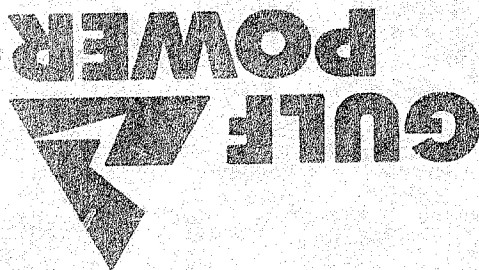


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A SOUTHERN COMPANY



APRIL, 1998

FOR ELECTRIC GENERATING FACILITIES  
AND  
ASSOCIATED TRANSMISSION LINES

1998 - 2007

TEN YEAR SITE PLAN

# **GULF POWER COMPANY TEN YEAR SITE PLAN**

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

**Submitted To The  
State Of Florida  
Public Service Commission  
Division of Electric and Gas**

**APRIL 1, 1998**



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## 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 very embedded in 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 resources 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 Power Company has determined that the best way in which to meet its capacity obligations over the next ten years is through a combination of power purchases and participation in combined cycle and combustion turbine additions. Gulf plans to use power purchases, exclusively until the year 2002 when it plans to participate in Southern System or other cost-

effective resources. Gulf's decision to take this approach to meeting its capacity needs is driven by the fact 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 306 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. 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 2,284 MW and a total net winter generating capability of 2,292 MW as of December 31, 1997.

During 1997, Daniel Unit No. 1 experienced economizer problems resulting in a limitation of its rating. The economizer is to be replaced in March 1998, and the unit capability will be updated to match that of unit no. 2. Then the total summer net generating capability for Gulf's existing units will be 2,294 MW and the total net winter generating capability will be 2,302 MW. This increase is reflected in the installed capacity in Schedule 7.1 and Schedule 7.2.

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

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SCHEDULE 1  
EXISTING GENERATING FACILITIES  
AS OF DECEMBER 31, 1997

| (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   |           |          |          |                 |                 |                    |                        |                     | 1,223,000            | 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              | 367.2                  | 365.6                  |
|               | 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 |           |          |          |                 |                 |                    |                        |                     | 546,250              | 468.3                  | 465.3                  |
|               | 1        |                             | FS        | C        | HO       | RR              | TK              | --                 | 9/77                   | 12/27               | 274,125              | 229.1                  | 229.1                  |
|               | 2        |                             | FS        | C        | HO       | RR              | TK              | --                 | 6/81                   | 12/31               | 274,125              | 239.2                  | 239.2                  |
| (A) Scherer   |          | Monroe County, GA           |           |          |          |                 |                 |                    |                        |                     | 222,750              | 223.4                  | 223.3                  |
|               | 3        |                             | FS        | C        | --       | RR              | --              | --                 | 1/87                   | 12/62               | 222,750              | 223.4                  | 223.3                  |
| Total System  |          |                             |           |          |          |                 |                 |                    |                        |                     | 2,463,700            | 2,463.7                | 2,463.7                |

SCHEDULE 1

Page 2 of 2

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%).

(B) Update to 239.2 MW when economizer replaced March, 1998.

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GULF POWER COMPANY  
SYSTEM MAP  
JANUARY 1998

230 KV LINES  
115 KV LINES  
48 KV LINES  
GPCO SUBSTATION  
GPCO STEAM PLANT





FORECAST OF ELECTRIC POWER DEMAND  
AND ENERGY CONSUMPTION

CHAPTER II

FORECASTING DOCUMENTATION

GULF POWER COMPANY  
LOAD FORECASTING METHODOLOGY  
OVERVIEW

Gulf Power Company views the forecasting effort as a dynamic process requiring on-going 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:



# ECONOMIC SUMMARY (1997-2002)

TABLE 1

|                    |            |
|--------------------|------------|
| GDP Growth         | 2.9 - 1.5% |
| Real Interest Rate | 4.7 - 3.8% |
| Inflation          | 2.3 - 2.9% |
| Base Case Forecast |            |

# AREA DEMOGRAPHIC SUMMARY (1997-2002)

TABLE 2

|                                   |        |
|-----------------------------------|--------|
| 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%  |
| Base Case Forecast                |        |

## 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 well as 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.

DRJ 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 G&B Power's Commercial Good Cents building program and efficiency improvements undertaken by customers as a result of Commercial Energy Audits and Technical Assistance Audits, as well as conversions to higher efficient outdoor lighting. The commercial sales forecast also reflects the anticipated incremental impacts of Gulf's DSM plan, approved in April, 1995, designed to meet the Commission-approved demand and energy reduction goals established in October, 1994. Additional information on the Commercial Conservation programs and program features are provided in the Conservation section.

