# TEN YEAR SITE PLAN

## 1996 - 2005

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

## APRIL, 1996

## GULF POWER

# 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, 1996

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160186-OPC-POD-144-895

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# CHAPTER I

# DESCRIPTION OF EXISTING FACILITIES

UTILITY: GULF POWER COMPANY
EXISTING GENERATING FACILITIES



| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Fuel | | Com'l In-Service | Exptd Retrmnt | Gen Max Nameplate | Net Capability | | Fuel Transp | |
| Plant Name | Unit No. | Location | Type | Pri | Alt | Mo/Yr | Mo/Yr | KW | Summer MW | Winter MW | Pri | Alt |
| Crist | | Escambia County 25/1N/30W | | | | | | 1,229,000 | 1,105.2 | 1,105.2 | | |
| | 1 | | FS | NG | HO | 1/45 | 12/11 | 28,125 | 24.0 | 24.0 | PL | TK |
| | 2 | | FS | NG | HO | 6/49 | 12/11 | 28,125 | 25.1 | 25.1 | PL | TK |
| | 3 | | FS | NG | HO | 9/52 | 12/11 | 37,500 | 37.0 | 37.0 | PL | TK |
| | 4 | | FS | C | NG | 7/59 | 12/14 | 93,750 | 88.0 | 88.0 | WA | PL |
| | 5 | | FS | C | NG | 6/61 | 12/16 | 93,750 | 87.0 | 87.0 | WA | PL |
| | 6 | | FS | C | NG | 5/70 | 12/15 | 369,750 | 327.0 | 327.0 | WA | PL |
| | 7 | | FS | C | NG | 8/73 | 12/18 | 578,000 | 517.1 | 517.1 | WA | PL |
| Lansing Smith | | Bay County 36/2S/15W | | | | | | 381,850 | 387.2 | 395.6 | | |
| | 1 | | FS | C | -- | 6/65 | 12/15 | 149,600 | 162.0 | 162.0 | WA | -- |
| | 2 | | FS | C | -- | 6/67 | 12/17 | 190,400 | 193.6 | 193.6 | WA | -- |
| | A | | CT | LO | -- | 5/71 | 12/06 | 41,850 | 31.6 | 40.0 | TK | -- |
| Scholz | | Jackson County 12/3N/7W | | | | | | 98,000 | 98.1 | 98.1 | | |
| | 1 | | FS | C | -- | 3/53 | 12/11 | 49,000 | 49.6 | 49.6 | RR | WA |
| | 2 | | FS | C | -- | 10/53 | 12/11 | 49,000 | 48.5 | 48.5 | RR | WA |
| Daniel (A) | | Jackson County, MS 42/5S/6W | | | | | | 548,250 | 540.7 | 540.7 | | |
| | 1 | | FS | C | HO | 9/77 | 12/22 | 274,125 | 268.0 | 268.0 | RR | TK |
| | 2 | | FS | C | HO | 6/81 | 12/26 | 274,125 | 272.7 | 272.7 | RR | TK |
| Scherer (A) | 3 | Monroe County, GA | FS | C | -- | 1/87 | 12/27 | 222,750 | 211.0 | 211.0 | RR | -- |
| | | | | | | Total System as of January 1, 1996 | | | 2342.2 | 2350.6 | | |

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 Gul's portion of Daniel Units 1 & 2 (50%) and Scherer Unit 3 (25%).

Utility: Gulf Power Company

Existing Generating Facilities

Land Use and Investment (A)

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|
| | Land Area Owned | | Plant Capital Investment in ($1,000) | | | |
| Plant Name | Total Acres | In Use Acres | Land & Land Rights | Site Improvements (B) | Buildings & Equipment | Total |
| Steam Total | | | 6,922 | | 894,613 | 901,535 |
| Crist | 680 | 350 | 1,792 | | 372,527 | 374,319 |
| Lansing Smith | 1,340 | 400 | 612 | | 103,222 | 103,834 |
| Scholz | 293 | 168 | 45 | | 29,477 | 29,522 |
| Daniel | 2,657 (C) | 500 (C) | 3,666 (D) | | 215,017 (D) | 218,683 (D) |
| Scherer | 12,158 (E) | 9,500 (E) | 807 (F) | | 174,370 (F) | 175,177 (F) |
| Combustion Turbine Total | | | | | 4,251 | 4,251 |
| Lansing Smith CT | | | | | 4,251 | 4,251 |

(A) As of 12/31/95.
(B) Included in column 6.
(C) Daniel Plant information refers to total area owned jointly by Gulf and Mississippi Power.
(D) Gulf Power's portion of Plant Daniel only.
(E) Scherer Plant information refers to total area owned by Georgia Power and area owned jointly by Gulf and Georgia Power. "In Use Acres" includes cooling water lake.
(F) Gulf Power's portion of Plant Scherer only. Excludes acquisition adjustment in the amount of $6,626,524.

Utility: Gulf Power Company

Existing Generating Facilities
Environmental Considerations for Steam Generating Units

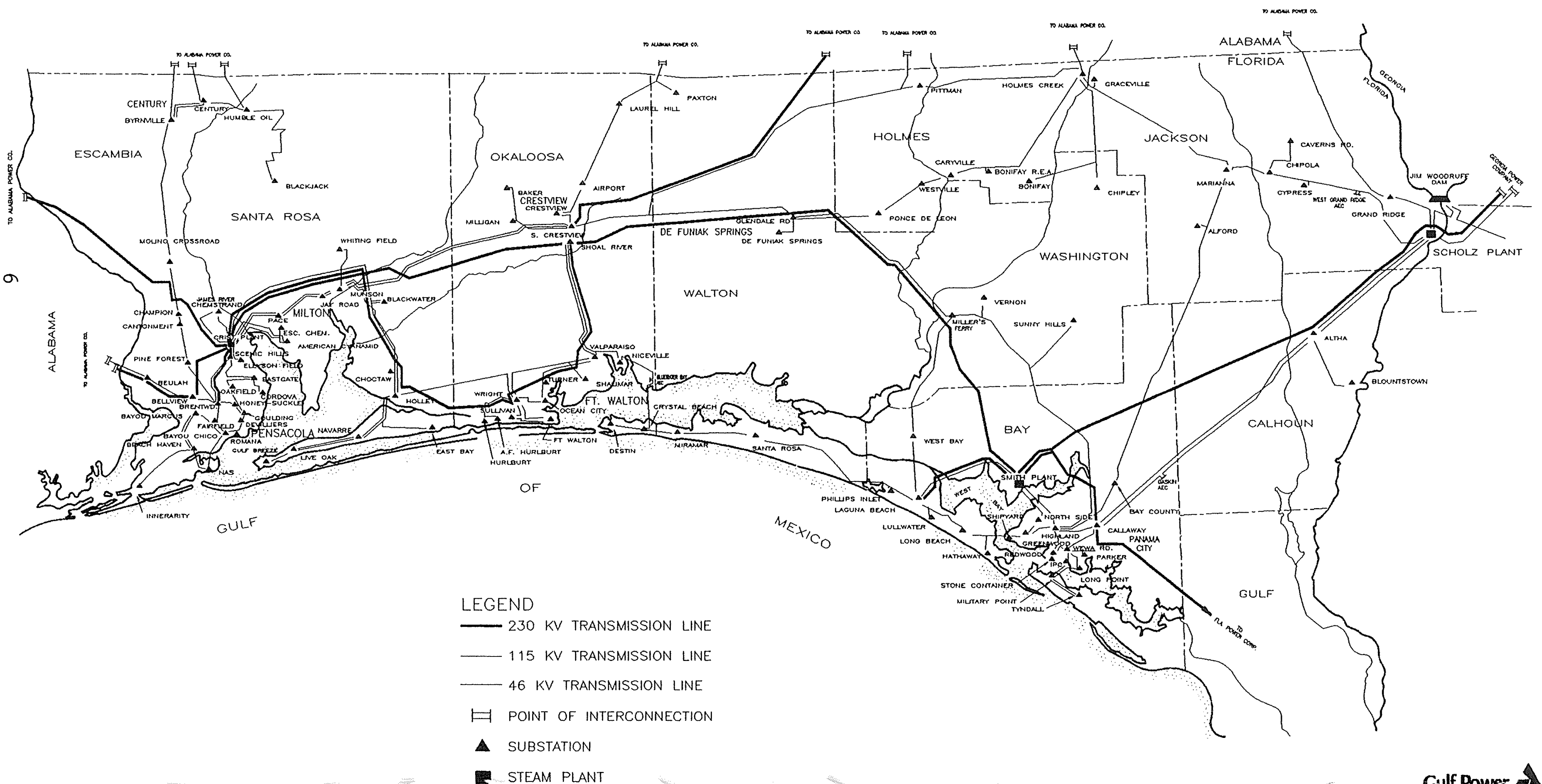
| (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|
| | | Flue Gas Cleaning | | | |
| Plant Name | Unit | Particulate | SOx | NOx | Cooling Type |
| Crist | 1 | no | no | no | WCTM |
| | 2 | no | no | no | WCTM |
| | 3 | no | no | no | WCTM |
| | 4 | EP | no | no | WCTM |
| | 5 | EP | no | no | WCTM |
| | 6 | EP | no | LNB | WCTM |
| | 7 | EP | no | LNB | WCTM |
| Lansing Smith | 1 | EP | no | no | OTS |
| | 2 | EP | no | LNB | OTS |
| Scholz | 1 | EP | no | no | OTF |
| | 2 | EP | no | no | OTF |
| Daniel | 1 | EP | no | no | CP |
| | 2 | EP | no | no | CP |
| Scherer | 3 | EP | no | no | NDCT |

