

Before the  
Florida Public Service Commission  
Docket No. 891345-E1

**ORIGINAL  
FILE COPY**

## **GULF POWER COMPANY**

Exhibit of

**JEFFRY POLLOCK**

On behalf of:

**AIR PRODUCTS AND CHEMICALS, INC.  
AMERICAN CYANAMID COMPANY  
CHAMPION INTERNATIONAL CORPORATION  
EXXON COMPANY, U.S.A.  
MONSANTO COMPANY  
STONE CONTAINER CORPORATION**

Project 5095  
May 1990

Drazen-Brubaker & Associates, Inc.  
St. Louis, Missouri 63141-0110

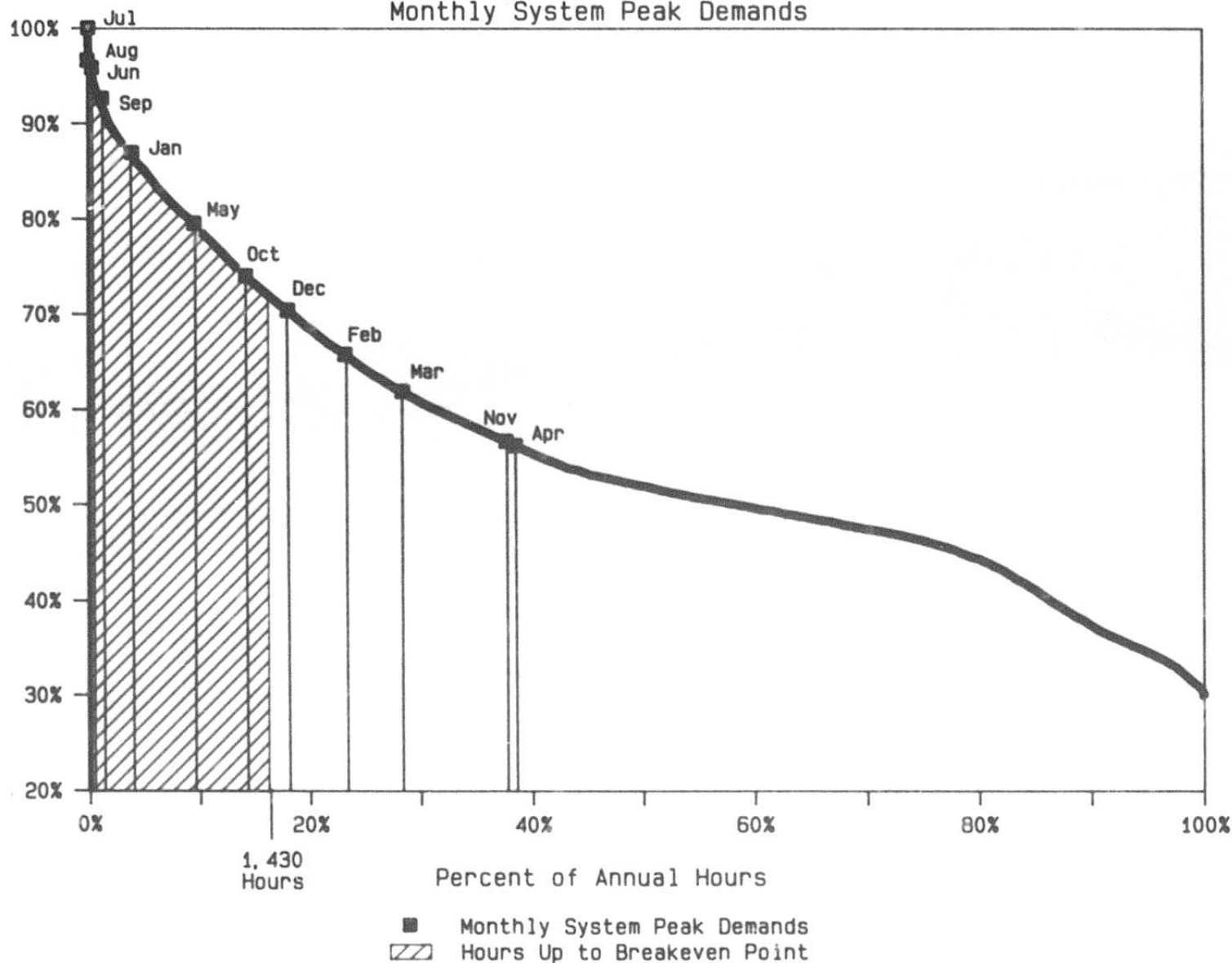
DOCUMENT NUMBER-DATE

03794 MAY -2 1990  
FPSC-RECORDS/REPORTING

# GULF POWER COMPANY

Exhibit JP-1 ( )  
Schedule 1

Test Year Total System Load Duration Curve and  
Monthly System Peak Demands



DOCUMENT NUMBER-DATE

03794 MAY-2 1990

FPSC-RECORDS/REPORTING

Exhibit JP-1 ( )  
Schedule 1

GULF POWER COMPANY

Comparison Between the Per Unit Capital Costs  
and the Per Unit Operating Costs Allocated to Customer Classes  
Under Gulf's Version of the Refined Equivalent Peaker Method  
(Year Ended December 31, 1990)

Line	Customer Class	Capital Costs				Operating Costs			
		Net Production Plant (000) (1)	Near Peak Demand (MW) (2)	Net Plant Per kW of Peak Demand (3)	Index (4)	Fuel Expense (000) (5)	Energy Required (GWh) (6)	Expense Per MWh (7)	Index (8)
1	RS/RST	\$205,638	841	\$245	99	\$ 66,888	3,607.0	\$18.54	100
2	GS/GST	12,621	56	225	91	4,237	228.6	18.54	100
3	GSD/GSDT	89,321	365	245	100	34,769	1,875.0	18.54	100
4	LP/LPT	62,651	265	236	96	28,883	1,557.7	18.54	100
5	PX/PXT	32,970	110	300	121	16,709	901.1	18.54	100
6	OS I, II & III	<u>1,371</u>	<u>1</u>	<u>1,371</u>	555	<u>1,101</u>	<u>59.4</u>	18.54	100
7	Total Retail	\$404,572	1,638	\$ 247	100	\$152,587	8,228.8	\$18.54	100

Note: Based on Gulf's Responses to Staff Interrogatory No. 2;  
not revised to reflect changes to the LP/LPT and PX/PXT classes.

**GULF POWER COMPANY**

**Comparison of Outage Rates Between  
 Coal-Fired Base Load and Peaking Technologies\***

Line	Description	Coal-Fired Base Load Units (1)	Peaking Units		
			Jet Engine Units (2)	Gas Turbine Units (3)	Diesel Units (4)
1	Forced Outage Rate	6.87%	31.55%	53.49%	56.35%
2	Effective Forced Outage Rate	9.73%	37.53%	56.72%	59.90%

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Source: NERC GADS Generating Availability Report,  
 August, 1989.

