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November 18, 1997

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

Dear Ms. Bayo:

RE: Docket No. 970002-EG

Enclosed for official filing in the above referenced docket
are an original and ten (10) copies of the Prepared Direct
Testimony and Exhibits of Margaret D. Neyman.

Sincerely,

Linda G. Malone

Linda G. Malone
Assistant Secretary and Assistant Treasurer

- ACK _____ lw
- AFA 2 Enclosure
- APP _____
- CAF _____ cc: Beggs and Lane
 J. A. Stone, Esq.
- CMU _____
- CTR _____
- EAG _____
- LES 1 _____
- LIN 3 _____
- OPD _____
- RCH _____
- SEC 1 _____
- WAS _____
- OTH _____

DOCUMENT NUMBER DATE
11857 NOV 19 97
FPSO-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Conservation Cost Recovery)

Docket No. 970002-EG

Certificate of Service

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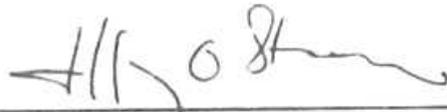
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ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 970002-EG

PREPARED DIRECT TESTIMONY AND EXHIBITS
OF
M. D. NEYMAN

ENERGY CONSERVATION COST RECOVERY

FINAL TRUE-UP
NOVEMBER 19, 1997

GULF 
POWER

A SOUTHERN COMPANY

DOCUMENT NUMBER-DATE

11857 NOV 1997

FPSC-RECORDS/REPORTING

ORIGINAL

1 Gulf Power Company

2 Before the Florida Public Service Commission
3 Prepared Direct Testimony of
4 Margaret D. Neyman
5 Docket No. 970002-EG
6 November 19, 1997

7 Q. Will you please state your name, business address,
8 employer and position?

9 A. My name is Margaret D. Neyman and my business address is
10 One Energy Place, Pensacola, Florida 32520. I am
11 employed by Gulf Power Company as the Marketing Services
12 Manager.

13 Q. Ms. Neyman, for what purpose are you appearing before
14 this Commission today?

15 A. I am testifying before this Commission on behalf of Gulf
16 Power Company regarding matters related to the Energy
17 Conservation Cost Recovery Clause, specifically the
18 approved programs for October, 1996, through September,
19 1997.

20
21 Q. Are you familiar with the documents concerning the
22 Energy Conservation Cost Recovery Clause and its related
23 true-up and interest provisions?

24 A. Yes, I am.

25

1 Q. Have you verified, that to the best of your knowledge
2 and belief, this information is correct?

3 A. Yes, I have.

4 Counsel: We ask that Ms. Neyman's exhibit consisting of
5 6 Schedules, CT-1 thorough CT-6, be marked for
6 identification as:

7 Exhibit No. ____ (MDN-1)
8

9 Q. Do you have any other exhibits to which you will be
10 referring in the course of your testimony?

11 A. Yes. I will be referring to Gulf's answer to Staff's
12 First Set of Interrogatories, Docket 970002-EG, October
13 30, 1996, Item number 1.

14 Counsel: We ask that Ms. Neyman's exhibit consisting of
15 Gulf's answer to Staff's First Set of
16 Interrogatories, Docket 970002-EG, October 30,
17 1996, Item number 1, be marked for
18 identification as:

19 Exhibit No. ____ (MDN-2)
20
21
22
23
24
25

1 Q. Would you summarize for this Commission the deviations
2 resulting from the actual expenditures for this recovery
3 period and the original estimates of expenses?

4 A. The budgeted net expenses for the entire recovery period
5 October, 1996, through September, 1997, were \$3,354,655,
6 while the actual costs were \$2,822,416 resulting in a
7 variance of \$532,239 or 15.9% under budget.

8
9 Q. Ms. Neyman, would you explain the October, 1996, through
10 September, 1997, variance?

11 A. Yes, the major reasons for this variance are a decrease
12 in expenses in Research and Development, under \$29,168;
13 In Concert with the Environment, under \$122,189; Good
14 Cents Environmental Home, under \$67,272; Duct Leakage,
15 under \$25,867; Geothermal Heat Pump, under \$138,158;
16 Advanced Energy Management, under \$80,360;
17 Commercial/Industrial E.A. & T.A.A., under \$80,401;
18 Commercial Mail-in Energy Audit, under \$108,995; Solar
19 for Schools, under \$13,324; and Gas Research, under
20 \$8,600. However, these programs are offset by
21 Residential Energy Audits, over \$43,631; Gulf Express,
22 over \$31,386; and Commercial/Industrial Good Cents
23 Buildings, over \$67,078; resulting in the previously
24 referenced variance of \$532,239 under budget. A more

1 detailed description of the deviations are contained in
2 Schedule CT-6.

3

4 Q. Ms. Neyman, what was Gulf's adjusted net true-up for the
5 period October, 1996, through September, 1997?

6 A. There was an over-recovery of \$520,590 as shown on
7 Schedule CT-1, page 1.

8

9 Q. Would you describe the results of your programs during
10 the October, 1996, through September, 1997, recovery
11 period?

12 A. A more detailed review of each of the programs is
13 included in my Schedule CT-6. The following is a
14 synopsis of the accomplishments during this recovery
15 period.

16 (A) Home Energy Audits - During this period, we
17 projected to audit 3,200 structures. We actually
18 completed 2,336.

19 (B) Gulf Express Loan Program - During this recovery
20 period, a total of 374 loans were completed compared
21 to a budget of 300 or 74 loans above the goal.

22 (C) In Concert With The Environment - During this
23 recovery period, 607 students attended the program
24 compared to a projection of 4,000 students.

25

- 1 (D) Good Cents Environmental Home - During this
2 recovery period, no homes were completed compared
3 to a projection of 42.
- 4 (E) Duct Leakage Program - During this recovery period,
5 10 homes were completed compared to a projection of
6 107.
- 7 (F) Geothermal Heat Pump - During this recovery period,
8 a total of 121 heat pumps were installed compared
9 to a projection of 152 for a deviation of 31 units
10 under goal.
- 11 (G) Good Cents Building - During this recovery period a
12 total of 216 buildings were built or improved to
13 Good Cents standards, compared to a budget of 244
14 or 28 units below goal.
- 15 (H) Energy Audits and Technical Assistance Audits -
16 During this recovery period, a total of 208 EA/TAA
17 were completed compared to a projection of 365 for
18 a deviation of 157 units under goal.
- 19 (I) Commercial/Industrial Mail-in Audit - This program
20 was approved January 7, 1997, in Docket 960897-EI.
21 For the recovery period following the program
22 approval, 500 mail-in audits were projected
23 compared to 313 mail-in audits being completed for
24 a deviation of 187 mail-in audits below goal.
- 25

1 (J) Solar for Schools - During this recovery period,
2 the first Solar for Schools project was evaluated
3 as was the mechanism to obtain customer
4 contributions for solar projects.

5 (K) Conservation Demonstration and Development -
6 Twenty-two research projects have been identified
7 and are detailed in Schedule CT-6.

8 (L) Gas Research and Development - Gulf Power has
9 completed research in four individual research and
10 demonstration projects. Project details are
11 explained in Schedule C-5 in accordance with Docket
12 No. 950520-EG, Order No. PSC-95-1146-FOF-EG.

13 (M) Advanced Energy Management - During this recovery
14 period, no units were installed. Startup of this
15 program has been delayed until 1998 due to
16 equipment delays.