Abbreviations:

EP - Electrostatic Precipitator
WCTM - Wet cooling tower, mechanical draft
OTS - Once-through, saline
OTF - Once-through, fresh
CP - Cooling pond
NDCT - Natural Draft Cooling Tower
LNB - Low NOx Burners

# GULF POWER COMPANY SYSTEM MAP

## JANUARY, 1996



# CHAPTER II

# FORECAST OF ELECTRIC POWER DEMAND

UTILITY: GULF POWER COMPANY

HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|
| | RURAL AND RESIDENTIAL | | | | | COMMERCIAL | | |
| YEAR | POPULATION * | MEMBERS PER HOUSEHOLD | GWH | AVERAGE NO. OF CUSTOMERS | AVERAGE KWH CONSUMPTION PER CUSTOMER | GWH | AVERAGE NO. OF CUSTOMERS | AVERAGE KWH CONSUMPTION PER CUSTOMER |
| 1986 | 544,000 | 2.34 | 2,964 | 232,816 | 12,729 | 1,913 | 30,576 | 62,570 |
| 1987 | 556,836 | 2.33 | 3,055 | 239,362 | 12,763 | 1,986 | 31,821 | 62,422 |
| 1988 | 562,487 | 2.30 | 3,155 | 244,859 | 12,883 | 2,089 | 32,757 | 63,760 |
| 1989 | 573,780 | 2.29 | 3,294 | 250,038 | 13,173 | 2,169 | 33,500 | 64,761 |
| 1990 | 582,690 | 2.28 | 3,361 | 255,129 | 13,173 | 2,218 | 33,957 | 65,305 |
| 1991 | 593,238 | 2.29 | 3,455 | 259,395 | 13,320 | 2,273 | 34,372 | 66,120 |
| 1992 | 610,275 | 2.30 | 3,597 | 265,374 | 13,553 | 2,369 | 36,009 | 65,796 |
| 1993 | 621,702 | 2.29 | 3,713 | 271,594 | 13,671 | 2,433 | 38,477 | 63,242 |
| 1994 | 633,972 | 2.28 | 3,752 | 278,215 | 13,486 | 2,549 | 39,989 | 63,739 |
| 1995 | 646,277 | 2.28 | 4,014 | 283,717 | 14,148 | 2,708 | 41,007 | 66,043 |
| 1996 | 658,618 | 2.26 | 4,029 | 291,727 | 13,812 | 2,692 | 42,310 | 63,626 |
| 1997 | 672,621 | 2.25 | 4,135 | 299,396 | 13,811 | 2,770 | 43,458 | 63,746 |
| 1998 | 688,294 | 2.25 | 4,198 | 305,872 | 13,724 | 2,830 | 44,553 | 63,530 |
| 1999 | 704,013 | 2.25 | 4,276 | 312,429 | 13,688 | 2,895 | 45,578 | 63,508 |
| 2000 | 720,594 | 2.26 | 4,340 | 319,126 | 13,598 | 2,933 | 46,599 | 62,948 |
| 2001 | 735,300 | 2.26 | 4,418 | 325,864 | 13,558 | 2,983 | 47,645 | 62,610 |
| 2002 | 750,006 | 2.25 | 4,508 | 332,698 | 13,551 | 3,046 | 48,702 | 62,545 |
| 2003 | 763,895 | 2.25 | 4,606 | 339,462 | 13,570 | 3,116 | 49,776 | 62,591 |
| 2004 | 777,784 | 2.25 | 4,709 | 346,079 | 13,606 | 3,186 | 50,843 | 62,666 |
| 2005 | 791,673 | 2.25 | 4,818 | 352,624 | 13,664 | 3,257 | 51,888 | 62,762 |

* HISTORICAL AND PROJECTED FIGURES INCLUDE PORTIONS OF ESCAMBIA, SANTA ROSA, OKALOOSA, BAY WALTON, WASHINGTON, HOLMES, AND JACKSON COUNTIES SERVED BY GULF POWER COMPANY.

UTILITY: GULF POWER COMPANY

HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

| (10) | (11) | (12) | (13) | (14) | (15) | (16) |
|---|---|---|---|---|---|---|
| | INDUSTRIAL | | | | | |
| YEAR | GWH | AVERAGE NO. OF CUSTOMERS | AVERAGE KWH CONSUMPTION PER CUSTOMER | STREET AND HIGHWAY LIGHTING GWH | OTHER SALES TO ULTIMATE CONSUMERS GWH | TOTAL SALES TO ULTIMATE CONSUMERS GWH |
| 1986 | 1,745 | 195 | 8,949,099 | 14 | 0 | 6,636 |
| 1987 | 1,840 | 204 | 9,019,271 | 14 | 0 | 6,896 |
| 1988 | 1,968 | 206 | 9,553,842 | 15 | 0 | 7,226 |
| 1989 | 2,095 | 229 | 9,147,029 | 16 | 0 | 7,574 |
| 1990 | 2,178 | 247 | 8,817,297 | 17 | 0 | 7,774 |
| 1991 | 2,117 | 260 | 8,143,878 | 16 | 0 | 7,861 |
| 1992 | 2,179 | 262 | 8,318,456 | 16 | 0 | 8,161 |
| 1993 | 2,030 | 268 | 7,574,388 | 16 | 0 | 8,192 |
| 1994 | 1,847 | 280 | 6,596,837 | 16 | 0 | 8,164 |
| 1995 | 1,795 | 276 | 6,502,731 | 16 | 0 | 8,534 |
| 1996 | 1,886 | 311 | 6,063,575 | 17 | 0 | 8,624 |
| 1997 | 1,914 | 322 | 5,944,411 | 17 | 0 | 8,837 |
| 1998 | 1,921 | 325 | 5,910,096 | 18 | 0 | 8,967 |
| 1999 | 1,926 | 328 | 5,870,893 | 18 | 0 | 9,115 |
| 2000 | 1,935 | 331 | 5,847,239 | 18 | 0 | 9,227 |
| 2001 | 1,938 | 334 | 5,803,697 | 19 | 0 | 9,358 |
| 2002 | 1,950 | 337 | 5,785,341 | 19 | 0 | 9,523 |
| 2003 | 1,957 | 340 | 5,754,852 | 19 | 0 | 9,698 |
| 2004 | 1,969 | 343 | 5,741,225 | 20 | 0 | 9,884 |
| 2005 | 1,979 | 346 | 5,718,689 | 20 | 0 | 10,074 |

