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GULF POWER
A SOUTHERN COMPANY

August 26, 1999

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. 981591-EG

Enclosed for official filing are an original and fifteen copies of the rebuttal testimony of T. S. Spangenberg and D. A. Shell on behalf of Gulf Power Company in the above docket. Also enclosed are revisions to T. S. Spangenberg's Direct testimony and page 9 of his exhibit.

Sincerely,

Susan D. Ritenour

Susan D. Ritenour
Assistant Secretary and Assistant Treasurer

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Enclosures

cc: Beggs & Lane
Jeffrey A. Stone, Esquire

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Spangenberg
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Shell
DOCUMENT NUMBER-DATE
10242 AUG 26 99
FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for authority to implement)
Good Cents Conversion Program by) Docket No. 981591-EG
Gulf Power Company)
)

Certificate of Service

I HEREBY CERTIFY that a copy of the foregoing has been furnished this 26th day of August 1999 by U.S. Mail or hand delivery to the following:

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annual electrical energy consumption is a reduction of 1,030 kWh at the meter. When the reduction in the participant's natural gas requirements is included, the typical impact is the conservation of 33.7 million Btu's of energy per year per participant at the meter.

Q. Were any recognized methodologies used to assess the cost effectiveness of the GoodCents Conversion Program?

A. Yes. The Commission has an established, approved methodology for assessing the cost effectiveness of energy conservation programs. This approved methodology is described in the publication "Florida Public Service Commission Cost Effectiveness Manual for Demand Side Management Programs and Self-Service Wheeling Proposals" adopted by the Commission in Rule 25-17.008, Florida Administrative Code. The approved methodology was used in performing the assessments of the Program. The manual sets forth three critical cost-effectiveness tests, the Ratepayer Impact Measure (RIM) Test, the Participant's Test, and the Total Resource Cost (TRC) Test. In order to be cost-effective under any of these tests, a program must have a benefits to cost ratio greater than 1.0.

Q. Using the approved methodology just described, is the GoodCents Conversion Program cost effective?

A. Yes. As depicted in Schedule TSS-1, all three key measures were at least 1.00. In other words, the GoodCents Conversion Program passes all three tests of cost-effectiveness specified in the Commission's manual on cost effectiveness of conservation programs.

Q. Please describe the assumptions that have been incorporated in the cost-effectiveness analysis for the GoodCents Conversion Program.

A. The base home for modeling purposes is a 1680 square foot home with an inefficient central air conditioning unit having an effective Seasonal Energy Efficiency Ratio (SEER) of 7.0 and a central gas furnace with a 68% Annual Fuel Utilization Efficiency (AFUE). In Gulf's assumptions, the entire existing heating and cooling system has been removed and replaced with a heat pump having a SEER of 11.0 and a Heating Season Performance Factor (HSPF) of 7.4.

Q. Are the assumptions incorporated in the cost-effectiveness analysis regarding summer peak demand, winter peak demand and annual energy usage reasonable?

A. Yes. These cost effectiveness evaluations are the result of the aforementioned system assumptions input

electrical demand, the use of promotional incentives was considered because those seem to be one of the most effective tools in today's marketplace for encouraging consumer action. However, the company wanted to ensure that all promotional offerings to customers were cost-effective. In all our considerations for potential HVAC upgrade programs, with the natural exception of our geothermal initiatives, we assumed that the cooling aspect of existing and replacement systems would be the traditional refrigerant cycle with air-to-air heat exchange. For the heating cycle we analyzed electric resistance heat, gas furnaces, and air-to-air heat pumps. While knowing that 7.0 SEER was a good average for existing systems, we also considered higher SEER's, i.e. newer equipment, for the system being replaced, realizing that the higher SEER's would make the cost-effectiveness tests more difficult to pass. The company did everything reasonable to ensure rigor in its analyses. The cost effectiveness tests results for these other variations are shown in Schedule TSS-1 and indicate that the only combination that passed the necessary cost-effectiveness tests was going from a gas furnace, regardless of equipment vintage, to a heat pump. In short, an attempt was made to include the

Cost Effectiveness Analysis
Cooling and Heating Efficiency Enhancement Program

Existing System			New System		Cost Effectiveness		
Heating	Cooling		Heating	Cooling	RIM	PART	TRC
68% AFUE Gas Furnace	**7 SEER A/C**		**7.4 HSPF Heat Pump**	**11 SEER Heat Pump**	**1.74**	**1.65**	**2.20**
68% AFUE Gas Furnace	7 SEER A/C	25% Free Riders	7.4 HSPF Heat Pump	11 SEER Heat Pump	1.59	1.60	2.12
68% AFUE Gas Furnace	7 SEER A/C	15 Yr. Program Life	7.4 HSPF Heat Pump	11 SEER Heat Pump	1.49	1.09	1.30
68% AFUE Gas Furnace	8 SEER A/C		7.4 HSPF Heat Pump	11 SEER Heat Pump	2.45	1.45	1.85
68% AFUE Gas Furnace	10 SEER A/C		7.4 HSPF Heat Pump	11 SEER Heat Pump	1.41	1.14	1.32
68% AFUE Gas Furnace	10 SEER A/C	15 Yr. Program Life	7.4 HSPF Heat Pump	11 SEER Heat Pump	1.19	1.39	1.88
Gas or Resistance Heat	7 SEER A/C		Gas or Resistance Heat	11 SEER A/C	1.06	0.87	0.93
Gas or Resistance Heat	8 SEER A/C		Gas or Resistance Heat	11 SEER A/C	0.95	0.60	0.60
Resistance Heat	7 SEER A/C		7.4 HSPF Heat Pump	11 SEER Heat Pump	0.75	1.46	1.07
Resistance Heat	8 SEER A/C		7.4 HSPF Heat Pump	11 SEER Heat Pump	0.66	1.26	0.82

Florida Public Service Commission
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Gulf Power Company
Witness: T.S.Spangenberg
Exhibit No.___ (TSS-1)
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Revised 08/25/99