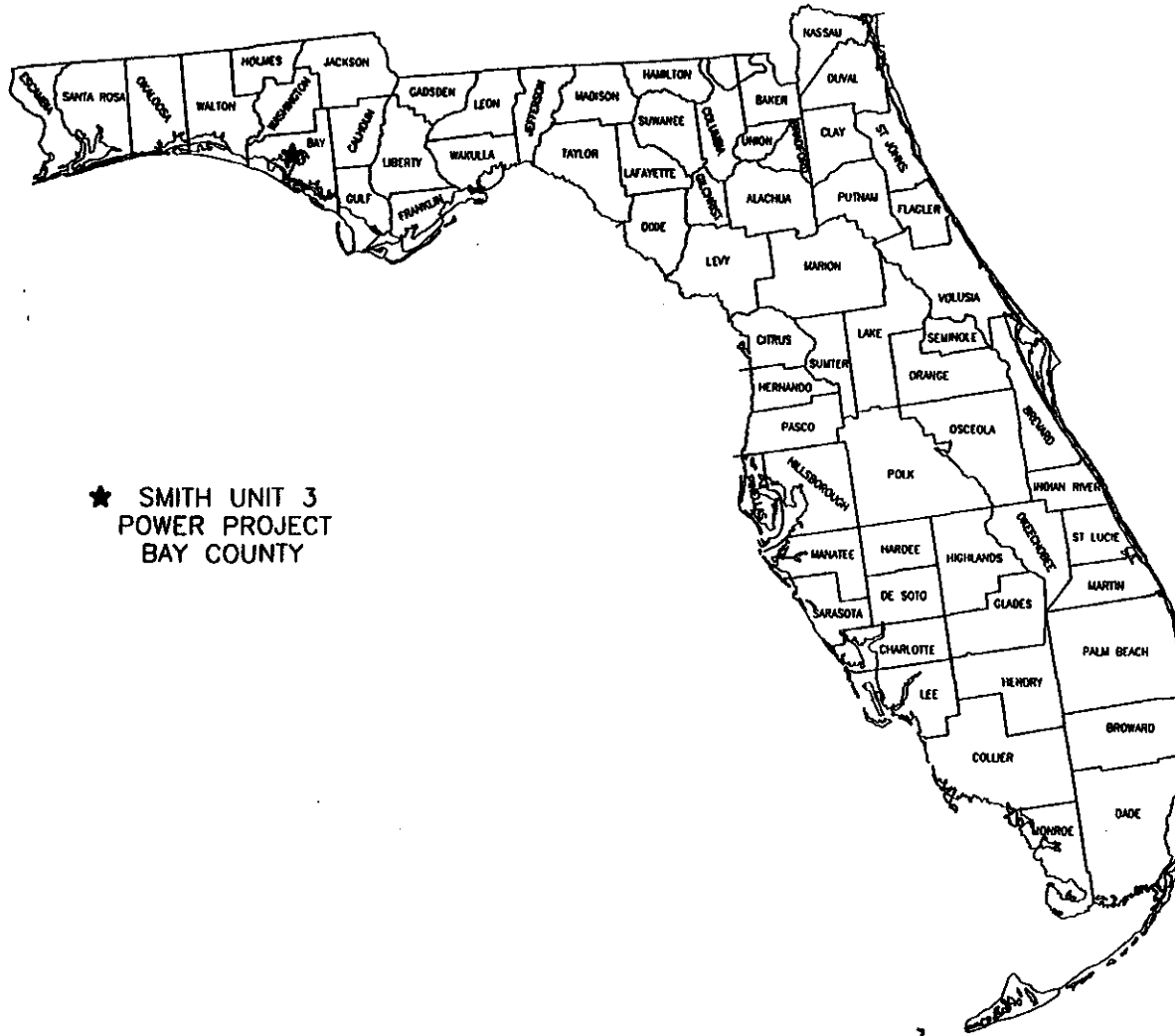
Figures ES-1 and ES-2 show the location of the Project within the State of Florida and within Bay County, respectively. Figure ES-3 shows the location of the proposed 50.1-acre site relative to the existing Smith Plant. The site is located at the end of County Road (CR) 2300 which connects to State Road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



ES-3

FIGURE ES-1.
SITE LOCATION

Source: ECT, 1999.