UTILITY: GULF POWER COMPANY



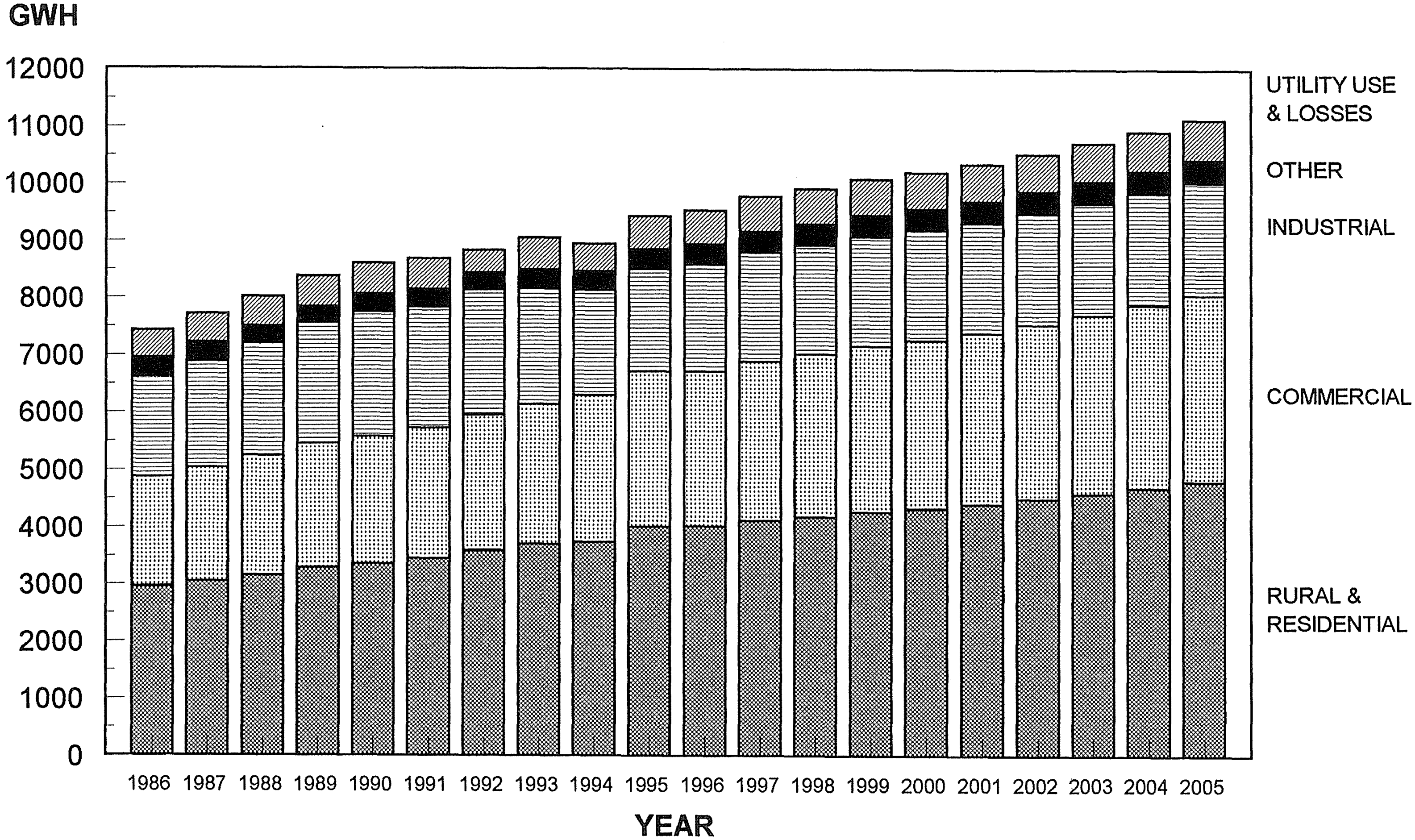
HISTORY AND FORECAST OF ENERGY CONSUMPTION AND NUMBER OF CUSTOMERS BY CUSTOMER CLASS

| (17) YEAR | (18) SALES FOR RESALE GWH | (19) UTILITY USE AND LOSSES GWH | (20) NET ENERGY FOR LOAD GWH | (21) OTHER CUSTOMERS (AVERAGE NO.) | (22) TOTAL NO. OF CUSTOMERS |
|---|---|---|---|---|---|
| 1986 | 324 | 475 | 7,435 | 62 | 263,646 |
| 1987 | 328 | 499 | 7,723 | 62 | 271,449 |
| 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 | 343 | 590 | 9,557 | 121 | 334,470 |
| 1997 | 352 | 605 | 9,794 | 124 | 343,299 |
| 1998 | 355 | 617 | 9,938 | 124 | 350,873 |
| 1999 | 358 | 627 | 10,100 | 124 | 358,458 |
| 2000 | 361 | 636 | 10,224 | 124 | 366,179 |
| 2001 | 364 | 646 | 10,369 | 124 | 373,966 |
| 2002 | 367 | 658 | 10,549 | 124 | 381,860 |
| 2003 | 370 | 671 | 10,739 | 124 | 389,701 |
| 2004 | 373 | 685 | 10,941 | 124 | 397,388 |
| 2005 | 375 | 698 | 11,147 | 124 | 404,982 |

NOTE: SALES FOR RESALE AND NET ENERGY FOR LOAD INCLUDE CONTRACTED ENERGY ALLOCATED TO CERTAIN CUSTOMERS BY SOUTHEASTERN POWER ADMINISTRATION (SEPA).

# GRAPH 1

HISTORY AND FORECAST
OF ENERGY USE BY TYPE OF CUSTOMER



Utility: Gulf Power Company
(a) (b)
Energy Sources

| Energy Sources | | | Actual 1994 | Actual 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|
| Annual Energy Interchange | | GWH | (592) | (376) | (484) | (293) | (578) | 271 |
| Nuclear | | GWH | None | None | None | None | None | None |
| Coal | | GWH | 9,544 | 9782 | 9,983 | 10,016 | 10,441 | 9,748 |
| Residual | -Total | GWH | 0 | 0 | 0 | 0 | 0 | 0 |
| | Steam | GWH | 0 | 0 | 0 | 0 | 0 | 0 |
| | CC | GWH | None | None | None | None | None | None |
| | CT | GWH | None | None | None | None | None | None |
| | Diesel | GWH | None | None | None | None | None | None |
| Distillate | -Total | GWH | 1 | 3 | 2 | 3 | 3 | 3 |
| | Steam | GWH | None | None | None | None | None | None |
| | CC | GWH | None | None | None | None | None | None |
| | CT | GWH | 1 | 3 | 2 | 3 | 3 | 3 |
| | Diesel | GWH | None | None | None | None | None | None |
| Natural Gas | -Total | GWH | 14 | 43 | 56 | 68 | 72 | 78 |
| | Steam | GWH | 14 | 43 | 56 | 68 | 72 | 78 |
| | CC | GWH | None | None | None | None | None | None |
| | CT | GWH | None | None | None | None | None | None |
| | Diesel | GWH | None | None | None | None | None | None |
| Other | | GWH | None | None | None | None | None | None |
| Net Energy for Load | | GWH | 8,967 | 9,452 | 9,557 | 9,794 | 9,938 | 10,100 |

(a) Includes contracted energy allocated to certain resale customers by Southeastern Power Administration (SEPA).

(b) Includes energy generated and sold under existing power sales contracts as well as energy from projected short term firm purchases.

Utility: Gulf Power Company

(a) (b)

Energy Sources

| Energy Sources | | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|
| Annual Energy Interchange | | GWH | 1,794 | 2,064 | 2,205 | 2,440 | 2,145 | 2,198 |
| Nuclear | | GWH | None | None | None | None | None | None |
| Coal | | GWH | 8,373 | 8,247 | 8,292 | 8,089 | 8,518 | 8,686 |
| Residual | -Total | GWH | 0 | 0 | 0 | 0 | 0 | 0 |
| | Steam | GWH | 0 | 0 | 0 | 0 | 0 | 0 |
| | CC | GWH | None | None | None | None | None | None |
| | CT | GWH | None | None | None | None | None | None |
| | Diesel | GWH | None | None | None | None | None | None |
| Distillate | -Total | GWH | 2 | 2 | 2 | 2 | 2 | 2 |
| | Steam | GWH | None | None | None | None | None | None |
| | CC | GWH | None | None | None | None | None | None |
| | CT | GWH | 2 | 2 | 2 | 2 | 2 | 2 |
| | Diesel | GWH | None | None | None | None | None | None |
| Natural Gas | -Total | GWH | 55 | 56 | 50 | 208 | 276 | 261 |
| | Steam | GWH | 55 | 56 | 50 | 44 | 54 | 45 |
| | CC | GWH | None | None | None | None | None | None |
| | CT | GWH | None | None | None | 164 | 222 | 216 |
| | Diesel | GWH | None | None | None | None | None | None |
| Other | | GWH | None | None | None | None | None | None |
| Net Energy for Load | | GWH | 10,224 | 10,369 | 10,549 | 10,739 | 10,941 | 11,147 |

(a) Includes contracted energy allocated to certain resale customers by Southeastern Power Administration (SEPA).