### C. INDUSTRIAL SALES FORECAST

The short-term industrial energy sales forecast is developed using a combination of on-site surveys of major industrial customers, trending techniques, and multiple regression analysis. Forty-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:

| HIGH PRESSURE SODIUM |              |
|----------------------|--------------|
| 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 |
| MERCURY VAPOR        |              |

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  $i$ :

$$L_i = \sum NR_i + \sum NC_i + \sum NI_i + \sum LC_i + \sum LI_i + \text{Misc}_i$$

$$NR = \quad \quad \quad NC = \quad \quad \quad NI = \quad \quad \quad LC = \quad \quad \quad LI = \quad \quad \quad \text{Misc} =$$

Where:  $L_i$  = system demand for electricity in hour  $i$ ;

$NR$  = number of residential end-use loads;

$NC$  = number of commercial end-use loads;

$NI$  = number of industrial end-use loads;

$LR_i$  = demand for electricity by residential end-use  $R$  in hour  $i$ ;

$LC_i$  = demand for electricity by commercial end-use  $C$  in hour  $i$ ;

$LI_i$  = demand for electricity by industrial end-use  $I$  in hour  $i$ ;

$\text{Misc}_i$  = 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. *Live 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 only be achieved by linking environmental benefits to wise energy use practices 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 total 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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1996 | 231,475                | 259,860                | 504,881,507                     |

1998 BUDGET FORECAST  
TOTAL CONSERVATION PROGRAMS  
INCREMENTAL ANNUAL REDUCTIONS  
AT GENERATOR

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

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

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

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1996 | 0                      | 0                      | 10,301,764                      |

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1997 | 0                      | 0                      | 10,512,611                      |
| 1998 | 0                      | 0                      | 10,740,088                      |
| 1999 | 0                      | 0                      | 10,949,444                      |
| 2000 | 0                      | 0                      | 11,140,585                      |
| 2001 | 0                      | 0                      | 11,340,973                      |
| 2002 | 0                      | 0                      | 11,530,611                      |
| 2003 | 0                      | 0                      | 11,720,471                      |
| 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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1996 | 205,366                | 256,571                | 500,219,714                     |

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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 | WINTER  | NET ENERGY  |
|--------|---------|-------------|
| PEAK   | PEAK    | FOR LOAD    |
| (KW)   | (KW)    | (KWH)       |
| 98.661 | 155.003 | 261,165.842 |

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

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

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1996 | 0                      | 0                      | 10,301,784                      |

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

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

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1996 | 1,040                  | 1,538                  | 1,334,475                       |

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

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

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(KWH) |
|------|------------------------|------------------------|---------------------------------|
| 1996 | 0                      | 0                      | 0                               |

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

|      | SUMMER<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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<br>PEAK<br>(KW) | WINTER<br>PEAK<br>(KW) | NET ENERGY<br>FOR LOAD<br>(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 and 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)<br>Year | (2)<br>Population | (3)<br>Members<br>per<br>Household | Rural and Residential |                                       |                                       | (7)<br>GWH | (6)<br>Average KWH<br>Consumption<br>Per Customer | Commercial |  | (9)<br>Average KWH<br>Consumption<br>Per Customer |
|-------------|-------------------|------------------------------------|-----------------------|---------------------------------------|---------------------------------------|------------|---------------------------------------------------|------------|--|---------------------------------------------------|
|             |                   |                                    | (4)<br>GWH            | (5)<br>Average<br>No. of<br>Customers | (8)<br>Average<br>No. of<br>Customers |            |                                                   |            |  |                                                   |
| 1988        | 568,122           | 2.32                               | 3,155                 | 244,859                               |                                       | 2,089      | 12,883                                            | 32,757     |  | 63,760                                            |
| 1989        | 578,876           | 2.32                               | 3,294                 | 250,038                               |                                       | 2,169      | 13,173                                            | 33,500     |  | 64,761                                            |
| 1990        | 587,894           | 2.30                               | 3,361                 | 255,129                               |                                       | 2,218      | 13,173                                            | 33,957     |  | 65,305                                            |
| 1991        | 601,646           | 2.32                               | 3,455                 | 259,395                               |                                       | 2,273      | 13,320                                            | 34,372     |  | 66,120                                            |
| 1992        | 617,393           | 2.33                               | 3,597                 | 265,374                               |                                       | 2,369      | 13,553                                            | 36,009     |  | 65,796                                            |
| 1993        | 630,674           | 2.32                               | 3,713                 | 271,594                               |                                       | 2,433      | 13,671                                            | 38,477     |  | 63,242                                            |
| 1994        | 644,046           | 2.31                               | 3,752                 | 278,215                               |                                       | 2,549      | 13,486                                            | 39,989     |  | 63,739                                            |
| 1995        | 657,036           | 2.32                               | 4,014                 | 283,717                               |                                       | 2,708      | 14,148                                            | 41,007     |  | 66,043                                            |
| 1996        | 671,351           | 2.33                               | 4,160                 | 287,752                               |                                       | 2,809      | 14,457                                            | 42,381     |  | 66,271                                            |
| 1997        | 687,466           | 2.32                               | 4,119                 | 296,497                               |                                       | 2,898      | 13,894                                            | 43,955     |  | 65,928                                            |
| 1998        | 704,125           | 2.31                               | 4,296                 | 305,253                               |                                       | 2,964      | 14,074                                            | 45,874     |  | 64,606                                            |
| 1999        | 718,816           | 2.30                               | 4,481                 | 312,783                               |                                       | 3,113      | 14,327                                            | 47,506     |  | 65,534                                            |
| 2000        | 732,257           | 2.30                               | 4,607                 | 318,849                               |                                       | 3,223      | 14,450                                            | 48,615     |  | 66,288                                            |
| 2001        | 745,569           | 2.29                               | 4,681                 | 324,878                               |                                       | 3,293      | 14,407                                            | 49,564     |  | 66,435                                            |
| 2002        | 761,155           | 2.30                               | 4,767                 | 331,072                               |                                       | 3,368      | 14,398                                            | 50,509     |  | 66,662                                            |
| 2003        | 774,329           | 2.30                               | 4,854                 | 337,385                               |                                       | 3,443      | 14,387                                            | 51,481     |  | 66,870                                            |
| 2004        | 787,153           | 2.29                               | 4,938                 | 343,751                               |                                       | 3,517      | 14,366                                            | 52,476     |  | 67,022                                            |
| 2005        | 801,448           | 2.29                               | 5,053                 | 350,216                               |                                       | 3,603      | 14,427                                            | 53,481     |  | 67,374                                            |
| 2006        | 816,431           | 2.29                               | 5,157                 | 356,949                               |                                       | 3,681      | 14,448                                            | 54,504     |  | 67,591                                            |
| 2007        | 831,534           | 2.29                               | 5,257                 | 363,810                               |                                       | 3,753      | 14,451                                            | 55,574     |  | 67,831                                            |

