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Jack L. Haskins
Manager of Rates and Regulatory Matters
and Assistant Secretary

the southern electric system

January 2, 1996

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
101 East Gaines Street
Tallahassee FL 32399-0870

RE: Docket No. 941172-EI

Enclosed are an original and fifteen copies of Gulf Power Company's Program Standards for its Demand Side Management Plan to be filed in the above docket.

Any questions the Commission staff may have regarding the plan may be directed to Margaret Neyman, Marketing Services Manager, at 904-444-6562.

Also enclosed is a 3.5 inch double sided, high density diskette containing the Program Standards in Microsoft Word 6.0 for Windows format as prepared on a MS-DOS based computer.

Sincerely,

Jack L Haskins

bjn

Enclosures

cc: Beggs and Lane
Jeffrey A. Stone, Esquire

Demand-Side Management Plan

of

Gulf Power Company Program Standards

Docket No. 941172-EI
January 2, 1996

"We Sell Efficiency"

Table of Contents

Gulf Power Company

Solar for Schools Pilot

Program Standards

Program Description

The Solar for Schools program is a demand side management program that 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.

In this "green pricing" approach, voluntary contributions for the program are solicited by bill inserts and media campaigns targeted at those interested in renewable energy and/or helping Gulf Power territory public schools. The funds are collected through a "check-off" mechanism in the utility bill or through a direct contribution and accumulated in an interest bearing account.

When contributions reach a workable level, they are applied at a participating school to 1) implement solar measures in three categories: passive solar, thermal active solar and photovoltaic solar, and 2) to initiate an Energy Education program.

Each participating school will implement a project that features a tailored combination of solar measures. The participating school will receive "green pricing" funds to implement the solar measures. In addition, each participating school may include some security lighting measures as part of the project. The project is subject to the conditions listed in the PARTICIPATION AGREEMENT (See attachment 2).

Gulf Power Company will also provide a cost effective contribution to each participating school which will include security lighting measures (if applicable) and equipment for energy education. If applicable, Gulf Power will provide the resources to install security lighting measures during the implementation phase of the project. The rest of the Gulf Power's cost-effective contribution will be for a tailored energy education program. A component of the energy education program will use the solar technologies in a "show and tell" sense so students get and report on an in-depth renewable-energy learning experience. Another component of the energy education program involves student participation in the measurement and analysis of solar measures. Finally, the energy education program will teach energy efficiency and renewable energy basics to both students and parents.

Program Objective

The principle objective of this program is to reduce kW demand and kWh consumption on the Gulf Power system by implementing a broad spectrum of solar technologies at public schools. The program also seeks to increase renewable energy and energy efficiency awareness among students, parents, and contributors. Finally, the program seeks to increase security and safety in participating schools.

Customer Eligibility

All public elementary, middle, and high schools in Gulf Power's service territory are eligible to seek inclusion in the Solar for Schools program. Participation must be initiated through a Gulf Power Commercial Energy Audit. After receiving a recommendation, each interested school may elect to become a Solar for Schools candidate by signing and returning to Gulf Power a Candidacy Application form (see Attachment 1).

After notification of selection, candidate schools may choose to become participants in the Solar for Schools program by executing "Gulf Power's Solar for Schools Program Participation Agreement", (see Attachment 2).

Program Standards

Solar Measures Requirements:

Each participating school will receive a tailored combination of solar measures which are grouped into three broad categories; namely

a) Passive Solar - includes measures which address solar load through non-mechanical means. By this definition, Passive Solar encompasses many building envelope measures, such as insulation, weather-stripping, sealing, caulking, radiant barriers, etc.

b) Thermal Active Solar - includes solar-thermal water heating, space heating, and air conditioning systems, as well as other thermal applications of solar energy.

c) Photovoltaic Solar - includes those systems which utilize electrical energy produced from sunlight by non-mechanical means. Photovoltaic systems may include a means for energy storage and DC to AC electrical conversion.

