

**TEN YEAR SITE PLAN
1998 - 2007**

**FOR ELECTRIC GENERATING FACILITIES
AND
ASSOCIATED TRANSMISSION LINES**

JUNE, 1998



**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**

JUNE 26, 1998

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	1
<u>CHAPTER I DESCRIPTION OF EXISTING FACILITIES</u>	
Description of Generating Facilities	3
Schedule 1 Existing Generating Facilities	4
System Map	7
<u>CHAPTER II FORECAST OF ELECTRIC POWER DEMAND AND ENERGY CONSUMPTION</u>	
Forecasting Documentation	
Overview	8
I. Assumptions	9
II. Customer Forecast	11
III. Energy Sales Forecast	13
IV. Peak Demand Forecast	19
V. Conservation Programs	21
VI. Small Power Production	38
Schedule 2.1 History and Forecast of Energy Consumption and Number of Customers by Customer Class	40
Schedule 2.2 History and Forecast of Energy Consumption and Number of Customers by Customer Class	41
Schedule 2.3 History and Forecast of Energy Consumption and Number of Customers by Customer Class	42
Schedule 3.1 History and Forecast of Summer Peak Demand	43
Schedule 3.2 History and Forecast of Winter Peak Demand	44
Schedule 3.3 History and Forecast of Annual Net Energy for Load	45
Schedule 4 Previous Year Actual and Two-Year Forecast of Peak Demand and Net Energy for Load by Month	46
Schedule 5 Fuel Requirements	47

	<u>Page</u>
Schedule 6.1 Energy Sources - GWH	48
Schedule 6.2 Energy Sources - % of NEL	49
<u>CHAPTER III PLANNING ASSUMPTIONS AND PROCESSES</u>	
Integrated Resource Planning Process	50
Overview of Supply Side Options	54
Overview of Demand Side Options	54
Fuel Price Forecast Process	55
Southern Electric System's Forecast of Long Range Coal Prices	57
Southern Electric System's Forecast of Long Range Natural Gas Prices	58
Southern Electric System's Forecast of Long Range Oil Prices	62
Transmission Planning Process	64
Strategic Issues	65
Environmental Concerns	66
Availability of System Interchange	69
Off-System Sales	69
<u>CHAPTER IV FORECAST OF FACILITIES REQUIREMENTS</u>	
Capacity Resource Alternatives	70
Schedule 7.1 Forecast of Capacity, Demand, and Scheduled Maintenance at Time Of Summer Peak	71
Schedule 7.2 Forecast of Capacity, Demand, and Scheduled Maintenance at Time Of Summer Peak	72
Schedule 8 Planned and Prospective Generating Facility Additions and Changes	73
Schedule 9 Status Report and Specifications of Proposed Generating Facilities	74
Schedule 10 Status Report and Specifications of Directly associated Transmission Lines	77

GULF POWER COMPANY

TEN-YEAR SITE PLAN
Executive Summary

The Gulf Power Company 1998 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 1998 Ten-Year Site Plan for Gulf Power Company is being filed in compliance with the Commission's newly revised rules.

The 1998 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 power purchases, exclusively, until the year 2002. Gulf Power Company has determined that the best way in which to meet its 2002 capacity obligations with internal construction will be with the installation of a combined cycle generating unit at its Lansing Smith Generating Plant. Of course, this combined cycle unit will require certification under the state's

Power Plant Siting Act (PPSA) and therefore, will require that Gulf issue a Request for Proposals (RFP) for possible alternatives to the Company's own construction. Gulf anticipates issuing this RFP in July of 1998. Gulf's decision to take this approach to meeting its capacity needs is driven by the factors of cost-effectiveness and that this plan provides Gulf with the most flexibility and reliability while taking advantage of low cost market energy in the near term.

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 1,107 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 356 MW of steam generation and 32 MW (summer rating) of combustion turbine facilities. The Scholz Electric Generating Facility, near Sneeds, Florida consists of 98 MW of steam generation. The company has just recently taken 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 2,308 MW and a total net winter generating capability of 2,317 MW as of June 1, 1998.

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

UTILITY: GULF POWER COMPANY
 SCHEDULE 1
 EXISTING GENERATING FACILITIES
 AS OF JUNE 1, 1998

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit No.	Location	Unit Type	Fuel Pri	Fuel Alt	Fuel Transp Pri	Fuel Transp Alt	Alt. Fuel Days Use	Com'l In-Service Mo/Yr	Exptd Retirmt Mo/Yr	Gen Max Nameplate KW	Net Capacity Summer MW	Net Capacity Winter MW
Crist		Escambia County 25/1N/30W									1,229,000	1,106.8	1,106.8
	1		FS	NG	HO	PL	TK	--	1/45	12/11	28,125	25.6	25.6
	2		FS	NG	HO	PL	TK	--	6/49	12/11	28,125	25.1	25.1
	3		FS	NG	HO	PL	TK	--	9/52	12/11	37,500	37.0	37.0
	4		FS	C	NG	WA	PL	2	7/59	12/14	93,750	88.0	88.0
	5		FS	C	NG	WA	PL	1	6/61	12/16	93,750	87.0	87.0
	6		FS	C	NG	WA	PL	1	5/70	12/15	369,750	327.0	327.0
	7		FS	C	NG	WA	PL	1	8/73	12/18	578,000	517.1	517.1
Lansing Smith		Bay County 36/2S/15W									381,850	387.2	395.6
	1		FS	C	--	WA	--	--	6/65	12/15	149,600	162.0	162.0
	2		FS	C	--	WA	--	--	6/67	12/17	190,400	193.6	193.6
	A		CT	LO	--	TK	--	5/71	12/06	41,850	31.6	40.0	
Scholz		Jackson County 12/3N/7W									98,000	98.1	98.1
	1		FS	C	--	RR	WA	--	3/53	12/11	49,000	49.6	49.6
	2		FS	C	--	RR	WA	--	10/53	12/11	49,000	48.5	48.5
(A) Daniel		Jackson County, MS 42/5S/6W									548,250	478.4	478.4
	1		FS	C	HO	RR	TK	--	9/77	12/27	274,125	239.2	239.2
	2		FS	C	HO	RR	TK	--	6/81	12/31	274,125	239.2	239.2
(A) Scherer		Monroe County, GA	FS	C	--	RR	--	--	1/87	12/42	222,750	223.3	223.3
	1										14,250	14.4	14.4
	2										4,750	4.8	4.8
Pea Ridge		Santa Rosa County 15/1N/29W	CT	NG	--	PL	--	--	5/98	UNK	4,750	4.8	4.8
	1										4,750	4.8	4.8
	2										4,750	4.8	4.8
	3		CT	NG	--	PL	--	--	5/98	UNK	4,750	4.8	4.8
Total System											2,308.2	2,316.6	



SCHEDULE 1

Abbreviations:

Fuel

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

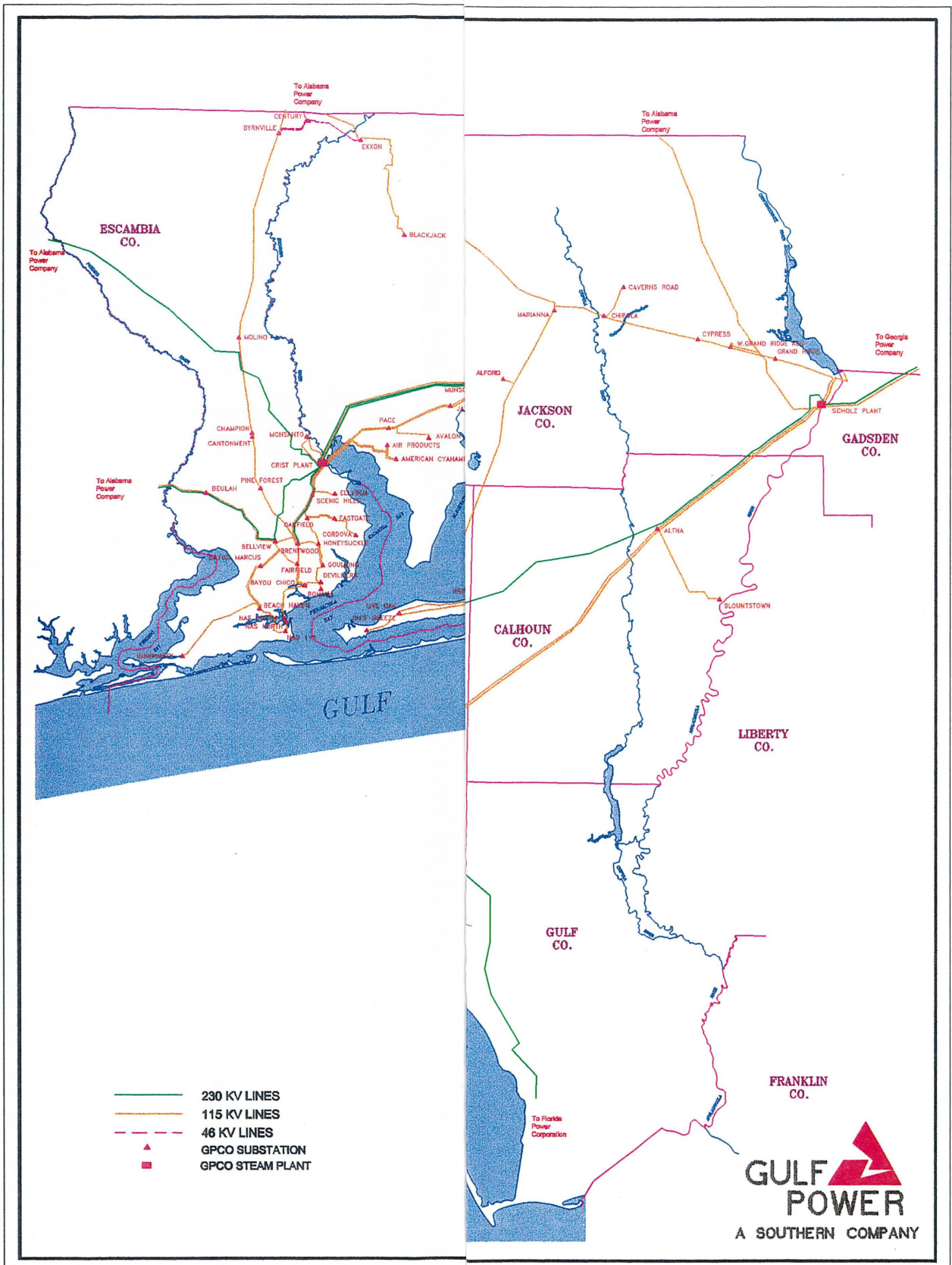
Fuel Transportation

- 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%).

This page is intentionally blank.





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 U. S. economy will continue to grow from its 1996 growth of 2.5% in real Gross Domestic Product (GDP). The Federal Reserve is expected to maintain its policy of restricting economic growth in order to control inflation. This environment of moderate growth (1997-2.9%, 1998-2.1%, 1999-2.1%) with inflation below 3% is expected to encourage business investment. Current labor force projections indicate that growth in the work force is slowing down, and this business investment will be key to achieve the productivity gains necessary to offset the slowing work force.

B. TERRITORIAL

Gulf's projections reflect the current economic outlook for our service area as provided by Regional Financial Associates (RFA), a renowned economic service provider. Gulf's forecast assumes that service area population growth will continue to exceed that of the nation and will slightly lead the rate of growth for the state of Florida. Additionally, Gulf's projections incorporate electric price assumptions derived from the 1997 Gulf Power Official Long-Range Forecast. Natural gas prices are derived from the 1998 Southern Company Services (SCS) Fuel Panel. The following tables provide a summary of the assumptions associated with Gulf's forecast:

TABLE 1
ECONOMIC SUMMARY
(1997-2002)

	<u>Base Case Forecast</u>
GDP Growth	2.9 - 1.5%
Real Interest Rate	4.7 - 3.8%
Inflation	2.3 - 2.9%

TABLE 2
AREA DEMOGRAPHIC SUMMARY
(1997-2002)

	<u>Base Case Forecast</u>
Population Gain	83,850
Net Migration	55,046
Average Annual Population Growth	1.9%
Average Annual Labor Force Growth	1.7%
Share of Population Served	81.7%

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 immediate short-term forecasts prepared by the districts, which are developed through various forecasting methods, are analyzed for consistency and the incorporation of major construction projects and business developments is reviewed. The end result is a near-term forecast of residential customers by type of dwelling.

For the remaining forecast horizon (3-25 years), the Gulf Economic Model, a competition-based econometric model, 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. 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 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

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

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

Changes in equipment utilization are modeled using short-run econometric fuel price elasticities. Fuel choice is forecast with a life-cycle cost/behavioral microsimulation submodel, and changes in equipment efficiency are determined using engineering and cost information for space heating, cooling and ventilation equipment and econometric elasticity estimates for the other end-uses (lighting, water heating, ventilation, cooking, refrigeration, and others).

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

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

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

The commercial sales forecast reflects the continued impacts of Gulf Power's Commercial Good ~~C~~ents 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-six 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.

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 have been designed to meet the incremental impacts of the Commission-approved demand and energy reduction DSM goals established in October, 1994.

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 Good Cents Improved Home program is designed to make cost effective increases in efficiencies in the existing home market by requiring improvements in the insulation levels in walls, ceilings, and floors, and increased efficiency requirements on heating and cooling systems, air distribution system leakage, and water heating 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 to the Good Cents Improved Home standard by providing specific whole house recommendations, a list of qualified companies who provide installation services, and information on "low-interest" financing available through the Gulf Express Loan program.

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 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 AEM 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 AEM 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 AEM 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 AEM 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 pilot program is designed to take advantage of customer price response to achieve peak demand reductions. Initial participation was limited to a maximum of 12 customers with actual demand of 2,000 KW or higher for this pilot program, as is reflected in this site plan. Subsequent to the preparation of this forecast Gulf received approval to increase the participation level to a maximum of 24 customers, and any changes associated with this increase will be reflected in future forecast revisions. Customer participation will be 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. The RTP Pilot program is expected to play a major role in affording Gulf Power the opportunity to be successful in meeting its conservation objectives. Information gained through this program will be used to determine whether or not a permanent RTP program should be implemented, and to design such a permanent program.

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)
1996	231,475	259,860	504,881,507

1998 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	14,136	7,253	15,009,201
1997	10,073	6,966	14,888,112
1998	29,960	26,623	22,883,995
1999	26,651	30,416	23,823,782
2000	26,965	31,049	23,089,082
2001	25,411	30,162	19,037,822
2002	24,575	29,194	18,862,340
2003	24,624	29,374	18,952,360
2004	24,562	29,407	18,816,118
2005	22,004	25,766	17,352,836
2006	22,082	25,987	17,462,520
2007	19,497	22,192	16,013,417

1998 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	241,549	266,827	519,769,620
1998	271,509	293,449	542,653,615
1999	298,160	323,864	566,477,397
2000	325,125	354,914	589,566,478
2001	350,536	385,075	608,604,300
2002	375,110	414,268	627,466,642
2003	399,733	443,642	646,419,002
2004	424,295	473,049	665,235,120
2005	446,299	498,815	682,587,955
2006	468,381	524,801	700,050,476
2007	487,877	546,993	716,063,893

HISTORICAL
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	99,701	156,541	262,500,317