## GULF POWER COMPANY

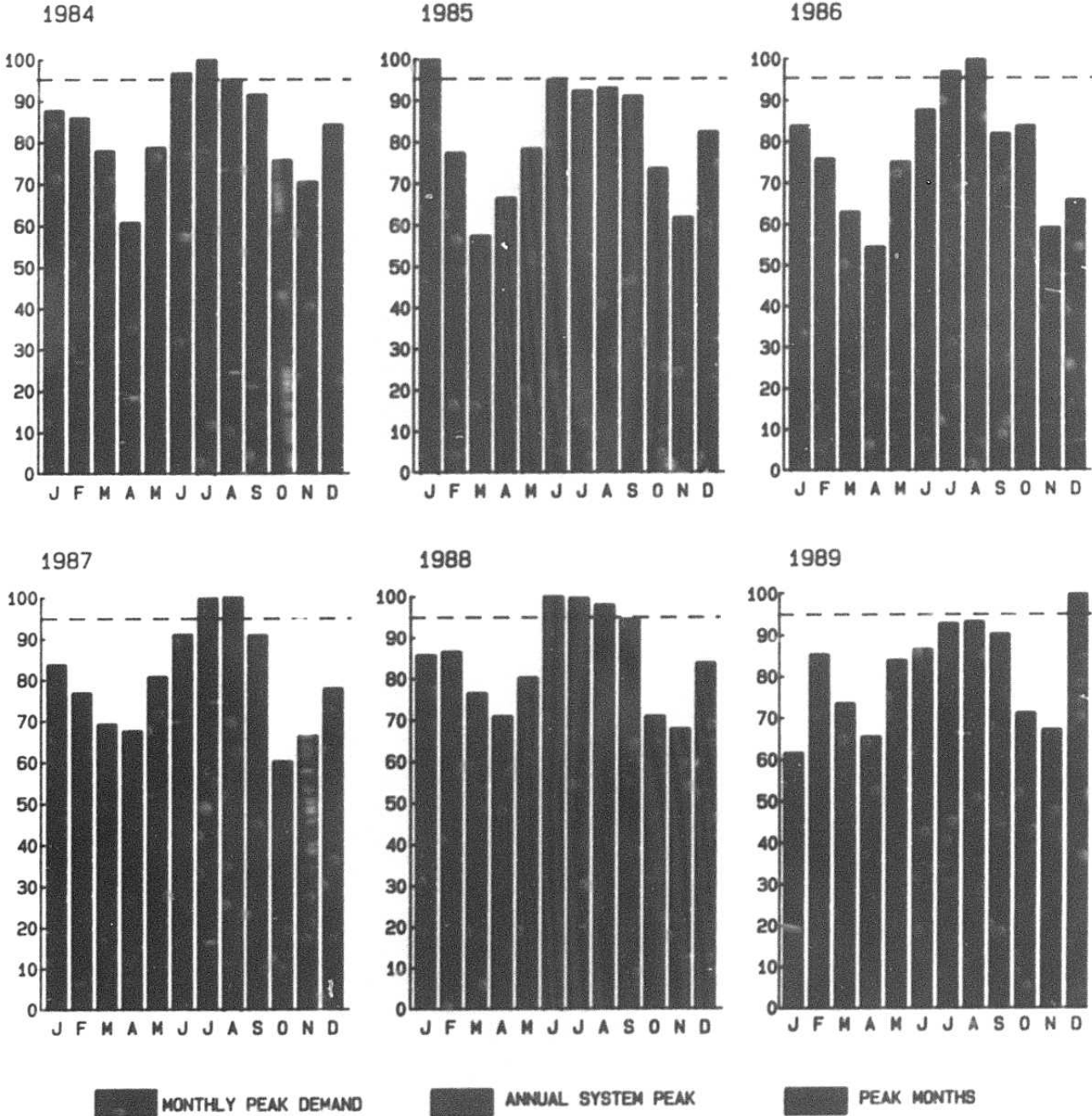
**Classification of Production Plant  
Between Reliability and CAPSUB Components Under the REP Method  
Based on Calendar Year 1987 Data and Taking into Account  
the Different Forced Outage Rates Between Base and Peaking Units**

Line	Generating Plant	Net Installed Cost (000) (1)	Unit Nameplate Rating (MW) (2)	Unit Cost (\$/kW) (3)	Handy Whitman Index Year/ Current (4)	Deprec. Reserve Ratio (5)	Net Investment If Installed As a Peaker* (000) (6)
<b>STEAM UNITS</b>							
Scholz:							
1	Unit 1	\$ 4,962	40.0	\$124	0.90	0.17	\$ 17,315
2	Unit 2	4,705	40.0	118	0.90	0.17	17,315
3	Total Scholz	9,666	80.0	121	1.80		34,630
Christ:							
4	Unit 1	3,010	22.5	134	0.52	0.43	3,827
5	Unit 2	3,255	22.5	145	0.70	0.30	6,363
6	Unit 3	4,411	30.0	147	0.88	0.20	12,190
7	Unit 4	20,832	75.0	278	0.26	0.97	375
8	Unit 5	21,051	75.0	281	0.24	0.90	1,039
9	Unit 6	49,834	320.0	156	0.36	0.60	26,596
10	Unit 7	79,079	500.0	158	0.39	0.50	56,273
11	Total Christ	181,473	1,045.0	174	0.75		106,662
Smith:							
12	Unit 1	21,839	125.0	175	0.28	0.77	4,713
13	Unit 2	21,222	180.0	118	0.31	0.70	9,662
14	Total Smith	43,061	305.0	141	0.59		14,375
Daniel:							
15	Unit 1	58,583	250.0	234	0.62	0.37	56,658
16	Unit 2	79,436	250.0	318	0.82	0.23	90,710
17	Total Daniel	138,019	500.0	276	1.44		147,368
18	Scherer 3	172,962	204.5	846	1.00	0.03	114,095
19	Total Steam Units	\$545,180	2,134.5	\$255			\$417,130
<b>PEAKING UNITS</b>							
20	Smith A	\$ 1,020	39.4	\$ 26			\$ 1,020
21	Total Peaking	\$ 1,020	39.4	\$ 26			\$ 1,020
22	Total Base & Peaking	\$546,200	2,173.9	\$251			\$418,150
23	Percent Classified to Demand (Line 23, Column 6 ÷ Column 1)						77%

\*\$307/kW x Column 2 x  $\frac{(1 - \text{FOR Base})}{(1 - \text{FOR Peaker})}$  x Column 4 x (1 - Column 5)  
where FOR peaker = 30% and FOR Base = 6%.

