One Energy Place Pensacola, Florida 32520

850.444.6111

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00 1027 15 7H 8 51



May 12, 2000

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. 000002-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,

inde G. Malane

Linda G. Malone Assistant Secretary and Assistant Treasurer

A Enclosure C Enclosure C C: Beggs and Lane Jeffrey A. Stone, Esq. Gulf Power Company Susan D. Ritenour

> DOCUMENT NUMBER-DATE 05950 MAY 158 FPSC-RECORDS/REPORTING

> > ŧ

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Conservation Cost Recovery

.

Docket No. 000002-EG

Certificate of Service

I HEREBY CERTIFY that a true copy of the foregoing was furnished by hand delivery or the U. S. Mail this $/\underline{34k}$ day of May 2000 to the following:

Norman Horton, Jr., Esquire Messer, Caparello, & Self, P.A. P. O. Box 1876 Tallahassee FL 32302-1876

John Roger Howe, Esquire Office of Public Counsel 111 W. Madison St., Suite 812 Tallahassee FL 32399-1400

Stuart L. Shoaf St. Joe Natural Gas Company P. O. Box 549 Port St. Joe FL 32456

Charles A. Guyton, Esquire Steel, Hector & Davis 215 S. Monroe, Suite 601 Tallahassee FL 32301

James D. Beasley, Esquire Ausley & McMullen P. O. Box 391 Tallahassee FL 32302

Ansley Watson, Jr., Esquire Macfarlane Ferguson & McMullen P. O. Box 1531 Tampa FL 33601-1531 Vicki G. Kaufman, Esquire McWhirter Reeves 117 S. Gadsden Street Tallahassee FL 32301

Grace A. Jaye, Esquire Staff Counsel FL Public Service Commission 2540 Shumard Oak Boulevard Tallahassee FL 32399-0863

James McGee, Esquire Florida Power Corporation P. O. Box 14042 St. Petersburg FL 33733-4042

Wayne L. Schiefelbein, Esq. Wiggins & Villacorta, PA P. O. Drawer 1657 Tallahassee FL 32302 John W. McWhirter, Jr., Esq. McWhirter Reeves P. O. Box 3350 Tampa FL 33601-3350

. . .

Kenneth A. Hoffman, Esq. Rutledge, Ecenia, Underwood, Purnell & Hoffman, P.A. P. O. Box 551 Tallahassee FL 32302-0551

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with Baller

JÉFFREY A. STONE Florida Bar No. 325953 RUSSELL A. BADDERS Florida Bar No. 0007455 Beggs & Lane P. O. Box 12950 Pensacola FL 32576 (850) 432-2451 Attorneys for Gulf Power Company

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION



ENERGY CONSERVATION COST RECOVERY CLAUSE

DOCKET NO. 000002-EG

PREPARED DIRECT TESTIMONY AND EXHIBIT OF MARGARET D. NEYMAN

True-up

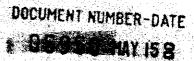
JANUARY – DECEMBER 1999

May 15, 2000



T,

A SOUTHERN COMPANY



EPSG-PCCOODC INC.

٩	t	Gulf Power Company
2	2	Before the Florida Public Service Commission Prepared Direct Testimony of
3	3	Margaret D. Neyman Docket No. 000002-EG
4	1	May 15, 2000
5	5	
e	6 Q.	Will you please state your name, business address,
7	7	employer and position?
ε	3 A.	My name is Margaret D. Neyman and my business address is
ş	•	One Energy Place, Pensacola, Florida 32520. I am
10)	employed by Gulf Power Company as the Marketing Services
11	I	Manager.
12	2	
13	3 Q.	Ms. Neyman, for what purpose are you appearing before
14	ŧ	this Commission today?
15	5 A.	I am testifying before this Commission on behalf of Gulf
16	6	Power Company regarding matters related to the Energy
17	7	Conservation Cost Recovery Clause, specifically the
18	3	approved programs and related expenses for January,
19)	1999, through December, 1999.
20)	
21	Q.	Are you familiar with the documents concerning the
22	2	Energy Conservation Cost Recovery Clause and its related
23	3	true-up and interest provisions?
24	4 A.	Yes, I am.
28	5	

Have you verified, that to the best of your knowledge ο. 1 and belief, this information is correct? 2 Yes, I have. 3 Α. We ask that Ms. Neyman's exhibit consisting of Counsel: 4 6 Schedules, CT-1 through CT-6, be marked for 5 identification as: 6 Exhibit No. ____(MDN-1) 7 8 Would you summarize for this Commission the deviations 9 Q. resulting from the actual expenditures for this recovery 10 period and the original estimates of expenses? 11 12 The estimated true-up net expenses for the entire Α. recovery period January, 1999, through December, 1999, 13 were \$3,103,777, while the actual costs were \$2,961,896 14 resulting in a variance of \$141,881 or 4.6% under the 15 estimated true-up. 16 17 Ms. Neyman, would you explain the January, 1999, through 18 ο. 19 December, 1999, variance? Yes, the reasons for this variance are a decrease in 20 Α. expenses in Gulf Express, under \$11,355; Geothermal Heat 21 Pump, under \$116,048; Commercial/Industrial E.A. & 22 T.A.A., under \$72,908; Commercial Mail-in Audit, under 23 \$9,723; Solar for Schools, under \$11,497; Conservation 24 Demonstration and Development, under \$82,482 and 25

Docket No. 000002-EG

Page 2

Witness: M. D. Neyman

Residential Mail-in Audit, under \$42,054. These program 1 expenses are off-set by Residential Energy Audits, over 2 \$39,825; GoodCents Select (Advanced Energy Management), 3 over \$84,770; Commercial/Industrial GoodCents 4 5 Buildings, over \$79,591 resulting in a net variance of \$141,881 under the estimated/actual program expenses 6 7 reported in November, 1999. A more detailed description of the deviations is contained in Schedule CT-6. 8 9 Ms. Neyman, what was Gulf's adjusted net true-up for the 10 Ο. period January, 1999 through December, 1999? 11 12 There was an over-recovery of \$217,821 as shown on Α. 13 Schedule CT-1, page 1. 14 Would you describe the results of your programs during 15 0. the January, 1999 through December, 1999, recovery 16 17 period? A more detailed review of each of the programs is 18 Α. 19 included in my Schedule CT-6. The following is a synopsis of the accomplishments during this recovery 20 period. 21 Residential Energy Audits - During this period, we 22 (A) projected to audit 2,000 structures. We actually 23 completed 1,103. 24 Residential Mail-In Audits - During this period, 25 (B)