1998 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	3,990	6,150	9,358,735
1997	8,066	5,853	9,158,157
1998	21,501	25,510	15,869,546
1999	23,919	29,302	15,876,570
2000	24,233	29,936	15,151,085
2001	23,456	29,049	13,479,679
2002	22,620	28,081	13,317,948
2003	22,669	28,261	13,397,745
2004	22,607	28,294	13,300,805
2005	20,049	24,653	11,891,390
2006	20,128	24,874	12,004,396
2007	17,542	21,079	10,556,210

1998 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	107,768	162,395	271,658,475
1998	129,269	187,904	287,528,021
1999	153,188	217,206	303,404,591
2000	177,421	247,143	318,555,675
2001	200,877	276,191	332,035,354
2002	223,497	304,272	345,353,303
2003	246,165	332,533	358,751,048
2004	268,772	360,827	372,051,853
2005	288,821	385,480	383,943,242
2006	308,949	410,354	395,947,638
2007	326,490	431,433	406,503,848

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

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	131,774	103,319	232,079,406

1998 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	10,146	1,103	5,318,850
1997	2,007	1,113	5,519,128
1998	8,459	1,113	6,786,972
1999	2,732	1,114	7,737,856
2000	2,732	1,113	7,737,856
2001	1,955	1,113	5,360,755
2002	1,955	1,113	5,360,755
2003	1,955	1,113	5,360,755
2004	1,955	1,113	5,360,755
2005	1,955	1,113	5,360,755
2006	1,954	1,113	5,360,755
2007	1,955	1,113	5,360,755

1998 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	133,781	104,432	237,598,534
1998	142,240	105,545	244,385,506
1999	144,972	106,658	252,123,362
2000	147,704	107,771	259,861,218
2001	149,659	108,884	265,221,973
2002	151,613	109,996	270,582,728
2003	153,568	111,109	275,943,483
2004	155,523	112,222	281,304,238
2005	157,478	113,335	286,664,993
2006	159,432	114,447	292,025,749
2007	161,387	115,560	297,386,504

HISTORICAL
TOTAL OTHER DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	0	0	10,301,784

1998 BUDGET FORECAST
TOTAL OTHER DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	0	0	331,615
1997	0	0	210,827
1998	0	0	227,477
1999	0	0	209,356
2000	0	0	200,141
2001	0	0	197,388
2002	0	0	183,637
2003	0	0	193,860
2004	0	0	154,558
2005	0	0	100,691
2006	0	0	97,369
2007	0	0	96,452

1998 BUDGET FORECAST
TOTAL OTHER DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	0	0	10,512,611
1998	0	0	10,740,088
1999	0	0	10,949,444
2000	0	0	11,149,585
2001	0	0	11,346,973
2002	0	0	11,530,611
2003	0	0	11,724,471
2004	0	0	11,879,029
2005	0	0	11,979,720
2006	0	0	12,077,089
2007	0	0	12,173,541

HISTORICAL
TOTAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	205,366	256,571	500,219,714

1998 BUDGET FORECAST
TOTAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	5,070	5,868	12,741,215
1997	8,376	4,329	11,901,398
1998	8,807	4,196	11,961,577
1999	8,603	3,510	10,997,340
2000	8,632	3,548	9,901,916
2001	7,888	3,592	5,978,542
2002	7,841	3,530	5,895,195
2003	7,819	3,500	5,871,780
2004	7,718	3,365	5,681,688
2005	7,771	3,436	5,707,856
2006	7,811	3,489	5,763,690
2007	7,875	3,574	5,857,887

1998 BUDGET FORECAST
TOTAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	213,743	260,901	512,121,113
1998	222,550	265,096	524,082,690
1999	231,153	268,605	535,080,030
2000	239,785	272,154	544,981,945
2001	247,673	275,745	550,960,487
2002	255,513	279,274	556,855,684
2003	263,331	282,774	562,727,464
2004	271,049	286,139	568,409,152
2005	278,820	289,575	574,117,007
2006	286,631	293,063	579,880,698
2007	294,505	296,637	585,738,585

HISTORICAL
RESIDENTIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	98,661	155,003	261,165,842

1998 BUDGET FORECAST
RESIDENTIAL EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	3,797	5,647	8,766,207
1997	7,042	4,106	7,862,633
1998	7,059	3,973	6,638,318
1999	6,544	3,287	4,741,318
2000	6,573	3,325	3,655,109
2001	6,606	3,369	2,111,589
2002	6,559	3,307	2,041,993
2003	6,537	3,277	2,008,355
2004	6,436	3,142	1,857,565
2005	6,489	3,213	1,937,600
2006	6,529	3,266	1,996,756
2007	6,593	3,351	2,091,870

1998 BUDGET FORECAST
RESIDENTIAL EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	105,704	159,110	269,028,476
1998	112,763	163,082	275,666,794
1999	119,307	166,369	280,408,112
2000	125,880	169,695	284,063,220
2001	132,486	173,063	286,174,809
2002	139,045	176,370	288,216,803
2003	145,581	179,647	290,225,158
2004	152,017	182,789	292,082,723
2005	158,506	186,002	294,020,322
2006	165,035	189,268	296,017,078
2007	171,627	192,619	298,108,948

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

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	106,705	101,568	228,752,088

1998 BUDGET FORECAST
 COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
 INCREMENTAL ANNUAL REDUCTIONS
 AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	1,273	221	3,643,392
1997	1,334	223	3,827,938
1998	1,748	223	5,095,782
1999	2,059	223	6,046,666
2000	2,059	223	6,046,666
2001	1,282	223	3,669,565
2002	1,282	223	3,669,565
2003	1,282	223	3,669,565
2004	1,282	223	3,669,565
2005	1,282	223	3,669,565
2006	1,282	223	3,669,565
2007	1,282	223	3,669,565

1998 BUDGET FORECAST
 COMMERCIAL/INDUSTRIAL EXISTING DSM PROGRAMS
 CUMULATIVE ANNUAL REDUCTIONS
 AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	108,039	101,791	232,580,026
1998	109,787	102,014	237,675,808
1999	111,846	102,236	243,722,474
2000	113,905	102,459	249,769,140
2001	115,187	102,682	253,438,705
2002	116,468	102,904	257,108,270
2003	117,750	103,127	260,777,835
2004	119,032	103,350	264,447,400
2005	120,314	103,573	268,116,965
2006	121,596	103,795	271,786,531
2007	122,878	104,018	275,456,096

HISTORICAL
OTHER EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	0	0	10,301,784

1998 BUDGET FORECAST
OTHER EXISTING DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	0	0	331,615
1997	0	0	210,827
1998	0	0	227,477
1999	0	0	209,356
2000	0	0	200,141
2001	0	0	197,388
2002	0	0	183,637
2003	0	0	193,860
2004	0	0	154,558
2005	0	0	100,691
2006	0	0	97,369
2007	0	0	96,452

1998 BUDGET FORECAST
OTHER EXISTING DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	0	0	10,512,611
1998	0	0	10,740,088
1999	0	0	10,949,444
2000	0	0	11,149,585
2001	0	0	11,346,973
2002	0	0	11,530,611
2003	0	0	11,724,471
2004	0	0	11,879,029
2005	0	0	11,979,720
2006	0	0	12,077,089
2007	0	0	12,173,541

HISTORICAL
TOTAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	26,109	3,289	4,661,793

1998 BUDGET FORECAST
TOTAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	9,066	1,385	2,267,986
1997	1,697	2,637	2,986,714
1998	21,153	22,427	10,922,418
1999	18,048	26,906	12,826,442
2000	18,333	27,501	13,187,166
2001	17,523	26,570	13,059,280
2002	16,734	25,664	12,967,145
2003	16,805	25,874	13,080,580
2004	16,844	26,042	13,134,430
2005	14,233	22,330	11,644,980
2006	14,271	22,498	11,698,830
2007	11,622	18,618	10,155,530