(b) Includes energy generated and sold under existing power sales contracts as well as energy from projected short term firm purchases.

Utility: Gulf Power Company

Fuel Requirements

| Fuel Requirements | | | Actual 1994 | Actual 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|
| Nuclear | | $BTU \times 10^{12}$ | None | None | None | None | None | None |
| Coal | | 1000 TON | 4,392 | 4,654 | 4,588 | 4,597 | 4,847 | 4,540 |
| Residual | -Total | 1000 BBL | 0 | 0 | 0 | 0 | 0 | 0 |
| | Steam | 1000 BBL | 0 | 0 | 0 | 0 | 0 | 0 |
| | CC | 1000 BBL | None | None | None | None | None | None |
| | CT | 1000 BBL | None | None | None | None | None | None |
| | Diesel | 1000 BBL | None | None | None | None | None | None |
| Distillate | -Total | 1000 BBL | 24 | 29 | 62 | 67 | 62 | 44 |
| | Steam | 1000 BBL | 22 | 21 | 58 | 61 | 56 | 37 |
| | CC | 1000 BBL | None | None | None | None | None | None |
| | CT | 1000 BBL | 2 | 8 | 4 | 6 | 6 | 7 |
| | Diesel | 1000 BBL | None | None | None | None | None | None |
| Natural Gas | -Total | 1000 MCF | 461 | 889 | 931 | 1,099 | 1,170 | 1,265 |
| | Steam | 1000 MCF | 461 | 889 | 931 | 1,099 | 1,170 | 1,265 |
| | CC | 1000 MCF | None | None | None | None | None | None |
| | CT | 1000 MCF | None | None | None | None | None | None |
| | Diesel | 1000 MCF | None | None | None | None | None | None |
| Other | | $BTU \times 10^{6}$ | None | None | None | None | None | None |
| Annual Avg. Fossil Net H.R. | | BTU/KWH | 10,614 | 10,609 | 10,333 | 10,344 | 10,320 | 10,379 |

Utility: Gulf Power Company

Fuel Requirements

| Fuel Requirements | | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|
| Nuclear | | $BTUx10^{12}$ | None | None | None | None | None | None |
| Coal | | 1000 TON | 3,970 | 3,912 | 3,925 | 3,846 | 4,040 | 4,116 |
| Residual | -Total | 1000 BBL | 0 | 0 | 0 | 0 | 0 | 0 |
| | Steam | 1000 BBL | 0 | 0 | 0 | 0 | 0 | 0 |
| | CC | 1000 BBL | None | None | None | None | None | None |
| | CT | 1000 BBL | None | None | None | None | None | None |
| | Diesel | 1000 BBL | None | None | None | None | None | None |
| Distillate | -Total | 1000 BBL | 50 | 46 | 49 | 51 | 47 | 49 |
| | Steam | 1000 BBL | 45 | 41 | 45 | 48 | 43 | 45 |
| | CC | 1000 BBL | None | None | None | None | None | None |
| | CT | 1000 BBL | 5 | 5 | 4 | 3 | 4 | 4 |
| | Diesel | 1000 BBL | None | None | None | None | None | None |
| Natural Gas | -Total | 1000 MCF | 947 | 1,006 | 890 | 2,514 | 3,335 | 3,086 |
| | Steam | 1000 MCF | 947 | 1,006 | 890 | 795 | 1,006 | 827 |
| | CC | 1000 MCF | None | None | None | None | None | None |
| | CT | 1000 MCF | None | None | None | 1,719 | 2,329 | 2,259 |
| | Diesel | 1000 MCF | None | None | None | None | None | None |
| Other | | $BTUx10^{6}$ | None | None | None | None | None | None |
| Annual Avg. Fossil Net H.R. | | BTU/KWH | 10,446 | 10,438 | 10,454 | 10,437 | 10,431 | 10,405 |

UTILITY: GULF POWER COMPANY

HISTORY AND FORECAST OF SEASONAL PEAK DEMAND AND ANNUAL NET ENERGY FOR LOAD

| | SUMMER PEAK DEMAND - MW | | | | | ANNUAL NET ENERGY FOR LOAD | | | ANNUAL LOAD FACTOR |
|---|---|---|---|---|---|---|---|---|---|
| | FIRM | | | | | GWH | | | |
| YEAR | RETAIL | WHOLESALE | TOTAL | INTERRUPT | TOTAL | RETAIL | WHOLESALE | TOTAL | % |
| 1986 | 1,611 | 73 | 1,684 | 0 | 1,684 | 7,110 | 324 | 7,435 | 50.4% |
| 1987 | 1,551 | 73 | 1,624 | 0 | 1,624 | 7,395 | 328 | 7,723 | 54.3% |
| 1988 | 1,565 | 55 | 1,620 | 0 | 1,620 | 7,733 | 283 | 8,016 | 56.3% |
| 1989 | 1,638 | 60 | 1,698 | 0 | 1,698 | 8,102 | 276 | 8,378 | 56.3% |
| 1990 | 1,716 | 69 | 1,785 | 0 | 1,785 | 8,319 | 294 | 8,612 | 55.1% |
| 1991 | 1,684 | 64 | 1,748 | 0 | 1,748 | 8,409 | 296 | 8,704 | 56.8% |
| 1992 | 1,765 | 71 | 1,836 | 0 | 1,836 | 8,550 | 299 | 8,849 | 54.9% |
| 1993 | 1,830 | 76 | 1,906 | 0 | 1,906 | 8,758 | 317 | 9,074 | 54.3% |
| 1994 | 1,731 | 72 | 1,803 | 0 | 1,803 | 8,651 | 316 | 8,967 | 56.8% |
| 1995 | 1,966 | 82 | 2,048 | 0 | 2,048 | 9,116 | 336 | 9,452 | 52.7% |
| 1996 | 1,909 | 74 | 1,983 | 0 | 1,983 | 9,214 | 343 | 9,557 | 54.9% |
| 1997 | 1,942 | 77 | 2,019 | 0 | 2,019 | 9,442 | 352 | 9,794 | 55.4% |
| 1998 | 1,945 | 78 | 2,023 | 0 | 2,023 | 9,583 | 355 | 9,938 | 56.1% |
| 1999 | 1,966 | 78 | 2,044 | 0 | 2,044 | 9,742 | 358 | 10,100 | 56.4% |
| 2000 | 1,977 | 79 | 2,056 | 0 | 2,056 | 9,863 | 361 | 10,224 | 56.6% |
| 2001 | 1,996 | 79 | 2,075 | 0 | 2,075 | 10,005 | 364 | 10,369 | 57.0% |
| 2002 | 2,026 | 80 | 2,106 | 0 | 2,106 | 10,182 | 367 | 10,549 | 57.2% |
| 2003 | 2,059 | 81 | 2,140 | 0 | 2,140 | 10,369 | 370 | 10,739 | 57.3% |
| 2004 | 2,092 | 81 | 2,173 | 0 | 2,173 | 10,569 | 373 | 10,941 | 57.3% |
| 2005 | 2,134 | 82 | 2,216 | 0 | 2,216 | 10,771 | 375 | 11,147 | 57.4% |