Energy Education Requirements

Each participating school will receive an energy education resource portfolio which consists of computer equipment, measurement instruments, energy education teaching and learning materials, and student energy activities planning and support.

Program Implementation Procedures

Gulf Power

Upon request, Gulf Power will evaluate a school by means of an energy audit and recommend Solar for Schools candidacy based on an assessment of potential solar and lighting measures applicable to the school. If recommended, the Gulf Power employee will explain the requirements of the program to the customer and issue a Solar for Schools candidacy form. (See Attachment 1.)

After receipt of an appropriately signed Solar for Schools candidacy form, Gulf Power will request from the school any other information necessary to perform a preliminary cost-effectiveness analysis of the solar and security lighting potential at the school. Gulf Power will notify each selected school and invite these schools(s) to assist in the development of a project plan. Gulf Power will incorporate into each project plan a full range of solar and lighting measures using the guidelines described in the "Requirements for Contractor Participation in Project Design" section of the Solar for Schools Standards and Procedures. Gulf Power will forward the results of this evaluation to the candidate school along with an estimated length of time for funding availability.

Schools

Requirements for participation in the Solar for Schools program include the following items:

1) After receiving a Gulf Power recommendation, interested schools should complete and submit the Solar for Schools Candidacy Application.

2) Upon the request of Gulf Power, a selected school must secure and review with Gulf Power current bids for contractor proposals which have been incorporated into the solar and security project plan.

3) Selected schools(s) may elect to implement a a finalized set of measures by executing a Participation Agreement (see Attachment 2).

4) Participanting schools are required to monitor the project after completion, subject to criteria listed in the Participation Agreement (see Attachment2).

Contractor Participation in Project Design

Gulf Power does not employ contractors in this program. Hiring contractors or approved alternate equipment vendors/installers is the responsibility of the participating school. However, as conditions warrant, contractors will be invited by Gulf Power to perform a detailed assessment of solar measures for a specific candidate school and propose specific measures. Each contractor must be licensed by the State of Florida to perform the services proposed. Solar and lighting security measures proposed by contractors as a result of this assessment must meet the following criteria:

1) The cost for each solar measure must include maintenance for the first five years of operation.

2) Each installed measure must be configured to serve as an energy lab for students. Configuration examples include installation location, visibility, gauges, transparent equipment covers, etc.

Each contractor should submit its assessment and proposed measures to Gulf Power for inclusion in the project design for the candidate school. The submitted proposals must include the estimated energy impact for each proposed solar measure including:

1) The specification of a reasonable reference state and/or equipment comparison from which demand and consumption estimates can be made

2) Estimated winter and summer customer peak demand savings

3) Estimated annual electrical energy consumption increases or consumption decreases

Disbursement of Funds:

The following requirements apply to the disbursement of contributed funds used to implement the Solar for Schools program:

1) No funds collected through the green pricing mechanism may be used to pay utility overhead costs incurred in the administration of the Solar for Schools DSM program.

2) On a program-wide basis, approximately 70% of the program funds will be applied to implement solar measures; approximately 30% of the funds will be applied to implement energy education measures.

3) The value of contributions (not including Gulf Power's contribution) applied at each participating school will not exceed $300,000.

The following requirements apply to the disbursement of contributed funds used to implement solar measures:

1) On a per school basis, disbursements of contributed funds will be authorized only for a cost effective package of solar and security lighting measures.

2) On a per school basis, the amount of money spent to implement the passive solar measures should equal or exceed funds authorized for either active thermal solar measures or photovoltaic measures.

3) On a per school basis, the amount of money spent to implement nonpassive measures must exceed 50% of the total funds to implement solar measures.

Gulf Power Contribution Procedures

Gulf Power will provide contributions to support the Solar for Schools program on a program-wide basis and on a per-school basis. The money for this contribution will be obtained through Energy Conservation Cost Recovery clause. Program-wide support includes coverage of the administrative cost of funds collection through the billing mechanism and the administrative and marketing cost attributable to the program.

