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July 2, 1998

Ms. Blanca S. Bayo, Director Division of Records and Reporting Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee FL 32399-0870

980000-PUL

Dear Ms. Bayo:

Enclosed is Gulf Power Company's 1999 Cost of Service Load Research Plan which is filed pursuant to Order No. 13026.

Sincerely,

usan D. Cranma

Susan D. Cranmer Assistant Secretary and Assistant Treasurer

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# GULF POWER COMPANY

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# Cost of Service Load Research Plan

1999

July 1998

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### INTRODUCTION

The purpose of this load research plan is to ensure compliance with the Cost of Service Load Research Rule, Docket No. 820491-EU, Order No. 13026, issued 02-23-84 by the Florida Public Service Commission.

This rule requires that all subject utilities shall provide for load research sampling of all rate classes that account for more than one percent of their annual retail sales and that the sampling plan shall be designed to provide estimates of the summer and winter peak demand by class and the averages of the twelve monthly coincident peaks for each class within plus or minus ten percent relative accuracy at the ninety percent confidence level. It fu ...er states that each subject utility shall submit a currently revised sampling plan to the Commission no less than every two years. Gulf Power Company submitted its initial sampling plan in May, 1984 and the plan was approved by the Commission in August, 1984.

Provided in Table 1 are the applicable rate classes subject to this rule for Gulf Power Company and their 1997 energy relationship to the total retail energy sales. As shown on this table, rate classes RS, GS, GSD, LP, LPT, RTP and PXT are subject to the requirements of this rule.

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### TABLE 1

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		% of
Rate	MWh	Total Energy
RS/RST	4,129,667	46.53%
GS/GST	234,014	2.64%
GSD/GSDT	2,015,830	22.71%
LP	455,241	5.13%
LPT	932,747	10.51%
PXT	187,580	2 11%
RTP	814,459	9.18%
OS-I	17,242	0.19%
OS-II	55,062	0.62%
OS-III	20,440	0.23%
OS-IV	3,069	0.03%
SBS	9,569	0.11%
TOTAL	8,874,920	100.00%

(1) Excludes unbilled, Interdepartmental, company use and losses.

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### PREV.OUS SAMPLE DESIGN PLAN

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The 1997 Load Research Study used the combined ratio estimator methodology for sample size estimates in all rate classes. Sample points were allocated to the various strata using the Neyman allocation procedure. Provided in Table 2 is a summary of the 1997 sample size for each of the applicable rate classes and the strata allocation variable with the strata limits.

The RS rate class, which represents approximately 47 percent of the total Company's annual kWh retail sales, was prestratified into six strata based on housing type and winter peak month usage. The break points were 1000 kWh for multifamily and 1150 and 1750 kWh for single family detached.

The GS rate class sample design was prestratified by kWh into four strata based on winter peak month usage with break points at 400, 1100, and 1700 kWh. The GS class accounts for only 2.6 percent of the Company's annual kWh retail sales.

The GSD rate class, accounting for 23 percent of the Company's annual kWh retail sales, was prestratified on the winter peak month kW demand with strata break points of 20.0 kW, 50.0 kW and 130.0 kW.

The LP rate class was prestratified into two groups. The first stratum contained a random sampling of 30 customers out of approximately 110 customers whose billing demand during February

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was lower than 800 kWh. The second stratum was a census of all customers whose billing demand was 800 kW or higher. The LP rate class accounts for 5 percent of the Company's annual kWh retail sales.

The LPT rate class was prestratified into two groups. The first stratum contained a random sampling of 20 customers out of approximately 60 customers whose billing demand during February was lower than 1,000 kW. The second stratum was a census of all customers whose billing demand was 1,000 kW or higher. The LPT rate class accounts for 10.5 percent of the Company's annual kWh retail sales.

The PXT rate class customers, which account for 2 percent of the Company's annual kWh retail sales, and the RTP rate class customers which are 9.2 percent of annual kWh retail sales, were 100 percent metered, thus requiring no sample design.