# GULF POWER COMPANY

## ANALYSIS OF MONTHLY PEAK DEMANDS AS A PERCENT OF THE ANNUAL SYSTEM PEAK FOR THE YEARS 1984 THROUGH 1989



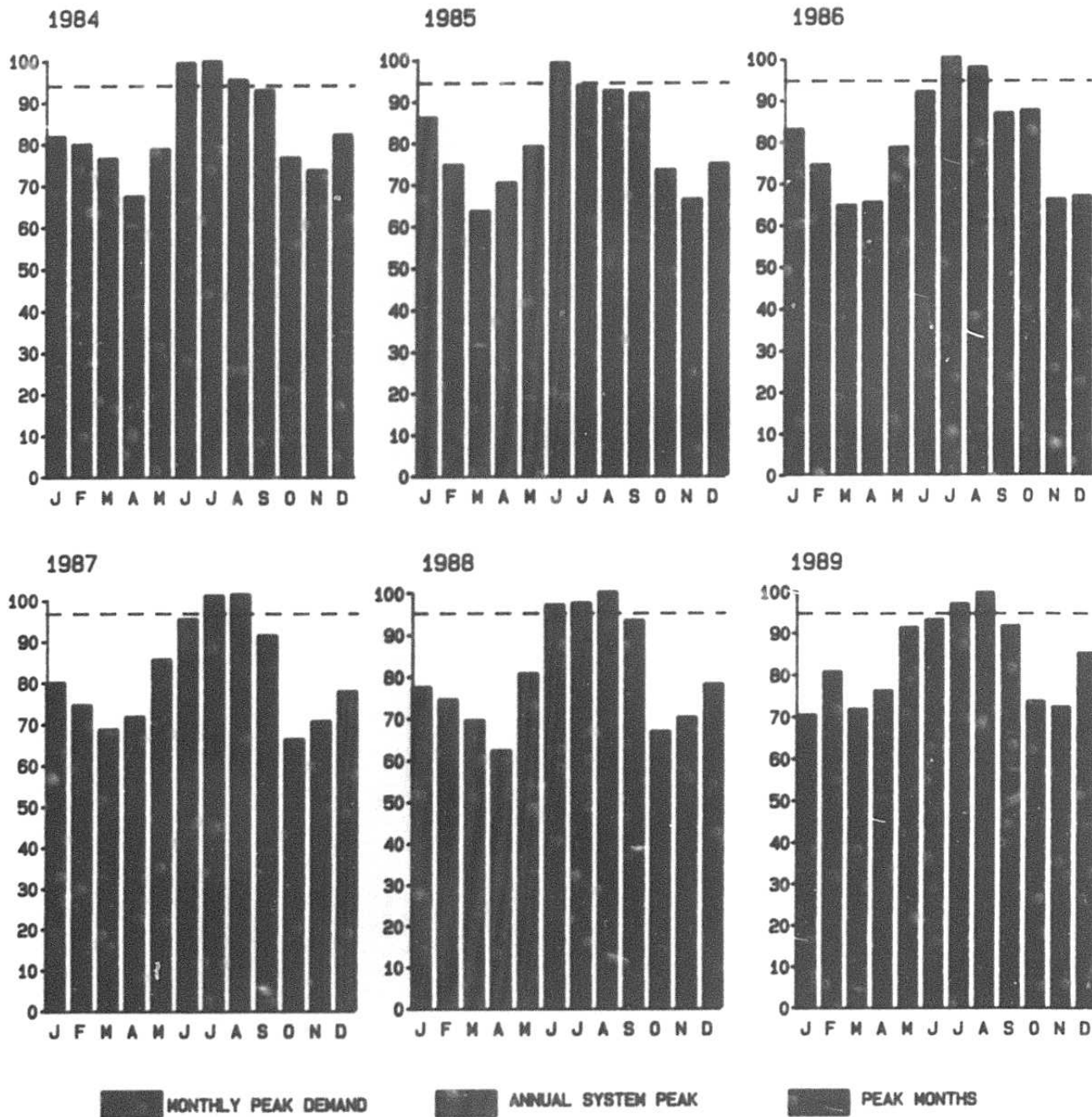
## GULF POWER COMPANY

### Summary of Load Characteristics

<u>Line</u>	<u>Year</u>	<u>System Peak (1)</u>	<u>Maximum-to- Minimum Monthly Peak (2)</u>	<u>Maximum-to- Average Monthly Peak (3)</u>	<u>Annual Load Factor (4)</u>
1	1984	1,395	1.64	1.19	55%
2	1985	1,531	1.74	1.24	53
3	1986	1,684	1.83	1.29	50
4	1987	1,624	1.66	1.24	54
5	1988	1,620	1.47	1.18	56
6	1989	1,821	1.62	1.24	53

# THE SOUTHERN COMPANY

## ANALYSIS OF MONTHLY PEAK DEMANDS AS A PERCENT OF THE ANNUAL SYSTEM PEAK FOR THE YEARS 1984 THROUGH 1989





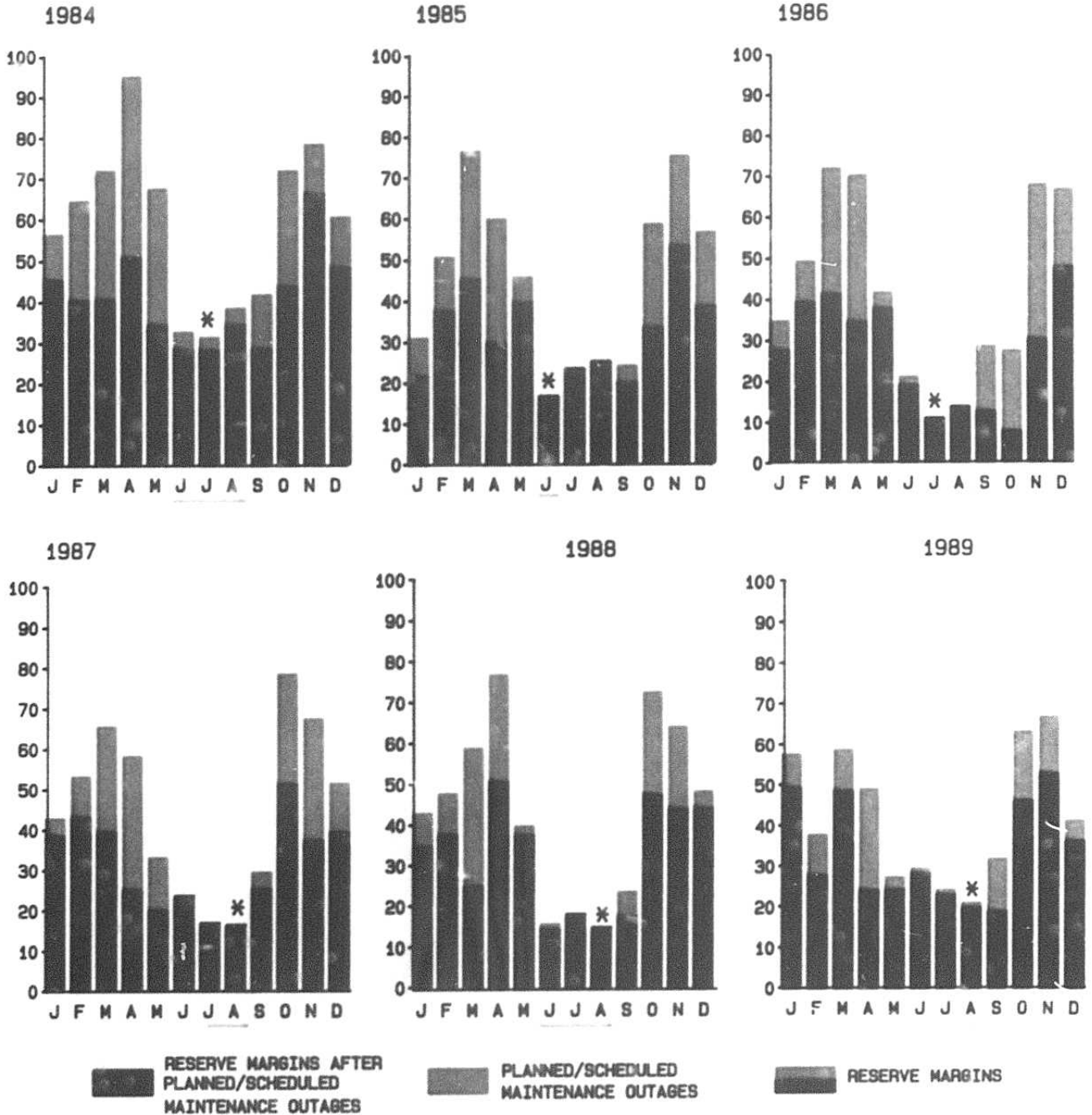
## THE SOUTHERN COMPANY

### SUMMARY OF LOAD CHARACTERISTICS

<u>Line</u>	<u>Year</u>	<u>System Peak (1)</u>	<u>Maximum-to- Minimum Monthly Peak (2)</u>	<u>Maximum-to- Average Monthly Peak (3)</u>
1	1984	21,618	1.48	1.19
2	1985	23,737	1.56	1.23
3	1986	25,138	1.55	1.25
4	1987	25,138	1.53	1.24
5	1988	26,494	1.61	1.24
6	1989	27,411	1.41	1.19

# THE SOUTHERN COMPANY

## MONTHLY RESERVE MARGINS EXPRESSED AS A PERCENT OF PEAK DEMAND (1984 - 1989)



\* ANNUAL PEAK

**GULF POWER COMPANY**

**Derivation of Near Coincident Peak Demand  
 Allocation Factors  
 (Year Ended December 31, 1990)**

<u>Line</u>	<u>Rate Class</u>	<u>Cumulative Unadjusted Hourly Demands (MWh) (1)</u>	<u>Adjusted Near Peak Demands (MW) (2)</u>	<u>Allocation Factor (3)</u>
1	RS/RST	59,836	843	51.6%
2	GS/GST	3,974	56	3.4
3	GSD/GSDT	25,942	365	22.3
4	LP/LPT	17,770	250	15.3
5	PX/PXT	8,458	119	7.3
6	OS I, II & III	<u>65</u>	<u>1</u>	<u>0.1</u>
7	<b>Total Retail</b>	<b>116,045</b>	<b>1,634</b>	<b>100.0%</b>