Witness: M. D. Neyman

- 1,000 audits were projected and 210 audits were
 2 completed.
 - 3 (C) Gulf Express Loan Program No loans were completed
 4 during this period. The program discontinued
 5 accepting new loans in June, 1997.
 - 6 (D) In Concert With The Environment During this recovery
 7 period, no students attended the program compared to a
 8 projection of 1,000 students.
 - 9 (E) Duct Leakage Program During this recovery period, no
 10 homes were completed compared to a projection of 20.
 - (F) Geothermal Heat Pump During this recovery period, a
 total of 275 geothermal heat pumps were installed
 compared to a projection of 400.
 - (G) GoodCents Select (Advanced Energy Management) During
 this recovery period, 59 units were installed.
 - 16

17 Gulf expected 6,750 customers to participate in this
18 program by the end of the projection period. However,
19 the program has been delayed due to several factors.

20

21Gulf is modifying its schedule for market22implementation as a result of the delays, and plans to23increase the number of units deployed during the24latter part of 2000 and during the years 2001 to 200925to accomplish the basic program objective of achieving

- a total of 99,000 kilowatts of peak demand reduction
 by year end 2009.
 - 3 (H) Commercial/Industrial GoodCents Buildings During
 4 this recovery period a total of 232 buildings were
 5 built or improved to Good Cents standards, compared to
 6 a budget of 215.
 - 7 (I) Commercial/Industrial Energy Audits and Technical
 8 Assistance Audits During this recovery period, a
 9 total of 92 EA/TAA were completed compared to a
 10 projection of 156.
- (J) Commercial/Industrial Mail-in Audit 950 mail-in
 audits were projected compared to 1,147 mail-in audits
 being completed.
- (K) Solar for Schools This program uses "green 14 pricing" to fund solar technologies in public 15 schools. It also incorporates a school-based 16 energy education component as well as enhanced 17 outdoor lighting for schools. During the 18 projection period, Gulf will continue evaluating 19 20 various implementation options for Solar for 21 Schools.
 - (L) Conservation Demonstration and Development Sixteen
 research or demonstration projects have been
 identified and are detailed in Schedule CT-6.

25

1									
2	Q.	Ms.	Neyman,	does	this	conclude	your	testimony?	
3	Α.	Yes,	it doe:	5.					
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Witness: M. D. Neyman

STATE OF FLORIDA)) COUNTY OF ESCAMBIA)

Docket No. 000002-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 her knowledge, information and belief. She is personally known to me.

Margaret D. Neyman Marketing Services Manager

Sworn to and subscribed before me this 12^{m} day of Max_{m} , 2000.

State of Florida at Large Public,



Florida Public Service Commission Docket No. 000002-EG Gulf Power Company Witness: M. D. Neyman Exhibit No. ____ (MDN-1)

INDEX

Schedule Number	Title	Pages
CT-1	Adjusted net True-Up, January, 1999, through December, 1999	1
CT-2	Analysis of Energy Conservation Program Costs	2
СТ-3	Energy Conservation Adjustment	3 - 7
CT-4	Schedule of Capital Investments, Depreciation and Return	8 - 10
CT-5	Reconciliation and Explanation of Differences Between Filing and Audit	11
СТ-6	Program Descriptions and Progress Reports	12 - 28

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Florida Public Service Commission Docket No. 000002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-1 Page 1 of 1

GULF POWER COMPANY ENERGY CONSERVATION COST RECOVERY ADJUSTED NET TRUE-UP For the Period: January, 1999 Through December, 1999

		\$	\$
	Actual		
1.	Principal	(684,965)	
2.	Interest	(872)	
	Actual Under Recovery Ending Bala	nce	(685,837)
	Estimated/Actual Revised Novembe	r 19, 1999	
3.	Principal	(899,962)	
4.	Interest	(3,696)	
5.	Total Estimated/Actual Under Recov	ery	(903,658)
6.	Adjusted Net True-up, Amount to be	Refunded	217,821

Florida Public Service Commission Docket No. 000002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-2 Page 1 of 1

GULF POWER COMPANY ENERGY CONSERVATION COST RECOVERY ANALYSIS OF ENERGY CONSERVATION PROGRAM COSTS ACTUAL Vs ESTIMATED For the Period: January, 1999 Through December, 1999

	Actual	Est/Actual	Difference
1. Depreciation & Return	\$ 122,388.40	\$ 127,685	\$ (5,296.60)
2. Payroll & Benefits	1,325,215.40	1,381,236	(56,020.60)
3. Materials & Supplies	1,350,184.28	1,300,345	49,839.28
4. Outside Services	-	0	0.00
5. Advertising	186,024.33	299,041	(113,016.67)
6. Incentives	-	0	0.00
7. Adjustments	(19,924.22)	0	(19,924.22)
8. Other		0	0.00
9. SUBTOTAL	2,963,888.19	3,108,307	(144,418.81)
10. Program Revenues	1,991.90	4,530	(2,538.10)
11. TOTAL PROGRAM COSTS	2,961,896.29	3,103,777	(141,880.71)
12. Less: Payroll Adjustment	-	0	0.00
13. Amounts Inc. in Base Rate		0	0.00
14. Conservation Adjustment Revenues	1,906,253.18	1,833,137.31	73,115.87
15. Rounding Adjustment	1,906,253.00	1,833,137	73,116
16. True-up Before Adjustment	(1,055,643)	(1,270,640)	214,997
17. Interest Provision	(872)	(3,696)	2,824
18. Prior Period True-up	370,678	370,678	0
19. Other			0
20. End of Period True-up	(685,837.00)	(903,658)	217,821