### PREVIOUS STUDY ACCURACY

The relative accuracy of the 1997 load research data based on the sample design described above is provided in Table 3 and the results obtained in this study were used in the design of the 1999 Load Research Study. The 1997 annual system peak occurred on Thursday, July 3, at 5:00 p.m. while the winter peak occurred on Friday, January 17, at 8:00 a.m. All rate classes achieved better than ten percent accuracy at the ninety percent confidence interval for the summer and winter peak period as well as for the averages of the twelve monthly coincident peaks.

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# TABLE 2

# **GULF POWER COMPANY**

# 1997 Cost of Service Load Research Rule Sample Size

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Rate		Strata Allocation	Sample Size	
RS	1)	MF GT 1000 kWh	22	
	2)	MF 0-1000 kWh	24	
	3)	мн	23	
	4)	SFD 1151-1750 kWh	53	
	5)	SFD GE 1751 kWh	52	
	6)	SFD 0-1150 kWh	51	
		TOTAL	225	
GS		0-400 kWh	95	
	0.000	401-1100 kWh	92	
	3)		92	
	4)	있다. 안 관계 등 이 가지자 주 문제가 지하는	101	
		TOTAL	380	
GSD	1	0-20.0 kW	22	
		20.1-50.0 kW	46	
		50.1-130.0 kW	43	
	4)		49	
		TOTAL	160	
LP		Less than 800 kW	30	
	2)	8000 kW and greater	29	(census)
		TOTAL	59	
LPT		Less than 1000 kW	20	57 - 26
	2)	1000 kW and greater	24	(census)
			44	
PXT	1)	All customers	2	(census)
RTP	1)	All customers	9	(census)
SBS	1)	All customers TOTAL	2 881	(census)

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# Table 3

## GULF POWER COMPANY Load Research Data January, 1997 to December, 1997

RATE	SCHEDULE RS	RST	RATE SCHEDULE GS/GST					
1997	Estimated CPKW	Relative Accuracy	1997	Estimated CPKW	Relative Accuracy			
Winter Pea	k 1,036,346	8.62%	Winter Peak	51,978	9.36%			
Summer Pea	k 976,967	5.14%	Summer Peak	58,782	6.00%			
12 Month A	vg. 831,442	3.93%	12 Month Avg.	46,623	4.29%			

RATE SC	HEDULE GSD	/GSDT	RATE	E SCHEDULE	LP
1997	CPKW	Relative <u>Accuracy</u>	<u>1997</u>	CPKW	Relative Accuracy
Winter Peak	255,931	8.84%	Winter Peak	60,081	8.11%
Summer Peak	366,065	4.58%	Summer Peak	74,971	3.59%
12 Month Avg	. 318,280	3.73%	12 Month Avg.	68,556	2.80%

	TE SCHEDULE Estimated CPKW	LPT Relative <u>Accuracy</u>	1000 ( 100	SCHEDULE stimated CPKW	PXT Relative Accuracy
Winter Peak	102,442	1.09%	Winter Peak	13,123	0.00%
Summer Peak	155,504	0.86%	Summer Peak	31,089	0.00%
12 Month Ave	g. 116,740	0.46%	12 Month Avg.	21,992	0.00%

### RATE SCHEDULE RTP

	Estimated	Relative
1997	CPKW	Accuracy
Winter Peak	97,198	0.00%
Summer Peak	95,529	0.00%
12 Month Avg.	109,790	0.00%

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### PROPOSED SAMPLE DESIGN PLAN

This sample design plan uses the data collected from the 1997 Load Research Study as required by the Cost of Service Load Research Rule, which states that ". . . any new or revised plan shall be developed using data from the utility's most current load research to determine the required sampling plan to achieve the precision required . . ".

The combined ratio estimator methodology was used for the sample size estimates for this 1999 proposed sample plan. The formulas for this plan using this method are provided in Table 4. The definitions for the variables for these formulas are provided in Table 5. Stratified random sampling was used within each rate class, except those rate classes which were census metered, to achieve better accuracy with fewer sample points. The actual calculations for each rate class, which provide sample size determinations based on the Neyman allocation methods, are provided in the description of each rate class within this study plan.