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



GULF POWER COMPANY

Schedule 2.2

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

| (1)  | (2)   | (3)                                          | (4)                                        | (5)                              | (6)                                    | (7)                                            | (8)                                            |
|------|-------|----------------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------------------|------------------------------------------------|
| Year | GWH   | Industrial<br>Average<br>No. of<br>Customers | Average KWH<br>Consumption<br>Per Customer | Railroads<br>and Railways<br>GWH | Street &<br>Highway<br>Lighting<br>GWH | Other Sales<br>to Public<br>Authorities<br>GWH | Total Sales<br>to Ultimate<br>Consumers<br>GWH |
| 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                                          | 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)<br>Year | (2)<br>Sales for<br>Resale<br>GWH | (3)<br>Utility Use<br>& Losses<br>GWH | (4)<br>Net Energy<br>for Load<br>GWH | (5)<br>Other<br>Customers<br>(Average No.) | (6)<br>Total<br>No. of<br>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                                        | 419,649                             |

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

# GULF POWER COMPANY

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

| (1)  | (2)   | (3)       | (4)    | (5)           | (6)                            | (7)                         | (8)                         | (9)                      | (10)               |
|------|-------|-----------|--------|---------------|--------------------------------|-----------------------------|-----------------------------|--------------------------|--------------------|
| Year | Total | Wholesale | Retail | Interruptible | Residential<br>Load Management | Residential<br>Conservation | Comm/Ind<br>Load Management | Comm/Ind<br>Conservation | Net Firm<br>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)   | (2)   | (3)       | (4)    | (5)           | (6)                         | (7)                      | (8)                      | (9)                   | (10)            |
|-------|-------|-----------|--------|---------------|-----------------------------|--------------------------|--------------------------|-----------------------|-----------------|
| Year  | Total | Wholesale | Retail | Interruptible | Residential Load Management | Residential Conservation | Comm/Ind Load Management | Comm/Ind Conservation | 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)  | (2)    | (3)                         | (4)                      | (5)    | (6)       | (7)                     | (8)                    | (9)              |
|------|--------|-----------------------------|--------------------------|--------|-----------|-------------------------|------------------------|------------------|
| Year | Total  | Residential<br>Conservation | Comm/Ind<br>Conservation | Retail | Wholesale | Utility Use<br>& Losses | Net Energy<br>for Load | Load<br>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).



# CULF POWER COMPANY

## Schedule 4

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

| (1)       | (2)               | (3)        | (4)               | (5)        | (6)               | (7)        |
|-----------|-------------------|------------|-------------------|------------|-------------------|------------|
|           | 1997<br>Actual    |            | 1998<br>Forecast  |            | 1999<br>Forecast  |            |
| Month     | Peak Demand<br>MW | NEL<br>GWH | Peak Demand<br>MW | NEL<br>GWH | Peak Demand<br>MW | NEL<br>GWH |
| 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<br>1996 | Actual<br>1997 | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004   | 2005   | 2006   | 2007   |
|                   |     |     | Units              |                |                |       |       |       |       |       |       |        |        |        |        |
| (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 | 5,033 | 4,924 | 4,768 | 4,556 | 4,334  | 4,317  | 4,275  | 4,332  |
| (3) Residual      |     |     | Total<br>1000 BBL  | 0              | 0              | 0     | 0     | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      |
| (4)               |     |     | Steam<br>1000 BBL  | 0              | 0              | 0     | 0     | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      |
| (5)               |     |     | CC<br>1000 BBL     | None           | None           | None  | None  | None  | None  | None  | None  | None   | None   | None   | None   |
| (6)               |     |     | CT<br>1000 BBL     | None           | None           | None  | None  | None  | None  | None  | None  | None   | None   | None   | None   |
| (7)               |     |     | Diesel<br>1000 BBL | None           | None           | None  | None  | None  | None  | None  | None  | None   | None   | None   | None   |
| (8) Distillate    |     |     | Total<br>1000 BBL  | 29             | 30             | 39    | 38    | 49    | 52    | 54    | 50    | 47     | 57     | 54     | 52     |
| (9)               |     |     | Steam<br>1000 BBL  | 20             | 23             | 34    | 32    | 45    | 47    | 50    | 46    | 43     | 54     | 52     | 52     |
| (10)              |     |     | CC<br>1000 BBL     | None           | None           | None  | None  | None  | None  | None  | None  | None   | None   | None   | None   |
| (11)              |     |     | CT<br>1000 BBL     | 9              | 7              | 5     | 6     | 4     | 5     | 4     | 4     | 4      | 3      | 2      | 0      |
| (12)              |     |     | Diesel<br>1000 BBL | None           | None           | None  | None  | None  | None  | None  | None  | None   | None   | None   | None   |
| (13) Natural Gas  |     |     | Total<br>1000 MCF  | 1,099          | 955            | 1,023 | 1,614 | 1,234 | 1,258 | 6,297 | 9,354 | 11,329 | 14,304 | 15,165 | 15,950 |
| (14)              |     |     | Steam<br>1000 MCF  | 1,099          | 955            | 1,023 | 1,614 | 1,234 | 1,258 | 1,181 | 1,181 | 1,247  | 1,372  | 1,474  | 1,460  |
| (15)              |     |     | CC<br>1000 MCF     | None           | None           | None  | None  | None  | None  | 4,433 | 7,547 | 9,240  | 11,966 | 12,859 | 13,547 |
| (16)              |     |     | CT<br>1000 MCF     | None           | None           | None  | None  | None  | None  | 683   | 626   | 842    | 966    | 832    | 943    |
| (17) Other        |     |     | Trillion BTU       | None           | None           | None  | None  | None  | None  | None  | None  | None   | None   | None   | None   |