Gulf Power's contribution per school will be determined by the Commission-approved Rate Impact Test, i.e., each school project will be evaluated individually using the Rate Impact Test. In this evaluation, the utility program-wide costs for

the operation of the Solar for Schools program will be apportioned equally across all participating schools. The value of the per-school contribution shall be the maximum amount which can be attained while still resulting in a Rate Impact Benefits -to- Costs ratio of 1.05.

The per-school cost effective contribution will consist of:

a) Scientific Instrumentation

This instrumentation will be capable of measuring the energy impact of selected solar measures. Contributions in this category will comprise approximately one-half the value of the Rate Impact cost effective contribution calculated just prior to measures implementation. The instrumentation will be contributed upon completion of satisfactory inspection of installed measures.

b) Computer Equipment

Additional equipment will be contributed after verification of projected energy impacts, as described in the Participation Agreement (see Attachment 2). Contributions in this category will be based on the remaining value achievable according to the Rate Impact Test, where this test reflects verified energy impacts.

C) Security Lighting

The per-school cost effective contribution may also include the installation of energy efficient security lighting systems. The application of security lighting systems on a per-school basis will be evaluated according to the following:

1) The proposed lighting measures must enhance the existing security at the school.

2) The security lighting measures must optimize Rate Impact cost effectiveness to the extent practical.

Gulf Power will provide funding for security lighting in accordance with the Participation Agreement.

ATTACHMENTS

Attachment 1:

Solar for Schools
Candidacy Application

Name of School:

Street Address _____
State, Zip Code _____
Phone Number _____
Principal _____
Assistant Principal _____
Designated Solar for Schools Contact _____
Solar for Schools Contact Phone Number _____

I. Customer Obligations

By applying for Candidacy in the Solar for Schools Program, the applicant school agrees to abide by the following conditions:

1. The candidate school must allow Gulf Power employees access to the premises for the purpose of further development of a Solar for Schools project plan.

2. The candidate school must allow qualified contractors access to the premises for the purpose of performing assessments of solar and security lighting applications.

If selected to receive Solar for Schools funding, the candidate school agrees to abide by the following conditions:

1. Participate in the development of a project plan in conjunction with Gulf Power in the following manner:

   a) review Gulf Power's proposed project plan during its development

   b) when requested by Gulf Power, solicit bids from qualified contractors whose proposals have been incorporated into the proposed project plan. Bid documents are subject to the guidelines described in "Contractor Participation in Project Design" section of the Solar for Schools Standards.

II. Gulf Power Obligations

Gulf Power Company agrees to evaluate the candidate for possible funding under the Solar for Schools Program. If selected for funding, Gulf Power will notify the candidate school and invite the candidate to assist in the development of a Solar and Security

project plan. Selection notification will include an estimate of the amount of funds available to the candidate school.

III. Indemnification

The Customer hereby expressly agrees to defend, indemnify and hold harmless Gulf Power from any and all claims, liabilities, obligations, damages, demands, losses, causes of action, cost or expenses of whatsoever kind of nature, including attorney's fees in all pre-litigation and litigation issues, including trial and appellate levels and in bankruptcy or insolvency proceedings, for injury to or death of any person and for damage to or destruction of any property resulting, in whole or in part, from any errors, omissions or any negligent, willful, wanton, reckless or intentional act(s) of the Customer in connection with the performance of the terms and conditions of this **Candidacy Application**, to the extent caused in whole or in part by said acts, errors or omissions of the Customer or a contractor/subcontractor retained by the Customer and/or anyone directly or indirectly employed by them, or either of them, or anyone for whose acts they may be liable; for, by reason of or in consequence of any error omission, or any willful, wanton, reckless, negligent or intentional act of, by or through the Customer; and/or for any violation of any federal, state, or local laws, ordinances or regulations by, through or as a result of the Customer or any employee, agent, contractor/subcontractor or anyone else directly or indirectly employed by or through them, or either of them, or anyone for whose acts they may be liable. The Customer shall not be obligated to indemnify Gulf Power for such claims, liabilities, obligations, damages or causes of action which arise as a result of the sole negligence of Gulf Power or its employees.