In all rate class studies where census metering is not applicable, a new sample will be drawn from the existing population and the recorders relocated to those premises.

A summary of strata allocation and sample size for all rate classes is shown in Table 9.

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### TABLE 4 GULF POWER COMPANY Formulas for Sample Plan

I. Sample Size Estimates Using Combined Ratio Estimator:



$$F_h = S_{yh}^2 + R^2 S_{xh}^2 - 2R_{yh} \cdot S_{yh} \cdot S_{xh}$$

 $TY = R \cdot T_{*}$  L  $\Sigma \quad W_{h} \quad \overline{Y_{h}}$   $R = \underline{h} = 1$ 

$$L
  $\Sigma \qquad W_h \qquad \overline{\pi_h}
 h = 1$$$

II. Neyman Allocation of Sample Points to Strata:

$$n_{n} = \frac{W_{n} S_{\gamma n}}{L} * n$$

$$\sum_{\substack{k = 1}} W_{n} S_{\gamma n}$$

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### TABLE 5

### GULF POWER COMPANY Definitions for Formulas

- n = Sample Size Estimate
- n<sub>h</sub> = Stratum Sample Size
- W<sub>h</sub> = Stratum Weight
- D = Percent Relative Accuracy (0.1)
- Ty = Estimated Population CPKW
- N = Population Number of Customers
- R = Ratio Estimator
- $T_x$  = Population kWh
- Y<sub>h</sub> = Stratum Average CPKW
- Syh = Stratum Standard Deviation of CPKW
- $\overline{x}_h$  = Stratum Average Monthly kWh
- S<sub>xh</sub> = Stratum Standard Deviation of Monthly kWh
- rh = Stratum Correlation Coefficient between CPKW & Monthly kWh

### Subscripts

- h = Stratum number
- y = CPKW variable

k

x = Monthly kWh variable

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### Residential Rate Class

The 1999 RS rate class study will use a similar design to that used in 1997. The 1997 study used stratification that was necessary in order to meet the requirements of the "Demand-Side Management Monitoring and Evaluation Plan" of Gulf Power Company, dated April 26, 1996. This plan called for the Advanced Energy Management (AEM) program's control group premise metering to be obtained from the Rate Class Load Research Study. A two-way sample design was used that incorporated a primary stratification variable of housing type and a secondary stratification variable of kWh for the single-family detached and multifamily housing types only. The only changes to the 1999 study are the breakpoints. The kWh breakpoint for multifamily will be 900 kWh and the two breakpoints for single family detached will be 1,301 kWh and 2,000 kWh.

The Neyman allocation of sample to strata for the 1999 study is as follows:

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	PRIMARY	1999 SECONDARY	WIN	TER		
	STRATA	STRATA	WSTD	MIN	1997	1999
STR	DESCRIPTION	DESCRIPTION	CPKW	n	INSTALLED	INSTALLED
1	Multifamily	gt 900 kWh	0.22	9	22	20
2	Multifamily	0-900 Kwh	0.23	9	24	21
3	Mobile Home		0.31	12	23	28
4	Single Family Detached	1301 to 2000 kWh	0,52	22	53	47
5	Single Family Detached	ge 2001 kWh	0.58	24	52	53
6	Single Family Detached	0-1300 kWh	0.62	20	51	56
			2.48	96	225	225

Additional date and study design calculations for this rate class are provided in Table 6.