GULF POWER COMPANY  
 SYSTEM LOAD DURATION AND COINCIDENT CLASS DURATION  
 WITHIN 5% OF SYSTEM PEAK  
 1990 ADJUSTED AT LEVEL 1

DUR #	MO	DAY	HR	RESIDENTIAL		GENERAL SERVICE		GEN SERVICE DEMAND		LP & LPT		PXT		OUTDOOR SERVICE	
				AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE
1	8	26	17	857,391	857,391	57,975	57,975	378,134	378,134	265,733	265,733	113,501	113,501	930	930
2	7	29	17	884,159	1,741,550	60,838	118,814	376,735	754,869	235,269	501,001	123,699	237,200	899	1,829
3	8	24	17	863,106	2,604,656	56,408	175,221	362,122	1,116,990	266,796	767,798	115,930	353,130	930	2,759
4	8	24	16	835,018	3,439,675	59,930	235,151	369,947	1,486,938	275,960	1,043,758	115,636	468,766	930	3,689
5	8	25	17	848,844	4,288,518	60,232	295,383	368,769	1,855,707	265,568	1,309,326	114,809	583,575	930	4,618
6	8	20	17	843,460	5,131,978	65,420	360,803	363,162	2,218,869	266,302	1,575,628	120,446	704,021	930	5,548
7	8	26	18	881,968	6,013,946	44,046	404,849	354,463	2,573,332	260,649	1,836,276	113,919	817,841	930	6,478
8	7	29	18	922,580	6,936,527	42,248	447,096	355,816	2,929,149	221,340	2,057,617	122,360	940,201	899	7,377
9	8	26	16	806,133	7,742,659	63,591	510,687	393,311	3,322,459	275,007	2,332,624	113,278	1,053,479	930	8,307
10	7	23	17	879,625	8,622,284	56,871	567,558	366,629	3,689,088	232,175	2,564,798	124,637	1,178,116	899	9,206
11	8	27	17	867,044	9,489,328	55,111	622,669	355,470	4,044,558	266,711	2,831,509	112,070	1,290,186	930	10,136
12	8	21	15	796,153	10,285,481	64,517	687,186	385,817	4,430,376	285,358	3,116,868	118,151	1,408,337	930	11,066
13	7	29	16	849,276	11,134,757	61,767	748,953	377,832	4,808,208	243,232	3,360,099	122,720	1,531,057	899	11,965
14	8	25	18	883,566	12,018,323	45,917	794,870	347,116	5,155,324	260,268	3,620,367	114,655	1,645,711	930	12,895
15	8	20	15	792,710	12,811,033	63,457	858,328	387,525	5,542,849	280,779	3,901,146	122,267	1,767,979	930	13,825
16	8	24	15	789,986	13,601,019	61,377	919,705	385,791	5,928,640	290,533	4,191,679	116,142	1,884,121	930	14,754
17	7	23	18	904,066	14,505,085	43,061	962,766	354,761	6,283,401	225,704	4,417,383	124,192	2,008,313	899	15,654
18	8	20	18	879,215	15,384,300	49,809	1,012,574	339,350	6,622,751	256,108	4,673,491	121,205	2,129,518	930	16,583
19	8	25	16	825,605	16,209,904	61,435	1,074,009	379,706	7,002,457	265,712	4,939,203	113,640	2,243,158	930	17,513
20	8	10	14	789,260	16,999,164	62,428	1,136,437	385,120	7,387,577	281,347	5,220,550	122,862	2,366,021	930	18,443
21	7	13	16	880,310	17,879,474	62,524	1,198,961	374,063	7,761,641	213,091	5,433,641	118,108	2,484,129	899	19,342
22	8	7	17	870,900	18,750,374	59,454	1,258,415	356,585	8,118,226	238,964	5,672,605	124,050	2,608,179	930	20,272
23	8	24	18	881,884	19,632,258	44,645	1,303,060	338,686	8,456,911	261,157	5,933,762	115,184	2,723,363	930	21,202
24	8	27	16	818,327	20,450,585	57,372	1,360,432	376,167	8,833,078	276,401	6,210,164	111,921	2,835,284	930	22,132
25	7	13	14	832,520	21,283,106	62,729	1,423,161	392,910	9,225,988	238,915	6,449,079	119,793	2,955,077	899	23,031
26	7	13	15	859,609	22,142,715	62,202	1,485,363	380,023	9,606,012	220,562	6,669,641	118,592	3,073,669	899	23,930
27	8	27	15	790,118	22,932,833	59,657	1,545,021	383,967	9,989,978	287,230	6,958,871	112,336	3,186,005	930	24,860
28	7	23	16	832,859	23,765,692	60,525	1,605,546	381,895	10,371,874	239,289	7,196,160	125,107	3,311,112	899	25,759
29	7	24	14	830,848	24,596,540	62,109	1,667,655	370,848	10,742,722	247,305	7,443,464	124,563	3,435,675	899	26,658
30	8	26	15	775,360	25,371,900	64,933	1,732,588	393,157	11,135,879	281,504	7,724,969	114,877	3,550,553	930	27,588
31	8	7	16	848,413	26,220,312	61,379	1,793,967	352,860	11,488,739	248,757	7,973,725	124,071	3,674,624	930	28,518
32	8	27	18	880,264	27,100,576	41,271	1,835,238	337,653	11,826,392	266,410	8,240,135	110,899	3,785,522	930	29,447
33	8	8	17	956,561	28,057,137	36,504	1,871,743	313,559	12,139,951	210,169	8,450,305	122,150	3,907,672	930	30,377
34	7	13	17	897,716	28,954,854	58,197	1,929,940	355,921	12,495,873	205,463	8,655,768	118,628	4,026,300	899	31,276
35	8	20	16	794,441	29,749,295	70,015	1,999,955	366,430	12,862,303	274,842	8,930,610	120,121	4,146,421	930	32,206
36	7	24	15	833,395	30,582,689	61,890	2,061,845	362,899	13,225,202	247,310	9,177,919	124,407	4,270,828	899	33,105
37	8	8	18	920,081	31,502,771	36,269	2,098,114	331,956	13,557,157	224,625	9,402,544	121,361	4,392,189	930	34,035
38	8	7	18	881,296	32,384,067	45,177	2,143,291	348,769	13,905,926	230,893	9,633,437	124,309	4,516,498	930	34,965
39	7	10	16	856,381	33,240,448	64,285	2,207,576	370,014	14,275,940	223,665	9,857,102	116,982	4,633,479	899	35,864
40	7	30	14	794,518	34,034,966	66,362	2,273,938	385,304	14,661,244	258,585	10,115,687	124,928	4,758,407	899	36,763
41	7	10	15	831,923	34,866,890	65,835	2,339,774	378,718	15,039,961	237,750	10,353,437	117,386	4,875,794	899	37,662
42	8	20	15	768,344	35,635,234	69,241	2,409,015	380,443	15,420,405	263,252	10,636,689	119,676	4,995,470	930	38,592
43	7	29	15	781,144	36,416,378	65,163	2,474,178	391,579	15,811,984	262,129	10,898,818	122,832	5,118,302	899	39,491
44	7	30	15	795,978	37,212,356	65,896	2,540,074	388,480	16,200,464	253,504	11,152,322	124,586	5,242,888	899	40,390
45	8	9	17	961,180	38,173,536	27,287	2,567,361	306,757	16,507,220	209,808	11,362,130	120,468	5,363,357	930	41,320
46	8	10	16	770,732	38,944,268	65,016	2,632,377	385,970	16,893,190	272,533	11,634,662	121,808	5,485,165	930	42,250
47	7	10	17	874,855	39,819,123	59,289	2,691,666	360,781	17,253,971	214,580	11,849,242	117,683	5,602,848	899	43,149
48	8	24	14	760,621	40,579,744	62,088	2,753,755	390,013	17,643,984	288,652	12,137,894	116,118	5,718,965	930	44,079
49	7	29	19	866,768	41,466,513	37,679	2,791,433	348,558	17,992,542	231,753	12,369,648	121,269	5,840,234	899	44,978
50	8	21	14	768,478	42,234,991	60,239	2,851,673	388,344	18,380,886	282,380	12,652,028	119,143	5,959,378	930	45,908