IV. Governing Laws

This **Candidacy Application** shall be construed under and governed by the laws of the State of Florida.

Gulf Power Corporate accepts the application of Candidacy for the Solar for Schools Program of

_____

The Candidacy Applicant listed above agrees to honor the terms listed in this Application.

GULF POWER COMPANY	CUSTOMER
By: _____	By: _____
Name: _____	Name: _____
Date: _____	Date: _____

Attachment 2:

GULF POWER'S SOLAR FOR SCHOOLS PROGRAM

PARTICIPATION AGREEMENT

Gulf Power Company, a Florida Corporation, hereinafter Gulf Power, whose mailing address is 500 Bayfront Parkway, P.O. Box 1151, Pensacola, FL, 32520-0231, and hereinafter Customer, whose business address is _____

_____

agrees to implement a Solar for Schools project as follows:

Title of Project _____
Location _____
Projected coincident kW reduced or shifted _____
Projected kWh increase at the meter _____
Projected kWh decrease at the meter _____
Appended Project description of measures **no. of pages** _____
Appended Impact Verification Plan **no. of pages** _____
Appended Education Plan **no. of pages** _____
Appended Disbursement Plan **no. of pages** _____

I. Customer Obligations

1. The Customer agrees to install the project named above, as described in the appended project description. Any deviations from the above stated project desired by the Customer shall be submitted in writing and approved by Gulf Power before the deviation is incorporated into the project. Any deviation from the above stated project not approved by Gulf Power may result in this **Agreement** being declared null and void by Gulf Power within Gulf Power's sole discretion.

2. The Customer agrees to monitor the demand and energy impact of selected measures as described in the appended Impact Verification Plan, which is subject to the following criteria:

   a) Energy impact data will be collected by the participanting school for selected measures over a one year period.

   b) Students will participate in the analysis and/or reporting of measured data for selected measures.

   c) Energy impact data and its corresponding analysis of kW and kWh effects will be made available to Gulf Power in written form accompanied by computer disk.

Any deviations from the above stated Verification Plan desired by the Customer shall be submitted in writing and approved by Gulf Power before the deviation is incorporated into the Verification Plan. Any deviation from the above stated Verification Plan not approved by Gulf Power may result in this **Agreement** being declared null and void by Gulf Power within Gulf Power's sole discretion.

3. The Customer agrees to select and hire contractors to implement the measures embodied in the above named the project.

4. The Customer agrees to the long term support of the Energy Education component of the Solar for Schools program in accordance to the attached Energy Education Plan, which is subject to the following criteria:

   a) ready access to students of energy education resources made available through this program

   b) secure housing and storage of energy education resources made available through this program

   c) support for at least five years of student-based measuring, monitoring and reporting activities for selected solar measures

Any deviations from the above stated Energy Education Plan desired by the Customer shall be submitted in writing and approved by Gulf Power before the deviation is incorporated into the Energy Education Plan. Any deviation from the above stated Education Plan not approved by Gulf Power may result in this Agreement being declared null and void by Gulf Power within Gulf Power's sole discretion.

5. The Customer agrees to select only those contractors who provide at least a five year performance guarantee and a five year equipment warrantee as a component of their bids. The performance guarantee may include a maintenance contract by the contractor or subcontractor.

6. The Customer agrees to allow Gulf Power access to their facility during the installation and maintenance of the project and throughout the minimum fifteen year life of the project to install, maintain, and read metering instrumentation.

7. The Customer agrees to properly maintain and operate installed measures.

8. The Customer agrees to properly remove and dispose of any equipment which is replaced in connection, directly or indirectly, with this project at the Customer's sole expense and at the Customer's sole discretion. Any and all removal/disposal of any such equipment shall be the Customer's sole responsibility/liability. It is

expressly understood and agreed that Gulf Power shall have no responsibility/liability for any said removal/disposal, including, but not limited to incidental and consequential damages caused by/arising from any such removal/disposal.