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### TABLE 6

#### RATES RS AND RET STRATIFIED ON 1997 PREMISE TYPE AND JANUARY EMM SIX STRATA

#### 01/1997 PEAK

FTRAFUN	WALGHT		AVERAGE	MOT AND	PTD Dav	MOT STD	AVERAGE	MOT AVG	#TO DEV	MUT STD	1.83	CY188.
MF-07 900	0.094318	23	4.74	0.44	3.34	0.23	1487.45	144.23	613.99	\$9.13	0.25	0.154239
W-L8 900	0.1333218	33	1.36	0.17	1.73	0.33	440.45	61.34	333.24	31.07	0.18	0.645297
HUBILS .	0.094144	33	3.83	0.39	3.37	0.31	1042.15	\$8.11	\$33.27	87.84	0.13	0.917517
#F-1301+3000	0.149334	34	4.77	0.01	3.03	0.53	1651.61	279.51	303.44	34.43	0.33	001847
SF-CH2001	0.149819	34	8.50	1.37	3.90	0.54	3858.15	439.30	710.44	196.44	0.50	0.534118
#F-L#1300	0.357273	64	1.70	8.41	1.79	0.63	693.30	247.70	354.45	127.57	0.55	0.490265
						*******					*******	
TOTAL				3.60		3.48		1258.0036	434		3.14	
-	0.00386											
POP CURT.	290144		POP. EHE	BOT 1 344	114781							
POP. CPEN	1042135		POP. IM/	C 3.55								

RETINATES FOR 90% C.I., 10% RELATIVE ACCURACY MEAN FER UNIT EASTLE SETIMATE = 114,55 RATIO RETEOD EASTLE SIZE RETINATE = \$5,75

#### 07/1997 PEAK

NP-LE         900         0.133214         20         2.03         0.27         1.54         0.21         947.50         124.32         430.05         97.39         0.17         0.5983           MCNILE         0.094146         21         3.25         0.31         3.06         0.15         1265.53         118.30         433.27         95.43         0.15         0.6453           EF         1.501*2000         0.149236         54         4.26         0.72         1.61         0.27         157.56         334.74         410.97         103.40         0.34         0.4678           EF         1.501*2000         0.149236         54         4.26         0.72         1.61         0.37         157.56         334.74         410.97         103.40         0.24         0.4678           EF         1.51         3.35         3.27         3.21         5.35         3.237.56         33.5.76         1134.51         148.97         0.35         0.7683           EF         1.51         0.34         1.35.76         485.76         604.61         214.73         6.35         0.7683				1	*****C2530	DATA			*******	DATA	*********	69	
NCP-LE         900         0.133214         20         2.03         0.27         1.54         0.21         947.50         124.33         430.05         97.39         0.17         0.5983           NCSRIM         0.094144         21         3.25         0.31         3.04         0.15         1265.53         118.30         433.37         59.43         0.15         0.6451           NF-1501*2000         0.149236         54         4.26         0.72         1.61         0.37         157.54         334.74         410.97         103.40         0.34         0.4678           NF-0R2001         0.149815         35         5.03         0.75         3.21         5.35         3237.54         334.74         410.97         103.40         0.34         0.34         0.4678           NF-0R201         0.149815         35         5.03         0.75         3.21         5.35         3237.54         334.74         410.97         0.34         0.34         0.7463           NF-0R201         0.349815         35         0.277         1.31         3.57         0.36         1357.54         345.76         604.61         214.73         6.35         0.7683           NF-0R20100         0.357273 <t< th=""><th>STRATUR.</th><th>WELGHT</th><th>8.8.</th><th>AVERAGE</th><th>MUT AVO</th><th>STD DET</th><th>NOT STD</th><th>AVERAGE</th><th>WOT AVO</th><th>STD DEV</th><th>MUT STD</th><th>1.83</th><th>CORD .</th></t<>	STRATUR.	WELGHT	8.8.	AVERAGE	MUT AVO	STD DET	NOT STD	AVERAGE	WOT AVO	STD DEV	MUT STD	1.83	CORD .
NCNILM 0.094146 31 3.25 0.31 3.06 0.19 1354.53 118.36 433.27 59.43 0.15 0.5453 HF-1301-2000 0.149234 54 4.36 0.73 1.41 0.27 1577.54 334.74 410.97 103.40 0.34 0.4478 HF-CH2001 0.149419 35 5.03 0.75 3.21 0.33 1227.54 333.79 1134.51 140.97 0.35 0.7493 HF-CH21300 0.357273 69 3.27 1.17 1.57 0.36 1359.43 485.74 604.61 214.73 0.35 0.7493	MF-GT \$00	0.094310	33	3.04	0.29	2.05	6.20	1415.33	134.13	\$48.38	54.74	0.18	0.433437
87-1301*2000 0.169236 54 4.26 0.72 1.41 0.27 1977.54 334.74 410.97 103.40 0.34 0.4478 87-082001 0.149819 33 5.03 0.75 3.21 5.33 2227.54 333.79 1134.51 100.97 0.25 0.7699 87-181300 0.337273 65 3.27 1.17 1.57 0.56 1359.63 485.76 606.61 216.73 0.55 0.7863	MP-LA 900	0.1333316	30	5.03	0.27	1.54	0.31	947.50	134.33	430.05	\$7.25	0.17	0.598341
#F-C#2001 0.149819 33 5.03 0.75 3.21 0.33 2227.54 333.79 1134.51 160.97 0.25 0.7699 #F-L#1300 0.357273 65 3.27 1.17 1.57 0.56 1359.63 465.76 606.61 216.73 0.15 0.7863	MOSTLE	0.094146	31	3.25	0.31	3.04	0.15	1356.52	118.30	633.27	35.43	0.15	0.645249
EF-LE1300 0.357273 45 3.37 1.17 1.57 0.54 1359.43 445.74 404.41 314.73 0.15 0.7443	##-1301*2000	0.149336	34	4.36	0.73	1.41	0.37	1\$77.94	334.74	\$10.97	103.40	8.34	0.447881
an and the state and the state state states and the states and the states and the states and states	#F-GE3001	0.149819	33	5.03	0.75	3.31	8.33	3237.94	333.79	1134.91	149.97	0.35	0.769989
	#F-1#1300	0.357373	63	3.27	1.17	1.57	0.34	1339.63	485.76	606.61	318.73	0.15	0.708332
TOTAL 3.51 1.76 1534.9356805 1.35	TOTAL				3.51		1.76		1534.9330	#05		1.95	