1998 BUDGET FORECAST
TOTAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	27,806	5,926	7,648,507
1998	48,959	28,353	18,570,925
1999	67,007	55,259	31,397,367
2000	85,340	82,760	44,584,533
2001	102,863	109,330	57,643,813
2002	119,597	134,994	70,610,958
2003	136,402	160,868	83,691,538
2004	153,246	186,910	96,825,968
2005	167,479	209,240	108,470,948
2006	181,750	231,738	120,169,778
2007	193,372	250,356	130,325,308

HISTORICAL
RESIDENTIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	1,040	1,538	1,334,475

1998 BUDGET FORECAST
RESIDENTIAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	193	503	592,528
1997	1,024	1,747	1,295,524
1998	14,442	21,537	9,231,228
1999	17,375	26,015	11,135,252
2000	17,660	26,611	11,495,976
2001	16,850	25,680	11,368,090
2002	16,061	24,774	11,275,955
2003	16,132	24,984	11,389,390
2004	16,171	25,152	11,443,240
2005	13,560	21,440	9,953,790
2006	13,599	21,608	10,007,640
2007	10,949	17,728	8,464,340

1998 BUDGET FORECAST
RESIDENTIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	2,064	3,285	2,629,999
1998	16,506	24,822	11,861,227
1999	33,881	50,837	22,996,479
2000	51,541	77,448	34,492,455
2001	68,391	103,128	45,860,545
2002	84,452	127,902	57,136,500
2003	100,584	152,886	68,525,890
2004	116,755	178,038	79,969,130
2005	130,315	199,478	89,922,920
2006	143,914	221,086	99,930,560
2007	154,863	238,814	108,394,900

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

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	25,069	1,751	3,327,318

1998 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	8,873	882	1,675,458
1997	673	890	1,691,190
1998	6,711	890	1,691,190
1999	673	891	1,691,190
2000	673	890	1,691,190
2001	673	890	1,691,190
2002	673	890	1,691,190
2003	673	890	1,691,190
2004	673	890	1,691,190
2005	673	890	1,691,190
2006	672	890	1,691,190
2007	673	890	1,691,190

1998 BUDGET FORECAST
COMMERCIAL/INDUSTRIAL NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	25,742	2,641	5,018,508
1998	32,453	3,531	6,709,698
1999	33,126	4,422	8,400,888
2000	33,799	5,312	10,092,078
2001	34,472	6,202	11,783,268
2002	35,145	7,092	13,474,458
2003	35,818	7,982	15,165,648
2004	36,491	8,872	16,856,838
2005	37,164	9,762	18,548,028
2006	37,836	10,652	20,239,218
2007	38,509	11,542	21,930,408

HISTORICAL
OTHER NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	0	0	0

1998 BUDGET FORECAST
OTHER NEW DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1996	0	0	0
1997	0	0	0
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

1998 BUDGET FORECAST
OTHER NEW DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

	SUMMER PEAK (KW)	WINTER PEAK (KW)	NET ENERGY FOR LOAD (KWH)
1997	0	0	0
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

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>
1997	30
1998	30
1999	30
2000	30
2001	30
2002	30
2003	30
2004	30
2005	11
2006	11
2007	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 396 customers contributing \$12,512 through February, 1998. 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.

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) Year	(2) Population *	(3) Members per Household	(4) Rural and Residential			(5) Commercial		
			(4) GWH	(5) Average No. of Customers	(6) Average KWH Consumption Per Customer	(7) GWH	(8) Average No. of Customers	(9) Average KWH Consumption Per Customer
1988	568,122	2.32	3,155	244,859	12,883	2,089	32,757	63,760
1989	578,876	2.32	3,294	250,038	13,173	2,169	33,500	64,761
1990	587,894	2.30	3,361	255,129	13,173	2,218	33,957	65,305
1991	601,646	2.32	3,455	259,395	13,320	2,273	34,372	66,120
1992	617,393	2.33	3,597	265,374	13,553	2,369	36,009	65,796
1993	630,674	2.32	3,713	271,594	13,671	2,433	38,477	63,242
1994	644,046	2.31	3,752	278,215	13,486	2,549	39,989	63,739
1995	657,036	2.32	4,014	283,717	14,148	2,708	41,007	66,043
1996	671,351	2.33	4,160	287,752	14,457	2,809	42,381	66,271
1997	687,466	2.32	4,119	296,497	13,894	2,898	43,955	65,928
1998	704,125	2.31	4,296	305,253	14,074	2,964	45,874	64,606
1999	718,816	2.30	4,481	312,783	14,327	3,113	47,506	65,534
2000	732,257	2.30	4,607	318,849	14,450	3,223	48,615	66,288
2001	745,569	2.29	4,681	324,878	14,407	3,293	49,564	66,435
2002	761,155	2.30	4,767	331,072	14,398	3,368	50,509	66,682
2003	774,329	2.30	4,854	337,385	14,387	3,443	51,481	66,870
2004	787,153	2.29	4,938	343,751	14,366	3,517	52,476	67,022
2005	801,448	2.29	5,053	350,216	14,427	3,603	53,481	67,374
2006	816,431	2.29	5,157	356,949	14,448	3,681	54,504	67,531
2007	831,534	2.29	5,257	363,810	14,451	3,753	55,574	67,531

* 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) Year	(2) GWH	(3) Industrial		(4) Average KWH Consumption Per Customer	(5) Railroads and Railways GWH	(6) Street & Highway Lighting GWH	(7) Other Sales to Public Authorities GWH	(8) Total Sales to Ultimate Consumers GWH
		Average No. of Customers						
1988	1,968	206		9,553,842	0	15	0	7,226
1989	2,095	229		9,147,029	0	16	0	7,574
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	1,987	279		7,122,027	0	18	0	9,264
1999	2,048	284		7,210,405	0	18	0	9,660
2000	2,070	287		7,213,407	0	18	0	9,918
2001	2,090	290		7,206,264	0	18	0	10,081
2002	2,108	293		7,194,941	0	18	0	10,261
2003	2,127	296		7,184,751	0	19	0	10,442
2004	2,144	299		7,170,897	0	19	0	10,618
2005	2,161	302		7,155,935	0	19	0	10,836
2006	2,178	305		7,141,916	0	19	0	11,035
2007	2,166	308		7,032,343	0	19	0	11,195

GULF POWER COMPANY

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

(1) Year	(2) Sales for Resale GWH	(3) Utility Use & Losses GWH	(4) Net Energy for Load GWH	(5) Other Customers (Average No.)	(6) Total No. of Customers
1988	283	507	8,016	59	277,881
1989	276	528	8,378	63	283,830
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	342	615	10,222	174	351,580
1999	352	640	10,652	183	360,756
2000	362	658	10,938	192	367,943
2001	370	669	11,120	201	374,933
2002	376	681	11,319	210	382,083
2003	383	694	11,519	219	389,381
2004	390	706	11,714	228	396,753
2005	397	720	11,953	237	404,236
2006	403	734	12,172	246	412,004
2007	410	745	12,350	255	419,946

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) Year	(2) Total	(3) Wholesale	(4) Retail	(5) Interruptible	(6) Residential Load Management	(7) Residential Conservation	(8) Comm/Ind Load Management	(9) Comm/Ind Conservation	(10) Net Firm Demand
1988	1,766	55	1,711	0	0	76	0	69	1,620
1989	1,858	60	1,799	0	0	79	0	81	1,698
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	2,200	79	2,122	0	0	100	0	132	1,969
1997	2,282	67	2,214	0	0	108	0	134	2,040
1998	2,372	71	2,300	0	0	129	0	142	2,100
1999	2,439	73	2,366	0	0	153	0	145	2,141
2000	2,511	75	2,436	0	0	177	0	148	2,186
2001	2,557	76	2,481	0	0	201	0	150	2,207
2002	2,609	77	2,531	0	0	223	0	152	2,234
2003	2,661	79	2,582	0	0	246	0	154	2,261
2004	2,713	80	2,632	0	0	269	0	156	2,288
2005	2,775	82	2,693	0	0	289	0	157	2,329
2006	2,834	83	2,751	0	0	309	0	159	2,366
2007	2,886	84	2,802	0	0	326	0	161	2,398