17
18 Q. Could you tell us more about the delays in implementing
19 AEM?

20 A. Initially, startup of the AEM program was delayed
21 pending a final order in Docket No. 941172-EG which
22 caused a delay in Gulf's issuance of an AEM equipment
23 RFP. Once the RFP was issued, the contract negotiation
24 process took longer than expected in order to insure
25 that Gulf received the best possible AEM technological

1 solution and the best price. Gulf Power signed a
2 contract with Scientific Atlanta (SA) in September,
3 1996, which called for delivery of prototype units for
4 field testing in March, 1997, and full production units
5 in June, 1997.

6
7 Q. Please describe the AEM equipment components.

8 A. The AEM system is to include field units utilizing a
9 communication gateway, a radio frequency (RF) based
10 Local Area Network (LAN), major appliance load control
11 relays, and a proprietary, programmable thermostat
12 (Superstat), all operating at the consumer's home.

13
14 Q. Please tell us about the equipment delays.

15 A. Early in 1997, SA advised Gulf that the delivery of
16 units would be delayed due to the inability of suppliers
17 to provide some components on the established schedule.
18 Despite Gulf's best efforts to remedy SA's delays and
19 the negotiation of penalties for late delivery, in
20 August, 1997, SA also advised Gulf that no field units
21 utilizing an RF-based LAN would be available earlier
22 than mid to late 1998. Gulf negotiated conditions which
23 allowed for an interim solution, accompanied by a price
24 reduction due to SA's failure to comply with the RF-
25 based requirements and their overall failure to deliver

1 any usable product within the time provisions specified
2 in the contract. As part of these revised provisions,
3 SA was to deliver field units for testing in mid-
4 October, 1997, with the first batch of production units
5 to be delivered during the first quarter of 1998.

6
7 As of November 15, 1997, the expected prototype units
8 had still not been delivered due to failures of
9 electronic components during testing. SA still contends
10 that production units will be delivered during the first
11 quarter of 1998, but Gulf now believes that there is a
12 reasonable probability that production units will not
13 arrive until second quarter, 1998.

14
15 Q. How do these equipment delays impact Gulf's AEM program
16 and its rescheduled conservation goals?

17 A. Despite the unpreventable delays that have occurred,
18 Gulf still believes that the AEM System is a viable
19 program. Gulf is modifying its schedule for market
20 implementation as a result of the delays and plans to
21 increase the number of units deployed during the years
22 1999 to 2003 to still accomplish the basic program
23 objective of achieving a total of 80,000 kilowatts of
24 peak demand reduction by year end 2004.

25

1 Gulf's near term residential conservation goals have
2 been adversely impacted as a result of the delays in
3 implementing AEM, but the process has produced the most
4 cost-effective solution that is currently possible. In
5 the longer term, Gulf fully expects to catch up on a
6 cumulative basis in subsequent periods.
7

8 Q. In Docket 960002-EG, Gulf provided an update of the cost
9 effectiveness of its ECCR programs in response to
10 Question 1 of Staff's First Set of Interrogatories,
11 dated October 30, 1996. What steps has the company
12 taken to improve the cost effectiveness of these
13 programs?

14 A. Gulf's response to Question 1 of Staff's First Set of
15 Interrogatories, Docket 960002-EG is attached as Exhibit
16 No. _____MDN(2). Seven programs had RIM cost
17 effectiveness values less than one. The following is a
18 synopsis of the steps taken for each of the programs.
19 1) Residential and Commercial Audit Programs- This
20 category includes Gulf's Residential Energy Audit,
21 Residential Mail-in Energy Survey, In Concert with the
22 Environment, Commercial Audit/Industrial EA/TAA, and
23 Commercial Mail-In Energy Audit Programs. Audits are
24 required by Florida Administrative Code. However, Gulf
25 Power has taken several steps to reduce the overall

1 average cost of providing this service to customers.
2 For example, during the past year Gulf filed and
3 received approval for a commercial and a residential
4 mail-in audit program. These programs are more cost
5 effective than the traditional walk through audits.
6 Also, Gulf has taken steps to reduce the cost of
7 performing the walk through audits. In addition, a new
8 contract has been negotiated with the In Concert with
9 the Environment program vendor. The result of this new
10 contract is a reduction in the administration costs for
11 the program. All of these steps result in more cost
12 effective audit programs for Gulf Power and its
13 ratepayers.

14
15 2) Residential Duct Leakage - Administration costs for
16 this program are being reduced. A number of contractors
17 in Gulf's service territory have been trained to provide
18 the services associated with identification and
19 correction of duct leakage and other duct deficiencies.
20 Gulf Power's Residential Energy Consultants will utilize
21 these resources to minimize the cost associated with the
22 program. Gulf will maintain our customer incentive of
23 \$25 to encourage participation in this program by
24 customers. The trained contractors along with Gulf's
25 Energy Consultants have been promoting this program for

1 over a year with virtually no participation. Gulf
2 believes this to be because of a lack of perceived need
3 and benefit by the customer. The cost of advertising
4 and promotion necessary to overcome these customer
5 perceptions would far exceed the benefit to Gulf Power
6 and the entire body of ratepayers. Even though Gulf has
7 chosen to keep the program, additional costs targeted at
8 changing customer perception will be at a minimum.

9
10 3) Good Cents Environmental Home - Gulf Power has
11 expended significant resources promoting this program
12 over the past two years. Despite these efforts, the
13 lack of participation in this program has indicated that
14 there is not substantial interest in the resulting
15 environmental benefits associated with its
16 implementation. Gulf Power will maintain availability
17 of this program to our builders and customers, however,
18 we will not advertise and promote this program in an
19 active manner. Administration costs for this program
20 will be negligible and no longer be charged to the ECCR
21 account. Benefits to our customers and to Gulf Power
22 will continue to accrue with the realization of any
23 units constructed to the GoodCents Environmental Home
24 standards.

25

1 4) Gulf Express Energy Loan Program - Gulf has ceased
2 accepting new loans under this program. Any future
3 costs will be administrative costs for outstanding loans
4 and any default costs.

5
6 5) Residential Geothermal Heat Pump Program - Although
7 the program is cost effective, Gulf Power has
8 significantly reduced the cost of incentives to the
9 customer installing these systems. This has been done
10 through an innovative program to guarantee the cost
11 associated with heating and cooling of single family
12 homes with geothermal technology. Gulf Power intends to
13 further utilize this Heating and Cooling Cost Guarantee
14 program to reduce the average cost of incentives for the
15 Residential Geothermal Heat Pump program from \$500 per
16 dwelling unit to \$150 per dwelling unit. These
17 incentives are currently available only in the
18 multifamily market. It is our intention to begin
19 reducing and eventually eliminate this incentive amount
20 as appropriate to sustain a growing market penetration.

21
22 6) Good Cents Commercial Buildings - Gulf is currently
23 reviewing the latest revision to the Florida Energy
24 Efficiency Code For Building Construction to reestablish
25 the benchmark for standard energy requirements. The

1 last update was 1994. Gulf will update the Good Cents
2 Building cost effectiveness evaluation as a result of
3 this new benchmark and updated market assumptions.

4
5 Where applicable, the changes described to the programs
6 will be effective January 1, 1998. Updated program
7 standards and cost effectiveness evaluations will be
8 submitted separately.

9
10 Q. Ms. Neyman, does this conclude your testimony?