Utility Gulf Power Company

Schedule 6.1  
Energy Sources

| (1)                         | (2)          | (3)    | (4)    | (5)            | (6)            | (7)    | (8)    | (9)    | (10)   | (11)   | (12)   | (13)   | (14)   | (15) | (16) |
|-----------------------------|--------------|--------|--------|----------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|
| Energy Sources              |              |        |        | Actual<br>1996 | Actual<br>1997 | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006 | 2007 |
| (1) Annual Firm Interchange | GWH          | (633)  | (647)  | (1,503)        | (1,447)        | 10     | 464    | 274    | 402    | 848    | 653    | 819    | 949    |      |      |
| (2) Nuclear                 | GWH          | None   | None   | None           | None           | None   | None   | None   | None   | None   | None   | None   | None   | None | None |
| (3) Coal                    | GWH          | 10,153 | 10,389 | 11,475         | 11,774         | 10,631 | 0,359  | 10,018 | 9,590  | 9,038  | 9,074  | 9,024  | 8,958  |      |      |
| (4) Residual                | Total<br>GWH | 0      | 0      | 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      | 0    | 0    |
| (6) CC                      | GWH          | None   | None   | 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   | None | None |
| (8) Diesel                  | GWH          | None   | None   | None           | None           | None   | None   | None   | None   | None   | None   | None   | None   | None | None |
| (9) Distillate              | Total<br>GWH | 3      | 3      | 2              | 3              | 2      | 2      | 2      | 2      | 2      | 2      | 1      | 1      | 1    | 0    |
| (10) Steam                  | GWH          | None   | None   | 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   | None | None |
| (12) CT                     | GWH          | 3      | 3      | 2              | 3              | 2      | 2      | 2      | 2      | 2      | 2      | 1      | 1      | 1    | 0    |
| (13) Diesel                 | GWH          | None   | None   | None           | None           | None   | None   | None   | None   | None   | None   | None   | None   | None | None |
| (14) Natural Gas            | Total<br>GWH | 57     | 44     | 70             | 111            | 85     | 87     | 818    | 1,317  | 1,617  | 2,068  | 2,204  | 2,319  |      |      |
| (15) Steam                  | GWH          | 57     | 44     | 70             | 111            | 85     | 87     | 81     | 81     | 86     | 96     | 103    | 101    |      |      |
| (16) CC                     | GWH          | None   | None   | None           | None           | None   | None   | 679    | 1,183  | 1,459  | 1,890  | 2,030  | 2,138  |      |      |
| (17) CT                     | GWH          | None   | None   | None           | None           | None   | None   | 58     | 53     | 72     | 82     | 71     | 80     |      |      |
| (18) NUGS                   | GWH          | 82     | 98     | 178            | 211            | 210    | 208    | 207    | 208    | 209    | 157    | 124    | 124    |      |      |
| (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<br>1995 | Actual<br>1996 | 1997    | 1998    | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   |      |      |      |
| (1) Annual Firm Interchange | %     | (6.55)         | (6.54)         | (14.70) | (13.58) | 0.09   | 4.17   | 2.42   | 3.49   | 7.24   | 5.46   | 6.73   | 7.68   |      |      |      |
| (2) Nuclear                 | %     | None           | None           | None    | None    | None   | None   | None   | None   | None   | None   | None   | None   |      |      |      |
| (3) Coal                    | %     | 105.08         | 105.08         | 112.26  | 110.53  | 97.19  | 93.16  | 88.51  | 83.25  | 77.16  | 75.91  | 74.14  | 72.53  |      |      |      |
| (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           | 0.68    | 1.04    | 0.78   | 0.78   | 7.23   | 11.43  | 13.80  | 17.30  | 18.11  | 18.78  |      |      |      |
| (15) Steam                  | %     | 0.59           | 0.45           | 0.68    | 1.04    | 0.78   | 0.78   | 0.72   | 0.70   | 0.73   | 0.80   | 0.85   | 0.82   |      |      |      |
| (16) CC                     | %     | None           | None           | None    | None    | None   | None   | None   | None   | None   | None   | None   | None   |      |      |      |
| (17) CT                     | %     | None           | None           | None    | None    | None   | None   | None   | None   | 0.61   | 0.69   | 0.58   | 0.65   |      |      |      |
| (18) NUGs                   | %     | 0.65           | 0.99           | 1.74    | 1.98    | 1.92   | 1.87   | 1.83   | 1.81   | 1.78   | 1.31   | 1.02   | 1.00   |      |      |      |
| (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 meet 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 and time consuming activity. Some time back the Southern electric system 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. Also, since we are either pursuing purchases or constructing combustion turbines which have short lead times, the Company has valuable flexibility and can react quickly to any major changes should they arrive.