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

GULF POWER COMPANY

Schedule 3.2

**History and Forecast of Winter Peak Demand - MW
Base Case**

(1) Year	(2) Total	(3) Wholesale	(4) Retail	(5) Interruptible	(6) Residential Load Management	(7) Residential Conservation	(8) Comm/Ind Load Management	(9) Comm/Ind Conservation	(10) Net Firm Demand
87-88	1,589	60	1,530	0	0	106	0	81	1,402
88-89	1,762	56	1,706	0	0	113	0	95	1,554
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	2,206	80	2,125	0	0	162	0	104	1,939
97-98	2,302	60	2,242	0	0	188	0	106	2,009
98-99	2,412	62	2,350	0	0	217	0	107	2,088
99-00	2,475	64	2,412	0	0	247	0	108	2,120
00-01	2,513	65	2,447	0	0	276	0	109	2,128
01-02	2,554	67	2,488	0	0	304	0	110	2,140
02-03	2,595	68	2,527	0	0	333	0	111	2,151
03-04	2,635	69	2,567	0	0	361	0	112	2,162
04-05	2,686	70	2,616	0	0	385	0	113	2,188
05-06	2,734	71	2,663	0	0	410	0	114	2,209
06-07	2,775	72	2,703	0	0	431	0	116	2,228

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

GULF POWER COMPANY

Schedule 3.3

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

(1) Year	(2) Total	(3) Residential Conservation	(4) Comm/Ind Conservation	(5) Retail	(6) Wholesale	(7) Utility Use & Losses	(8) Net Energy for Load	(9) Load Factor %
1988	8,371	215	141	7,226	283	507	8,016	56.3%
1989	8,763	221	165	7,574	276	528	8,378	56.3%
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	54.9%
1993	9,537	247	216	8,192	317	565	9,074	54.3%
1994	9,443	254	222	8,164	316	487	8,967	56.8%
1995	9,942	263	227	8,534	336	582	9,452	52.7%
1996	10,167	273	232	8,794	347	521	9,662	55.9%
1997	10,407	282	238	8,938	342	607	9,887	55.3%
1998	10,765	298	244	9,264	342	615	10,222	55.6%
1999	11,219	314	252	9,660	352	640	10,652	56.8%
2000	11,527	330	260	9,918	362	658	10,938	57.0%
2001	11,729	343	265	10,081	370	669	11,120	57.5%
2002	11,947	357	271	10,261	376	681	11,319	57.8%
2003	12,165	370	276	10,442	383	694	11,519	58.2%
2004	12,379	384	281	10,618	390	706	11,714	58.3%
2005	12,636	396	287	10,836	397	720	11,953	58.6%
2006	12,872	408	292	11,035	403	734	12,172	58.7%
2007	13,066	419	297	11,195	410	745	12,350	58.8%

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) Month	(2) 1997 Actual		(3) NEL GWH		(4) 1998 Forecast		(5) NEL GWH		(6) 1999 Forecast		(7) NEL GWH	
	Peak Demand MW		Peak Demand MW		Peak Demand MW		Peak Demand MW		Peak Demand MW		Peak Demand MW	
January	1,852	789	2,009	855	2,088	898						
February	1,542	660	1,722	690	1,761	712						
March	1,255	679	1,549	732	1,606	765						
April	1,289	658	1,387	691	1,443	720						
May	1,790	800	1,778	865	1,893	925						
June	1,861	903	2,097	1,046	2,127	1,068						
July	2,040	1,073	2,100	1,097	2,141	1,115						
August	2,010	1,061	2,043	1,079	2,083	1,120						
September	1,998	980	1,906	905	2,032	970						
October	1,735	789	1,519	746	1,562	769						
November	1,526	685	1,422	693	1,465	720						
December	1,639	809	1,774	822	1,860	871						

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)
Fuel Requirements				Actual	Actual	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
			Units	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
(1) Nuclear			Trillion BTU	None	None	None	None	None	None	None	None	None	None	None	None
(2) Coal			1000 TON	4,889	5,000	5,347	5,620	5,035	4,925	4,691	4,419	4,198	4,198	4,211	4,286
(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	29	30	30	30	34	37	37	35	33	40	37	36
(9)	Steam		1000 BBL	20	23	25	24	30	32	33	31	29	37	35	36
(10)	CC		1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(11)	CT		1000 BBL	9	7	5	6	4	5	4	4	4	3	2	0
(12)	Diesel		1000 BBL	None	None	None	None	None	None	None	None	None	None	None	None
(13) Natural Gas	Total		1000 MCF	1,099	955	1,023	1,614	1,234	1,258	18,440	27,250	28,488	26,280	25,106	23,198
(14)	Steam		1000 MCF	1,099	955	1,023	1,614	1,234	1,258	987	986	1,237	1,257	1,361	1,203
(15)	CC		1000 MCF	None	None	None	None	None	None	17,453	26,264	27,251	25,023	23,463	21,459
(16)	CT		1000 MCF	None	None	None	None	None	None	None	None	None	None	282	536
(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

		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Energy Sources	Units	Actual 1996	Actual 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
(1)	Annual Firm Interchange	GWH	(633)	(647)	(1,503)	(1,447)	7	462	(1,366)	(1,896)	(1,326)	(775)	(398)	78	
(2)	Nuclear	GWH	None	None	None	None	None	None	None	None	None	None	None	None	
(3)	Coal	GWH	10,153	10,389	11,475	11,774	10,634	10,361	9,841	9,274	8,734	8,802	8,872	8,854	
(4)	Residual	Total	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	3	3	2	3	2	2	2	2	2	1	1	0	
(10)	Steam	GWH	None	None	None	None	None	None	None	None	None	None	None	None	
(11)	CC	GWH	None	None	None	None	None	None	None	None	None	None	None	None	
(12)	CT	GWH	3	3	2	3	2	2	2	2	2	1	1	0	
(13)	Diesel	GWH	None	None	None	None	None	None	None	None	None	None	None	None	
(14)	Natural Gas	Total	57	44	163	235	209	211	2,759	4,056	4,220	3,892	3,697	3,418	
(15)	Steam	GWH	57	44	70	111	85	87	68	68	86	88	95	83	
(16)	CC	GWH	None	None	None	None	None	None	2,567	3,864	4,010	3,680	3,447	3,151	
(17)	CT	GWH	None	None	93	124	124	124	124	124	124	124	155	184	
(18)	NUGs	GWH	82	98	85	87	86	84	83	83	84	33	0	0	
(19)	Net Energy for Load	GWH	9,662	9,887	10,222	10,652	10,938	11,120	11,319	11,519	11,714	11,953	12,172	12,350	

NOTE: Includes contracted energy allocated to certain resale customers by Southeastern Power Administration (SEPA), 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 1996	Actual 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
(1) Annual Firm Interchange			%	(6.55)	(6.54)	(14.70)	(13.58)	0.06	4.15	(12.07)	(16.46)	(11.32)	(6.48)	(3.27)	0.63	
(2) Nuclear			%	None	None	None	None	None	None	None	None	None	None	None	None	
(3) Coal			%	105.08	105.08	112.26	110.53	97.22	93.17	86.94	80.51	74.56	73.64	72.89	71.69	
(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		%	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.00	
(10) Steam			%	None	None	None	None	None	None	None	None	None	None	None	None	
(11) CC			%	None	None	None	None	None	None	None	None	None	None	None	None	
(12) CT			%	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.00	
(13) Diesel			%	None	None	None	None	None	None	None	None	None	None	None	None	
(14) Natural Gas	Total		%	0.59	0.45	1.59	2.21	1.91	1.90	24.37	35.21	36.03	32.56	30.37	27.68	
(15) Steam			%	0.59	0.45	0.68	1.04	0.78	0.78	0.60	0.59	0.73	0.74	0.78	0.67	
(16) CC			%	None	None	None	None	None	None	22.68	33.54	34.23	30.79	28.32	25.51	
(17) CT			%	None	None	0.91	1.16	1.13	1.12	1.10	1.08	1.06	1.04	1.27	1.49	
(18) NUGs			%	0.85	0.99	0.83	0.82	0.79	0.76	0.73	0.72	0.72	0.28	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 13.5% target reserve margin beyond 1998. 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 forecast, 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 the 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. In summary, 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 results 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 plan is 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 is 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 presented for approval to the Southern electric system Operating Committee.