GULF POWER COMPANY  
 SYSTEM LOAD DURATION AND COINCIDENT CLASS DURATION  
 WITHIN 5% OF SYSTEM PEAK  
 1990 ADJUSTED AT LEVEL 1

DUR #	MO	DAY	HR	RESIDENTIAL		GENERAL SERVICE		GEN SERVICE DEMAND		LP & LPT		PXT		OUTDOOR SERVICE	
				AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE	AMOUNT	CUMULATIVE
51	8	7	15	824,961	43,059,952	63,737	2,915,409	368,813	18,749,699	240,324	12,892,352	124,314	6,083,692	930	46,838
52	8	25	15	785,678	43,845,630	61,709	2,977,118	381,150	19,130,849	274,839	13,167,192	114,326	6,198,018	930	47,768
53	7	13	13	792,073	44,637,703	62,411	3,039,529	395,119	19,525,968	251,811	13,419,003	119,821	6,317,840	899	48,667
54	7	28	15	803,583	45,441,286	65,510	3,105,039	369,660	19,895,628	256,828	13,675,631	121,621	6,439,460	899	49,566
55	8	8	16	932,464	46,373,750	38,275	3,143,314	314,737	20,210,365	214,203	13,889,834	121,794	6,561,255	930	50,496
56	7	9	17	842,667	47,216,416	61,551	3,204,865	368,623	20,578,988	232,219	14,122,053	116,044	6,677,299	899	51,395
57	7	9	18	895,737	48,112,153	46,451	3,251,316	340,662	20,919,651	221,875	14,343,928	116,159	6,793,457	899	52,294
58	8	9	18	947,619	49,059,772	28,922	3,280,238	307,907	21,227,558	214,129	14,558,057	119,601	6,913,258	930	53,224
59	7	23	15	786,759	49,846,531	62,036	3,342,275	387,783	21,615,341	255,155	14,813,211	123,687	7,036,945	899	54,123
60	8	21	16	801,911	50,648,442	59,557	3,401,832	366,679	21,982,019	263,104	15,076,316	117,977	7,154,922	930	55,053
61	7	23	19	870,257	51,518,699	38,522	3,440,353	357,041	22,339,060	227,092	15,303,408	124,247	7,279,169	899	55,952
62	8	26	19	848,395	52,367,094	38,398	3,478,751	349,461	22,688,522	259,739	15,563,147	114,177	7,393,346	930	56,882
63	8	10	13	758,811	53,125,904	62,686	3,541,437	389,096	23,077,618	275,014	15,838,161	123,379	7,516,725	930	57,812
64	7	28	16	812,842	53,938,747	64,294	3,605,731	366,552	23,444,170	246,507	16,084,668	122,128	7,638,853	899	58,711
65	7	10	14	835,161	54,773,908	63,628	3,669,360	364,880	23,809,051	234,876	16,319,544	117,042	7,755,895	899	59,610
66	7	13	18	920,094	55,694,001	38,154	3,707,513	335,304	24,144,355	203,364	16,522,908	117,360	7,873,274	899	60,509
67	8	27	14	739,852	56,433,853	61,950	3,769,464	390,339	24,534,695	299,176	16,822,084	112,244	7,985,519	930	61,439
68	7	10	18	903,489	57,337,342	42,386	3,811,849	341,433	24,876,128	206,757	17,028,841	116,969	8,102,488	899	62,338
69	8	28	15	751,905	58,089,247	65,073	3,876,922	378,154	25,254,282	287,479	17,316,320	121,997	8,224,485	930	63,268
70	7	11	18	942,222	59,031,469	36,044	3,912,966	327,114	25,581,396	194,238	17,510,558	111,540	8,336,025	899	64,167
71	8	28	17	804,107	59,835,576	60,627	3,973,593	360,295	25,941,691	259,764	17,770,322	121,906	8,457,931	930	65,097

**GULF POWER COMPANY**

**Illustration Showing the Impact of a  
 Load Shift on the 12CP Allocation Factors  
 (Monthly Coincident Demands in Megawatts)**

Line	Month	Base Case			With Load Shift*		
		Total Company (1)	Class A (2)	Class B (3)	Total Company (4)	Class A (5)	Class B (6)
1	Jan	1,500	1,350	150	1,500	1,350	150
2	Feb	1,200	1,050	150	1,200	1,050	150
3	Mar	1,200	1,050	150	1,200	1,050	150
4	Apr	1,100	950	150	1,085	950	135
5	May	1,400	1,250	150	1,400	1,250	150
6	Jun	1,700	1,550	150	1,700	1,550	150
7	Jul	1,700	1,550	150	1,700	1,550	150
8	Aug	1,700	1,550	150	1,715	1,550	165
9	Sep	1,600	1,450	150	1,600	1,450	150
10	Oct	1,200	1,050	150	1,200	1,050	150
11	Nov	1,100	950	150	1,100	950	150
12	Dec	1,300	1,150	150	1,300	1,150	150
13	Avg. 12CP	1,392	1,242	150	1,392	1,242	150
14	Allocation Factor		89.22%	10.78%		89.22%	10.78%

\*Class B shifts 15 MW from April to August creating a higher annual peak.

36 CLASSIFICATION BETWEEN ENERGY- AND DEMAND-RELATED COSTS

TABLE IV-A  
 CLASSIFICATION OF RATE BASE<sup>1</sup>

FPC Uniform System of Accounts No.	Description	Demand Energy Customer		
		Related	Related	Related
<b>Production Plant</b>				
301-303	Intangible Plant	x	-	-
310-316	Steam Production	x	-	-
320-325	Nuclear Production	x	-	-
330-336	Hydraulic Production	x	x <sup>2</sup>	-
340-346	Other Production	x	-	-
<b>Transmission Plant</b>				
350-359	All Transmission Accounts	x	-	-
<b>Distribution Plant</b>				
360	Land & Land Rights	x	-	x
361	Structures & Improvements	x	-	x
362	Station Equipment	x	-	-
363	Storage Battery Equipment	x	-	-
364	Poles, Towers, & Fixtures	x	-	x
365	Overhead Conductors & Devices	x	-	x
366	Underground Conduit	x	-	x
367	Underground Conductors & Devices	x	-	x
368	Line Transformers	x	-	x
369	Services	-	-	x
370	Meters	-	-	x
371	Installations on Customer Premises	-	-	x
372	Leased Property on Customer Premises	-	-	x
373	Street Lighting & Signal Systems <sup>1</sup>	-	-	-
<b>General Plant</b>				
389-399	All General Plant Accounts	x	-	x
<b>Material and Supplies</b>				
151	Fuel	x	-	-
152-174	Other	x	-	x

<sup>1</sup> Direct assignment or "exclusive use" costs are assigned directly to the customer class or group which exclusively uses such facilities. The remaining costs are then classified to the respective cost components.

<sup>2</sup> In some instances, a portion of hydro rate base may be classified as energy-related.

**DUKE POWER COMPANY**

**COST OF SERVICE SURVEY**

**Calvin J. White  
Rate Research  
June 11, 1986**



### Introduction

The following survey was conducted for the purpose of gathering specific cost of service information from electric utilities. The cost of service information pertains to distribution expenses and rate base items with emphasis on the customer component.

There was a total of eighty-seven (87) companies who were able to respond with data that was included in the tabulations and summaries. For the purpose of tabulating the data, each company was assigned a code number which is included on the attached listing of participating companies.

### Objective

1. Determine the methodology of allocating distribution plant accounts to classes of business and cost components (Table 1).
2. Separate the distribution plant accounts between demand, customer and energy-related components of cost (Table 2).
3. Separate the distribution operating accounts between demand, customer and energy-related components of cost (Table 3).
4. Separate the distribution maintenance accounts between demand, customer and energy-related components of cost (Table 4).