RATIO 8_BAT + 0.00239		
POP. 8 CUPT. 1395498	POP. BRENDT	1 448668885
POP. CPER ( 1027023	POP. BH/C	3.44

ВРТІМАТИВ РОВ 90% С.І., 10% ВИЛАТУЧ АССОЛАСТ НИЛА РЕВ ОКІТ ВАЛРІЯ БІТІВ ВИТІМАТИ = 44.03 ВАТІО МИТИКО БАМРІЯ БІТІВ ВИТІМАТИ = 41.09

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### GENERAL SERVICE (NON-DEMAND) RATE CLASS

The 1997 study contained a total of 380 sample points stratified on winter peak month energy with strata break points at 400, 1,100, and 1,700 kWh. The resulting accuracy did meet the target accuracy of 10 percent at the 90 percent confidence level during both winter and summer peaks. Since the target accuracy was met, the basic sample design will be kept for 1999 with minor changes in the breakpoints. The 1999 GS rate class is prestratified into four strata with breakpoints at 600, 1,400, and 2,600 kWh of the average of January and February energy.

Shown below is the Neyman allocation of sample to strata for the 1999 study.

	WIN		
	WSTD	MIN	INSTALLED
STR	CPKW	n	n
1	0.57	53	77
1 2 3 4	0.70	65	94
3	0.70	65	94
4	0.86	80	115
	2.83	263	380

Additional statistical data and study design calculations for this rate class are provided in Table 7.