II. Gulf Power Obligations

1. Gulf Power will provide to the Customer an Impact Verification Plan which contains those measures selected for energy kW and kWh impact verification and a proposed methodology which takes into account available instrumentation and student expertise.

2. Gulf Power will disburse to the Customer the monies required to carry out the project as described in the appended Disbursement Plan, provided the project meets all the terms, conditions, and provisions of this **Agreement** and the Solar for Schools Program Standards.

3. Gulf Power will initiate and Energy Education Program for the Customer in accordance with the attached Energy Education Plan.

4. Gulf Power will provide a contribution to the project as described in the appended Disbursement Plan and in accordance with the Gulf Power Contribution Procedures in the Solar for Schools Program Standards.

III. Term

1. The time frame of this agreement shall begin on_____, 19____, and project implementation shall commence within six (6) months of this date.

2. The offer of a Gulf Power contribution is valid as long as the Florida Public Service Commission continues to approve Gulf Power's Solar for Schools Program and as long as the project is completed within one year from the execution of this **Agreement.**

IV. Indemnification

The Customer hereby expressly agrees to defend, indemnify and hold harmless Gulf Power from any and all claims, liabilities, obligations, damages, demands, losses, causes of action, cost or expenses of whatsoever kind or nature, including attorney's fees in all pre-litigation and litigation issues, including trial and appellate levels and in bankruptcy or insolvency proceedings, for injury to or death of any person and for damage to or destruction of any property resulting, in whole or in part, from any errors, omissions or any negligent, willful, wanton, reckless or intentional act(s) of the Customer in connection with the performance of the terms and conditions of this

Agreement, to the extent caused in whole or in part by said acts, errors or omissions of the Customer or a contractor/subcontractor retained by the Customer and/or anyone directly or indirectly employed by them, or either of them, or anyone for whose acts they may be liable; for, by reason of or in consequence of any error omission, or any willful, wanton, reckless, negligent or intentional act of, by or through the Customer; and/or for any violation of any federal, state, or local laws, ordinances or regulations by, through or as a result of the Customer or any employee, agent, contractor/subcontractor or anyone else directly or indirectly employed by or through them, or either of them, or anyone for whose acts they may be liable. The Customer shall not be obligated to indemnify Gulf Power for such claims, liabilities, obligations, damages or causes of action which arise as a result of the sole negligence of Gulf Power or its employees.

V. Amendment

This **Agreement** represents the complete understanding between Gulf Power and the Customer, and cannot be amended or modified without a written instrument executed by both parties to this **Agreement**.

VI. Governing Laws

This **Agreement** shall be construed under and governed by the laws of the Sate of Florida.

IN WITNESS WHEREOF, Gulf Power Corporation and _____ have executed this Agreement on _____ , 19_____

GULF POWER COMPANY

By: _____
Name: _____

CUSTOMER

By: _____
Name: _____

Gulf Power Company

In Concert With The Environment

Program Standards

Program Description

"In Concert With The Environment" is an environment and energy awareness program that is being implemented in the 8th and 9th grade science classes in Gulf Power Company's service area. The program will show students how everyday energy use impacts the environment and how using energy wisely increases environmental quality. "In Concert" is brought to students who are already making decisions which impact our country's energy supply and the environment. Wise energy use today can best be achieved by linking environment benefits to wise energy-use activities and by educating both present and future consumers on how to live "in concert with the environment".

The "In Concert" program was designed for teachers and their students from the ground up. "In Concert" comes complete with suggestions for implementation and evaluation, with quality materials designed to accentuate distinctive teaching styles. The program is flexible enough to be used as a stand-alone learning unit, or it can be integrated into existing lessons.

Program Objectives

The objectives of "In Concert" are as follows:

- To provide residential customers with energy conservation advice that will encourage the implementation of efficiency measures resulting in energy savings for the customer and energy and demand savings for Gulf Power Company.
- To encourage the wise use of energy and natural resources and affect change in energy-use habits.
- To illustrate the connection which exists between the daily use of energy and the quality of our environment.
- To develop a sensitivity to energy related environmental concerns.