11 A. Yes, it does.

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INDEX

Schedule Number	Title	Pages
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GULF POWER COMPANY
ENERGY CONSERVATION COST RECOVERY
ADJUSTED NET TRUE-UP
For the Period: October, 1996 Through September, 1997

1. Principal	764,235.62	
2. Interest	29,466.72	
Less Projected True-up		793,702.34
February Hearing Conservation Factor		
3. Principal	251,961.06	
4. Interest	21,151.13	273,112.19
5. Adjusted Net True-up		520,590.15

GULF POWER COMPANY
ENERGY CONSERVATION COST RECOVERY
ANALYSIS OF ENERGY CONSERVATION PROGRAM COSTS
ACTUAL Vs ESTIMATED
For the Period: October, 1996 Through September, 1997

	Actual \$	Projected \$	Difference \$
1. Depreciation & Return	5,087.45	208,456.00	(203,368.55)
2. Payroll & Benefits	1,718,165.59	2,086,433.00	(368,267.41)
3. Materials & Supplies	591,541.81	528,130.00	63,411.81
4. Outside Services	0.00	264,342.00	(264,342.00)
5. Advertising	396,545.73	429,955.00	(33,409.27)
6. Incentives	0.00	112,276.00	(112,276.00)
7. Vehicles	53,832.66	66,959.00	(13,126.34)
8. Other	57,243.05	38,438.00	18,805.05
9. SUBTOTAL	2,822,416.29	3,734,989.00	(912,572.71)
10. Program Revenues	0.00	380,334.00	(380,334.00)
11. TOTAL PROGRAM COSTS	2,822,416	3,354,655	(532,239)
12. Less: Payroll Adjustment	0.00	0.00	0.00
13. Amounts Inc. in Base Rate	0.00	0.00	0.00
14. Conservation Adjustment Revenues	3,189,545.97	3,209,510.12	(19,964.15)
15. Rounding Adjustment	3,189,546	3,209,510	(19,964.00)
16. True-up Before Adjustment	367,130	(145,145)	512,275.00
17. Interest Provision	29,467	21,151	8,316.00
18. Prior Period True-up	397,106	397,106	0.00
19. Deferred True-up Prior Perio	0	0	0
20. End of Period True-up	793,703	273,112	520,591

GULF POWER COMPANY

CONSERVATION COSTS PER PROGRAM
 VARIANCE ACTUAL VS PROJECTED
 For the Period October, 1988 Through September, 1987

	Depreciation & Return	Payroll & Benefits	Utilities & Expenses	Advertising	Incentives	Outside Services	Vehicles	Other	Sub-Total	Program Revenues	Total
1 Residential Energy Audit	0.00	48,298.45	(42,839.08)	31,302.07	0.00	0.00	7,083.08	(412.02)	43,630.50	0.00	43,630.50
2 Gulf Express	0.00	(8,083.05)	42,503.87	4,201.91	0.00	(8,865.00)	(371.94)	0.00	31,386.79	0.00	31,386.79
3 In Concert with the Environment	0.00	(15,867.32)	(103,986.22)	0.00	0.00	0.00	(2,323.00)	0.00	(122,186.54)	0.00	(122,186.54)
4 Good Cards Environmental	0.00	(32,106.86)	(15,008.98)	(18,048.16)	0.00	0.00	(2,107.04)	0.00	(67,271.84)	0.00	(67,271.84)
5 Duct Leakage	0.00	(19,648.27)	8,115.80	0.00	(11,005.00)	0.00	(4,329.00)	0.00	(25,866.87)	0.00	(25,866.87)
6 Geothermal Heat Pump	0.00	(81,228.50)	76,752.81	(47,772.49)	(101,271.00)	0.00	(4,838.89)	0.00	(138,158.07)	0.00	(138,158.07)
7 Advanced Energy Management	(201,287.00)	(242,408.98)	84,568.85	0.00	0.00	(73,074.00)	(6,512.86)	0.00	(653,693.87)	(380,334.00)	(80,359.87)
8 Commfnd Good Cards Building	0.00	68,049.07	24,368.41	(15,287.96)	0.00	(12,915.00)	2,835.26	0.00	67,077.78	0.00	67,077.78
9 Commfnd E.A. & T.A.A.	0.00	(88,417.97)	100,242.61	12,196.36	0.00	(55,534.00)	(2,762.13)	(38,028.00)	(80,401.13)	0.00	(80,401.13)
10 Solar for Schools	0.00	(8,802.20)	(4,471.90)	0.00	0.00	0.00	0.00	0.00	(13,324.10)	0.00	(13,324.10)
11 Research & Development	(101.55)	0.00	(88,309.01)	0.00	0.00	0.00	0.00	57,243.05	(29,167.51)	0.00	(29,167.51)
12 Gas Research & Development	0.00	0.00	(8,569.89)	0.00	0.00	0.00	0.00	0.00	(8,569.89)	0.00	(8,569.89)
13 Commercial/Industrial Mail In Audit	0.00	0.00	6,856.64	0.00	0.00	(115,854.00)	0.00	0.00	(108,997.36)	0.00	(108,997.36)
	(203,988.55)	(388,267.41)	63,411.81	(33,409.27)	(112,278.00)	(264,342.00)	(13,126.34)	18,805.05	(912,572.71)	(380,334.00)	(532,238.71)

Florida Public Service Commission
 Docket No. 970002-EG
 GULF POWER COMPANY
 Witness: Margaret D. Heyman
 Exhibit No. (MDN-1)
 Schedule CT-3
 Page 1 of 5

GULF POWER COMPANY

CONSERVATION COSTS Per PROGRAM
 ACTUAL EXPENSES
 For the Period October, 1988 Through September, 1997