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		Depre/Amort & Return	Payroll & Benefits	Materials & Expenses	Advertising	Incentives	Outside Services	Adjustments	Other	Sub-Total	Program Revenues I	Total
1.	Residential Energy Audit	0.00	(16,963.47)	17,014.12	39,774.37	0.00	0.00	0.00	ا 0.00 1 1	39,825.02	 0.00 	39,825.02
2.	Gutf Express	0.00	100.17	(11,455.42)	0.00	0.00	0.00	0.00	i 0.00 l I	(11,365.25)	1 0.00 	(11,355.25)
3.	In Concert with the Environment	0.00	7,290.68	920.33	0.00	0.00	0.00	(8,211.00)	ו 0.00 ו ו	0.01	ا 0.00 ا ا	0.01
4.	Good Cents Environmental	0.00	0.00	42.00	0.00	0.00	0.00	(42.22)	ן 0.00 ו ו	(0.22)	0.00 1 	(0.22)
5.	Duct Leakage	0.00	0.06	0.35	0.00	0.00	0.00	0.00	0.00 i I	0.41	 0.00 	0.41
6.	Geothermal Heat Pump	0.00	(62,468.22)	27,738.41	(70,798.04)	0.00	0.00	(10,520.00)	ا 0.00 ا	(116,047.85)	ا 0.00 ا ا	(116,047.85)
7.	Advanced Energy Management	(5,289.98)	(18,202.92)	103,564.68	2,160.00	0.00	0.00	0.00	0.00	62,231.76	(2,538.10) i I	84,769.88
8.	Comm/Ind Good Cents Building	0.00	95,893.68	9,047.77	(25,125.00)	0.00	0.00	(225.00)	0.00	 79,591.45 	ן 0.00 ו ו	79,591.45
9.	Comm/Ind E.A. & T.A.A.	0.00	(60,695.63)	(2,258.82)	(9,028.00)	0.00	0.00	(926.00)	0.00	(72,908.45)	 00.0 	(72,908.45)
10	Commercial Mail In Audit	0.00	1,402.15	(11,125.15)	0.00	0.00	0.00	0.00	0.00	(9,723.00)	0.00	(9,723.00)
11.	Solar for Schools	0.00	(1,331.53)	(10,165.37)	0.00	0.00	0.00	0.00	0.00	l (11,496.90) I	0.00 	(11,496.90)
12.	Research & Development	(6.62)	0.00	(82,475.56)	0.00	0.00	0.00	0.00	0.00	 (82,482.18) 	0.00 	(82,482.18)
13.	Gas Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1 I 0.00 I	0.00	0.00
14.	Residential Mail In Audit	0.00	(1,045.57)	8,991.94	(50,000.00)	0.00	0.00	0.00	0.00	 (42,053.63) 	0.00	(42,053.63)
15.	Total	(5,296.60)	(58,020.60)	49,639.28	(113,016.67)	0.00	0.00	(19,924.22) = ==================================		 (144,418.91) = ===================================	••••	(141,880.71)

CONSERVATION COSTS Per PROGRAM VARIANCE ACTUAL Vs ESTIMATED/ACTUAL For the Period: January, 1999 Through December, 1999

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Florida Public Service Commission Docket No. 00002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-3 Page 1 of 5

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CONSERVATION COSTS Per PROGRAM ACTUAL EXPENSES For the Period: January, 1999 Through December, 1999

	Actuat	Depre/Amon & Return	Psyroll & Benefits	Materials & Expenses	Advertising	Incentives	Outside Services	Adjustments	Other (Sub-Tolal	Program Revenues I	Total
1.	Residential Energy Audit	0.00	236,355.53	38,597.12	140,274.37		0.00	0.00	4	415,227.02	0.00 	415,227.02
2.	Gulf Express	0.00	3,592.17	(4,555.42)				0.00		(963.25)	0.00	(963.25)
3.	In Concert with the Environment	0.00	7,290.66	920.33				(6,211.00)	1	0.01	0.00 1	0.01
4.	Good Cents Environmental	0.00	0.00					(42.22)		(42.22)	0.00 ł I	(42.22)
5.	Duci Leakage	0.00	197.06	25.35						222.41	0.00	222.41
6.	Geothermal Heat Pump	0.00	82,286.78	97,415.41	40,889.96			(10,520.00)	1	210,072.15	0.00	210,072.15
7.	Advanced Energy Management	118,059.02	204,006.08	991,907.68	3,688.00					1,317,860.78	1,991.90	1,315,868.88
8.	Comm/Ind Good Cents Building	0.00	243,759. 68	30,883.77				(225.00)		274,418.45	0.00	274,418.45
9.	Commind E.A. & T.A.A.	0.00	470,958.37	75,564.18	972.00			(926.00)		546,568.55	0.00	546,568.55
10.	Commercia/Industrial Mail In Audi	0.00	26,777.15	53,674.85					1	80,652.00	0.00	80,652.00
11.	Solar for Schools	0.00	4,756.47	(9,665.37)						(4,908.90)	0.00	(4,908.90)
12.	Research & Development End Use Profiling Geothermal Heat pump FCG Desiccant Dehum. H. P. Energy Education Commercial Technology PJC Chosed Loop (Dentist) Sleep (nn Van Norman Shores Swilley Slinky Loop GCCC H2O Pur. Joe Ridge Jim Day Burger King Dr. Taylor (Dentist) Bey Co. Schools Low Income Mulki-Family MIOX Dunes Solar Light Days Inn Hampton Boardwalk Total	0.00 0.00 4.145.25 184.13 0.00	0.00	41,814.54 13,855.81 81.90 87.12 8,000.00 1,326.25 58.72 65,224.44	Ō.00	0.00	0.00	0.00	0.00	0.00 0.00 0.00 45,959.93 14,033.94 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0		0.00 0.00
13.	Gas Research & Development	0.00								0.00	0.00	1 0.00 1 I
14.	Residential Mail In Audit	0.00	45,235.43	9,991.94			L-11	*******	 	55,227.37	0.00	55,227.37
15.	Total	122,388.40	1,325,215.40	1,350,184.28	186,024.33	0.00	0.00	(19,924.22)	0.00	2,963,888.19	1,991.90	 2,961,896.29 = ===================================