- To create an understanding of what energy is and how it is transformed for our use.

- To help students understand how personal and family energy use impacts the environment, and encourage them to make positive changes in personal and family energy habits and, thus, positively impact the environment.

Customer Eligibility

"In Concert" is available to all eighth or ninth grade science classes in Gulf Power Company's service area. The Administration from each School District will determine in which grade the program is to be implemented. Students in other grade levels may participate if requested by the teacher. These classes would include honor classes, environmental classes, etc.

Program Standards

"In Concert" program materials include the following:

- An introductory presentation to launch student participation.

- A teacher's guide which includes lesson plans, activities, charts and graphs, and a resource guide.

- A take-home energy survey which the student completes with their families. The survey asks questions about their homes, lifestyles, and family and recycling habits.

- A student handbook which demonstrates to the student the link between energy consumption and the environment is provided to each student. The student will complete the handbook, answer questions and complete activities presented in the handbook and the teacher's guide.

- The energy survey is either entered into computers (supplied with the program) by the students or the student transfers the information from the survey to a scan card which is mailed to EcoGroup and scanned into the computer. The computer generates a three-part report:

  1) Annual Energy Expenditure Report: shows how much the family spends on various energy uses.

2) EcoWatt Benefits Report: demonstrates how the family can save money and earn EcoWatts to benefit the environment.

3) EcoWatt Benefits Action Plan: This report makes recommendations that will save energy and money, reduce transportation, and improve recycling habits. Students review this plan with their families and make commitments to implement these recommendations. The plan is signed and returned to Gulf Power Company for evaluation.

Gulf Power Company

Duct Leakage Repair

Program Standards

Program Description

The Duct Leakage Repair Program is to provide Gulf Power Company's residential customers a means to identify house air duct leakage and recommend appropriate repairs.

Program Objectives

The objective of the program is to reduce customer kWh energy usage and kW demand.

Customer Eligibility

This program is available to all residential customers within Gulf Power's service territory. Gulf Power Company will identify potential program participants through the Residential Energy Audit Program as well as through educational activities. The following criteria must be met:

- The residence must have an electric air conditioning system(s) coupled with a central duct system(s). Residences with non-electric heating are eligible where safety is not an issue.
- Duct systems must be easily accessible for leak site identification and repair.
- Duct leakage testing and diagnostics to be performed by Gulf Power.
- Repairs must be performed by Gulf Power Company approved contractors.
- The customer agrees to pay $25 for the duct system test.

Contractor Eligibility

- Repair contractors and their employees making repairs must attend a specified training course in testing and repair.
- Approved contractors must comply with Gulf's repair program requirements.
- All repairs to meet state and local codes.
- It is the responsibility of the contractor to obtain repair approval from the owner of the residence prior to performing any repairs.

Program Standards:

- Existing Home Market

1. Energy consultant conducts residential energy survey (audit).
2. Energy consultant notifies customer of supply/return leaks and recommends duct test.
3. Customer signs agreement and is billed $25 on electric service account by Gulf Power for duct test.
4. Gulf Power Company conducts pre-test diagnostics and provides results to customer.

   Results Include:

   a) Drawing of ductwork and leakage points identified.

   b) Amount of leakage in Cubic Foot per Minute (CFM).

   c) List of approved duct repair contractors.

5. Customer schedules appointment with contractor of choice.
6. Contractor meets with customer to provide repair estimate.
7. Customer schedules repair work with contractor.
8. Contractor makes repairs and bills customer.

9. Gulf Power Company inspects work.

10. Gulf Power Company credits customer's original $25.

- New Home Market

1. Builder, HVAC Contractor or Homeowner requests duct leakage test for new home duct system.

2. Requesting customer signs agreement and is billed $25 per duct system for duct test.

3. Gulf Power Company conducts duct test diagnostics (utilizing duct blaster) and provides results to requesting customer.