## OVERVIEW OF SUPPLY SIDE ASSUMPTIONS

We anticipate productivity improvements to remain stable throughout 2020 at a rate of 2% - 4% due to competitive pressures in the marketplace. New technological innovations will serve to stabilize these improvements after 2003. Increased company consolidating activities will tend to create a positive effect on supply. 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 <sub>2</sub> /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. Power River Basin  | <= 0.5 (0.4)      | <= 1.09                  | 9,200  |
| 10. Power 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 principle 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 month, 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 as 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 lose some short-term manipulation of prices. The latter projection 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 planned in conjunction with the Integrated Resource Planning 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 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 the probability of occurrence are 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 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. Otherwise, the transmission system in its current configuration with all other expected generation and load increases is adequate during the planning horizon.



## 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. Strategically, the Company believes that this is superior to investing in new power plants in light of the ever-changing electric utility industry and the eminent move to re-regulation. The flexibility of purchases allows the Company to react quickly to changes that may occur over the next five years without serious negative financial impacts. Gulf fully expects to build new generating capacity in the future to maintain in reliability, however, at this time it is believed to be significantly risky to do so.

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

Gulf plans to meet its generating capacity needs through a combination of power purchases and capacity additions. Most of the capacity may be unsited shared units at other Southern system generating plants.

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 SO<sub>2</sub> on January 1, 1995. Fuel procurement and equipment installation efforts to support Gulf Power's Phase I fuel switching

strategy are complete. Gulf Power has also completed installation of low-NOx burners on two large coal-fired units to support compliance with Title IV Phase I NOx requirements. Gulf Power is presently installing low-NOx burner tips on two other coal fired units to augment compliance initiatives for Phase II NOx requirements. In addition, Gulf Power brought 4 Phase II units into Phase I as 1995 substitution units. All of these units were affected for SO2 in 1995, and are affected for NOx during 1996 through 1999 and are grandfathered under the Phase I NOx limits during Phase II. These units were again substituted in 1997 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 1997 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 NOx and SO2 reductions. All of this uncertainty reinforces the need for a flexible, robust compliance plan. Accordingly, as decision dates for fuel and equipment purchases approach or as better information becomes available relative to regulatory and economic drivers, the analysis will be updated to determine the most cost-effective decisions while maintaining future flexibility.



## 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.



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**CHAPTER IV**  
**FORECAST**  
**OF**  
**FACILITIES REQUIREMENTS**



## CAPACITY RESOURCE ALTERNATIVES

### Power Purchases

Gulf Power Company recognizes the potential uncertainty that may exist over the next few years in the electric utility industry. Although, the Company has identified capacity needs during this time, Gulf believes that the uncertainty that exist is such that it would be unwise to commit long-term capital investment to meet these needs in the near term. Some of the specific concerns the Company has are in regard to unexpected increases or decreases in demand growth, reduced off system sales, and the effects of open competition.

Gulf has entered into short-term purchased power agreements that will meet its needs through the year 2001. After that time Gulf will explore a number of resource options which include, but are not limited to, long-term purchases, participation in portions of cost-effective new generation with other entities, and Gulf's own resource additions. Because there is the potential for the construction of a new generation resource and the lead-time required for new construction, it is anticipated that Gulf will likely issue a solicitation to inquire about available alternatives in the market to building new generation. The results of this solicitation will help Gulf Power Company determine the most cost-effective approach to meeting the future needs of its customers after the short-term capacity arrangements end in 2001.



UTILITY OIL-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<br>INSTALLED<br>CAPACITY<br>MW | FIRM<br>CAPACITY<br>IMPORT<br>MW (B) | FIRM<br>CAPACITY<br>EXPORT<br>MW | NUG<br>MW | TOTAL<br>CAPACITY<br>AVAILABLE<br>MW | FIRM<br>PEAK<br>DEMAND<br>MW | RESERVE<br>MARGIN BEFORE<br>MAINTENANCE<br>MW | %<br>OF PEAK | SCHEDULED<br>MAINTENANCE<br>MW | RESERVE<br>MARGIN AFTER<br>MAINTENANCE<br>MW | %<br>OF PEAK |
| 1998 | 2294                                 | 240                                  | (213)                            | 34        | 2355                                 | 2100                         | 255                                           | 12.1%        | NONE                           | 255                                          | 12.1%        |
| 1999 | 2294                                 | 242                                  | (214)                            | 34        | 2356                                 | 2141                         | 215                                           | 10.0%        |                                | 215                                          | 10.0%        |
| 2000 | 2294                                 | 227                                  | (214)                            | 34        | 2341                                 | 2186                         | 155                                           | 7.1%         |                                | 155                                          | 7.1%         |
| 2001 | 2294                                 | 212                                  | (215)                            | 34        | 2325                                 | 2207                         | 118                                           | 5.3%         |                                | 118                                          | 5.3%         |
| 2002 | 2654                                 | 34                                   | (215)                            | 34        | 2507                                 | 2234                         | 273                                           | 12.2%        |                                | 273                                          | 12.2%        |
| 2003 | 2684                                 | 34                                   | (215)                            | 34        | 2537                                 | 2261                         | 276                                           | 12.2%        |                                | 276                                          | 12.2%        |
| 2004 | 2714                                 | 34                                   | (215)                            | 34        | 2567                                 | 2288                         | 279                                           | 12.2%        |                                | 279                                          | 12.2%        |
| 2005 | 2774                                 | 34                                   | (215)                            | 15        | 2608                                 | 2329                         | 279                                           | 12.0%        |                                | 279                                          | 12.0%        |
| 2006 | 2834                                 | 34                                   | (215)                            | 15        | 2668                                 | 2366                         | 302                                           | 12.8%        |                                | 302                                          | 12.8%        |
| 2007 | 2862                                 | 30                                   | (215)                            | 15        | 2692                                 | 2398                         | 294                                           | 12.3%        |                                | 294                                          | 12.3%        |