Florida Public Service Commission Docket No. 000002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-3 Page 2 of 5

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CONSERVATION COSTS Per PROGRAM SUMMARY OF ACTUAL EXPENSES BY PROGRAM MONTH For the Period: January, 1999 Through December, 1999 in Concert w Envir, & Adv Energy Mgmi AUDIT ADJUSTMENTS PROGRAMS JAN FFB MAR APR MAY JUNE JULY AUGUST SEPTEMBER OCTOBER Rebete Adi NOVEMBER DECEMBER TOTAL Residential Energy Audits 28,290 91 ۰. 1801680 22 514 18 22,966 37 22,641.18 22,618,72 24.487.49 28,164.97 22 511 80 29,729.35 50,817.06 121 948 72 415,227.02 2. Gulf Express 284.68 261.64 14 248 17) 299.67 307.64 297.91 307.85 307.64 297.91 337.19 268.56 313.83 (963.25) 3. In Concert with the Environme 1,243.03 1,098.64 1,303.19 1,291.48 1.328.46 1 275 90 704.30 (33.99) (8 211 00) 0.00 0 00 0.00 0.00 0 01 Good Cents Environmente 0.00 0.00 0.00 0.00 0.00 0.00 0.00 (42.22) 0.00 0.00 0.00 0.00 6.00 (42.22) 5. Duct Leakage 293.97 (40.63) (40.96) 10.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 222.41 6. Geothermal Heat Pump 8,290,27 13 702 60 11 977 03 8,190.45 8,606.22 19,787.77 30 996 00 (2,520.00) 11,028.76 69.638 97 (8,000.00) 6,120.17 8,907.20 31,449,69 210.072.15 Advanced Energy Management Amortization and Return on I 31.929.61 84 077 69 96 265 55 96.173.62 47,353.50 66,216.68 115,808,93 178,187.98 117,047.10 17,846.20 9,561.35 113,001.63 115,814.79 1,199,801.75 76,090,34 9,561.41 9,322.92 13,523.00 118,059.02 B. Commiling Good Cents Bidg 29,597.23 20.099.52 22 890.06 23 683 27 20.697.73 24,985.87 20,948.30 (225.00) 21,184.66 23,119.50 22,673.06 19,724,91 24,739.34 274,418.45 9. Commind F & & T & A 48.130.74 53,266.27 60,905.45 28,599.85 44,110,42 47,900.18 41,932.97 (926.00 49,206.83 43,967.97 45,859.81 39 282 20 44.331.88 546,568.55 10. Commercial Mail In Aude 2.073.39 4 695 99 3 784.99 2,375.33 4,498.24 2,984.77 2,481.70 3,323.37 2,636.83 4,619.67 7,229.41 39,765 31 80,652.00 11. Solar for Schools 238.65 427 40 183 67 430.01 837.23 836.54 455.87 360.68 359.68 (10.053.03) 338.42 477.79 (4,908.90) 12. Research & Development End Use Profiling Geothermal Heat Pump (23,100.00) 23,100.00 0.00 0.00 FCG Desiccent Dehum, H. P. 0.00 0.00 45,959.89 14,039.94 Energy Education Commercial Technology 5,960.58 1,087.71 3,633.51 3 594.77 1,240,45 310,87 4,111.44 1,252.64 8,718.95 1.577.18 3,706.90 3,938.13 8 455 11 251.69 1,102.64 1,090.36 1,943.93 424.37 PJC 1.207.96 2,048.06 549.05 Closed Loop (Dentist) 0.00 Sleep Inn Van Norman 0.00 20.11 61,79 Shores Swilley Sinky Loop GCCC H2O Pur. 81.90 0.00 0.00 Joe Ridge Jim Day Burger King Or. Teylor (Denilet) Bay Co. Schools Low income Multi-Family мюх Dunes Bolar Lighi 87.12 Days inn Hampton 0.00 71.88 80.40 8.000.00 8,000 00 141.30 144.13 151.86 199.40 62.06 79.01 Boarrhupit 198.21 196.02 29.14 4.815.45 5,518.41 4 686 12 1.692.64 11,661.03 58.72 69,553.82 2,200.95 4,899.68 6.225.12 31,811.48 (12,409.00) 13. Gas Research & Development 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 14. Residential Mail In Audi 4,258.99 3,698.80 4,398.60 4,299.53 4 472 70 4,409.62 5,007.50 4,494.37 5,108.62 4,848.39 4.666.24 5,364.01 55,227.37 15. Recoverable Conservation Expenses 162.512.09 201.073.92 225,020.22 193,327.93 156,745.17 217.032.65 254 789 94 (3,713.22) 298, 435.72 67,879.34 269 047 76 (8,000.00) 238,767.28 285,650.03 305.319.38 2,963,888,19

Florida Public Service Commission Docket No. 000002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-3 Page 3 of 5

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ENERGY CONSERVATION ADJUSTMENT For the Period: January, 1999 through December, 1999