   Results include:

   a) Drawing of ductwork and leakage points identified.

   b) Amount of leakage in CFM.

4. Duct repairs made (responsibility of requesting customer).

5. Post test available upon request. (Cost is $25 per duct system).

Gulf Power Company

The Good ¢ents Environmental Home Program

Program Standards

Program Description

The Good ¢ents Environmental Home Program promotes energy-efficient and environmentally sensitive home construction techniques. The Good ¢ents Environmental Home Program Building Survey and Software program evaluates over 500 components in six categories:

1. Energy Efficiency
2. Building Design
3. Construction Practices
4. Building Materials
5. Water Efficiency
6. Ecological Planning

The Good ¢ents Environmental Home consists of energy and environmental components. The energy components evaluate the building envelope and mechanical systems of the home with respect to energy efficiency. The environmental components of the program include measures which evaluate thermal energy loss, alternative energy sources, embodied energy and design strategies that affect energy usage in the home.

Program Objectives

The objective of the Good ¢ents Environmental Home Program is to provide Gulf Power Company's residential customers with guidance concerning energy and environmental efficiency in new construction. The effect of the program will result in reductions in energy usage and peak demand as well as environmental impact.

Customer Eligibility

The Good ¢ents Environmental Home Program is available to individuals or entities constructing new residential buildings within Gulf Power Company's service territory.

Program Standards

The Gulf Power residential energy consultant will work with prospective participants by assisting with the completion of a Good ¢ents Environmental Home Program Building Survey. The survey will be input into the Good ¢ents Environmental Home Software Program which will determine program compliance.

The home must meet both Good ¢ents New Home standards and minimum environmental efficiency standards.

The heat pump/air conditioning system must have a minimum SEER of 13.0 with the minimum heating requirements being a 3.5 COP for a heat pump and a .90 AFUE for a fossil fuel furnace.

Gulf Power will give preliminary certification to homes meeting the Good ¢ents Environmental Home Program standards before construction or during early construction process and will inspect the home upon completion to ensure program compliance. Homes meeting program guidelines upon completion will be awarded Good ¢ents Environmental Home Certification. Each homeowner will be presented with a certificate of compliance and a user's manual to help guide lifestyle and usage patterns that are more environmentally and energy efficient. Gulf Power will provide the HVAC contractor with a certificate to complete and present to the homeowner certifying that the HVAC unit is properly sized and charged and that the duct work has been designed and installed to deliver proper air flow.

Gulf Power Company

Geothermal Heat Pump

Program Standards

Program Description

Geothermal heat pumps have been recognized as the most efficient heating and cooling systems available. However, because of higher initial cost and lack of information, consumers have been reluctant to buy even though these measures provide high rates of return.

The Residential Geothermal Heat Pump Program will promote this advanced heating and cooling technology to consumers, builders, HVAC contractors, residential designers and architects through information, education and demonstration. Promotional activities will include guaranteed heating and cooling operating costs to residential customers installing geothermal heat pumps in single-family homes or a $500 cash incentive per unit for multi-family dwellings.

Gulf Power's Geothermal Heat Pump program is designed to overcome existing market barriers, specifically, lack of consumer awareness, knowledge and acceptance of this technology. This program will promote efficiency levels well above current market conditions, specifically those units with an Energy Efficiency Ratio (EER) of 13.0 or higher.

Program Objectives

The Residential Geothermal Heat Pump Program is designed to reduce the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced geothermal systems. Geothermal heat pumps also provide significant benefits to participating customers in the form of reduced operating costs and increased comfort levels, and are superior to other available heating and cooling technologies with respect to source efficiency and environmental impacts.

Customer Eligibility

All single- and multi-family, new and existing dwellings in Gulf Power's service territory are eligible for the program. All participants must be willing to have an existing home energy audit or new home plan review completed to address proper HVAC sizing, proper installation and other conservation measures.