### Results & Summary

There are four tables summarizing the results of the survey. The following is a description of these tables.

TABLE 1 - Methodology of allocating distribution plant accounts to classes of business and cost components.  
This table summarizes the number of companies that include a customer component in their determination of plant investment as well as illustrating how they allocate customer and demand investment to rate schedules.

TABLE 2 - Summary of distribution plant accounts by cost components.

This table categorizes each company's distribution investment into demand, customer and energy-related cost components. The composite percentages represent the average of all companies which responded to the survey. Each individual company can compare their responses to the composite percentages. The survey results indicate that the accounts (360,361,362) which represent land and station investment are primarily demand related. The accounts (364,365,366,367,368) which represent conductors and transformers investment are split approximately 70 percent demand and 30 percent customer. The remaining accounts (369,370,371,373) are primarily customer related.

TABLES 3 & 4 - These tables have categorized each company's distribution operating and maintenance expense into demand, customer and energy-related cost components. The composite line for these tables illustrates that, in general, distribution operating maintenance expenses are split into cost components based on related distribution plant accounts. Also, the composite line can be used as a source of comparison for the individual companies.

Calvin J. White

GULF POWER COMPANY  
 COST OF SERVICE STUDY  
 NEAR PEAK DEMAND METHOD  
 AT PRESENT RATES  
 TWELVE MONTHS ENDING DECEMBER 31, 1990  
 (THOUSANDS OF DOLLARS)

	TOTAL RETAIL	RATE RS	RATE GS	RATE GSD	RATES LP AND LPT	RATE PXT	RATE OS	RATE OS111	RATE SS.
<b>**RATE BASE**</b>									
ELECTRIC GROSS PLANT	\$ 1,275,810	\$ 696,333	\$ 52,858	\$ 275,454	\$ 162,477	\$ 68,922	\$ 15,343	\$ 803	\$ 3,619
ACCUMULATED DEPRECIATION	455,035	248,080	18,779	98,612	58,984	25,096	4,065	283	1,135
NET PLANT	820,775	448,253	34,079	176,842	103,494	43,826	11,278	520	2,484
MATERIALS AND SUPPLIES	84,749	44,593	3,103	18,711	12,182	5,526	410	50	175
OTHER WORKING CAPITAL	-1,921	-860	1	-494	-390	-184	14	-1	-7
WORK NOT BEARING INTEREST	14,951	8,182	615	3,240	1,872	777	210	10	45
PLANT HELD FOR FUTURE USE	3,926	2,188	189	808	486	215	29	2	8
UNAMORT PLANT ACQ ADJ	2,317	1,192	79	517	354	168	0	1	5
INJURIES & DAMAGES RESERVE	-1,102	-641	-62	-216	-119	-49	-13	-1	-2
TOTAL RATE BASE	\$ 923,695	\$ 502,907	\$ 38,004	\$ 199,407	\$ 117,880	\$ 50,280	\$ 11,928	\$ 582	\$ 2,708
<b>**REVENUES**</b>									
REVENUE FROM SALES	\$ 249,389	\$ 131,859	\$ 15,031	\$ 52,003	\$ 29,253	\$ 16,366	\$ 3,769	\$ 337	\$ 771
OTHER REVENUE	6,296	4,099	427	1,011	569	164	18	4	6
TOTAL REVENUE	\$ 255,685	\$ 135,958	\$ 15,458	\$ 53,014	\$ 29,822	\$ 16,530	\$ 3,787	\$ 341	\$ 777
<b>**EXPENSES**</b>									
OPERATIONS AND MAINTENANCE	\$ 112,526	\$ 63,033	\$ 5,921	\$ 22,659	\$ 13,097	\$ 6,194	\$ 1,367	\$ 72	\$ 183
DEPRECIATION EXPENSE	47,635	26,049	1,997	10,174	5,914	2,457	894	30	119
AMORT OF ITC	-2,041	-1,116	-86	-436	-253	-105	-38	-1	-5
OTHER AMORTIZATION	74	38	3	17	11	5	0	0	0
REAL & PERSONAL PROPERTY TAX	13,002	6,909	494	2,852	1,809	815	83	8	34
PAYROLL TAXES	3,414	1,985	191	670	367	153	40	2	6
OTHER TAXES	363	199	16	76	47	21	2	0	1
REVENUE RELATED TAXES	4,918	2,849	381	983	415	162	97	8	22
INCOME TAXES	15,275	6,340	1,916	3,169	1,476	1,849	334	75	118
INTEREST SYNCHRONIZATION	-442	-241	-18	-95	-56	-24	-6	0	-1
TOTAL OPERATING EXPENSES	\$ 194,724	\$ 106,044	\$ 10,816	\$ 40,068	\$ 22,827	\$ 11,526	\$ 2,774	\$ 193	\$ 477
OPERATING INCOME	\$ 60,961	\$ 29,913	\$ 4,642	\$ 12,946	\$ 6,995	\$ 5,004	\$ 1,013	\$ 147	\$ 300
RATE OF RETURN	6.60%	5.95%	12.21%	6.49%	5.93%	9.95%	8.50%	25.29%	11.07%
RELATIVE RATE OF RETURN	100	90	185	98	90	151	129	383	168
SUBSIDIES	\$ -1	\$ -5,347	\$ 3,482	\$ -349	\$ -1,201	\$ 2,751	\$ 369	\$ 178	\$ 197

GULF POWER COMPANY  
 COST OF SERVICE STUDY  
 NEAR PEAK DEMAND METHOD  
 AT PROPOSED RATES  
 TWELVE MONTHS ENDING DECEMBER 31, 1990  
 (THOUSANDS OF DOLLARS)

	TOTAL RETAIL	RATE RS	RATE GS	RATE GSD	RATES LP AND LPT	RATE PXT	RATE OS	RATE OSIII	RATE SS
<b>**RATE BASE**</b>									
TOTAL RATE BASE	\$ 923,695	\$ 502,907	\$ 38,004	\$ 199,407	\$ 117,880	\$ 50,280	\$ 11,928	\$ 582	\$ 2,708
<b>**REVENUES**</b>									
PRESENT REVENUE	\$ 255,685	\$ 135,958	\$ 15,458	\$ 53,014	\$ 29,822	\$ 16,530	\$ 3,787	\$ 341	\$ 777
PROPOSED INCREASE	26,295	17,538	0	4,757	3,735	0	186	-52	132
REVENUE AT PROPOSED RATES	\$ 281,980	\$ 153,496	\$ 15,458	\$ 57,771	\$ 33,557	\$ 16,530	\$ 3,973	\$ 288	\$ 909
<b>**EXPENSES**</b>									
EXPENSES AT PRESENT RATES	\$ 194,724	\$ 106,044	\$ 10,816	\$ 40,068	\$ 22,827	\$ 11,526	\$ 2,774	\$ 193	\$ 477
PROPOSED EXPENSE INCREASE	457	305	0	83	65	0	3	-1	2
ADDITIONAL INCOME TAXES	9,723	6,485	0	1,759	1,381	0	69	-20	49
EXPENSES AT PROPOSED RATES	\$ 204,904	\$ 112,834	\$ 10,816	\$ 41,909	\$ 24,273	\$ 11,526	\$ 2,846	\$ 173	\$ 528
PROPOSED OPERATING INCOME	\$ 77,076	\$ 40,662	\$ 4,642	\$ 15,862	\$ 9,284	\$ 5,004	\$ 1,127	\$ 115	\$ 381
RATE OF RETURN	8.34%	8.09%	12.21%	7.95%	7.88%	9.95%	9.45%	19.71%	14.06%
RELATIVE RATE OF RETURN	100	97	146	95	94	119	113	236	168
SUBSIDIES	\$ -1	\$ -2,125	\$ 2,400	\$ -1,269	\$ -901	\$ 1,319	\$ 215	\$ 108	\$ 252

**GULF POWER COMPANY**

**Derivation of Fuel Symmetry Adjustment  
 Under the Corrected REP Method  
 (Year Ending December 31, 1990)**

Line	Rate Class	Percent of Total Operating Cost(a) (1)	Gulf's Energy Allocation Factor(b) (2)	Difference (3)	Adjustment to Expense(c) (000) (4)
1	Residential	44.36%	43.84%	0.52 %	\$ 865
2	General Service	2.81%	2.78%	0.03 %	53
3	General Service - Demand	22.81%	22.79%	0.02 %	37
4	LP & LPT	17.33%	17.62%	(0.29)%	(490)
5	PXT	12.02%	12.25%	(0.23)%	(387)
6	OS	<u>0.67%</u>	<u>0.72%</u>	(0.05)%	<u>( 78)</u>
7	Total Retail	100.00%	100.00%	--	\$ --

(a)Page 2, Column 6.