Actual	Depreciation & Return	Payroll & Benefits	Materials & Expenses	Advertising	Incentives	Outside Services	Vehicles	Other	Sub-Total	Program Revenues	Total
1 Residential Energy Audit	0.00	308,991.45	22,288.92	138,671.07	0.00	0.00	16,965.06	0.00	487,914.50	0.00	487,914.50
2 Gulf Express	0.00	55,182.95	136,205.67	79,816.91	0.00	0.00	1,112.06	0.00	272,317.79	0.00	272,317.79
3 In Concert with the Environment	0.00	23,161.68	1,206.78	0.00	0.00	0.00	0.00	0.00	24,368.46	0.00	24,368.46
4 Good Cents Environmental	0.00	21,193.34	2,773.02	38,408.84	0.00	0.00	117.86	0.00	63,494.16	0.00	63,494.16
5 Duct Leakage	0.00	55,874.73	12,888.60	0.00	0.00	0.00	0.00	0.00	68,763.33	0.00	68,763.33
6 Geothermal Heat Pump	0.00	75,954.50	82,423.61	96,560.51	0.00	0.00	181.31	0.00	255,119.93	0.00	255,119.93
7 Advanced Energy Management	0.00	158,257.04	89,437.95	0.00	0.00	0.00	887.14	0.00	228,584.13	0.00	228,584.13
8 Comm/Ind Good Cents Building	0.00	390,089.07	30,523.41	28,891.04	0.00	0.00	12,886.26	0.00	462,390.78	0.00	462,390.78
9 Comm/Ind E.A. & T.A.A.	0.00	625,790.03	135,716.61	12,196.38	0.00	0.00	21,682.87	0.00	795,385.87	0.00	795,385.87
10 Solar for Schools	0.00	3,680.80	4.10	0.00	0.00	0.00	0.00	0.00	3,684.90	0.00	3,684.90
11 Research & Development											
End Use Profiling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geothermal Heat pump	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FCG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Desiccant Dehum. H.P.	0.00	0.00	2,508.92	0.00	0.00	0.00	0.00	830.40	3,339.32	0.00	3,339.32
Energy Education	4,870.85	0.00	105.99	0.00	0.00	0.00	0.00	42,371.86	47,348.16	0.00	47,348.16
Commercial Technology	216.80	0.00	0.00	0.00	0.00	0.00	0.00	14,040.79	14,257.39	0.00	14,257.39
PJC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closed Loop (Dentist)	0.00	0.00	270.24	0.00	0.00	0.00	0.00	0.00	270.24	0.00	270.24
Closed Loop (Hotel)	0.00	0.00	20,826.70	0.00	0.00	0.00	0.00	0.00	20,826.70	0.00	20,826.70
Van Norman	0.00	0.00	367.20	0.00	0.00	0.00	0.00	0.00	367.20	0.00	367.20
Shores	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stetley	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Simsy Loop	0.00	0.00	508.36	0.00	0.00	0.00	0.00	0.00	508.36	0.00	508.36
GLCC	0.00	0.00	5,332.20	0.00	0.00	0.00	0.00	0.00	5,332.20	0.00	5,332.20
H2O Pur	0.00	0.00	3,603.47	0.00	0.00	0.00	0.00	0.00	3,603.47	0.00	3,603.47
Joe Ridge	0.00	0.00	292.85	0.00	0.00	0.00	0.00	0.00	292.85	0.00	292.85
Jim Day	0.00	0.00	(0.29)	0.00	0.00	0.00	0.00	0.00	(0.29)	0.00	(0.29)
Burger King	0.00	0.00	18.72	0.00	0.00	0.00	0.00	0.00	18.72	0.00	18.72
Dr. Taylor (Dentist)	0.00	0.00	19.27	0.00	0.00	0.00	0.00	0.00	19.27	0.00	19.27
Bay Co. Schools	0.00	0.00	7,998.70	0.00	0.00	0.00	0.00	0.00	7,998.70	0.00	7,998.70
Low Income Multi-Family	0.00	0.00	47,358.94	0.00	0.00	0.00	0.00	0.00	47,358.94	0.00	47,358.94
Dunes	0.00	0.00	547.32	0.00	0.00	0.00	0.00	0.00	547.32	0.00	547.32
Total	5,087.45	0.00	89,755.99	0.00	0.00	0.00	0.00	57,243.05	152,086.49	0.00	152,086.49
12 Gas Research & Development	0.00	0.00	1,458.31	0.00	0.00	0.00	0.00	0.00	1,458.31	0.00	1,458.31
13 Commercial/Industrial Mail In Aud	0.00	0.00	8,858.64	0.00	0.00	0.00	0.00	0.00	8,858.64	0.00	8,858.64
Total	5,087.45	1,718,165.59	991,541.81	398,545.73	0.00	0.00	53,832.66	57,243.05	2,822,416.29	0.00	2,822,416.29

GULF POWER COMPANY
 ENERGY CONSERVATION ADJUSTMENT
 For the Period October 1998 through September 1997

Conservation Revenues	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	TOTAL
1. a. Residential Conservation Audit Fees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b. (Other Fees)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
c.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Conservation Adjustment Revenues	254,492.79	239,408.21	293,053.17	282,760.69	238,684.67	229,869.41	200,112.13	242,356.02	271,697.46	322,098.71	317,400.60	298,844.11	3,169,545.97
3. Total Revenues	254,492.79	239,408.21	293,053.17	282,760.69	238,684.67	229,869.41	200,112.13	242,356.02	271,697.46	322,098.71	317,400.60	298,844.11	3,169,545.97
4. Adjustment not Applicable to Period - Prior True Up	(12,785.50)	(12,785.50)	(12,785.50)	(12,785.50)	(12,785.50)	(12,785.50)	27,982.42	27,982.42	27,982.42	27,982.42	27,982.42	27,982.42	91,081.52
5. Conservation Revenues Applicable to Period	241,707.29	226,622.71	280,267.67	269,975.19	225,899.17	217,083.91	228,874.55	270,318.44	299,659.88	350,031.13	345,383.02	324,806.53	3,260,627.49
6. Conservation Expenses (Form CT-3 Page 6)	175,775.30	191,294.34	428,122.05	183,636.09	182,178.60	325,568.16	220,503.98	198,763.86	268,872.08	222,731.07	235,863.82	208,117.00	2,822,418.28
7. True Up this Period (Line 5 minus Line 6)	65,931.99	35,328.37	(147,854.38)	86,339.10	63,820.57	(108,474.25)	8,170.57	71,554.58	30,787.79	127,300.13	109,519.20	115,689.53	458,191.20
8. Interest Provision this Period (Page 10, Line 10)	1,987.73	2,264.59	2,188.01	2,113.03	2,424.78	2,458.52	2,236.63	2,275.15	2,394.29	2,839.58	3,057.47	3,449.84	29,488.72
9. True Up & Interest Provision Beginning of Month	387,125.94	477,791.18	528,187.62	395,268.75	498,524.38	575,855.23	482,423.00	464,867.78	510,735.09	515,954.75	617,832.04	702,528.29	5,971,911.11
1. Prior True Up Collected or Refunded	12,785.50	12,785.50	12,785.50	12,785.50	12,785.50	12,785.50	(27,982.42)	(27,982.42)	(27,982.42)	(27,982.42)	(27,982.42)	(27,982.42)	(91,081.52)
End of Period - Net True Up	477,791.18	528,187.62	528,187.62	395,268.75	498,524.38	575,855.23	482,423.00	464,867.78	510,735.09	515,954.75	617,832.04	702,528.29	793,702.34

GULF POWER COMPANY
ENERGY CONSERVATION ADJUSTMENT
For the Period October 1998 through September 1997

Interest Provision	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	TOTAL
1 Beginning True up Amount	397,105.94	477,791.16	528,167.62	395,286.75	496,524.38	575,655.23	48,423.00	464,867.78	510,735.09	515,864.75	617,832.04	707,528.29	
2 Ending True up before interest	475,623.43	525,903.03	393,098.74	494,411.35	573,235.45	479,968.48	487,631.15	508,439.94	513,580.48	615,292.46	699,468.82	790,253.40	
3 Total beginning & ending	872,729.37	1,003,694.19	921,266.36	889,698.10	1,069,754.83	1,055,623.71	945,054.15	973,327.72	1,024,295.55	1,131,247.21	1,317,400.86	1,497,779.69	
4 Average True up Amount	436,464.69	501,847.10	460,633.18	444,849.05	534,877.42	527,810.86	472,527.08	486,963.86	512,147.78	565,623.61	658,700.43	748,389.85	
5 Interest Rate First Day Reporting Business Month	5.4600	5.3800	5.4500	5.9500	5.4500	5.4300	5.7400	5.8200	5.8000	5.8200	5.5800	5.5800	5.5800
6 Interest Rate First Day Subsequent Business Month	5.3800	5.4500	5.9500	5.4500	5.4300	5.7400	5.8200	5.8000	5.8200	5.8000	5.5800	5.5800	5.5800
7 Total of Lines 5 and 6	10.8200	10.8300	11.4000	11.4000	10.8800	11.1700	11.5600	11.2200	11.2200	11.2000	11.1600	11.0800	11.0800
8 Average interest rate (50% of Line 7)	5.4100	5.4150	5.7000	5.7000	5.4400	5.5850	5.8000	5.6100	5.6100	5.6000	5.5700	5.5400	5.5400
9 Monthly Average interest Rate Line 8 x 12	0.004508	0.004513	0.004750	0.004750	0.004533	0.004654	0.004733	0.004675	0.004675	0.004667	0.004642	0.004621	0.004621
10 Interest Provision (line 4 x 9)	1,967.73	2,264.59	2,188.01	2,113.03	2,424.78	2,456.52	2,236.63	2,275.15	2,394.29	2,839.58	3,057.47	3,448.94	29,468.72