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<br>INSTALLED<br>CAPACITY<br>MW | FIRM<br>CAPACITY<br>IMPORT<br>MW (B) | FIRM<br>CAPACITY<br>EXPORT<br>MW | NUG<br>MW | TOTAL<br>CAPACITY<br>AVAILABLE<br>MW | FIRM<br>PEAK<br>DEMAND<br>MW | RESERVE<br>MARGIN BEFORE<br>MAINTENANCE<br>MW | %<br>OF PEAK | SCHEDULED<br>MAINTENANCE<br>MW | RESERVE<br>MARGIN AFTER<br>MAINTENANCE<br>MW | %<br>OF PEAK |
| 1997-98 | 2292                                 | 132                                  | (213)                            | 34        | 2245                                 | 2009                         | 236                                           | 11.7%        | NONE                           | 236                                          | 11.7%        |
| 1998-99 | 2302                                 | 242                                  | (214)                            | 34        | 2364                                 | 2038                         | 276                                           | 13.2%        |                                | 276                                          | 13.2%        |
| 1999-00 | 2302                                 | 177                                  | (214)                            | 34        | 2299                                 | 2120                         | 179                                           | 8.4%         |                                | 179                                          | 8.4%         |
| 2000-01 | 2302                                 | 177                                  | (215)                            | 34        | 2298                                 | 2128                         | 170                                           | 8.0%         |                                | 170                                          | 8.0%         |
| 2001-02 | 2302                                 | 177                                  | (215)                            | 34        | 2298                                 | 2140                         | 158                                           | 7.4%         |                                | 158                                          | 7.4%         |
| 2002-03 | 2662                                 | 34                                   | (215)                            | 34        | 2515                                 | 2151                         | 364                                           | 16.9%        |                                | 364                                          | 16.9%        |
| 2003-04 | 2692                                 | 34                                   | (215)                            | 34        | 2545                                 | 2162                         | 383                                           | 17.7%        |                                | 383                                          | 17.7%        |
| 2004-05 | 2722                                 | 34                                   | (215)                            | 34        | 2575                                 | 2188                         | 387                                           | 17.7%        |                                | 387                                          | 17.7%        |
| 2005-06 | 2782                                 | 34                                   | (215)                            | 15        | 2616                                 | 2209                         | 407                                           | 18.4%        |                                | 407                                          | 18.4%        |
| 2006-07 | 2842                                 | 30                                   | (215)                            | 15        | 2672                                 | 2228                         | 444                                           | 19.9%        |                                | 444                                          | 19.9%        |

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 AND POWER COMPANY

SCHEDULE B  
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 | Alt | Transport | Alt | Const Start Mo/Yr | Const In Service Mo/Yr | Expected Retirement Mo/Yr | Gen Max Nameplate kW | Net Capacity Summer MW | Net Capacity Winter MW | Status |
| Unlocated     | Unlocated | CT                   | NG        | LO   | PL  | TK        | TK  | 12/99             | 06/02                  |                           |                      | 240.0                  | 240.0                  | P      |
| Unlocated     | Unlocated | CC                   | NG        | -    | PL  | -         | -   | 06/99             | 06/02                  |                           |                      | 120.0                  | 120.0                  | P      |
| Unlocated     | Unlocated | CC                   | NG        | -    | PL  | -         | -   | 06/00             | 06/03                  |                           |                      | 30.0                   | 30.0                   | P      |
| Unlocated     | Unlocated | CC                   | NG        | -    | PL  | -         | -   | 06/01             | 06/04                  |                           |                      | 30.0                   | 30.0                   | P      |
| Unlocated     | Unlocated | CC                   | NG        | -    | PL  | -         | -   | 06/02             | 06/05                  |                           |                      | 60.0                   | 60.0                   | P      |
| Unlocated     | Unlocated | CT                   | NG        | LO   | PL  | TK        | TK  | 12/03             | 06/06                  |                           |                      | 60.0                   | 60.0                   | P      |
| Lansing Smith | A         | Bay County 36/25/15W | CT        | LO   | -   | TK        | -   | -                 | -                      | 12/06                     | 41,650               | (31.6)                 | (40.0)                 | R      |
| Unlocated     | Unlocated | CT                   | NG        | LO   | PL  | TK        | TK  | 12/04             | 06/07                  |                           |                      | 30.0                   | 30.0                   | P      |
| Unlocated     | Unlocated | CC                   | NG        | -    | PL  | -         | -   | 06/04             | 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 CTs is anticipated to take only 11 months.