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

UTILITY: GULF POWER COMPANY

HISTORY AND FORECAST OF SEASONAL PEAK DEMAND AND ANNUAL NET ENERGY FOR LOAD

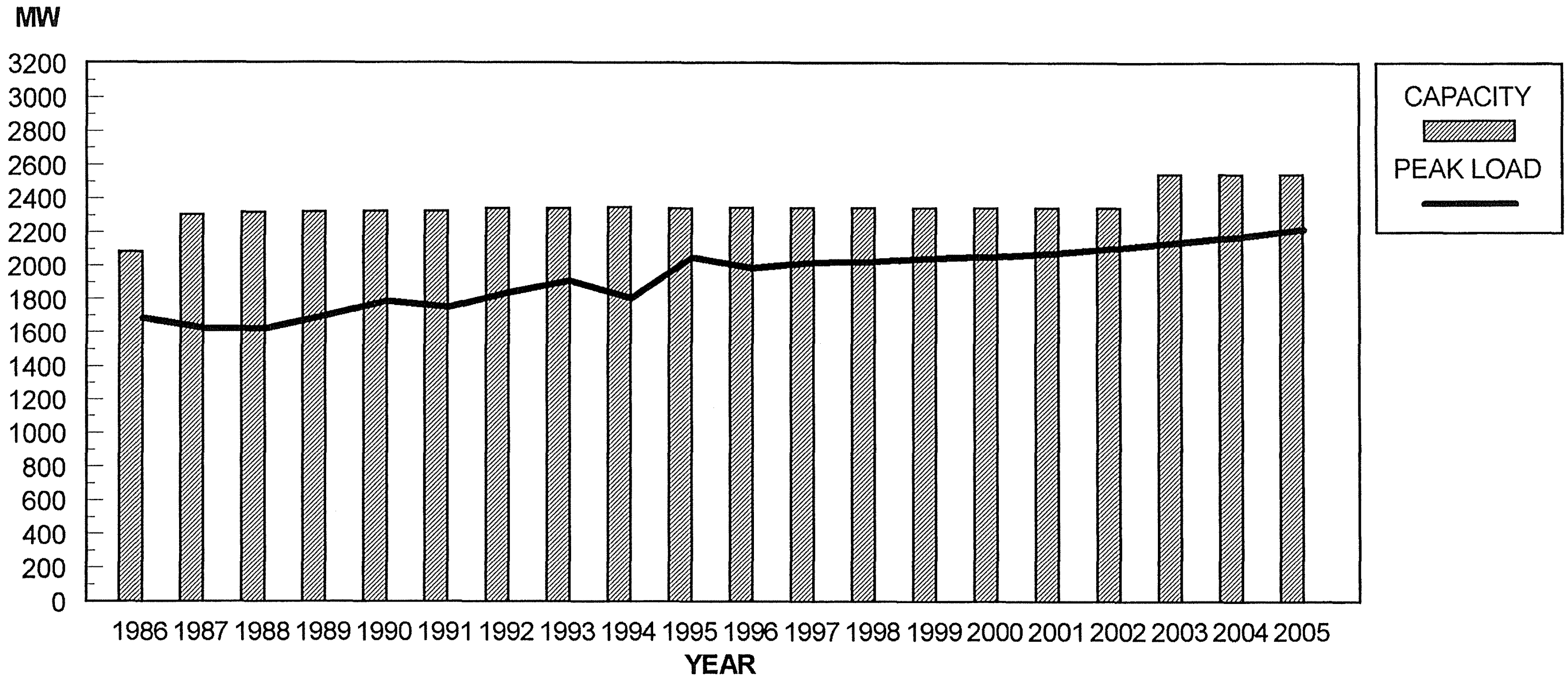
WINTER PEAK DEMAND - MW

| | FIRM | | | | |
|---|---|---|---|---|---|
| YEAR | RETAIL | WHOLESALE | TOTAL | INTERRUPT | TOTAL |
| 1985-86 | 1,365 | 47 | 1,412 | 0 | 1,412 |
| 1986-87 | 1,303 | 57 | 1,360 | 0 | 1,360 |
| 1987-88 | 1,342 | 60 | 1,402 | 0 | 1,402 |
| 1988-89 | 1,498 | 56 | 1,554 | 0 | 1,554 |
| 1989-90 | 1,764 | 57 | 1,821 | 0 | 1,821 |
| 1990-91 | 1,375 | 50 | 1,425 | 0 | 1,425 |
| 1991-92 | 1,481 | 60 | 1,541 | 0 | 1,541 |
| 1992-93 | 1,518 | 61 | 1,579 | 0 | 1,579 |
| 1993-94 | 1,737 | 72 | 1,809 | 0 | 1,809 |
| 1994-95 | 1,669 | 71 | 1,740 | 0 | 1,740 |
| 1995-96 | 1,788 | 65 | 1,853 | 0 | 1,853 |
| 1996-97 | 1,802 | 67 | 1,869 | 0 | 1,869 |
| 1997-98 | 1,771 | 68 | 1,839 | 0 | 1,839 |
| 1998-99 | 1,774 | 69 | 1,843 | 0 | 1,843 |
| 1999-00 | 1,770 | 69 | 1,839 | 0 | 1,839 |
| 2000-01 | 1,769 | 70 | 1,839 | 0 | 1,839 |
| 2001-02 | 1,783 | 70 | 1,853 | 0 | 1,853 |
| 2002-03 | 1,795 | 71 | 1,866 | 0 | 1,866 |
| 2003-04 | 1,808 | 71 | 1,879 | 0 | 1,879 |
| 2004-05 | 1,838 | 72 | 1,910 | 0 | 1,910 |

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

# GRAPH 2

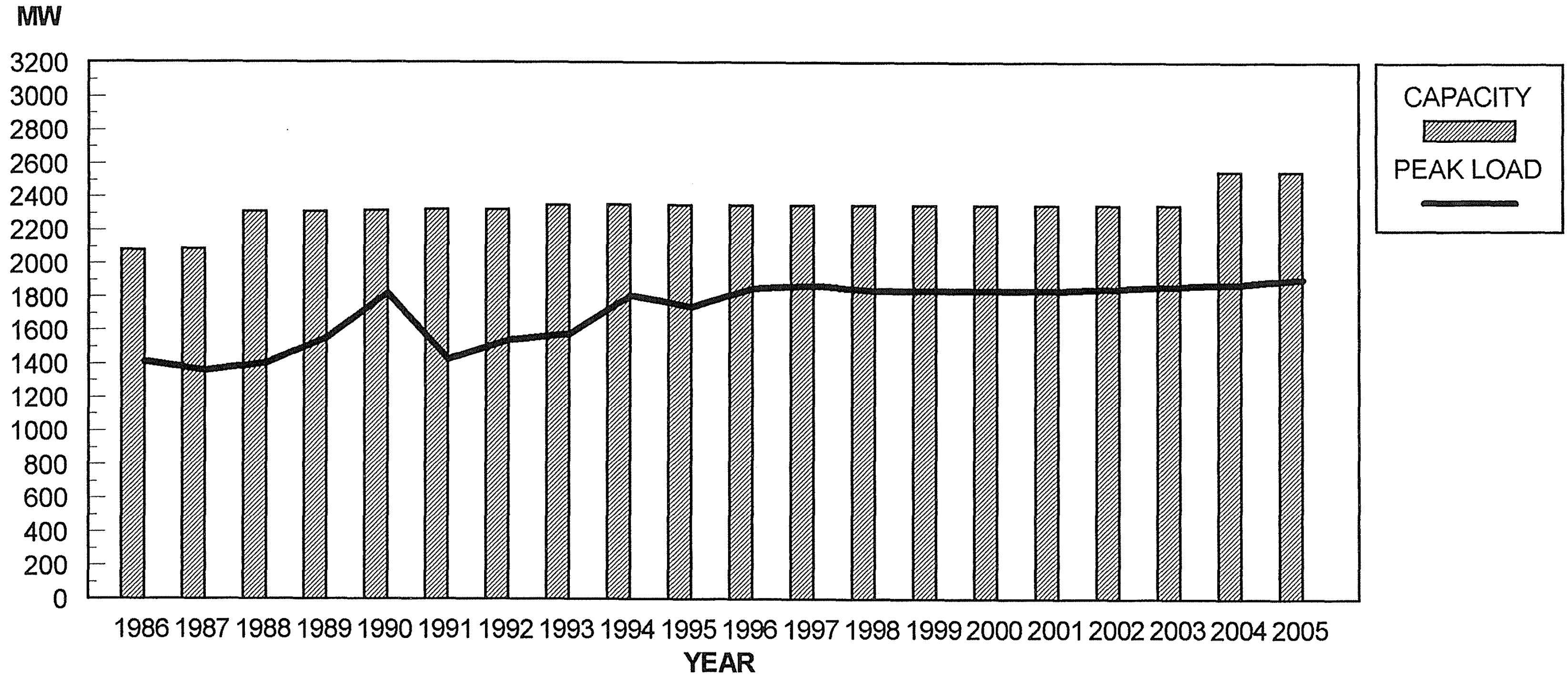
HISTORY AND FORECAST OF LOAD AND
CAPACITY ADDITIONS
SUMMER




NOTE: SHOWS INSTALLED GENERATING CAPACITY ONLY.
PEAK DEMAND INCLUDES SEPA RESALE CUSTOMER ALLOCATIONS.