GULF POWER COMPANY

SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION AND RETURN
Energy Education

For the Period October, 1986 Through September, 1997

Line No.	Description	Beginning of Period	October	November	December	January	February	March	April	May	June	July	August	September	Total
1	Investments (Net of Retirements)										0	0	0	0	0
2	Amortization Base		21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139
3	Amortization Expense (A)		251.65	251.65	251.65	251.65	251.65	251.65	251.65	251.65	251.65	251.65	251.65	251.65	3,019.80
4	Cumulative Investment	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139	21,139
5	Less: Accumulated Amortization	2,265	2,517	2,768	3,020	3,272	3,523	3,775	4,027	4,278	4,530	4,782	5,033	5,285	
6	Net Investment	18,874	18,622	18,371	18,119	17,867	17,616	17,364	17,112	16,861	16,609	16,358	16,106	15,854	
7	Average Net Investment		18,748	18,497	18,245	17,993	17,742	17,490	17,238	16,987	16,735	16,483	16,232	15,980	
8	Rate of Return / 12 (Including Income Taxes) (B)		0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	
9	Return Requirement on Average Net Investment		166.97	164.73	162.46	160.25	158.01	155.42	151.18	151.28	149.04	146.80	144.56	142.32	1,851.05
10	Total Amortization & Return (Line 3 + 9)		418.62	416.39	414.14	411.90	409.65	407.07	402.83	402.83	400.69	398.45	396.21	393.97	4,870.85

Notes:

(A) 1995 Additions Amortized over 7 Year Period

(B) Revenue Requirement Return is 10.6872%

GULF POWER COMPANY

SCHEDULE OF CAPITAL INVESTMENT DEPRECIATION AND RETURN

Commercial Technology
For the Period October 1996 Through September 1997

Line No	Description	Beginning of Period	October	November	December	January	February	March	April	May	June	July	August	September	Total
1	Investments (Net of Retirements)										0	0	0	0	0
2	Amortization Base		939	939	939	939	939	939	939	939	939	939	939	939	939
3	Amortization Expense (A)		11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	134.16
4	Cumulative Investment	939	939	939	939	939	939	939	939	939	939	939	939	939	939
5	Less Accumulated Amortization	100.82	112	123	134	145	157	168	179	190	201	212	224	235	235
6	Net Investment	838	827	816	805	794	782	771	760	749	738	727	715	704	704
7	Average Net Investment		832.79	821.61	810.43	799.25	788.07	776.89	765.71	754.53	743.35	732.17	720.99	709.81	
8	Rate of Return / 12 (including Income Taxes) (B)		0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%
9	Return Requirement on Average Net Investment		7.42	7.32	7.22	7.12	7.02	6.92	6.82	6.72	6.62	6.52	6.42	6.32	82.44
10	Total Amortization & Return: (Line 3 + 9)		18.60	18.50	18.40	18.30	18.20	18.10	18.00	17.90	17.80	17.70	17.60	17.50	216.60

Notes:

- (A) 1995 Additions Amortized over 7 Year Period
- (B) Revenue Requirement Return is 10.6872%

GULF POWER COMPANY

Reconciliation and Explanation of
Differences Between Filing and FPSC Audit
Report for Months, October, 1996, through September, 1997

(If no differences exist, please state.)

NO DIFFERENCES

Program Description and Progress

Program Title: Residential Energy Audits

Program Description: This program consists of two types of audits: (1) Class A Energy Conservation Audits and (2) Centsable Energy Checks, a walk-through audit. Both of these audits are performed on-site and involve assisting the customer in upgrading the thermal and equipment efficiencies in their homes as well as lifestyle measures and low or no cost improvements.

Program Accomplishments: 3,200 residential energy audits were forecasted to be completed compared to 2,336 actual audits completed for a difference of 864 audits under projection.

Program Fiscal Expenditures: Forecasted expenses were \$444,284 compared to actual expenses of \$487,915 resulting in a deviation of \$43,631 over budget. Two factors are largely responsible for this deviation. First, an increased advertising campaign for public awareness of the free audit service and secondly, more labor time was spent on each audit.

Program Progress Summary: Since the approval of this program Gulf has performed 123,556 residential energy audits. This is a result of Gulf's promotional campaign to solicit energy audits as well as the overall rapport established with its customers as the "energy experts" in Northwest Florida.

Program Description and Progress

Program Title: Gulf Express Loan Program

Program Description: The objective of this program has been to encourage and achieve energy conservation. The program provides below market interest rates by participating banks to customers as an incentive to install energy conservation features in their homes.

Program Accomplishments: There were 300 loans forecasted to be completed compared to 374 actual loans completed. This results in a deviation of 74 loans above the goal. New loans were discontinued as of second quarter, 1997.

Program Fiscal Expenditures: Forecasted expenses were \$240,932 compared to actual expenses of \$272,318 resulting in a deviation of \$31,386 over budget. The expenses are over budget due to an increased number of loans completed and slightly above average loan amounts.

Program Progress Summary: Since the approval of the program, Gulf has completed 1,953 Gulf Express Loans.

Program Description and Progress

Program Title: In Concert With The Environment

Program Description: In Concert With The Environment is an environmental and energy awareness program that is being implemented in the 8th and 9th grade science classes. The program shows students how everyday energy use impacts the environment and how using energy wisely increases environmental quality.

Program Accomplishments: In Concert With The Environment was presented to 607 students during this recovery period compared to a projection of 4,000 students. This deviation is due to a lack of response from the schools primarily because many schools already have environmental units incorporated into the curriculum and scheduling conflicts.

Program Fiscal Expenditures: Expenses for the 12 months ending September, 1997, were projected at \$146,557 compared to actual expenses of \$24,368 for a deviation of \$122,189 under budget. These expenses are under budget due to a contract negotiation with the vendor providing materials for the program that resulted in lower program costs.

Program Summary: Since the approval of the program, 4,378 students have completed the program.

Program Description and Progress

Program Title: Good Cents Environmental Home

Program Description: Good Cents Environmental Home Program provides 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 construction practices.

Program Accomplishments: During the this recovery period, no Good Cents Environmental Homes were constructed compared to a goal of 42 units. This program was approved in October, 1996, as part of the conservation programs in Gulf's Demand-Side Management Plan, Docket No. 941172-EI. It is still a relatively unknown program in the new construction field. Gulf Power will maintain the availability of this program to our builders and customers, however, starting in 1998, we will not advertise and promote this program in an active manner.

Program Fiscal Expenditures: Expenses for the 12 months ending September, 1997, are \$63,494. Projected expenses were \$130,766 for a deviation of \$67,272 below budget. This program is below budget due to lack of program acceptance and adoption by the building community and our customers. Despite the training programs, advertising and promotion, very little interest has been shown in this program.

Program Description and Progress

Program Title: Duct Leakage Repair

Program Description: The program provides the customer with a means to identify house air duct leakage and recommend repairs that can reduce customer kWh energy usage and kW demand.