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



Units Planned and Specifications of Proposed Generating Facilities

|      |                                               |                                             |
|------|-----------------------------------------------|---------------------------------------------|
| (1)  | Plant Name and Unit Number                    | Unlocated                                   |
| (2)  | Capacity                                      | 240 MW                                      |
|      | a. Summer                                     | 240 MW                                      |
|      | b. Winter                                     |                                             |
| (3)  | Technology Type                               | Combustion Turbine                          |
| (4)  | Anticipated Construction Timing               |                                             |
|      | a. Field construction start - date:           | 07/01                                       |
|      | b. Commercial in-service date:                | 06/02                                       |
| (5)  | Fuel                                          | Natural Gas                                 |
|      | a. Primary fuel:                              | Distillate Oil                              |
|      | b. Alternate fuel:                            |                                             |
| (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 (ANOH):       | 11,728                                      |
| (13) | Projected Unit Financial Data                 |                                             |
|      | Book Life (Years):                            | 40                                          |
|      | Total Installed Cost (In-Service Year \$/kW): | 242                                         |
|      | Direct Construction Cost (\$/kW):             | 214                                         |
|      | AFUDC Amount (\$/kW):                         | 0                                           |
|      | Escalation (\$/kW):                           | 28                                          |
|      | Fixed O&M (\$/kW - Yr):                       | 2.60                                        |
|      | Variable O&M (\$/MWH):                        | 3.10                                        |
|      | K Factor:                                     | 1.4813                                      |



Schedule 9

Status Report and Specifications of Proposed Generating Facilities

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|      |                                               |                                             |
|------|-----------------------------------------------|---------------------------------------------|
| (1)  | Plant Name and Unit Number                    | Unlocated                                   |
| (2)  | Capacity                                      | 120 MW                                      |
|      | a. Summer                                     | 120 MW                                      |
|      | b. Winter                                     |                                             |
| (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                                          | Natural Gas                                 |
|      | a. Primary fuel:                              | None                                        |
|      | b. Alternate fuel:                            |                                             |
| (6)  | Air Pollution Control Strategy:               | Dry low NOx combustor                       |
| (7)  | Cooling Method:                               | Cooling Tower                               |
| (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):                  | 5.80%                                       |
|      | 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

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|      |                                               |                                             |
|------|-----------------------------------------------|---------------------------------------------|
| (1)  | Plant Name and Unit Number:                   | Unlocated                                   |
| (2)  | Capacity                                      |                                             |
|      | a. Summer:                                    | 30 MW                                       |
|      | b. Winter:                                    | 30 MW                                       |
| (3)  | Technology Type:                              | Combined Cycle                              |
| (4)  | Anticipated Construction Timing               |                                             |
|      | a. Field construction start - date:           | 03/02                                       |
|      | b. Commercial in-service date:                | 06/03                                       |
| (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:                              | 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):                  | 5.80%                                       |
|      | 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): | 505                                         |
|      | Direct Construction Cost (\$/kW):             | 395                                         |
|      | AFUDC Amount (\$/kW):                         | 67                                          |
|      | Escalation (\$/kW):                           | 43                                          |
|      | Fixed O&M (\$/kW - Yr):                       | 3.18                                        |
|      | Variable O&M (\$/MWH):                        | 2.16                                        |
|      | K Factor:                                     | 1.5371                                      |

Status Report and Specifications of Proposed Generating Facilities

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| (1)  | Plant Name and Unit Number:                                                                                                                                                                                                                                  | Unlocated                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| (2)  | Capacity:<br>a. Summer<br>b. Winter                                                                                                                                                                                                                          | 30 MW<br>30 MW                                          |
| (3)  | Technology Type:                                                                                                                                                                                                                                             | Combined Cycle                                          |
| (4)  | Anticipated Construction Timing:<br>a. Field construction start - date:<br>b. Commercial in-service date:                                                                                                                                                    | 03/03<br>06/04                                          |
| (5)  | Fuel:<br>a. Primary fuel:<br>b. Alternate fuel:                                                                                                                                                                                                              | Natural Gas<br>None                                     |
| (6)  | Air Pollution Control Strategy:                                                                                                                                                                                                                              | Dry low NOx combustor                                   |
| (7)  | Cooling Method:                                                                                                                                                                                                                                              | Cooling Tower                                           |
| (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:<br>Planned Outage Factor (POF):<br>Forced Outage Factor (FOF):<br>Equivalent Availability Factor (EAF):<br>Resulting Capacity Factor (%):<br>Average Net Operating Heat Rate (ANOHR):                                       | 5.80%<br>3.20%<br>91.20%<br>70% - 90%<br>6,527          |
| (13) | Projected Unit Financial Data:<br>Book Life (Years):<br>Total Installed Cost (In-Service Year \$/kW):<br>Direct Construction Cost (\$/kW):<br>AFUDC Amount (\$/kW):<br>Escalation (\$/kW):<br>Fixed O&M (\$/kW - Yr):<br>Variable O&M (\$/MWH):<br>K Factor: | 40<br>515<br>395<br>68<br>52<br>3.27<br>2.22<br>1,537.1 |