ECT
Environmental Consulting & Technology, Inc.

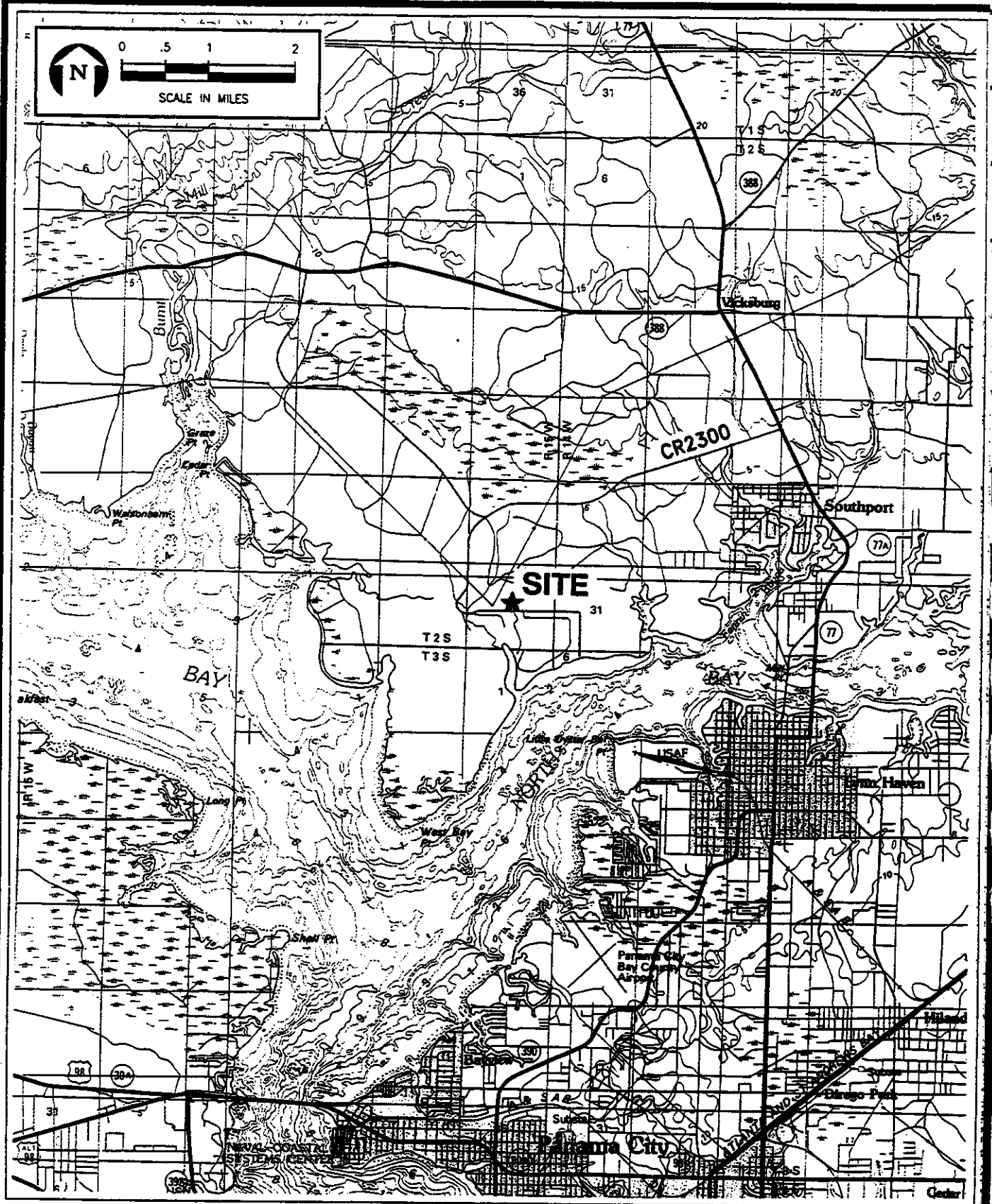


FIGURE ES-2.
SITE LOCATION WITHIN BAY COUNTY

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

ECT
 Environmental Consulting & Technology, Inc.