(b)Industrial Intervenor's Second Request For Production of Documents, Item No. 27.

(c)Column (3) x \$168,333 (test year recoverable fuel and purchased costs removed from the cost of service).

**GULF POWER COMPANY**

**Allocation of Operating Cost by Period**  
**(Year Ending December 31, 1990)**

Line	Rate Class	Peak Period Operating Cost(a)		Base Period Operating Cost(a)		Total Operating Cost	
		Percent(b) (1)	Amount (000) (2)	Percent(b) (3)	Amount (000) (4)	Amount(c) (000) (5)	Percent (6)
1	RS/RST	47.51%	\$29,557	40.74%	\$ 54,291	\$ 83,847	44.36%
2	GS/GST	3.00	1,866	2.58	3,438	5,304	2.81
3	GSD/GSDT	22.24	13,836	21.97	29,277	43,113	22.81
4	LP/LPT	14.11	8,778	18.00	23,987	32,765	17.33
5	PX/PXT	9.53	5,929	12.60	16,791	22,720	12.02
6	OS I, II & III	<u>0.23</u>	<u>143</u>	<u>0.85</u>	<u>1,133</u>	<u>1,276</u>	<u>0.67</u>
7	Total Retail Excluding Rate SS	96.63%	\$60,109	96.74%	\$128,917	\$189,026	100.00%
8	Total Company	100.00%	\$62,212	100.00%	\$133,261	\$195,473	-- %

(a)Total Company amounts derived on Page 3.

(b)Allocation factors derived on Page 4.

(c)Column (2) + Column (4).

**GULF POWER COMPANY**

**Derivation of  
 Peak and Base Period Operating Costs  
 (Year Ending December 31, 1990)**

Line	Description	Generation (MWh) (1)	Operating Cost	
			Per Unit(a) (\$/MWh) (2)	Amount (000) (3)
<b>Peak Period (First 1,430 Hours):</b>				
1	Peaking Capacity	330,246	\$77.90	\$ 25,726
2	Base Load Capacity	<u>1,757,530(b)</u>	20.76	<u>36,486</u>
3	Total Peak Period	2,087,776(c)	29.80	62,212
4	Base Period	<u>6,419,135(d)</u>	20.76	<u>133,261</u>
5	Total Cost	8,506,911	\$22.98	\$195,473

(a)Gulf's response to Staff Interrogatory No. 1, Pages 5 and 6.

(b)1,229 MW x 1,430 hours (where 1,229 MW is the y axis intercept of Gulf's system load duration curve at 1,430 hours use).

(c)Cumulative hourly loads through the highest 1,430 hours.

(d)Total Energy less Peak Period Energy.

## GULF POWER COMPANY

### Derivation of Peak and Base Period Energy Use (Year Ending December 31, 1990)

Line	Rate Class	(Peak Period Energy Use)		Annual Energy Use (b) (MWh) (3)	(Base Period Energy Use)	
		Amount (a) (MWh) (1)	Percent (2)		Amount (c) (MWh) (4)	Percent (5)
1	Residential	991,902	47.51%	3,606,997	2,615,095	40.74%
2	General Service	62,680	3.00%	228,563	165,883	2.58%
3	General Service - Demand	464,355	22.24%	1,874,959	1,410,604	21.97%
4	LP & LPT	294,687	14.11%	1,450,046	1,155,359	18.00%
5	PXT	198,924	9.53%	1,007,513	808,589	12.60%
6	OS	<u>4,854</u>	<u>0.23%</u>	<u>59,357</u>	<u>54,503</u>	0.85%
7	Total Retail Excluding Rate SS	2,017,403	96.63%	8,227,435	6,210,033	96.74%
8	Total Company	2,087,776	100.00%	8,506,911	6,419,135	100.00%

(a) Cumulative loads over the 1st 1,430 hours.

(b) Industrial Intervenor's Second Request of Documents, Item No. 27.

(c) Column (3) - Column (1).



GULF POWER COMPANY  
 COST OF SERVICE STUDY  
 CORRECTED REFINED EQUIVALENT PEAKER  
 AT PRESENT RATES  
 TWELVE MONTHS ENDING DECEMBER 31, 1990  
 (THOUSANDS OF DOLLARS)

	TOTAL RETAIL	RATE RS	RATE GS	RATE GSD	RATES LP AND LPT	RATE PXT	RATE OS	RATE OSIII	RATE SS-
<b>**RATE BASE**</b>									
ELECTRIC GROSS PLANT	\$ 1,275,810	\$ 692,505	\$ 52,339	\$ 276,638	\$ 161,349	\$ 73,167	\$ 15,636	\$ 820	\$ 3,355
ACCUMULATED DEPRECIATION	455,035	246,606	18,579	99,068	58,549	26,731	4,177	290	1,034
NET PLANT	820,775	445,899	33,760	177,570	102,800	46,436	11,458	530	2,321
MATERIALS AND SUPPLIES	84,749	44,201	3,049	18,832	12,067	5,961	440	52	148
OTHER WORKING CAPITAL	-1,921	-840	3	-500	-384	-205	12	-1	-6
WORK NOT BEARING INTEREST	14,951	8,139	609	3,254	1,860	824	213	10	42
PLANT HELD FOR FUTURE USE	3,926	2,174	187	813	482	231	30	2	7
UNAMORT PLANT ACQ ADJ	2,317	1,180	78	520	351	182	1	1	4
INJURIES & DAMAGES RESERVE	-1,102	-638	-61	-217	-118	-53	-13	-1	-2
TOTAL RATE BASE	\$ 923,695	\$ 500,115	\$ 37,625	\$ 200,271	\$ 117,057	\$ 53,376	\$ 12,141	\$ 594	\$ 2,515
<b>**REVENUES**</b>									
REVENUE FROM SALES	\$ 249,389	\$ 131,859	\$ 15,031	\$ 52,003	\$ 29,253	\$ 16,366	\$ 3,769	\$ 337	\$ 771
OTHER REVENUE	6,296	4,111	428	1,012	560	160	17	4	6
TOTAL REVENUE	\$ 255,685	\$ 135,970	\$ 15,459	\$ 53,015	\$ 29,813	\$ 16,526	\$ 3,786	\$ 341	\$ 777
<b>**EXPENSES**</b>									
OPERATIONS AND MAINTENANCE	\$ 112,526	\$ 63,796	\$ 5,961	\$ 22,728	\$ 12,577	\$ 5,918	\$ 1,307	\$ 62	\$ 176
DEPRECIATION EXPENSE	47,635	25,905	1,978	10,218	5,872	2,616	905	31	110
AMORT OF ITC	-2,041	-1,110	-85	-438	-252	-112	-39	-1	-5
OTHER AMORTIZATION	74	38	2	17	11	6	0	0	0
REAL & PERSONAL PROPERTY TAX	13,002	6,856	487	2,868	1,793	873	87	8	30
PAYROLL TAXES	3,414	1,975	190	673	365	163	40	2	6
OTHER TAXES	363	198	16	76	47	22	2	0	1
REVENUE RELATED TAXES	4,918	2,849	381	983	415	162	97	8	22
INCOME TAXES	15,275	6,173	1,917	3,108	1,702	1,822	347	79	128
INTEREST SYNCHRONIZATION	-442	-239	-18	-96	-56	-26	-6	0	-1
TOTAL OPERATING EXPENSES	\$ 194,724	\$ 106,441	\$ 10,830	\$ 40,137	\$ 22,475	\$ 11,445	\$ 2,742	\$ 188	\$ 467
OPERATING INCOME	\$ 60,961	\$ 29,528	\$ 4,629	\$ 12,878	\$ 7,338	\$ 5,080	\$ 1,044	\$ 153	\$ 310
RATE OF RETURN	6.60%	5.90%	12.30%	6.43%	6.27%	9.52%	8.60%	25.76%	12.31%
RELATIVE RATE OF RETURN	100	89	186	97	95	144	130	390	187
SUBSIDIES	\$ -1	\$ -5,675	\$ 3,501	\$ -553	\$ -632	\$ 2,541	\$ 395	\$ 186	\$ 235