# GRAPH 2

HISTORY AND FORECAST OF LOAD AND
CAPACITY ADDITIONS
WINTER




NOTE: SHOWS INSTALLED GENERATING CAPACITY ONLY.
PEAK DEMAND INCLUDES SEPA RESALE CUSTOMER ALLOCATIONS.

UTILITY: GULF POWER COMPANY

TYP FORM 5

PREVIOUS YEAR ACTUAL AND TWO-YEAR FORECAST OF PEAK DEMAND
AND NET ENERGY FOR LOAD BY MONTH

| | ACTUAL | | FORECAST | | | |
|---|---|---|---|---|---|---|
| | 1995 | | 1996 | | 1997 | |
| MONTH | PEAK DEMAND MW | NEL GWH | PEAK DEMAND MW | NEL GWH | PEAK DEMAND MW | NEL GWH |
| JAN | 1,598 | 719 | 1,853 | 804 | 1,869 | 825 |
| FEB | 1,740 | 644 | 1,546 | 645 | 1,628 | 664 |
| MAR | 1,494 | 659 | 1,453 | 686 | 1,475 | 704 |
| APR | 1,348 | 654 | 1,260 | 635 | 1,290 | 653 |
| MAY | 1,715 | 862 | 1,625 | 799 | 1,665 | 824 |
| JUN | 1,866 | 898 | 1,901 | 951 | 1,943 | 982 |
| JUL | 1,954 | 1,017 | 1,983 | 1,014 | 2,019 | 1,045 |
| AUG | 2,048 | 1,025 | 1,967 | 1,033 | 1,992 | 1,058 |
| SEP | 1,828 | 884 | 1,846 | 872 | 1,820 | 867 |
| OCT | 1,472 | 674 | 1,440 | 710 | 1,477 | 730 |
| NOV | 1,372 | 646 | 1,308 | 640 | 1,335 | 660 |
| DEC | 1,636 | 769 | 1,638 | 767 | 1,640 | 781 |
| TOTAL | | 9,452 | | 9,557 | | 9,794 |

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

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FORECASTING DOCUMENTATION

GULF POWER COMPANY

LOAD FORECASTING METHODOLOGY

## OVERVIEW

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

## I. CUSTOMER FORECAST

### A. RESIDENTIAL CUSTOMER FORECAST

The immediate short-term forecast (0-2 years) of customers is based primarily on projections prepared by district personnel. The districts remain abreast of local market and economic conditions within their service territories through direct contact with economic development agencies, developers, builders, lending institutions and other key contacts. The immediate short-term forecasts prepared by the districts, which are developed through various forecasting methods, are analyzed for consistency and the incorporation of major construction projects and business developments is reviewed. The end result is a near-term forecast of residential customers by type of dwelling.

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

The forecast of residential customers is an outcome of the final section of the migration/demographic element of the model. The number of residential customers Gulf expects to serve is calculated by multiplying the total number of households located in the eight counties in which Gulf provides service by the percentage of customers in these eight counties for which Gulf currently provides service.

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

## B. COMMERCIAL CUSTOMER FORECAST

The immediate short-term forecast (0-2 years) of commercial customers, as in the residential sector, is prepared by the districts. A review of the assumptions, techniques and results for each district is undertaken, with special attention given to the incorporation of major commercial development projects.

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

## II. 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 either 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.

Conditional energy demand models are multivariate regressions which explain residential customers' demands for electricity as functions of the energy-using equipment that they own, weather conditions, demographic and dwelling characteristics, and other factors playing a major role in total household energy consumption. The mathematics underlying this method rely upon the premise that consumption through a particular end-use must be zero if the end-use is not present, and if the end-use is present, energy consumption levels are represented as dependent on weather, demographics, income and other variables.

The total electrical energy consumption, E, of a household can be represented as:

$$E = E_o + \sum_{i=1}^{N} E_i$$

Where $E_i$ is the electrical energy consumed by a specified major appliance i, and $E_o$ is the electrical energy consumed by the remaining, unspecified set of appliances. The methodology of conditional energy demand analysis produces cross sectional, ordinary least squares regression estimates of the appliance coefficients. The regressions were performed using input data from the Gulf Power Company 1988 Residential Market Survey, billing cycle monthly energy data, and billing cycle monthly weather data.

The residential sales forecast reflects the continued impacts of Gulf Power's Good ¢ents Home program and efficiency improvements undertaken by customers as a result of ¢entsable Energy Check audits and the Gulf Express Loan program, as well as conversions to higher efficient outdoor lighting. The residential sales forecast also reflects the anticipated incremental impacts of Gulf's DSM plan, approved in April, 1995, designed to meet the Commission-approved demand and energy reduction goals established in October,1994. Additional information on the residential conservation programs and program features are provided in the Conservation section.

## B. COMMERCIAL SALES FORECAST

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

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

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

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

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

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

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

## C. <u>INDUSTRIAL SALES FORECAST</u>

The short-term industrial energy sales forecast is developed using a combination of on-site surveys of major industrial customers, trending techniques, and multiple regression analysis. Fifty-one 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 | MERCURY VAPOR |
|---|---|
| 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 |

In the short-term, 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. In the long-term, kilowatt-hour consumption grows at the same rate as projected fixture growth which, in itself, is modeled as a function of projected residential customer growth.

## 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 1995 Annual Forecast for Company and Interdepartmental energy usage was based on recent historical values, with appropriate adjustments to reflect increases in energy requirements through 1994, for new Company facilities. The 1995 forecasted Company usage was then projected through the year 2005, at the same growth rate each year as the growth in residential customers. The monthly spreads were derived using historical relationships between monthly and annual energy usage.

## III. PEAK DEMAND FORECAST

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

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

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

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

HELM has been designed to forecast electric utility load shapes and to analyze the impacts of factors such as alternative weather conditions, customer mix changes, fuel share changes, and demand-side programs. The structural detail of HELM provides forecasts of hourly class and system load curves by weighting and aggregating load shapes for individual end-use components.

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

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

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

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

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

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

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

$L_{R,i}$ = demand for electricity by residential end-use R in hour i;

$L_{C,i}$ = demand for electricity by commercial end-use C in hour i;

$L_{I,i}$ = demand for electricity by industrial end-use I in hour i;

$Misc_i$ = other demands (wholesale, street lighting, losses, company use) in hour i.

## IV. 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 ¢ents 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 ¢ents 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 ¢ents Improved Home standard by providing specific whole house recommendations, a list of qualified companies who provide installation services, and information on "low-interest" financing available through the Gulf Express Loan program.

*In Concert With The Environment®* is an environmental and energy awareness program that is being implemented in the 8th and 9th grade science classes in Gulf Power

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

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

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

The Commercial Energy Audit (EA) and Technical Assistance Audit (TAA) programs are designed to provide commercial customers with assistance in identifying cost effective energy conservation opportunities and introduce them to various technologies which will lead to improvements in the energy efficiency level of their business. The program is designed with enough flexibility to allow for a simple walk through analysis (EA) or a detailed economic evaluation of potential energy improvements through a more in-depth audit process (TAA) which includes equipment energy usage monitoring, computer energy modeling, life cycle equipment cost analysis, and feasibility studies.