Program Accomplishments: During the this recovery period, 10 Duct Leakage Repair units were completed compared to a goal of 107 units. Gulf has provided demonstrations and training to builders, dealers and homeowners regarding duct leakage and duct testing methods and procedures during this period. Gulf Power will maintain the availability of this program to our builders and customers, however, starting in 1998, we will not advertise and promote this program in an active manner.

Program Fiscal Expenditures: Projected expenses were \$94,630 compared to actual expenses of \$68,763 for a deviation of \$25,867 under budget. This program is under budget due to lower than expected participation rate in the program.

Program Progress Summary: Program-to-date, 10 Duct Leakage Repair units have been completed. Program activities have related to education, training, and program development.

Program Description and Progress

Program Title: Geothermal Heat Pump

Program Description: The objective of this program is to reduce the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced and emerging geothermal systems.

Program Accomplishments: During this recovery period, 121 Geothermal Heat Pump units were installed compared to a goal of 152 units. This results in a deviation of 31 units under goal. This program is under projection due to lower than expected participation rate in the program.

Program Fiscal Expenditures: Projected expenses for the period were \$393,278 compared to actual expenses of \$255,120 for a deviation of \$138,158 under budget. This program is under budget due to lower than expected participation rate resulting in fewer incentive payments and other expenses.

Program Progress Summary: Program progress to date has been related primarily to education, training, and program development. 121 units have been installed program-to-date.

Program Description and Progress

Program Title: Advanced Energy Management

Program Description: This program was field tested through the Transtext Advanced Energy Management Pilot Program in Gulf Breeze, Florida. The program is designed to provide the customer with a means of conveniently and automatically controlling and monitoring his/her 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.

Program Accomplishments: During this period, 5,962 customers were projected for the program. However, at this time the 180 customers from the Transtext pilot are the only participating customers in the program. During this recovery period, no units were installed. Startup of the program was delayed pending a final order in Docket No. 941172-EG which caused a delay in Gulf's issuance of an AEM equipment RFP. Once the RFP was issued, the contract negotiation process took longer than expected in order to insure that Gulf received the best possible AEM technological solution and the best price. The AEM contract was awarded in September, 1996, and AEM equipment was scheduled to be delivered August of 1997. Equipment delays have pushed the equipment delivery and installations to the first quarter, 1998. Gulf is aware that its near term residential conservation goals have been adversely impacted, but the process has produced the most cost-effective AEM solution that is currently possible. In the longer term, Gulf fully expects to catch up on a cumulative basis in subsequent periods.

Program Fiscal Expenditures: Expenses were projected at \$308,944 compared to actual expenses of \$228,584 for a deviation of \$80,360 under budget. It is expected that there will be participants during the next recovery period.

Program Progress Summary: The AEM equipment and installation are expected during the first quarter of 1998.

Program Description and Progress

Program Title: Good Cents Building

Program Description: This program is designed to educate non-residential customers on the most cost-effective methods of designing new and improving existing buildings. The program stresses efficient heating and cooling equipment, improved thermal envelope, operation and maintenance, lighting, cooking and water heating. Field representatives work with architects, engineers, consultants, contractors, equipment suppliers and building owners and occupants to encourage them to make the most efficient use of all energy sources and available technologies.

Program Accomplishments: The goal during the current period was 216 installations compared to actual installations of 244 for a difference of 28 or 13% above goal. This increase is attributed to an increase in new construction of commercial buildings. Additionally, more time was required in many instances to educate the builder, developer and/or owner on the newest technologies available to them. This ensures that the customer is aware of all possible energy savings for the future.

Program Fiscal Expenditures: Forecasted expenses were \$395,322 compared to actual expenses of \$462,400 for a deviation of \$67,078 or 17% over budget. This deviation is in line with the actual increase in installations of new Good Cents buildings as mentioned in the above paragraph. As our customers are becoming more educated on the new technologies available to them (through our efforts or by accessing information electronically) they are also requiring more technical support from us. This in turn causes an increase in our labor dollars spent.

Program Progress Summary: A total of 7,212 commercial/industrial buildings have qualified for the Good Cents designation since the program was developed in 1977.

Program Description and Progress

Program Title: Energy Audits and Technical Assistance Audits

Program Description: This program is designed to provide professional advice to our existing commercial customers on how to reduce and make the most efficient use of energy. This program covers the smallest commercial customer, requiring only a walk-through survey, to the use of computer programs which will simulate several design options for very large energy intensive customers. The program is designed to include six month and annual follow-ups with the customer to verify any conservation measures installed and to reinforce the need to continue with more conservation efforts.

Program Accomplishments: During the twelve month period ending September, 1997, our goal was 365 while actual results were 208 for a difference of 157 under goal. This deviation is primarily due to the development of the commercial mail-in audit program. Customers began receiving audit surveys through the mail at the end of June, 1997. This has reduced the number of on-site audits performed by field representatives.

Program Fiscal Expenditures: Forecasted expenses were \$875,787 compared to actual expenses of \$795,386 for a deviation of \$80,401 under budget. This program is under budget due to the development of the mail-in audit. The mail-in audit has reduced the number of on-site audit requests.

Program Progress Summary: A total of 10,747 EA/TAA's have been completed since the program started in January, 1981. These audits have ranged from basic walk-through type for some commercial customers to sophisticated technical assistance audits for other commercial and industrial customers.

Program Description and Progress

Program Title: Commercial Mail-In Audit Program

Program Description: The Commercial Mail-In Audit Program is a direct mail energy auditing program. This program is supplementing Gulf's existing Commercial/Industrial Energy Audit program and is assisting in the evaluation of the specific energy requirements of a given business type. Businesses complete an audit questionnaire on their own or may request the assistance of a Gulf Power representative. This questionnaire asks customers about their energy consuming equipment or appliances, square footage, hours of operation and other details regarding their business operations. The audit results package is returned to the customer and includes targeted, timely information about energy conservation opportunities specific to each business type and geographic area.

Program Accomplishments: To date, 313 mail-in audits have been completed compared to a projection of 500 audits. This deviation is due to the program being approved, developed and implemented during this recovery period. The program was approved in January, 1997, and the first audits were completed in June, 1997, resulting a fewer completed audits than expected.

Program Fiscal Expenditures: Projected expenses for the period were \$115,854 compared to actual expenses of \$6,859 resulting in a deviation of \$108,995 under budget. This deviation is due to reduced developmental costs. Gulf was able to do some in-house programming cheaper than purchasing parts of the program from an outside vendor. The reduction is also due to delayed billing for the parts of the program development that were purchased. The delayed invoices are expected during fourth quarter, 1997.

Program Progress Summary: This is a new program approved by the FPSC on January 7, 1997, Docket No. 960897-EI. To-date, 313 mail-in audits have been completed.

Program Description and Progress

Program Title: Solar for Schools Pilot

Program Description: The program combines the installation of solar technologies in participating school facilities with energy conservation education of students. The program is funded in part through funds collected through a "green pricing" mechanism.

Program Accomplishments: During the period, Gulf continued evaluating various implementation options and continued developing the "green pricing" billing mechanism and promotion plan. One middle school is participating in the program and the optional "green pricing" billing mechanism began in Fall, 1996. Through the end of this period, \$9,800 has been collected through the "green pricing" mechanism. However, additional funding is necessary to enhance the initial project or begin a new solar project.