In summary, the Southern electric system's integrated resource planning process involves a significant amount of manpower and computer resources in order to produce 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. Some time back the Southern electric sytem 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.

OVERVIEW OF SUPPLY SIDE ASSUMPTIONS

We anticipate productivity improvements to remain stable through 2020 at a rate of 2% -5% due to competitive pressures in the marketplace. New technological innovations will serve to stabilize these improvements after 2003. After 2003, the market is forecast to be dominated by major players who will create sufficient competition among themselves. There will be limited excess capacity present in the market until 2003. Thereafter, capacity will be nearly balanced with some need for new capacity in latter years.

Environmental regulations are projected to have little impact on supply markets until after 2005. Labor issues also pose little danger as the unions are predicted to remain weak causing stability of labor throughout the time period. Transportation is predicted to show improvements in all sectors as railroads become more efficient and productive due to greater competition from the west (possibilities of open access) and the barge markets are predicted to have infrastructure improvements as it cycles at equilibrium in latter years.

OVERVIEW OF DEMAND SIDE ASSUMPTIONS

As the allowance market continues to respond to Phase II regulations, premiums will continue to be attributed to compliance costs throughout time. Changes to environmental regulations will continue to drive the demand market as purchasers struggle to find the optimum balance between environmental costs and competitive pricing. Natural gas will gain a more active role as an alternative fuel as much of the new capacity will come from that market in earlier years.

As both load growth and the US economy continue to grow and expand throughout the time period, the likelihood of utility deregulation improves significantly. In the 2005-2020 period, the assumption of deregulated markets promotes increased utilization. With these three factors working together, the US is predicted to increase growth as a swing supplier through 2020. Since uncertainty plays a significant role in forecasting, real price changes will remain constant in latter years.

FUEL PRICE FORECAST PROCESS

Each year, the Southern Company develops a fuel price forecast, for coal, oil, and natural gas, which extends through the Company's planning horizon. The 1997 fuel price forecast was 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. In June of 1997, a Fossil Fuel Price Workshop was held with representatives from recognized leaders in energy related economic forecasting and transportation related industries. Presenters included representatives from Resource Data International, J. D. Energy Inc., Hill and Associates, Texaco, Data Resource International, Fieldston Company, and Criton Company.

The fuel panel used the information presented by the outside experts, as well as information from and experience of Fuel Procurement personnel, to develop a set of assumptions about the future supply and demand factors that drive fuel and transportation related prices. Assumptions regarding coal pricing, coal transportation, gas pricing, and oil pricing are utilized, along with the then current market pricing of these commodities, to produce a "spot market" forecast for each type of fuel.

High and low fuel pricing scenarios were discussed by the outside consultants and the fuel procurement representatives during the Fossil Fuel Price Workshop. Each representative presented their "base case" forecast and assumptions. A question period allowed for opposing views and debates on forecasts. Subsequent presentations by the Southern Company Fuel Procurement group referenced the outside consultant forecasts and any major assumption differences. Both internal and external forecasts and assumptions were then consolidated to derive the fuel panel's "base case" forecast. Actual computer modeling of a high and/or low fuel price forecast scenario was not executed. Sensitivities to gas pricing forecasts were based on seasonal supply and demand assumptions. For the 1998 "base" fuel forecast, it was assumed that a normal winter will be experienced in any given year and that fluctuations in gas pricing would be related to seasonal supply and demand and any related pipeline curtailments. As a

result, a "summer" gas price, a "winter" gas price, and a "winter" high gas price were developed and used in the base case model. The "winter high" gas price was assumed to be approximately equal to the price of fuel oil for the months of December through March of each year.

SOUTHERN ELECTRIC SYSTEM'S FORECAST OF LONG RANGE COAL PRICES

The following discussion will explain the methodology and assumptions used to create the 1997 coal price forecast.

Types of Coal

There are numerous types of coal purchased or considered for purchase by the Southern Electric System. Due to price differentials within these coal types, the coal pricing forecast must associate similar coal types based on sulfur content and Btu levels. Our 1997 forecast includes 12 types of coal classifications. The categories are as follows:

Coal Type	Sulfur %	# SO ₂ /MMBTU	BTU/#
1. Central Appalachia	<= 0.75 (0.75)	<= 1.20	12,500
2. Central Appalachia	0.75 -1.80 (1.0)	1.25 - 3.00	12,000
3. Illinois Basin	1.30 - 1.60 (1.5)	2.17 - 2.67	12,000
4. Illinois Basin	2.40 - 3.50 (2.5)	4.14 - 6.03	11,700
5. Illinois Basin	2.40 - 4.00 (3.0)	4.44 - 7.41	10,800
6. Alabama	<= 0.72 (0.70)	<= 1.20	12,000
7. Alabama	0.72 - 1.40 (1.0)	1.20 - 2.33	12,000
8. Alabama	1.40 - 2.50 (2.0)	2.37 - 4.24	11,800
9. Powder River Basin	<= 0.5 (0.4)	<= 1.09	9,200
10. Powder River Basin	<= 0.5 (0.4)	<= 1.16	8,600
11. Western	<= 0.7 (0.5)	<= 1.19	11,800
12. Foreign	0.75 - 1.20 (1.0)	1.25 - 2.00	12,000

Price disparity occurs among the coal types, as well as within the various coal types. These differentials are a result of contract vs. spot basis coal, in addition to whether the coal is loaded on railcars, barges, ships, or trucks. Since there are so many combinations, a benchmark coal price is established for each region. All other coal prices are a derivative of this benchmark.

SOUTHERN ELECTRIC SYSTEM'S FORECAST OF LONG RANGE NATURAL GAS PRICES

This section serves to explain and describe the methodology and factors used to develop the 1997 Natural Gas Price Forecast for the Southern electric system. After receiving pertinent market information from various producers, suppliers, and consultants, we have formulated opinions on a variety of topics.

Natural Gas Transportation

Natural gas transportation capacity for new SES gas-fired electric generation is limited without pipeline expansion. During the summer of 1995, Southern Natural Gas Company's (SNG) system, between Jefferson County and Savannah, Georgia, operated at 99% of capacity. Other SNG pipeline segments in Georgia were relatively full as well. These developments suggest that available capacity to handle new gas-fired generation in Georgia on SNG is severely limited during periods of hot weather.

For planning purposes, the budget assumes that approximately 1,000MW of gas-fired peakers could be constructed along SNG's southern mainline without the need for expansion. Similarly, the budget assumes the same amount of peakers along Transco's mainline. After the initial 2,000MW of expansion, both SNG and Transco will need to expand.

Since SNG's and Transco's pipeline capacity is fully committed, we must assume that pipelines must be expanded for baseload gas-fired generators. Both companies have indicated that expansion is possible and that rates would be similar to current firm transportation rates. The companies would require at least a ten year firm transportation contract to be executed before expanding their facilities. Firm transportation rates have been included for the system's CC units.

Koch Pipeline Company is the principal interstate pipeline that serves Mississippi, Alabama, and Gulf Power Companies. The average firm transportation rate on Koch is \$.22 per MMBTU.