GULF POWER COMPANY  
 COST OF SERVICE STUDY  
 CORRECTED REFINED EQUIVALENT PEAKER  
 AT PROPOSED RATES  
 TWELVE MONTHS ENDING DECEMBER 31, 1990  
 (THOUSANDS OF DOLLARS)  
 =====

	TOTAL RETAIL	RATE RS	RATE GS	RATE GSD	RATES LP AND LPT	RATE PXT	RATE OS	RATE OSIII	RATE SS'
	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>**RATE BASE**</b>									
TOTAL RATE BASE	\$ 923,695	\$ 500,115	\$ 37,625	\$ 200,271	\$ 117,057	\$ 53,376	\$ 12,141	\$ 594	\$ 2,515
<b>**REVENUES**</b>									
PRESENT REVENUE	\$ 255,685	\$ 135,970	\$ 15,459	\$ 53,015	\$ 29,813	\$ 16,526	\$ 3,786	\$ 341	\$ 777
PROPOSED INCREASE	26,295	17,538	0	4,757	3,735	0	186	-53	132
REVENUE AT PROPOSED RATES	\$ 281,980	\$ 153,508	\$ 15,459	\$ 57,772	\$ 33,548	\$ 16,526	\$ 3,972	\$ 288	\$ 909
<b>**EXPENSES**</b>									
EXPENSES AT PRESENT RATES	\$ 194,724	\$ 106,441	\$ 10,830	\$ 40,137	\$ 22,475	\$ 11,445	\$ 2,742	\$ 188	\$ 467
PROPOSED EXPENSE INCREASE	457	305	0	83	65	0	3	-1	2
ADDITIONAL INCOME TAXES	9,723	6,485	0	1,759	1,381	0	69	-20	49
EXPENSES AT PROPOSED RATES	\$ 204,904	\$ 113,231	\$ 10,830	\$ 41,978	\$ 23,921	\$ 11,445	\$ 2,814	\$ 167	\$ 518
PROPOSED OPERATING INCOME	\$ 77,076	\$ 40,277	\$ 4,629	\$ 15,794	\$ 9,627	\$ 5,080	\$ 1,158	\$ 121	\$ 391
RATE OF RETURN	8.34%	8.05%	12.30%	7.89%	8.22%	9.52%	9.53%	20.29%	15.53%
RELATIVE RATE OF RETURN	100	97	147	95	99	114	114	243	186
SUBSIDIES	\$ -1	\$ -2,374	\$ 2,430	\$ -1,497	\$ -229	\$ 1,022	\$ 236	\$ 116	\$ 295

**GULF POWER COMPANY**

**Gulf's Proposed Distribution of Base Revenue Increase  
 Relative to Present Base Revenue  
 Without Migration  
 (Year Ending December 31, 1990)**

Line	Rate Class	Present Base Revenue (000) (1)	Proposed Increase		Index (4)
			Amount (000) (2)	Percent (3)	
1	Rate RS/RST	\$131,559	\$17,451	13.3%	126
2	Rate GS/GST	14,985	( 47)	( 0.3)	( 3)
3	Rate GSD/GSDT	51,886	4,745	9.1	87
4	Rates LP/LPT	29,166	3,724	12.8	122
5	Rate PXT	16,366	--	--	--
6	Rate OS-I & II	3,757	186	5.0	47
7	Rate OS-III	336	( 53)	(15.8)	(150)
8	Rate SS	<u>771</u>	<u>132</u>	17.1	163
9	<b>Total Retail</b>	<b>\$248,826</b>	<b>\$26,138</b>	<b>10.5%</b>	<b>100</b>

**GULF POWER COMPANY**

**Summary of Cost-of-Service Study Results  
 at Present and Proposed Rates  
 (Without Migration)  
 Production & Transmission: Near Peak Method  
 No Minimum Distribution  
 (Year Ending December 31, 1990)**

Line	Rate Class	Rate of Return		Relative Rate of Return		Interclass Subsidy	
		Present Rates (1)	Recommended Rates (2)	Present Rates (3)	Recommended Rates (4)	Present Rates (000) (5)	Recommended Rates (000) (6)
1	Rate RS/RST	5.95%	8.09%	90	97	\$(5,347)	\$(2,121)
2	Rate GS/GST	12.21	12.21	185	146	3,483	2,399
3	Rate GSD/GSDT	6.49	7.95	98	95	( 350)	(1,270)
4	Rates LP/LPT	5.93	7.88	90	94	(1,281)	( 901)
5	Rate PXT	9.95	9.95	151	119	2,751	1,317
6	Rate OS-I & II	8.50	9.45	129	113	369	216
7	Rate OS-III	25.29	19.67	383	236	177	108
8	Rate SS	11.07	14.07	168	169	198	253
9	Total Retail	6.60%	8.34%	100	100	\$ --	\$ --

**GULF POWER COMPANY**

**Industrial Intervenors' Recommended  
 Distribution of Gulf's Proposed  
 Base Revenue Increase  
 Relative to Present Base Revenue  
 (Without Migration)  
(Year Ending December 31, 1990)**

Line	Rate Class	Present Base Revenue (000) (1)	Industrial Intervenors' Recommendation		Index (4)
			Amount (000) (2)	Percent (3)	
1	Rate RS/RST	\$131,559	\$ 16,900	12.8 %	122
2	Rate GS/GST	14,985	( 670)	( 4.5)	( 43)
3	Rate GSD/GSDT	51,886	5,840	11.3	107
4	Rates LP/LPT	29,166	3,985	13.7	130
5	Rate PXT	16,366	--	--	--
6	Rate OS-I & II	3,757	155	4.1	39
7	Rate OS-III	336	( 72)	(21.4)	(204)
8	Rate SS	<u>771</u>	<u>--</u>	--	--
9	<b>Total Retail</b>	<b>\$248,826</b>	<b>\$ 26,138</b>	<b>10.5 %</b>	<b>100</b>

## GULF POWER COMPANY

**Comparison of Cost-of-Service Study Results  
 at Present and Recommended Rates  
 (Without Migration)  
 Production & Transmission: Near Peak Method  
 No Minimum Distribution  
 (Year Ending December 31, 1990)**

Line	Rate Class	Rate of Return		Relative Rate of Return		Interclass Subsidy	
		Present Rates	Recommended Rates	Present Rates	Recommended Rates	Present Rates (000)	Recommended Rates (000)
		(1)	(2)	(3)	(4)	(5)	(6)
1	Rate RS/RST	5.95%	8.02%	90	96	\$(5,347)	\$(2,673)
2	Rate GS/GST	12.21	11.20	185	134	3,483	1,773
3	Rate GSD/GSDT	6.49	8.29	98	99	( 350)	( 172)
4	Rates LP/LPT	5.93	8.01	90	96	(1,281)	( 638)
5	Rate PXT	9.95	9.95	151	119	2,751	1,318
6	Rate OS-I & II	8.50	9.29	129	111	369	184
7	Rate OS-III	25.29	17.66	383	212	177	89
8	Rate SS	11.07	11.08	168	133	<u>198</u>	<u>121</u>
9	Total Retail	6.60%	8.34%	100	100	\$ --	\$ --