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Conservation Revenues	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUDIT ADJUSTMENTS	AUGUŞT	In Concert w Env & Adv Energy Mgmt		GEOTHERMAL REBATE	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1. a. Residential Conservation Audit Fees b. (Other Fees) c:	0.00 0.00 0.00		0.00 0.00 0.00		1,054-48 0.00 0.00		286.05 0.00 0.00	261.13 0.00 0.00	390.24 0.00 0.00	1,991.90 0.00 0.00						
2. Conservation Adjustment Revenues	142,193.18	116,352.74	123,556.32	136,795.97	153,212.73	178,330.09	197,779.92		205,229.09		177,853.12		145,436.62	124,280.99	207,432.41	1,906,253.18
3. Total Revenues	142,193.18	116,352.74	123,558.32	136,795.97	153,212.73	176,330.09	197,779.92	0.00	205,229.09	0.00	178,707.60	0.00	145,722.67	124,542.12	207,822.65	i 1,908,245.08
4. Adjustment not Applicable to Period - Prior True I	65 560 25	65,560.25	65,560.25	65,560.25	65,560.25	65,560.25	65,560 25		65,560.25		65,560.25		65,560.25	65,560.25	65,560.25	i 786,723.00
 Conservation Revenues Applicable to Period 	207,753.43	181,912.99	189,116.57	202,356.22	218,772.98	241,890.34	263,340.17	0.00	270,769.34	0.00	244,267.85	0.00	211,282.92	190,102.37	273,362.90	1 2,694,968.08 1
6. Conservation Expenses (Form CT-3 Page 8)	162,512.08	201,073.92	225,020.22	193,327.93	166,745.17	217,032.65	254,789.94	(3,713.22)	298,435.72	67,879.34	289,047.76	(8,000.00)	238,767.28	285,650.03	385,319.37	2,963,888.19
 True Up this Period (Line 5 minus Line 6) 	45,241.35	(19,160.93)	(35,903.65)	9,028.29	62,027.81	24,857.69	8,550.23	3,713.22	(27,646.38)	(67,879.34)	(44,779.91)	8,000.00	(27,484.36)	(95,547.66)	(111,936.47)	(268,920.11)
8. Interest Provision this Period (Page 10, Line 10)	1,458.60	1,245.56	882.23	562.63	442.39	364.44	188.56	274.65	(135.00)	279.34	(887.67)	448.06	(1,301.75)	(1,912.82)	(2,761.15)	l (871.93) I
9. True Up & Interest Provision Beginning of Month	370,677.64	351,817.34	268,341.72	167,760.05	111,790.72	108,700.67	68,362.55	11,521.09	15,508.96	(77,832.67)	(145,432.67)	(256,660.50)	(248,212.44)	(342,558.60)	(506,579.53)	l 370,677.64 l
10. Prior True Up Collected or Refunded	(65,560.25)	(65,560.25)	(65,560.25)	(65,560.25)	(65,560.25)	(65,580.25)	(65,560.25)	(65,560.25))	(65,560.25)		(65,560.25)	(65,560.25)	(65,560.25)	(786,723.00)
11. End of Period- Net True Up	351,817.34	268,341.72	167,760.05	111,790.72	108,700.67	68,362.55	11,521.09	15,508.96	(77,832.87)) (145,432.67)	(256,660.50)	(248,212.44)	(342,558.80)	(505,579.53)	(685,637.40)	(685,837.40)

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GULF POWER COMPANY COMPUTATION OF INTEREST EXPENSE ENERGY CONSERVATION ADJUSTMENT For the Period: January, 1999 through December, 1999

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	For the Period: January, 1999 through December, 1999 In Concert w															
					MAY	JUNE	JULY		AUGUST	In Concert w Env. & Adv Energy Mgmt.	SEPTEMBER	Geothermal Rebate	OCTOBER	NOVEMBER	DECEMBER I	TOTAL
Interest Provision	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULT	JUJUSIMENIC	100051	Energy Myrnu	acr i chipcri	1100410	OUTOBER	NOTEMOLIN		
1. Beginning True up Amount	370,677.64	351,817.34	268,341.72	167,760.05	111,790.72	108,700.67	68,362.55		15,508.98		(145,432.67)		(248,212.44)	(342,558.80)	(505,579.53) 	1
2. Ending True up before interes	350,358.74	267,096.15	166,877.82	111,228.09	108,258.28	87,998.11	11,352.53		(77,697.67)		(255,772.83)		(341,257.05)	(503,666.71)	(663,076.25) 	1
3. Total beginning & ending	721,038.38	618,913.50	435,219.54	278,988.14	220,049.00	176,698.78	79,715.08		(62,188.71)		(401,205.50)		(589,469.49)	(846,225.51)	(1,168,655.76)	j 4
4. Average True up Amount	360,518.19	309,456.75	217,609.77	139,494.07	110,024.50	88,349.39	39,857.54		(31,094,35)		(200,602.75)		(294,734.75)	(423,112.76)	(594,327.89) i	
5. Interest Rate First Day Reporting Business Month	4.9000	4.8100	4.8500	4.8800	4.8000	4.8500	5.0500		5.1000		5.3200		5.3000	5.3000	5.5500 l	4 4 8
 Interest Rate First Day Subsequent Business Month 	h 4.8100	4.8500	4.8800	4.8000	4.8500	5.0500	5.1000		5.3200		5.3000	*****	5.3000	5.5500	5.6000	1 1 1
7. Total of Lines 5 and 6	9.7100	9.6600	9.7300	9.6800	9.6500	9.9000	10.1500		10.4200		10.6200		10.6000	10.8500	11.1500	1
8. Average interest rate (50% of Line 7)	4.8550	4.6300	4.8650	4.8400	4.8250	4.9500	5.0750		5.2100		5.3100		5.3000	5.4250	5.5750	i I I
9. Monthly Average Interest Rat Line 8 \ 12	0.004046	0.004025	0.004054	0.004033	0.004021	0.004125	0.004229		0.004342		0.004425		0.004417	0.004521	0.004646	
10. Interest Provision (line 4 × 9)			882.23	562.63	442.39	364.44	168.56	274.65	(135.00)	279.34	(887.67)	448.06	(1,301.75)	(1,912.82)	(2,761.15)	(871.93)

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Florida Public Service Commission Docket No. 00002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-3 Page 5 of 5

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SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION AND RETURN Energy Education For the Period January, 1999 Through December, 1999