Although there is sufficient existing capacity available for some new Gas-fired generation located

along the Gulf coast near Mobile, pipeline expansion will be necessary for any further additions. The cost of expanding the gulf coast pipeline will be covered through the payment of firm transportation rates.

Storage Availability and Trends in the Market

During the winter months, U.S. natural gas demand can reach 100 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 between the time period 1999 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 2 Bcf per day will be delivered to the market by 1999. Another 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 available for all new gas-fired electric generation. It also means that average annual gas prices should drop in the 1998 to 2000 time period.

Natural Gas Price Forecast

In order to gain a thorough understanding of the natural gas price forecast, it is necessary to

provide background information on the market developments. In addition, cold and warm winter pricing patterns will be discussed.

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) have suggested 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 believes that gas resources are considered sufficient enough to meet the growing demand with moderate nominal dollar increases in price during the planning period 1997-2020.

Dramatic improvements in producer's ability to find and develop natural gas reserves has 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, as discussed earlier, will be a flood of new cheaper gas volumes in the near future.

Cold vs. Warm Winter Pricing

During abnormally cold winters, gas storage is depleted. This results in higher summer demand and prices for gas because storage has to be replenished. This occurrence was evident the summer of 1996, as we experienced cold winter weather. During January, February, and March of 1996, monthly gas deliveries into SNG averaged \$2.86 per MMBTU. Daily spot prices reached in the \$10 per MMBTU range during this time. Since storage levels were so low, demand for storage refill gas increased summer prices to around \$2.39 per MMBTU.

In years where warmer than normal winters are experienced, gas prices tend to be lower. An

example of this event would be the winter of 1995, where prices averaged only \$1.47 per MMBTU. This is about \$1.40 per MMBTU lower than in 1996. The lower winter demand resulted in lower summer demand, as storage was still relatively full. Consequently, 1995 summer gas prices averaged \$1.49 per MMBTU, which was \$.90 per MMBTU cheaper than in 1996.

SOUTHERN ELECTRIC SYSTEM'S FORECAST OF LONG RANGE OIL PRICES

This section has been devised to explain the methodology and major factors that were used to develop the 1996 Crude Oil and Fuel Oil price forecast for the Southern Electric System. The Oil Price Forecast will be discussed first, followed by an analysis on future oil availability and trends in the market.

Oil Price Forecast

SES develops a forecast for crude oil and uses it as a benchmark for determining the price forecasts of No. 2 fuel oil and No. 6 residual oil. The crude oil forecast represents the U.S. average annual refiner acquisition cost or RAC price. RAC has been chosen to model because it has historically proven to be a reliable indicator of refined crude oil (downstream) products.

Seasonal variation of prices paid for fuel or residual oil have not been factored into the SES forecast. This can be attributed to the fact that historically, SES purchase practices have avoided most seasonal variations. After collecting and analyzing pertinent data, the following relationships have been drawn between crude oil and other downstream products purchased by the Southern Electric System:

No. 2 Fuel Oil	=	115% of RAC
No. 6 LS Residual Oil	=	80% of RAC
No. 6 HS Residual Oil	=	70% of RAC

These prices are F.O.B. Gulf Coast Waterborne or Pipeline except for Savannah and Plant McManus which are F.O.B. Atlanta Coast Waterborne.

The 1997 budget suggests that prices will be in the area of \$18 per barrel. Due to recent developments in the Middle-East, short term oil prices go as high as \$25(+) per barrel. In any event, there is definitely potential for tremendous price volatility in the future oil market.

Availability and Trends

Due to great technological advancements in all aspects of oil exploration and production, sufficient oil quantities will be available to SES. Expansion and capacity increases are anticipated in all three major global economies. There are no major resource constraints predicted and capacity is expected to slightly exceed demand in the short run. Although

OPEC is projected to loose some short-term manipulation of prices, the later projections suggests that they will have an increasing role as their reserve bases become a future market driver.

Despite assumed short term downward price pressures, there are two assumptions that could nullify this effect. The reasons are as follows: 1) Members of OPEC will have a strong future influence on prices and 2) Increased consumption in China and Southern Asia could cause demand to rise, thereby causing upward price pressures. The "Wild-card" in the future world oil market is the political turmoil present in Iraq. If Iraq re-enters the marketplace, crude oil prices will weaken substantially. Unfortunately, there is no way to accurately predict the probability of this event occurring. Since there appears to be a current glut in the market, the current view of the OPEC nations is to somewhat reduce production in order to drive prices upward.

Real prices are predicted to be higher in the near term and will eventually fluctuate from -0.5% to 0.5% through 2005 as the market continues to adjust towards equilibrium. Stability can be seen through 2010 as the market has been driven to equilibrium. Gradual increases from 1.0% to 2.0% are expected through 2012, as OPEC begins to play a more significant role in the world crude oil market. This effect slows to .5% through 2014, as further technological innovations and process improvements erode some of the upward price pressures.

After 2014, OPEC's dominance is once again apparent as real oil prices increase 2.0% through 2020.

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 correcting 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 solving due to the 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 over the next four years. 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 system constraints and formulate a plan, if any, to most cost-effectively solve the problems prior to proceeding with negotiations for the agreement.

STRATEGIC ISSUES

As mentioned earlier, Gulf's immediate needs for additional supply-side resources will come from purchased power arrangements which will 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. Prior to moving forward with the certification process for this unit, Gulf will issue a Request for Proposals (RFP) in order to solicit potential cost-effective alternatives to the Company's construction of this combined cycle unit. After performing the economic evaluations of the proposals, Gulf will select its most cost-effective option and proceed with the necessary steps to implement the final plan for meeting its 2002 capacity needs.

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 is beginning to secure firm energy at prices that are leading to significant savings to the Southern electric system. This will most assuredly continue well into the future.

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, absent a more economical market offer, 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 virgin 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 not scheduled until after the year 2005. Gulf will continue to evaluate its available options to determine the most cost-effective method to meet this need and will take the appropriate steps to pursue that plan. As such, the Company has not yet decided where this resource should be sited. Therefore, it would be premature for the Company to have begun performing environmental studies in preparation for the siting of the next resource 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 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 CAA. 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-NO_x burners on two large coal-fired units to support compliance with Title IV NO_x 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 NO_x during 1996 through 1999 and are grandfathered under the Phase I NO_x 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 will continue to pursue additional fuel switching coupled with the use of emission allowances banked during Phase I and the acquisition of additional allowances to meet compliance. This 1996 review discovered only minor differences in the fuel selection at several plants 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 nonattainment or revised ambient standards, are aimed at further NO_x 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.

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, which 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 1998 and extends into 2010. Gulf's share of the capacity and energy sales is reflected in the reserves on Schedules 7.1 and 7.2 and the energy and fuel use on Schedules 5 and 6.1.

CHAPTER IV
FORECAST
OF
FACILITIES REQUIREMENTS

CAPACITY RESOURCE ALTERNATIVES

POWER PURCHASES

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

CAPACITY ADDITIONS

Gulf has 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. The Company has determined through these evaluations that the construction of a combined cycle unit at its Lansing Smith Generating Plant is 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 will issue a Request for Proposals 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 will proceed with the necessary steps to pursue its most cost-effective alternative.

FUTURE CONSIDERATIONS

Gulf will continue to evaluate its options in order to determine how to best meets its capacity obligations beyond 2002. Currently, the Company is looking toward participation in system resources as the likely economic choice for meeting its needs.