Program Fiscal Expenditures: Projected expenses for the period were \$16,989 compared to actual expenses of \$3,665 for a deviation of \$13,324 below budget. This program is below budget in labor and materials due to the delay of a new project pending additional funding.

Program Progress Summary: Gulf Power completed the project with the Florida Energy Extension Service on a prototype Solar for Schools installation at the Ferry Pass Middle School in Pensacola, FL. The installation was completed during the second quarter of 1996. Experience gained at this site will be used to design future Solar for Schools installations.

Gulf began solicitation for the \$1.75 monthly voluntary Solar for Schools contribution during September, 1996. As of September, 1997, 375 customers were signed up to contribute to this program. Extensive promotion of this program has been delayed due to the delayed implementation of Gulf's new billing system.

Program Description and Progress

Program Title: Conservation Demonstration and Development

Program Description: A package of conservation programs was approved by the FPSC in Order No. 23461 for Gulf Power Company to explore the development of a program to pursue research, development, and demonstration projects designed to promote energy efficiency and conservation. This program serves as an umbrella program for the identification, development, demonstration and evaluation of new or emerging end-use technologies.

Program Accomplishments:

Geothermal Heat Pump - A water furnace geothermal heat pump (AT034) with heat recovery for domestic hot water is being monitored on a 2333 sq. ft. Good Cents home. In addition, the builder installed a heat pump swimming pool heater using the same loop system as the house heat pump. The electric water heater, with heat recovery, is currently monitored for energy/demand consumption.

This project will produce actual detailed data on the energy and demand requirements for heating and cooling a Good Cents home with a geothermal heat pump. This data will provide energy and demand comparisons to computerized estimates and other fuels and or to air-to-air heat pumps. Monitoring the heat pump pool heater will provide data showing the impact of this type equipment on energy and demand requirements when it is installed on the same closed-loop system.

End-Use Profiling - The purpose of this 3-year project is to develop and provide detailed end use data for the major customer classes (Residential, Commercial and Industrial) as a baseline database for use in forecasting models and for analyzing the effectiveness of demand side management (DSM) programs.

The first year plan called for the sites to be selected from the following Commercial sectors: Churches, Grocery Stores, Health Care, Restaurants and Schools.

The second year plan called for metering multi-family residential dwellings and the remaining Commercial sectors: Hotels/Motels, Miscellaneous, Offices, Retail and Warehouses.

The third year plan, called for metering Industrial sites and Residential Mobile Homes. Residential Single Family homes are currently being end use metered as part of a separate study at Georgia Power Company. The Residential Single Family sample will be augmented with sites from the other operating companies. Gulf will have one industrial site in this project.

Florida Coordinating Group Research and Development - Gulf Power Company is actively participating in a research initiative commissioned by the Florida Coordinating Group Conservation Steering Committee, formed to evaluate and research demand side management measures. While this is an on-going research project, there were no expenses or activities for this project during this period.

The Efficiency Store - Energy Education program is designed to help achieve the conservation goals. The Efficiency Store is intended to provide customers with improved interest, awareness, and understanding of energy efficient technologies. The objective is to display and demonstrate those technologies that are designed to promote energy efficiency.

The Efficiency Store - Commercial Technology Demonstration is intended to provide customers with an avenue to energy efficient technologies. The objective of the store is to actually display and demonstrate those technologies that yield energy savings and benefits commercial customers. The customer will benefit through the convenience of one location for these demonstration needs and the ability to view new technologies in full use.

Pensacola Junior College (PJC) - Is a test project which will allow for full testing of commercial cooking equipment in the new culinary arts and test kitchen at Pensacola Junior College. Final construction and inspections have been completed. Customer demonstrations and student training began the last quarter of 1995.

Slinky Mat Loop Heat Pump - This type of ground loop design "slinky loop" or sometimes referred to as a "slinky mat loop" has not been installed in Northwest Florida or Florida to our knowledge. The results will reveal if this ground loop performs as well as the most common "vertical loop" in extracting and rejecting heat with the earth.

The system consist of an AT028 (2.3 tons) in a 2000 square feet home tied to 1800 feet of 3/4 inch polyethylene pipe 5 to 6 feet below grade. The mat loop is designed as 3 - 100 feet trenches with 600 feet of pipe per trench.

Another purpose is loop cost reduction potential. The projected savings on loop installation cost is \$1000 versus a vertical loop for the same unit. If the unit performs, the cost reduction will result in increased geothermal installations.

This project will also result in performance results associated with kWh, kW demand, ground source efficiency, supply/return water temperatures and hot water recovery kWh/kW reduction, with indoor/outdoor temperature monitoring (wet bulb, dry bulb, relative humidity).

Closed Loop - Dentist Office - Schwartz Dentist Office
This commercial project is to introduce and demonstrate geothermal technology benefits. This is a new construction general office building application to be monitored in conjunction with the Geothermal Heat Pump Consortium.

It consists of 10 tons of geothermal equipment connected to a underground closed loop piping system. The job also includes a hot water recovery unit to provide hot water needs.

Closed Loop - Hotel - Sleep Inn, hospitality/hotel - This application is for monitoring heating, cooling, and water heating costs. This includes 10 tons for heating & cooling in the office/lobby area and room/laundry hot water needs provided by a geothermal heat pump water heater with an efficiency rating of 10.

Van Norman Project - Is a triple function Nordyne heat pump providing heating, cooling, and water heating on demand. The heat pump compressor has a water heating mode. The total house, water heater, air handler and compressor are being monitored. Also, monitoring includes air temperatures, water temperatures, and gallons of hot water. Additional monitoring of various modes of operation is planned, but Gulf has not received the needed special equipment from the manufacturer at the close of this filing.

The Shores - The Shores is a Gulf-front condominium complex consisting of 52 units. The existing project was damaged during the storm surge caused by Hurricane Opal. The damage offered the opportunity to install geothermal equipment and avoid the frequent replacement of outdoor air cooled equipment every four to six years. This replacement is necessitated by the salt spray/ corrosion effects of the coastal environment.

A group common loop is installed consisting of one pump continuously circulating water avoiding the need for individual (pump) flow centers. The common loop option, combined with a volume purchase of all associated equipment, materials and labor, result in a substantial reduction in installation costs. The shared common loop (pipe/bore feet) has been designed at 13.5 percent less than that which would be required for individual unit installations. Gulf Power will be evaluating the common loop design as its application benefits versus individual demand pumping.

Funding in the amount of \$15,000 has been received from the Geothermal Heat Pump Consortium to cover engineering costs for this unique residential project. Gulf Power completed heat gain/loss calculations and has coordinated manufacturer/contractor support.

The Dunes - Is a project intended to monitor two heat pump water heaters in a hotel. The Heat Pump Water Heaters are expected to offset the KW demand of existing water heaters and to provide air conditioning to the laundry area.

Jim Day Project - Is a geothermal system which provides heating and cooling in a residential environment. This project also includes a geothermal heat pump water heater. The indoor air temperature, relative humidity, as well as ground loop temperatures are monitored along with the kilowatt hour usage for the geothermal system. Additionally, the geothermal heat pump water heater's water temperature is monitored as well as the kilowatt hour usage, water consumption, and ground loop temperatures.

Joe Ridge Project - Is a residential study which includes a geothermal heat pump with a built in heat recovery unit, a geothermal pool heater and a conventional air to air heat pump. This project was designed to study the efficiency of a geothermal pool heater and the built in heat recovery unit. The indoor air temperature, relative humidity,

kilowatt hour consumption, water consumption and ground loop temperatures are monitored. Additionally, the pool temperatures and water heating temperatures are included in the study.