Line NQ.	Description	Beginning of Period	January	February	March	April	Мау	June	July	August	September	October	November	December	Total
1.	Investments (Net of Retirements)													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	
З.	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	261.65	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	
5.	Less: Accumulated Amortization	9,060	9,312	9,563	9,815	10,067	10,318	10,570	10,822	11,073	11,325	11,577	11,828	12,080	
6.	Net Investment	12,079	11,827	11,576	11,324	11,072	10,821	10,569	10,317	10,066	9,614	9,563	9,311	9,059	
7.	Average Net Investment		11,953	11,702	11,450	11,198	10,947	10,695	10,443	10,192	9,940	9,688	9,437	9,185	
	Rate of Return / 12 (including income Ta	xes) (B)	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8684%	0.8684%	
	Return Requirement on Average Net Inv		106.45	104.22	101.98	99.74	97.50	95.26	93.01	90.77	88.53	86.28	81.95	79.76	1,125.45
10.	Total Amortization & Return (Line 3 + 9)		358.10	355.87	353.63	351.39	349.15	346.91	344.66	342.42	340.16	337.93	333.60	331.41	4,145.25

Noles:

(A) 1995 Additions Amortized over 7 Year Period
 (B) Revenue Requirement Return is 10.6872% Jan - Oct 1999
 Revenue Requirement Return is 10.4209% Nov 1999 torward

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Florida Public Service Commission Docket No. 000002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-4 Page 1 of 3

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SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION AND RETURN Commercial Technology For the Period January, 1999 Through December, 1999

Line No.	Description	Beginning of Period	January	February	March	April	May	June	July	August	September	October	November	December	Total
1.	Investments (Net of Retirements)													0	
2.	Amortization Base	-	939	939	939	939	939	939	939	939	939	939	939	939	
3.	Amortization Expanse (A)	-	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.18	11.16	11.18	11.18	134.16
4.	Cumulative investment	939	939	939	939	939	939	939	939	939	939	939	939	939	
6.	Less: Accumulated Amortization	403	414	425	437	448	459	470	481	492	504	515	526	537	
6.	Net Investment	536	525	514	502	491	480	469	458	447	435	424	413	402	
7.	Average Net Investment		530.41	519.23	508.05	496.87	485.69	474.51	463.33	452.15	440.97	429.79	418.61	407.43	
8.	Rate of Relum / 12 (including income Ta	xes) (B)	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8684%	0.8684%	
9.	Return Requirement on Average Net Inve	estment	4.72	4.63	4.53	4.43	4.33	4.23	4.13	4.03	3.93	3.83	3.64	3.54	49.97
10.	Total Amortization & Return (Line 3 + 9)	-	15.90	15.81	15.71	15.61	15.51	15,41	15.31	15.21	15.11	15.01	14.82	14.72	184.13

Notes: (A) 1995 Additions Amortized over 7 Year Period (B) Revenue Requirement Return is 10.6872% Jan - Oct 1999 Revenue Requirement Return is 10.4209% Nov 1999 torward

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Florida Public Service Commission Docket No. 00002-EG GULF POMER COMPANY Witness: Margaret D. Neyman Exhibit No.____(MDN-1) Schedule CT-4 Page 2 of 3

SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION AND RETURN Advanced Energy Management (Good Cents Select) For the Period January, 1999 Through December, 1999

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Line <u>No.</u>	Description	Beginning of Period	January	February	March	April	May	June	July	August	September	October	November	December	Total
1.	Investments (Net of Retirements)	1,057,085.54			12,860.01	3,611.49			34.57		(16.35)	(2.19)	170,820.95	97,943.57	
2.	Amortization Base		1,057,085.54	1,057,085.54	1,069,945.55	1,073,557.04	1,073,657.04	1,073,557.04	1,073,591.61	1,073,591.61	1,073,575.26	1,073,573.07	1,244,394.02	671,168.80	
З.	Amortization Expense (A)		•	•	-	-	-		•	•	•	-	-	1,555.49	1,555.49
4.	Cumulative Investment	1,057,085.54	1,057,085.54	1,057,085.54	1,069,945.55	1,073,557.04	1,073,557.04	1,073,557.04	1,073,591.61	1,073,591.61	1,073,575.26	1,073,573.07	1,244,394.02	1,342,337.59	
5.	Less: Accumulated Amortization	 		. <u> </u>							-	<u> </u>		1,555.49	
8.	Net Investment	1,057,085.54	1,057,085.64	1,057,085.54	1,069,945.55	1,073,557.04	1,073,557.04	1,073,557.04	1,073,591.61	1,073,591.61	1,073,575.26	1,073,573.07	1,244,394.02	1,340,782.10	
7.	Average Net Investment		1,057,085.54	1,057,085.54	1,063,515.55	1,071,751.30	1,073,557.04	1,073,557.04	1,073,574.33	1,073,591.61	1,073,583.44	1,073,574.17	1,168,983.65	1,292,588.06	
8.	Rate of Return / 12 (Including Income T	axes) (B)	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.8906%	0.6906%	0.6906%	0.8906%	0.8906%	0.8684%	0.8684%	
9.	Return Requirement on Average Net Im	vestment	9,414.40	9,414.40	9,471.67	9,545.02	9,561.10	9,561.10	9,561.25	9,561.41	9,561.41	9,561.35	10,064.61	11,225.81	116,503.53
10.	Total Amortization & Return (Line 3 + 9))	9,414.40	9,414,40	9,471.67	9,545.02	9,561.10	9,561.10	9,561.25	9,561.41	9,561.41	9,561.35	10,064.61	12,781.30	118,059.02
Notes	:										As booked November Correc	tion	9,322.92	13,523.00	

Notes: (A) AEM Property Additions Depreciated at 3% per year (B) Revenue Requirement Return is 10.6872% Jan · Oct 1999 Revenue Requirement Return is 10.4209% Nov 1999 Jorward

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Florida Public Service Commission Docket No. 000002-EG GULF POWER COMPANY Witness: Margaret D. Neyman Exhibit No. ____(MDN-1) Schedule CT-4 Page 3 of 3

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GULF POWER COMPANY

Reconciliation and Explanation of Differences Between Filing and FPSC Audit Report for Months, January, 1999 through December, 1999

(If no differences exist, please state.)