UTILITY: GULF POWER COMPANY

SCHEDULE 7.1

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	TOTAL INSTALLED CAPACITY MW	FIRM CAPACITY IMPORT MW (B)	FIRM CAPACITY EXPORT MW	NUG MW	TOTAL CAPACITY AVAILABLE MW	FIRM PEAK DEMAND MW	RESERVE MARGIN BEFORE MAINTENANCE MW	% OF PEAK	SCHEDULED MAINTENANCE MW	RESERVE MARGIN AFTER MAINTENANCE MW	% OF PEAK
1998	2308	240	(213)	19	2354	2100	254	12.1%	NONE	254	12.1%
1999	2308	242	(214)	19	2355	2141	214	10.0%		214	10.0%
2000	2308	227	(214)	19	2340	2186	154	7.0%		154	7.0%
2001	2308	212	(215)	19	2324	2207	117	5.3%		117	5.3%
2002	2840	34	(215)	19	2678	2234	444	19.9%		444	19.9%
2003	2840	34	(215)	19	2678	2261	417	18.4%		417	18.4%
2004	2840	34	(215)	19	2678	2288	390	17.0%		390	17.0%
2005	2840	34	(215)	0	2659	2329	330	14.2%		330	14.2%
2006	2870	34	(215)	0	2689	2366	323	13.7%		323	13.7%
2007	2868	30	(215)	0	2683	2398	285	11.9%		285	11.9%

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 AVAILABLE CAPACITY MW	FIRM PEAK DEMAND MW	RESERVE MARGIN BEFORE MAINTENANCE MW	% OF PEAK	SCHEDULED MAINTENANCE MW	RESERVE MARGIN AFTER MAINTENANCE MW	% OF PEAK
1997-98	2292	132	(213)	19	2230	2009	221	11.0%	NONE	221	11.0%
1998-99	2317	242	(214)	19	2364	2088	276	13.2%		276	13.2%
1999-00	2317	177	(214)	19	2299	2120	179	8.4%		179	8.4%
2000-01	2317	177	(215)	19	2298	2128	170	8.0%		170	8.0%
2001-02	2317	177	(215)	19	2298	2140	158	7.4%		158	7.4%
2002-03	2849	34	(215)	19	2687	2151	536	24.9%		536	24.9%
2003-04	2849	34	(215)	19	2687	2162	525	24.3%		525	24.3%
2004-05	2849	34	(215)	19	2687	2188	499	22.8%		499	22.8%
2005-06	2849	34	(215)	0	2668	2209	459	20.8%		459	20.8%
2006-07	2879	30	(215)	0	2694	2228	466	20.9%		466	20.9%

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 AND ESTIMATED DEMAND SIDE OPTIONS.

UTILITY: GULF POWER COMPANY

SCHEDULE 8
 PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Plant Name	Unit No.	Location	Unit Type	Fuel Pri.	Fuel Alt.	Fuel Transport Pri.	Fuel Transport Alt.	Const Start Mo/Yr	Com'l In-Service Mo/Yr	Expected Retirement Mo/Yr	Gen Max Nameplate KW	Net Capacity Summer MW	Net Capacity Winter MW	Status
Lansing Smith		Bay County 36/2S/15W	CC	NG	LO	PL	TK	06/99	06/02			532.0	532.0	P
Unlocated		Unlocated	CT	NG	LO	PL	TK	12/03	06/06			30.0	30.0	P
Lansing Smith	A	Bay County 36/2S/15W	CT	LO	--	TK	--	--	--	12/06	41,850	(31.6)	(40.0)	R
Unlocated		Unlocated	CT	NG	LO	PL	TK	12/04	06/07			30.0	30.0	P

Note: (a) The construction start date represents the estimated start of related expenditures. The actual construction of the CT's is anticipated to take only 11 months.

Abbreviations: CT - Combustion Turbine
 CC - Combined Cycle
 NG - Natural Gas
 LO - Light Oil
 PL - Pipeline
 TK - Truck
 P - Planned, but not authorized by utility
 R - To be retired



Utility: Gulf Power Company

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

- (1) Plant Name and Unit Number: Lansing Smith
- (2) Capacity
 - a. Summer: 532 MW
 - b. Winter: 532 MW
- (3) Technology Type: Combined Cycle
- (4) Anticipated Construction Timing
 - a. Field construction start - date: 03/01
 - 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 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): 5.80%
 - Forced Outage Factor (FOF): 3.20%
 - Equivalent Availability Factor (EAF): 91.20%
 - Resulting Capacity Factor (%): 70% - 90%
 - Average Net Operating Heat Rate (ANOHR): 6,527
- (13) Projected Unit Financial Data
 - Book Life (Years): 40
 - Total Installed Cost (In-Service Year \$/kW): 495
 - Direct Construction Cost (\$/kW): 395
 - AFUDC Amount (\$/kW): 66
 - Escalation (\$/kW): 34
 - Fixed O&M (\$/kW - Yr): 3.08
 - Variable O&M (\$/MWH): 2.09
 - K Factor: 1.5371

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: 07/05
 - b. Commercial in-service date: 06/06
- (5) Fuel
 - a. Primary fuel: Natural Gas
 - b. Alternate fuel: Distillate Oil
- (6) Air Pollution Control Strategy: Water injection for NOx control
- (7) Cooling Method: NA
- (8) Total Site Area: Unlocated
- (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): 5.00%
 - Forced Outage Factor (FOF): 3.00%
 - Equivalent Availability Factor (EAF): 92.20%
 - Resulting Capacity Factor (%): 5% - 10%
 - Average Net Operating Heat Rate (ANOHR): 11,728
- (13) Projected Unit Financial Data
 - Book Life (Years): 40
 - Total Installed Cost (In-Service Year \$/kW): 267
 - Direct Construction Cost (\$/kW): 214
 - AFUDC Amount (\$/kW): 0
 - Escalation (\$/kW): 53
 - Fixed O&M (\$/kW - Yr): 2.94
 - Variable O&M (\$/MWH): 3.50
 - K Factor: 1.4813



Utility: Gulf Power Company

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: 07/06
 - b. Commercial in-service date: 06/07
- (5) Fuel
 - a. Primary fuel: Natural Gas
 - b. Alternate fuel: Distillate Oil
- (6) Air Pollution Control Strategy: Water injection for NOx control
- (7) Cooling Method: NA
- (8) Total Site Area: Unlocated
- (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): 5.00%
 - Forced Outage Factor (FOF): 3.00%
 - Equivalent Availability Factor (EAF): 92.20%
 - Resulting Capacity Factor (%): 5% - 10%
 - Average Net Operating Heat Rate (ANOHR): 11,728
- (13) Projected Unit Financial Data
 - Book Life (Years): 40
 - Total Installed Cost (In-Service Year \$/kW): 274
 - Direct Construction Cost (\$/kW): 214
 - AFUDC Amount (\$/kW): 0
 - Escalation (\$/kW): 60
 - Fixed O&M (\$/kW - Yr): 3.03
 - Variable O&M (\$/MWH): 3.61
 - K Factor: 1.4813

Utility: Gulf Power Company

Schedule 10

Status Report and Specifications of Proposed Directly Associated Transmission Lines

- (1) Point of Origin and Termination:
- (2) Number of Lines:
- (3) Right-of-Way:
- (4) Line Length:
- (5) Voltage: None
- (6) Anticipated Construction Timing:
- (7) Anticipated Capital Investment:
- (8) Substations:
- (9) Participation with Other Utilities:



500 Bayfront Parkway
Pensacola, FL 32520

Tel 904.444.6000



March 31, 1997

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 ten copies of Gulf Power Company's 1997 Ten Year Site Plan. Included in the Plan is the Company's Clean Air Act Compliance update which is filed pursuant to Order No. PSC-93-1376-FOF-EI.

Sincerely,

A handwritten signature in cursive script that reads "Susan D. Cranmer".

Susan D. Cranmer
Assistant Secretary and Assistant Treasurer

lw

Enclosures

cc: Beggs and Lane
Jeffrey A. Stone, Esquire

bc: S. D. Cranmer
R. G. Livingston
L. G. Malone
W. F. Pope
J. O. Vick

A small, handwritten mark or signature, possibly initials, located next to the name "L. G. Malone" in the distribution list.