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### TABLE 7

#### RATES GS AND GST CHE-WAY STRATIFICATION ON AVERAGE OF FEB AND JAN KMM

### 01/1997 PEAK

			]	****CPEN	DATA		1		DATA			
STRATUM NEIGH	-		AVERAGE	NOT AVG	STO DEV	MOT \$10	AVERADE	OVA TOM	PTD DEV	MOT STO	(*)	CORR.
0- 600 0.53	8771	137	0.56	0.20	1.09	0.97	341.70	\$37.60	226.90	119.90	0.47	0.586954
601-1400 0.34	9833	104	2.64	0.71	2.58	0.70	1843.71	381.36	383.35	76.16	0.68	0.346013
1401-36000.15	8757	97	5.78	0.93	4.39	0.70	3057.77	326.69	480.81	73.16	0.72	0.015061
3601- 09 0.04	2439	25	12.55	0.53	30.37	0.84	4612.48	196.67	6611.33	381.90	0.33	0.972941
										9		
TOTAL				3.46		2.83		\$33.51876	661		3.08	
				2202								

RATIO B\_HAT + 0.00264 POP. # CUBT.: 25437 POP. RMENOT : 26384599 POP. CPEM : 51434 POP. RM/CUBT.: 3.13

ESTIMATES FOR 50% C.I., 10% RELATIVE ACCURACY MEAN FER CHIT SAMPLE SIZE ESTIMATE = 358.45 RATIO METROD SAMPLE SIZE ESTIMATE = 263.14

#### 07/1997 PEAK

			1	*****C2834	DATA	1	1	***************************************	DATA			
STRATUM	WELGHT		AVERAGE	OVA TOM	PTD DEV	NOT STD	AVERAGE	DVA TOM	STD DEV	MOT #TD	(*)	CORR.
0- 600	0.538771	125	1.01	0.53	1.81	0.96	476.76	252.10	759.30	401.44	0.53	0.853157
601-1400	0.369833	105	3.71	3.00	2.46	0.66	1403.40	378.68	623.38	168.21	0.49	0.668984
1401-2600	0.158757	92	5.28	0.84	3.60	0.57	2259.43	358.70	\$28.71	147.44	0.43	0.670361
2601- UP	0.043639	1.0	6.78	0.39	4.45	0.19	2776.17	118.37	P43.43	41.94	0.15	0.608378
						******		*******				
TOTAL				3.64		3.34		1107.8538	268		1.59	

RATIO R\_HAT = 0.00240 POP. 6 CUST.: 25327 POP. RMERGT : 26501743 POP. CHON : 63722 POP. RM/COST.: 3.52

ESTIMATES FOR 50% C.I., 10% RELATIVE ACCURACY REAM FER OWIT SAMPLE SIZE ESTIMATE = 314.77 RATIO METHOD EAMFLE SIZE ESTIMATE = 108.64

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### GENERAL SERVICE - DEMAND RATE CLASS

Since the 1997 sample design provided very accurate load research results, no change is being proposed for the 1999 sample design. The stratification variable will be February kW billing demand with break points at 20 kW, 50 kW and 130 kW. The total number of sample points is proposed to be 160 sample points, which is the same sample size as the 1997 study.

The Neyman allocation of sample to strata for the new study is as follows:

	WINT	PER	
	WSTD	MIN	INSTALLED
STR	CPKW	n	n
1	1.47	12	22
2 3	3.65	30	46
3	4.40	36	46
4	3.49	_29	46
	13.01	107	160

In order to increase the installed points in Stratum 1 to 22, points were reassigned from the other strata.

Additional statistical data and study design calculations for this rate class are provided in Table 8.

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### Table 8

#### RATES GED STRATIFIED ON February 1995 FM

#### 01/1997 PEAK

		1	****CPER	DATA		1		DATA		Denne and	
STRATUR MELGHT		AVERAGE	MOT AVG	SLD DEA	NOT STD	AVERAGE	DVA TOM	STD DEV	MOT STD	(7)	CORA.
0 - 20 0.331599	20	4.83	1.40	4.44	1.47	3497.75	1159.85	1753.55	541.48	1.36	0.451137
20.1- 50 0.436304	44	12.88	5.62	8.37	3.65	7873.45	3434.01	6490.37	3831.13	4.13	0.541447
50.1-130 0.176338	40	33.11	5.84	24.98	4.40	18707.35	1298.82	11375.65	2005.94	3.87	0.535994
130.1- UP0.055839	4.8	114.01	6.37	62.43	3.49	61574.37	3439.48	48792.88	3613.00	3.42	0.544338
			*******				*******				
TOTAL			19.43		13.03		11333.150	3 5 7		13.17	