Gulf's Real Time Pricing pilot program is designed to take advantage of customer price response to achieve peak demand reductions. Participation will be limited to a maximum of 12 customers with actual demand of 2,000 KW of higher for this pilot program. 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 numbers 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 RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1995 | 95,711 | 150,391 | 244,226,021 |

1996 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1996 | 18,922 | 27,082 | 15,748,393 |
| 1997 | 30,062 | 42,482 | 22,130,067 |
| 1998 | 41,836 | 62,170 | 30,145,985 |
| 1999 | 18,854 | 27,194 | 16,496,663 |
| 2000 | 17,886 | 26,236 | 17,256,220 |
| 2001 | 15,898 | 25,252 | 17,061,619 |
| 2002 | 10,923 | 18,286 | 15,501,897 |
| 2003 | 12,902 | 21,258 | 17,490,578 |
| 2004 | 14,860 | 25,202 | 19,777,942 |
| 2005 | 3,842 | 5,177 | 5,185,104 |

1996 BUDGET FORECAST
TOTAL RESIDENTIAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1996 | 114,633 | 177,472 | 259,974,414 |
| 1997 | 144,695 | 219,955 | 282,104,481 |
| 1998 | 186,531 | 282,125 | 312,250,466 |
| 1999 | 205,385 | 309,318 | 328,747,129 |
| 2000 | 223,271 | 335,554 | 346,003,349 |
| 2001 | 239,169 | 360,806 | 363,064,968 |
| 2002 | 250,092 | 379,092 | 378,566,864 |
| 2003 | 262,995 | 400,350 | 396,057,443 |
| 2004 | 277,855 | 425,552 | 415,835,385 |
| 2005 | 281,697 | 430,729 | 421,020,489 |

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

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1995 | 121,628 | 102,217 | 185,403,756 |

1996 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1996 | 3,176 | 11,390 | 47,811,627 |
| 1997 | 3,373 | 1,259 | 5,943,687 |
| 1998 | 3,373 | 2,259 | 6,666,687 |
| 1999 | 2,373 | 1,259 | 5,368,687 |
| 2000 | 2,373 | 1,259 | 6,442,687 |
| 2001 | 3,373 | 2,259 | 7,905,687 |
| 2002 | 3,373 | 1,259 | 7,905,687 |
| 2003 | 2,373 | 2,259 | 7,905,687 |
| 2004 | 3,373 | 1,259 | 7,905,687 |
| 2005 | 1,373 | 259 | 3,905,687 |

1996 BUDGET FORECAST
TOTAL COMMERCIAL/INDUSTRIAL DSM PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1996 | 124,805 | 113,606 | 233,215,383 |
| 1997 | 128,177 | 114,865 | 239,159,069 |
| 1998 | 131,550 | 117,124 | 245,825,756 |
| 1999 | 133,923 | 118,383 | 251,194,442 |
| 2000 | 136,295 | 119,642 | 257,637,129 |
| 2001 | 139,668 | 121,901 | 265,542,816 |
| 2002 | 143,040 | 123,160 | 273,448,502 |
| 2003 | 145,413 | 125,419 | 281,354,189 |
| 2004 | 148,786 | 126,678 | 289,259,876 |
| 2005 | 150,158 | 126,937 | 293,165,562 |

HISTORICAL
TOTAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1995 | 217,339 | 252,608 | 438,665,203 |

1996 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
INCREMENTAL ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1996 | 22,099 | 38,471 | 63,847,036 |
| 1997 | 33,434 | 43,741 | 28,289,326 |
| 1998 | 45,209 | 64,429 | 37,014,363 |
| 1999 | 21,227 | 28,453 | 22,054,479 |
| 2000 | 20,259 | 27,495 | 23,887,222 |
| 2001 | 19,270 | 27,511 | 25,153,179 |
| 2002 | 14,296 | 19,545 | 23,595,395 |
| 2003 | 15,275 | 23,517 | 25,582,138 |
| 2004 | 18,233 | 26,461 | 27,870,420 |
| 2005 | 5,214 | 5,436 | 9,277,685 |

1996 BUDGET FORECAST
TOTAL CONSERVATION PROGRAMS
CUMULATIVE ANNUAL REDUCTIONS
AT GENERATOR

| | SUMMER PEAK (KW) | WINTER PEAK (KW) | NET ENERGY FOR LOAD (KWH) |
|---|---|---|---|
| 1996 | 239,438 | 291,079 | 502,512,238 |
| 1997 | 272,872 | 334,820 | 530,801,565 |
| 1998 | 318,081 | 399,249 | 567,815,928 |
| 1999 | 339,308 | 427,702 | 589,870,407 |
| 2000 | 359,567 | 455,197 | 613,757,629 |
| 2001 | 378,837 | 482,708 | 638,910,808 |
| 2002 | 393,133 | 502,252 | 662,506,203 |
| 2003 | 408,408 | 525,769 | 688,088,341 |
| 2004 | 426,641 | 552,230 | 715,958,760 |
| 2005 | 431,855 | 557,667 | 725,236,445 |

## V. 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. Future projections will include additional impacts of Gulf's "Green Pricing" pilot program. The company has received administrative approval for this experiment to be implemented in early 1997.

Small Power Producers
Net Capability

| Year | MW |
|---|---|
| 1995 | 11 |
| 1996 | 32 |
| 1997 | 32 |
| 1998 | 32 |
| 1999 | 32 |
| 2000 | 37 |
| 2001 | 37 |
| 2002 | 37 |
| 2003 | 37 |
| 2004 | 37 |
| 2005 | 37 |

District heating and cooling plants are an older fundamental application of large central station heating and cooling equipment for service to multiple premises in close proximity. These systems are typically located in college or school settings as well as some military bases and industrial plants.

Within Gulf's service area there exists a number of these systems which were appropriate or seemed appropriate at the time of their installation. Current day considerations for energy pricing, operating and maintenance expenses have resulted in many of these systems becoming uneconomical and decommissioned. Future installations of district heating and cooling plants of any consequence hinge primarily upon the opportunity for optimum application of this technology. The very dispersed construction of low rise buildings which are characteristic of the building demographics in Gulf Power's service area yield no significant opportunities for district heating and cooling that are economically viable on the planning horizon.

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# CHAPTER III

# FORECAST
# OF
# FACILITIES REQUIREMENTS

## 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 will then decide what the various escalation and inflation rates will be for the various components that impact the financial condition of the Company. This group is the source for the assumptions surrounding general inflation and escalation regarding fuel, construction costs, labor rates and variable O&M.

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

As mentioned earlier, Gulf's forecast of energy sales and peak demand reflect the continued impacts of our conservation programs. Furthermore, an update of demand-side measure cost and benefits is conducted in order to perform cost-effectiveness evaluations against the selected supply-side technologies in the integration process.

A number of existing generating units on the Southern electric system are also evaluated with respect to their currently planned retirement dates as well as the economics and appropriateness of possible repowering over the planning horizon. The repowering evaluation is particularly important as a possible competing technology with the other unit addition technologies. The evaluations are extremely important in order to maximize the benefit of existing investment from both a capital and an operating and maintenance expense basis.

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

It is important to note, once again, that up to this point the supply side of the integrated resource planning process is focusing on the Southern electric system as a whole which has as its planning criterion a 15% target reserve margin. 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, and the necessary planning inputs are defined, 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 in every year each combination of generation additions that satisfy the reserve margin constraint. For each combination, annual system operating costs are simulated and are added to the construction costs required to build that particular 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 asses 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.