NO DIFFERENCES

Schedule CT-6 May 15, 2000 Page 1 of 17

Program Description and Progress

Program Title: Residential Energy Audits

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: 2,000 residential energy audits were forecasted to be completed compared to 1,103 actual audits completed for a difference of 897 audits under projection.

<u>Program Fiscal Expenditures</u>: Forecasted expenses were \$375,402 compared to actual expenses of \$415,227 resulting in a deviation of \$39,825 over budget. The deviation is the result of additional advertising and materials needed for each of the audits.

<u>Program Progress Summary</u>: Since the approval of this program Gulf has performed 126,610 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.

Schedule CT-6 May 15, 2000 Page 2 of 17

Program Description and Progress

Program Title: Residential Mail-In Audits

<u>Program Description</u>: The Residential Mail-In Audit Program is a direct mail energy auditing program. This program will supplement Gulf's existing Residential Energy Audit program and will assist in the evaluation of the specific energy requirements of a residential dwelling. Homeowners 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, and other details regarding their lifestyles. The audit results package will be returned to the customer and will include targeted, timely information about energy conservation opportunities specific to that dwelling.

<u>Program Accomplishments</u>: 210 audits were conducted using this process during the reporting period compared to a projection of 1,000. The residential mail-in audit is beginning to gain acceptance and is expected to increase in following years.

<u>Program Fiscal Expenditures</u>: The program had actual expenses of \$55,227 compared to a projection of \$97,281 for a difference of \$42,054 under budget.

<u>Program Progress Summary</u>: This program was approved on August 5, 1997. There have been 495 mail-in audits completed program-to-date.

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Schedule CT-6 May 15, 2000 Page 3 of 17

Program Description and Progress

Program Title: Gulf Express Loan Program

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

Program Accomplishments: New loans were discontinued as of second quarter, 1997.

<u>Program Fiscal Expenditures</u>: Forecasted expenses were \$10,392 compared to actual expenses of (\$963). Actual expenses are negative due to some previous charges being journaled out of the program during this period. All future expenses will be for the administration of existing loans.

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

Schedule CT-6 May 15, 2000 Page 4 of 17

Program Description and Progress

Program Title: In Concert With The Environment

<u>Program Description</u>: In Concert With The Environment is an environmental and energy awareness program that is being implemented in 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.

<u>Program Accomplishments</u>: In Concert With The Environment was presented to no students during this recovery period compared to a projection of 1,000 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. Beginning in 2000, the program will be available for the students by request, but no expenses will be incurred to promote the program.

<u>Program Fiscal Expenditures</u>: No expenses for the period ending December, 1999, were projected. Expenses that were charged to the program early in 1999, were journaled out so that no expenses were charged to the program for the year.

<u>Program Summary</u>: Since the approval of the program, 4,378 students have completed the program.

Schedule CT-6 May 15, 2000 Page 5 of 17

Program Description and Progress

Program Title: Good Cents Environmental Home

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: During the recovery period, no Good Cents Environmental Homes were constructed. Gulf Power has maintained the availability of this program to our builders and customers; however, we have not advertised and promoted this program in an active manner.

<u>Program Fiscal Expenditures</u>: No expenses were forecasted for the period ending December, 1999. However, a charge from a previous period was removed during 1999, resulting in (\$42) for the program.

Schedule CT-6 May 15, 2000 Page 6 of 17

Program Description and Progress

Program Title: Duct Leakage Repair

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: During the this recovery period, no Duct Leakage Repair units were completed. Gulf Power will maintain the availability of this program to our builders and customers; however, we will not advertise and promote this program.

<u>Program Fiscal Expenditures</u>: Projected expenses were \$222 compared to actual expenses of \$222. These expenses were incurred early in 1999 for administration of the program.

<u>Program Progress Summary</u>: Program-to-date, 13 Duct Leakage Repair units have been completed. Program activities have related to education, training, and program development.

Schedule CT-6 May 15, 2000 Page 7 of 17

Program Description and Progress

Program Title: Geothermal Heat Pump

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: During this recovery period, 275 Geothermal Heat Pump units were installed compared to a goal of 400 units. This program is under projection due to a lower than expected participation rate in the program.

<u>Program Fiscal Expenditures</u>: Projected expenses for the period were \$326,120 compared to actual expenses of \$210,072 for a deviation of \$116,048 under budget. This program is under budget due to a reduction in labor and advertising expenses for the period.

<u>Program Progress Summary</u>: Program progress to date has been related primarily to education, training, and program development. 1,041 units have been installed program-todate.

Schedule CT-6 May 15, 2000 Page 8 of 17

Program Description and Progress

Program Title: GoodCents Select (Advanced Energy Management)

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: Gulf has experienced delays in receiving working prototypes and production equipment from the vendor. A total of 59 units have been installed during this period. The rate of installations has increased this year from last year.

Program Fiscal Expenditures: Net expenses were projected at \$1,231,099 compared to actual expenses of \$1,315,869 for a deviation of \$84,770 over budget. This program is over budget due to fixed costs prior to full implementation of the program.

<u>Program Progress Summary</u>: A total of 83 units have been installed program-to-date.

Schedule CT-6 May 15, 2000 Page 9 of 17

Program Description and Progress

Program Title: GoodCents Buildings

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.

<u>Program Accomplishments</u>: The goal during the current period was 215 installations compared to actual installations of 232 for a difference of 17 over goal.

<u>Program Fiscal Expenditures</u>: Forecasted expenses were \$194,827 compared to actual expenses of \$274,418 for a deviation of \$79,591. This deviation is due to our customers 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.

<u>Program Progress Summary</u>: A total of 7,736 commercial/industrial buildings have qualified for the Good Cents designation since the program was developed in 1977.

Schedule CT-6 May 15, 2000 Page 10 of 17

Program Description and Progress

<u>Program Title</u>: Commercial/Industrial Energy Audits and Technical Assistance Audits

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: During the period ending December, 1999, our goal was 156 while actual results were 92. 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.

<u>Program Fiscal Expenditures</u>: Forecasted expenses were \$619,477 compared to actual expenses of \$546,569 for a deviation of \$72,908 under budget. This program is under budget due to less labor time and materials been spent on each audit as well as the number of audits being under budget.