RATIO B\_HAT = 0.00171 POP. 6 CUST.: 12507 POP. BHERGY : 153259109 POP. CPEN : 1263717 POP. EM/CUST.: 21.01

REFINATES FOR 50% C.I., 10% RELATIVE ACCURACY MEAN PER UNIT SAMPLE SIZE REFINATE = 131,55 RATIO METHIOD RAMPLE SIZE REFINATE = 104.35

10 III.

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#### 07/1997 PEAK

		1	****CPER	DATA	1	1	***************************************	DATS		1	
STRATUN WEIGHT		AVERAGE	MOT AND	SED DEA	MOT 810	AVERAGE	DVA TOM	STD DEV	MOT STD	(7)	CORR.
0 - 20 0.331599	1.0	10.73	3.34	5.33	1.76	5045.17	1686.24	3304.63	731.05	0.84	0.885321
30.1- 50 0.436304	44	19.76	8.63	13.36	3.78	10308.41	4496.57	8301.57	3577.56	3.39	0.874734
50.1-130 0.176338	43	48.19	8.50	29.51	5.20	25085.05	4433.45	16263.94	2867.95	3.01	0.841115
130.1- 090.055859	48	145.95	8.10	104.25	5.83	\$1760.94	4547.08	60181.69	3341.69	3.69	0.906489
					*******		*******				
TOTAL			38.78		18.57		15173.338	53		9.63	

AATIO 8\_BAT = 0.00190 PCP. 8 CUPT.: 13854 POP. EMERGY : 204117176 POP. CPEN : 1387136 POP. EM/CUET.: 30.05

RETINATES FOR 904 C.I., 104 RELATIVE ACCURACY MEAN FER UNIT SAMPLE SIZE RETINATE = 113,73 RATIO MATHOD SAMPLE SIZE RETINATE = 28.97

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### LARGE POWER RATE CLASS

The 1997 study design provided a very accurate estimate of demand for this class. The 1999 sample design will retain the 1997 sample design which is two strata with census metering of all LP rate customers whose billing demand during February was 800 kW or higher and a random sampling of 30 customers of the remaining customers.

### LARGE POWER TOU RATE CLASS

The 1997 study deign provided a very accurate estimate of demand for this class. The 1999 sample design will retain the 1997 sample design which is two strata with census metering of all LPT rate customers whose billing demand during February was 1,000 kW or higher and a random sampling of 20 customers of the remaining customers.

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### RTP AND PXT RATE

All customers being billed on these two rate classes have a recorder installed, thus no sample design is necessary. The number of customers on these rate classes as of June 1998 are as follows:

RTP Rate - 21 customers PXT Rate - 1 customer

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# Table 9

# GULF POWER COMPANY 1999 Cost of Service Load Research Rule Sample Size

Rate		Strata Allocation	Sample Size	
RS	1)	MF GT 900 kWh	21	
	2)	MF 0-900 kWh	20	
	3)	МН	28	
	4)	SFD 1301-2000 kWh	53	
	5)	SFD GE 2001 kWh	56	
		SFD 0-1300 kWh	47	
		TOTAL	225	
GS	1)	0-600 kWh	77	
	2)	601-1400 kWh	94	
	3)	1401-2600 kWh	94	
	4)	over 2600 kWh	115	
		TOTAL	380	
GSD	1)	0-20.0 kW	22	
		20.1-50.0 kW	46	
	3)	50.1-130.0 kW	46	
	4)	over 130.0 kW	46	
		TOTAL	160	
LP	1)	Less than 800 kW	30	
	2)	8000 kW and greater	28	(census)
		TOTAL	58	
LPT	1)	Less than 1000 kW	20	
	2)	1000 kW and greater	29	(census)
			49	
PXT	1)	All customers	1	(census)
RTP	1)	All customers	21	(census)
SBS	1)	All customers TOTAL	2 896	(census)