Status Report and Specifications of Proposed Generating Facilities

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|      |                                                                                                                                                                                                                                                                    |                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| (1)  | Plant Name and Unit Number:                                                                                                                                                                                                                                        | Unlocated                                              |
| (2)  | Capacity:<br>a. Summer<br>b. Winter                                                                                                                                                                                                                                | 60 MW<br>60 MW                                         |
| (3)  | Technology Type:                                                                                                                                                                                                                                                   | Combined Cycle                                         |
| (4)  | Anticipated Construction Timing:<br>a. Field construction start - date:<br>b. Commercial in-service date:                                                                                                                                                          | 03/04<br>06/05                                         |
| (5)  | Fuel:<br>a. Primary fuel:<br>b. Alternate fuel:                                                                                                                                                                                                                    | Natural Gas<br>None                                    |
| (6)  | Air Pollution Control Strategy:                                                                                                                                                                                                                                    | Dry low NOx combustor                                  |
| (7)  | Cooling Method:                                                                                                                                                                                                                                                    | Cooling Tower                                          |
| (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:<br>Planned Outage Factor (POF):<br>Forced Outage Factor (FOF):<br>Equivalent Availability Factor (EAF):<br>Resulting Capacity Factor (%):<br>Average Net Operating Heat Rate (ANOHR):                                             | 5.80%<br>3.20%<br>91.20%<br>70% - 90%<br>6,527         |
| (13) | Projected Unit Financial Data:<br>Book Life (Years):<br>Total Installed Cost (In-Service Year \$(/kW):<br>Direct Construction Cost (\$/kW):<br>AFUDC Amount (\$/kW):<br>Escalation (\$/kW - Yr):<br>Fixed O&M (\$/kW - Yr):<br>Variable O&M (\$/MWH):<br>K Factor: | 40<br>526<br>395<br>70<br>61<br>3.37<br>2.29<br>1.5371 |



Schedule 9  
Status Report and Specifications of Proposed Generating Facilities

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|      |                                               |                                             |
|------|-----------------------------------------------|---------------------------------------------|
| (1)  | Plant Name and Unit Number                    | Unlocated                                   |
| (2)  | Capacity                                      |                                             |
|      | a. Summer:                                    | 60 MW                                       |
|      | b. Winter:                                    | 60 MW                                       |
| (3)  | Technology Type:                              | Combustion Turbine                          |
| (4)  | Anticipated Construction Timing               |                                             |
|      | a. Field construction start - date:           | 07/05                                       |
|      | b. Commercial in-service date:                | 06/06                                       |
| (5)  | Fuel                                          |                                             |
|      | a. Primary fuel:                              | 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                                      |

Schedule 9  
Status Report and Specifications of Proposed Generating Facilities

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| (1)  | Plant Name and Unit Number:                                                                                                                                                                                                                                  | Unlocated                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| (2)  | Capacity:<br>a. Summer:<br>b. Winter:                                                                                                                                                                                                                        | 30 MW<br>30 MW                                        |
| (3)  | Technology Type:                                                                                                                                                                                                                                             | Combustion Turbine                                    |
| (4)  | Anticipated Construction Timing:<br>a. Field construction start - date:<br>b. Commercial in-service date:                                                                                                                                                    | 07/06<br>06/07                                        |
| (5)  | Fuel:<br>a. Primary fuel:<br>b. Alternate fuel:                                                                                                                                                                                                              | Natural Gas<br>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:<br>Planned Outage Factor (POF):<br>Forced Outage Factor (FOF):<br>Equivalent Availability Factor (EAF):<br>Resulting Capacity Factor (%):<br>Average Net Operating Heat Rate (ANOHR):                                       | 5.00%<br>3.00%<br>92.20%<br>5% - 10%<br>11,728        |
| (13) | Projected Unit Financial Data:<br>Book Life (Years):<br>Total Installed Cost (In-Service Year \$/kW):<br>Direct Construction Cost (\$/kW):<br>AFUDC Amount (\$/kW):<br>Escalation (\$/kW):<br>Fixed O&M (\$/kW - Yr):<br>Variable O&M (\$/MWH):<br>K Factor: | 40<br>274<br>214<br>0<br>60<br>3.03<br>3.61<br>1.4813 |

Schedule 9

Status Report and Specifications of Proposed Generating Facilities

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|      |                                                                                                                                                                                                                                                              |                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| (1)  | Plant Name and Unit Number                                                                                                                                                                                                                                   | Unlocated                                              |
| (2)  | Capacity<br>a. Summer:<br>b. Winter:                                                                                                                                                                                                                         | 30 MW<br>30 MW                                         |
| (3)  | Technology Type:                                                                                                                                                                                                                                             | Combined Cycle                                         |
| (4)  | Anticipated Construction Timing<br>a. Field construction start - date:<br>b. Commercial in-service date:                                                                                                                                                     | 03/06<br>06/07                                         |
| (5)  | Fuel<br>a. Primary fuel:<br>b. Alternate fuel:                                                                                                                                                                                                               | Natural Gas<br>None                                    |
| (6)  | Air Pollution Control Strategy:                                                                                                                                                                                                                              | Dry low NOx combustor                                  |
| (7)  | Cooling Method:                                                                                                                                                                                                                                              | Cooling Tower                                          |
| (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<br>Planned Outage Factor (POF):<br>Forced Outage Factor (FOF):<br>Equivalent Availability Factor (EAF):<br>Resulting Capacity Factor (%):<br>Average Net Operating Heat Rate (ANOHR):                                        | 5.80%<br>3.20%<br>91.20%<br>70% - 90%<br>6,527         |
| (13) | Projected Unit Financial Data<br>Book Life (Years):<br>Total Installed Cost (In-Service Year \$(/kW):<br>Direct Construction Cost (\$/kW):<br>AFUDC Amount (\$/kW):<br>Escalation (\$/kW):<br>Fixed O&M (\$/kW - Yr):<br>Variable O&M (\$/MWH):<br>K Factor: | 40<br>548<br>395<br>73<br>80<br>3.58<br>2.43<br>1.5371 |



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:

Unknown

(5) Voltage:

(6) Anticipated Construction Timing:

(7) Anticipated Capital Investment:

(8) Substations:

(9) Participation with Other Utilities:



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