Program Progress Summary: A total of 11,000 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.

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Schedule CT-6 May 15, 2000 Page 11 of 17

Program Description and Progress

Program Title: Commercial Mail-In Audit Program

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: In this period, 1147 mail-in audits have been completed compared to a projection of 950 audits.

<u>Program Fiscal Expenditures</u>: Projected expenses for the period were \$90,375 compared to actual expenses of \$80,652 resulting in a deviation of \$9,723 under budget.

Program Progress Summary: To-date, 2,849 mail-in audits have been completed.

Schedule CT-6 May 15, 2000 Page 12 of 17

Program Description and Progress

Program Title: Solar for Schools

<u>Program Description</u>: 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.

<u>Program Accomplishments</u>: This program uses "green pricing" to fund solar technologies in public schools. It also incorporates a school-based energy education component as well as enhanced security lighting for schools.

Through the end of this period, \$25,435 has been collected through the "green pricing" mechanism. However, additional funding is necessary to enhance the initial project or begin a new solar project.

<u>Program Fiscal Expenditures</u>: Projected expenses for the period were \$6,588 compared to actual expenses of (\$4,909) for a deviation of (\$11,497) below budget. This program is below budget due money being taken from the "green pricing" contributions to pay for lighting and repairs on existing equipment. The expenses were incurred in the previous period and the journal entry was completed in this period resulting in the negative total.

<u>Program Progress Summary</u>: 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 December, 1999, 328 customers were signed up to contribute to this program.

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Program Description and Progress

Program Title: Conservation Demonstration and Development

<u>Program Description</u>: A package of conservation programs was approved by the FPSC in Order No. 23561 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:

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.

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 Florida to our knowledge. The system consists of a 2.3 ton Water Furnace geothermal heat pump (AT028)a 2000 square foot 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 foot trenches with 600 feet of pipe per trench.

One objective of this project was to determine if this ground loop performs as well as the most common "vertical loop" in extracting and rejecting heat from the earth Another objective of this project was to determine the cost reduction potential of this type of loop. The projected

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savings on a "slinky loop" installation versus a vertical loop installation for the same unit type is expected to be \$1,000. If the unit performs, the cost reduction should encourage increased geothermal installations.

This project also provided 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). This project has been completed. The reports are being prepared at this time.

Closed Loop - Dentist Office - Schwartz Dentist Office This commercial project was to introduce and demonstrate geothermal technology benefits. This was a new construction general office building application to be monitored in conjunction with the Geothermal Heat Pump Consortium. It consisted of 10 tons of geothermal equipment connected to an underground closed loop piping system. The site also included a hot water recovery unit to provide hot water needs. This project has been completed. The reports are being prepared at this time.

Closed Loop - Hotel - Sleep Inn, hospitality/hotel - This application was for monitoring heating, cooling, and water heating costs. This included 10 tons for heating and cooling in the office/lobby area and room/laundry hot water need provided by a geothermal heat pump water heater with an efficiency rating of 10. This project has been completed. The reports are being prepared at this time.

Van Norman Project - This project was 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 were being monitored. Also, monitoring included air temperatures, water temperatures, and gallons of hot water. This project has been completed. The reports are being prepared at this time.

The Dunes - This project monitored two heat pump water heaters in a hotel. Preliminary results were available during the 3rd quarter, 1997. In this project, the Heat Pump Water Heaters were expected to offset the KW demand of existing water heaters and to provide air conditioning to

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the laundry area. This project has been completed. The reports are being prepared at this time.

Jim Day Project - This project was a geothermal system which provided heating and cooling in a residential environment. This project also included a geothermal heat pump water heater. The indoor air temperature, relative humidity, as well as ground loop temperatures were monitored along with the kilowatt hour usage for the geothermal system. Additionally, the geothermal heat pump water heater's water temperature was monitored as well as the kilowatt hour usage, water consumption, and ground loop temperatures. This project has been completed. The reports are being prepared at this time.

Joe Ridge Project - This project was a residential study which included 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. This project has been completed. The reports are being prepared at this time.

Bay County Schools - Lucille Moore Elementary - Was 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 were installed in identical instructional areas in an elementary school. This study monitored the demand and kilowatt hour consumption. Also the environmental issues such as temperature and humidity This study will also determine the were monitored as well. reliability and maintenance reductions associated with the geothermal systems. This project has been completed. The report is being prepared at this time.

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.

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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.

Burger King - Was 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 was designed to determine which fryer reduced heat within the cooking environment and reduced consumption on the total facility. This project has been completed. The reports are being prepared at this time.

Dr. Taylor - This commercial project was 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. This project has been completed. The reports are being prepared at this time.

Solar Light - Gulf Power Company is presently testing a solar Photovotaic light at the Pine Forest facility. The solar light will be monitored for energy consumption and peak demand savings as well as the actual lumen for the security light. A successful test would result in using this light in our Solar for Schools program. This particular light did not use funding from the Solar for Schools Program, however, we did use funds from the Conservation Demonstration and Development program.

Hampton Inn - The Hampton Inn is being used to study geothermal heat pump water heaters for their laundry and Pool heating requirements. The Laundry room is cooled and the water heated with Geo-thermal Heat pump water heaters. The hotel pool is heated with a Geo-thermal Heat pump water heater.

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Boardwalk - The Boardwalk Laundry Room is a research site designed to study the effectiveness of the triple function Nordyne heat pump. This heat pump is designed to cool and heat the laundry room and also heat the water used to do laundry.

Program Fiscal Expenditures: Program expenses were forecasted at \$152,036 compared to actual expenses of \$69,553.79 for a deviation of \$82,482.21 under budget. Project expenses were as follows: Efficiency Store - Energy Education, \$45,959.89; Efficiency Store - Commercial Technology, \$14,039.94; Van Norman Project, \$81.90.; Solar Light, \$87.12; Boardwalk, \$58.69; and Hampton Inn, \$1,326.25; and Days Inn, \$8,000.00.