Bay County Schools - Lucille Moore Elementary - Is a comparative study designed to illustrate the efficiency and demand reduction versus the conventional 10 S.E.E.R. air source systems. One six ton geothermal unit and one six ton air to air heat pump was installed in identical instructional areas in an elementary school. This study monitors the demand and kilowatt hour consumption. Also the environmental issues such as temperature and humidity are monitored as well. This study will also determine the reliability and maintenance reductions associated with the geothermal systems.

Low Income Multi-Family Housing Project - This is the first low income CDD project associated with Gulf Power Company. This project was designed to illustrate the efficiency of the geothermal systems compared to the existing heating and cooling systems. The project will demonstrate the reduction in maintenance cost to the facility and improve the quality of life for the tenants. This comparative study includes: three apartments retrofitted with geothermal equipment versus three identical structures with the existing heating and cooling equipment. KWh and water heating consumption is monitored for the comparison. Further, the indoor temperatures and ground loop temperatures are monitored also.

H₂O Purification This project is designed to test the reliability of ozone as an alternative to chlorine as a disinfectant. The ozone alternative is environmentally sensitive and would allow Panama City to reduce the amount of chlorine kept in storage. The ozone project will test the different types of installation schemes as well as the optimum ozone dosages needed to remove hydrogen sulfide gas and tannic acid through ozone injection.

Gulf Coast Community College (GCCC) - Is a test project which will allow full testing of commercial baking equipment in the culinary arts and test kitchen at Gulf Coast Community College. The test kitchen will allow Gulf Power to demonstrate different types of baking equipment in an actual restaurant environment.

Burger King - Is a comparative study between gas fryers and electric fryers and the effects on the cooking environment and energy consumption. Monitored equipment in the two Burger King's include: air conditioning, indoor temperatures, relative humidity, kWh, kW demand and of course the fryers. This study will determine which fryer reduces heat within the cooking environment and reduces consumption on the total facility.

Dr. Taylor - This commercial project is also a comparative study designed to illustrate the reduction of kW demand between geothermal heat pumps and air to air heat pumps. Dr. Taylor's office is located next to Dr. Schwartz's office (previously mentioned this report). The two offices were constructed to the exact same specification. The general office building includes 10 tons of high efficient air to air heat pumps and hot water heating to be examined.

Program Fiscal Expenditures: Program expenses were forecasted at \$181,254 compared to actual expenses of \$152,086 for a deviation of \$29,168 under budget. Project expenses were as follows: End-Use Profiling, \$0; Geothermal Heat Pump, \$0; FCG, \$0; Desiccant Dehumidification Heat Pump, \$3,339.32; Efficiency Store - Energy Education, \$47,348.10; Efficiency Store - Commercial Technology, \$14,257.39; PJC, \$0; Slinky Loop Mat Heat Pump, \$506.36; GCCC - \$5,332.20; H₂O Purification - \$3,603.47; Joe Ridge - \$292.85; Jim Day - (\$0.29); Burger King, \$18.72; Closed Loop - Dentist Office, \$270.24; Closed Loop - Hotel, \$20,826.70; Van Norman Project, \$367.20; Doctor Taylor (Dentist) - \$19.27; Bay County Schools - \$7,998.70; Low Income Multi-Family - \$47,358.94; Shores Condo, \$0; The Dunes, \$547.32.

Program Description and Progress

Program Title: Gas Research and Development

Program Description: Gulf Power's Gas Research and Development plan contains four individual research and demonstration projects. These are:

Triathlon Gas Heat Pump - a residential research project intended to determine long-term system performance, technical feasibility, and cost-effectiveness of engine driven gas heat pumps. Anticipated project duration is 48 months. This project is being conducted as part of an Electric Power research Institute (EPRI) Tailored Collaboration Project with the Southern Electric System. although transferability is not within the scope of the EPRI project, Gulf believes that the combination of field and lab tests under various conditions should provide sufficient information to characterize the unit performance for various ambient condition. Gulf's cost of the project is \$6,000 or an 8.8% share.

Gas Engine Driven Chiller - a commercial/industrial project intended to determine the actual operating characteristics and cost-effectiveness of engine driven chillers. The project is being conducted by the Southern Electric System in cooperation with the US Department of Energy and the ambient summer conditions in Atlanta, Georgia are transferable to Gulf's territory. This project has been completed. A final report has been submitted to the FPSC.

Dual Fuel Heat Pump Evaluation - a commercial/industrial project intended to determine the gas and electric energy consumption and cost effectiveness. The project is being conducted by the Southern Electric System in a climate area adjacent to Gulf's service area and therefore transferability of results will not be an issue. This project has been completed. A final report has been submitted to the FPSC.

Gas Fired Cogeneration Plant - Tyndall Air Force Base (AFB), located in Panama City, Florida, is in the process of constructing a 500 kW gas fired cogeneration plant. Gulf proposes to fund a monitoring study of the AFB's operational plant to determine cost-effectiveness of utilizing gas technology for cooling, hot water and electric production. The plant will be instrumented and data will be collected to

determine the efficiency of the overall process. This project has been completed. A final report has been submitted to the FPSC.

Program Fiscal Expenditures: Expenses were projected to be \$10,058 compared to actual expenses of \$1,458 for a deviation of \$8,600. All projects, except the Triathlon Gas Heat Pump project, have been completed and reports have been submitted to the FPSC. The Triathlon project is expected to be completed second quarter, 1998.

Staff's First Set of
Interrogatories
Docket No. 960002-EG
GULF POWER COMPANY
October 30, 1996
Item No. 1
Page 1 of 1

1. Please evaluate each of the company's approved DSM programs using the Commission's Comparison of Cost Effectiveness Test and the company's most recent planning assumptions. Show the results of each test. Identify each DSM program that fails RIM.

Answer:

The table below shows the results of Gulf Power's reevaluation of each of the Company's DSM programs currently approved for ECCR. These reevaluations were performed using the Company's most current planning assumptions. Those programs that do not pass the ratepayer impact measure test are indicated with an asterisk.

**Reevaluation for Cost-Effectiveness
of Gulf Power's Current ECCR Programs
(using Gulf Power Company's Current Planning Assumptions as of 11/01/96)**

	Benefit to Cost Ratios		
	Participant	RIM	IRC
* Residential Energy Audit	1.18	0.35	0.37
* In Concert with the Environment	2.22	0.72	1.24
* Residential Duct Leakage	1.86	0.81	1.25
* Good Cents Environmental Home	1.04	0.71	0.73
Residential Geothermal Home	N/A	1.87	N/A
Residential Advance Energy Management	0.95	1.04	1.00
* Gulf Express Energy Loan Program	N/A	0.73	N/A
* Commercial Energy Audit Program	5.55	0.87	2.10
* Good Cents Commercial Building	7.50	0.78	3.40

AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)

Docket No. 970002-EG

Before me the undersigned authority, personally appeared Margaret D. Neyman, who being first duly sworn, deposes and says that she is the Marketing Services Manager of Gulf Power Company, a Maine Corporation, that the foregoing is true and correct to the best of his knowledge, information and belief. She is personally known to me.



Margaret D. Neyman
Marketing Services Manager

Sworn to and subscribed before me this 18th day of
November, 1997.



Notary Public, State of Florida at Large