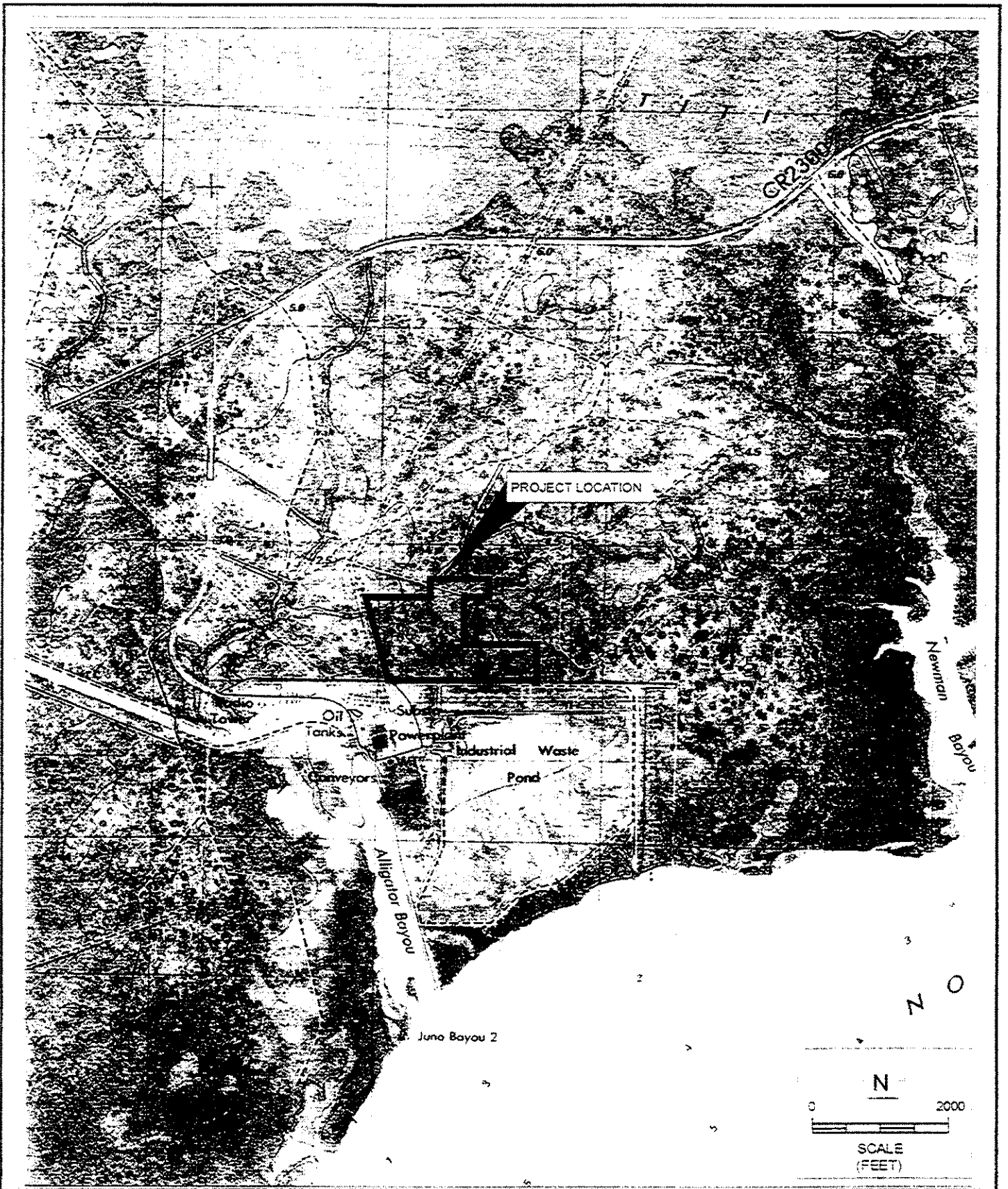


FIGURE ES-3.

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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