UTILITY: GULF POWER COMPANY

TYP FORM 6

PLANNED AND PROSPECTIVE GENERATING FACILITY ADDITIONS AND CHANGES

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Fuel | | (a) Const | Com'l In- | Gen Max | Net Capability | | Fuel Transp | | |
| Plant Name | Unit No. | Location | Type | Pri | Alt | Start Mo/Yr | Service Mo/Yr | Nameplate KW | Summer MW | Winter MW | Pri | Alt | Status |
| Scholz | A | Jackson County 12/3N/7W | CT | NG | LO | 02/01 | 05/03 | | 100.0 | 100.0 | PL | TK | P |
| Scholz | B | Jackson County 12/3N/7W | CT | NG | LO | 02/01 | 05/03 | | 100.0 | 100.0 | PL | TK | P |

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

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

UTILITY: GULF POWER COMPANY

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

| YEAR | TOTAL INSTALLED CAPACITY MW | FIRM CAPACITY IMPORT MW (B) | TOTAL AVAILABLE CAPACITY MW | FIRM PEAK DEMAND MW | MARGIN BEFORE MAINTENANCE MW | MARGIN BEFORE MAINTENANCE PER CENT OF PEAK | SCHEDULED MAINTENANCE MW | MARGIN AFTER MAINTENANCE MW | MARGIN AFTER MAINTENANCE PER CENT OF PEAK |
|---|---|---|---|---|---|---|---|---|---|
| 1996 | 2342 | (181) | 2161 | 1983 | 178 | 9.0% | NONE | 178 | 9.0% |
| 1997 | 2342 | (180) | 2162 | 2019 | 143 | 7.1% | | 143 | 7.1% |
| 1998 | 2342 | (180) | 2162 | 2023 | 139 | 6.9% | | 139 | 6.9% |
| 1999 | 2342 | 0 | 2342 | 2044 | 298 | 14.6% | | 298 | 14.6% |
| 2000 | 2342 | 0 | 2342 | 2056 | 286 | 13.9% | | 286 | 13.9% |
| 2001 | 2342 | 0 | 2342 | 2075 | 267 | 12.9% | | 267 | 12.9% |
| 2002 | 2342 | 0 | 2342 | 2106 | 236 | 11.2% | | 236 | 11.2% |
| 2003 | 2542 | (80) | 2462 | 2140 | 322 | 15.0% | | 322 | 15.0% |
| 2004 | 2542 | (80) | 2462 | 2173 | 289 | 13.3% | | 289 | 13.3% |
| 2005 | 2542 | (1) | 2541 | 2216 | 325 | 14.7% | | 325 | 14.7% |

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 CAPACITY SOLD IN ALL EXISTING UNIT POWER SALES CONTRACTS, CONTRACTED CAPACITY ALLOCATED TO CERTAIN RESALE CUSTOMERS BY THE SOUTHEASTERN POWER ADMINISTRATION (SEPA), FIRM PURCHASES, AND ESTIMATED CONTRACTED DEMAND SIDE OPTIONS.

UTILITY: GULF POWER COMPANY

TYP FORM 7B

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

| YEAR | TOTAL INSTALLED CAPACITY MW | FIRM CAPACITY IMPORT MW (B) | TOTAL AVAILABLE CAPACITY MW | FIRM PEAK DEMAND MW | MARGIN BEFORE MAINTENANCE MW | MARGIN BEFORE MAINTENANCE PER CENT OF PEAK | SCHEDULED MAINTENANCE MW | MARGIN AFTER MAINTENANCE MW | MARGIN AFTER MAINTENANCE PER CENT OF PEAK |
|---|---|---|---|---|---|---|---|---|---|
| 1995-96 | 2351 | (202) | 2149 | 1853 | 296 | 16.0% | NONE | 296 | 16.0% |
| 1996-97 | 2351 | (181) | 2170 | 1869 | 301 | 16.1% | | 301 | 16.1% |
| 1997-98 | 2351 | (180) | 2171 | 1839 | 332 | 18.1% | | 332 | 18.1% |
| 1998-99 | 2351 | (180) | 2171 | 1843 | 328 | 17.8% | | 328 | 17.8% |
| 1999-00 | 2351 | 0 | 2351 | 1839 | 512 | 27.8% | | 512 | 27.8% |
| 2000-01 | 2351 | 0 | 2351 | 1839 | 512 | 27.8% | | 512 | 27.8% |
| 2001-02 | 2351 | 0 | 2351 | 1853 | 498 | 26.9% | | 498 | 26.9% |
| 2002-03 | 2351 | 0 | 2351 | 1866 | 485 | 26.0% | | 485 | 26.0% |
| 2003-04 | 2551 | (80) | 2471 | 1879 | 592 | 31.5% | | 592 | 31.5% |
| 2004-05 | 2551 | (80) | 2471 | 1910 | 561 | 29.4% | | 561 | 29.4% |

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 CAPACITY SOLD IN ALL EXISTING UNIT POWER SALES CONTRACTS, CONTRACTED CAPACITY ALLOCATED TO CERTAIN RESALE CUSTOMERS BY THE SOUTHEASTERN POWER ADMINISTRATION (SEPA), FIRM PURCHASES, AND ESTIMATED CONTRACTED DEMAND SIDE OPTIONS.

## 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 1996 and extends into 2010. Gulf's share of the capacity and energy sales is reflected in the reserves on Forms 7A and 7B and the energy and fuel use on Forms 3A and 3B.

# CHAPTER IV

# SITE DESCRIPTION AND IMPACT ANALYSIS

## 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 made preliminary inquiries as to the availability of capacity for short-term firm purchases during the next several years. The Company has determined that there appears to be sufficient capacity available to meet its short-term needs at prices that would be competitively attractive when compared to its own cost to construct peaking capacity. Gulf intends to issue a Request For Proposals in the near future in order to secure short-term power to meet its initial need beginning in 1999. By acquiring short-term purchased power, the Company will be provided with flexibility during this period of uncertainty and allowed an opportunity to assess its position before it has to make further capacity need decisions.

### SCHOLZ SITE

The Scholz Site consist of 293 acres (total plant site) and is the location of the existing Scholz Electric Generating Facility. It is located south of the town of Sneads along the west side of the Apalachicola river. The site is accessible by railroad and river barge service.

Scholz has been chosen as the likely site for the installation of two 100 MW combustion turbines. It is currently anticipated that these units will be in service in May of 2003. These two combustion turbines and associated transmission facilities are to be installed on existing cleared company property immediately adjacent to the existing Scholz plant. These units will be used during peak periods, and the impact of their operation on the surrounding area should be minimal.

Utility: Gulf Power Company

Status Report
Specifications of Proposed Generating Facilities

| | |
|---|---|
| (1) Plant Name & Unit | Scholz A |
| (2) Status | This facility is planned but not authorized |
| (3) Anticipated Construction Timing | In-Service May, 2003 |
| (4) Capacity | Summer 100.0 MW<br>Winter 100.0 MW |
| (5) Type | Combustion Turbine |
| (6) Primary and Alternate Fuel | Primary - Natural Gas; Alternate - Light Oil (distillate) |
| (7) Air Pollution Control Strategy | Steam Injection for NOx control |
| (8) Cooling Method | NA |
| (9) Total Site Area | 293 acres (total plant site) |
| (10) Anticipated Capital Investment | $27,683,000 |
| (11) Certification Status | Not applied |
| (12) Status with Federal Agencies | Not applied |

Utility: Gulf Power Company

Status Report
Specifications of Proposed Generating Facilities

| | |
|---|---|
| (1) Plant Name & Unit | Scholz B |
| (2) Status | This facility is planned but not authorized |
| (3) Anticipated Construction Timing | In-Service May, 2003 |
| (4) Capacity | Summer 100.0 MW<br>Winter 100.0 MW |
| (5) Type | Combustion Turbine |
| (6) Primary and Alternate Fuel | Primary - Natural Gas; Alternate - Light Oil (distillate) |
| (7) Air Pollution Control Strategy | Steam Injection for NOx control |
| (8) Cooling Method | NA |
| (9) Total Site Area | 293 acres (total plant site) |
| (10) Anticipated Capital Investment | $27,683,000 |
| (11) Certification Status | Not applied |
| (12) Status with Federal Agencies | Not applied |

TYP FORM 8B

Utility: Gulf Power Company

Status Report and Specifications of Proposed
Specif Directly-Associated Transmission Lines

| | |
|---|---|
| (1) Point of Origin and Termination | Scholz to Smith - Thomasville 230 KV loop |
| (2) Number of Lines | 2 |
| (3) Right-of-Way | Length: on company property<br>Width: |
| (4) Line Length | 0.3 miles each |
| (5) Voltage | 230 KV |
| (6) Anticipated Construction Timing | In-Service January, 2003 |
| (7) Anticipated Capital Investment | $2,817,000 |
| (8) Substations | None |
| (9) Participation | None |