Program Standards

Job specifications and installation guidelines are as follows:

- The geothermal heat pump must meet the minimum efficiency of 13.0 EER at 90° entering water temperature (85° if 90° data is not published) and water flow of 3.0 gallons per minute per ton.
- Pressure and temperature (P/T) ports shall be installed on all loop systems.
- All piping for loop shall be PE 3408 polyethylene pipe with heat fused joints.
- All loop piping is to be pressure tested above ground prior to placing in bore holes or trench.
- All vertical bore holes are to be pressure grouted from the bottom to ground surface.
- Unit shall be set on sound deadening insulation pad.
- Equipment shall be sized according to Manual J or equivalent load calculation procedure.
- Equipment contractor shall provide manufacturer letter of certification to install ground source closed loop heat pumps.
- Loop contractor to provide manufacturer letter of certification in heat fusion, design (sizing), and installation of ground source closed loop systems.

Gulf Power Company

Residential Advanced Energy Management

Program Standards

Program Description

This program is designed to provide Gulf Power's customers with a means of conveniently and automatically controlling and monitoring their 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.

The Advanced Energy Management (AEM) System allows the customer to control the amount of electricity purchased for heating, cooling, water heating, and other selected loads; to purchase electric energy on a variable spot price rate; and to monitor at any time, and as often as desired, the use of electricity and its cost in dollars, both for the billing period to date and on a forecast basis to the end of the period. The various components of the AEM System installed in the customer's home, as well as the components installed at Gulf Power, provide constant communication between customer and utility. The combination of the AEM System and Gulf's innovative variable rate concept will provide consumers with the opportunity to modify their usage of electricity in order to purchase energy at prices that are somewhat lower to significantly lower than standard rates a majority of the time. Further, the communication capabilities of the AEM System allow Gulf to send a critical price signal to the customer's premises during extreme peak load conditions. The signal results in a reduction attributable to predetermined thermostat and relay settings chosen by the individual participating customer.

Program Objective

The program objectives for AEM are:

- Reduce the need for additional facilities required to meet peak period conditions.

- Increase the utilization of existing facilities during off-peak periods and measure in changes in energy consumption patterns resulting from customer use of advanced energy management features in conjunction with variable pricing.

- Enhance customer perception of the value of service by providing an alternative which allows greater understanding of and control over electric bills.

- Provide an alternative pricing structure which more accurately reflects the time varying cost of providing electric service.

- Increase customer acceptance and satisfaction associated with an alternative pricing structure.

Customer Eligibility

The Advanced Energy Management Program (AEM) is available to all detached single family, owner occupied residences. These customers must be eligible for the Rate Schedule RS (residential service).

Program Standards

The RSVP (residential service variable pricing) rate is for customers who volunteer to participate in Gulf Power Company's Residential AEM Program.

The customer must agree to participate in the AEM Program for a minimum of one year.

The customer's electrical equipment and appliances must be in acceptable operating condition. Gulf Power Company will not be responsible for the repair, maintenance, or replacement of the customers electrical equipment or appliances.

The customer will provide reasonable access for installing, maintaining, inspection, testing, and/or removal of the AEM equipment.

The customer will pay an additional charge to share the cost of the AEM equipment. This charge, based on equipment costs, will be added to the customer's monthly bill as a customer facility charge.

Gulf Power Company

Commercial/Industrial Good ¢ents Building

Program Standards

Program Description

The most common critical areas in commercial buildings that affect summer peak kW demand are the thermal efficiency of the building and HVAC equipment efficiency. The Commercial/Industrial Good ¢ents Building program provides requirements for these areas that will help reduce peak kW demand and energy consumption.

Gulf Power Company's representative is made aware of the possible construction or renovation of a building either through official notification as reported in the Dodge Reports published weekly, architect/engineers' request for assistance, or a request for temporary service made by the construction firm or owner.

The Company representative contacts the architect/engineer, if not previously contacted, to begin assisting in the design phase of the building in order to incorporate the conservation measures necessary to qualify for the Commercial/Industrial Good ¢ents Building program. The assistance provided consists of: load calculations using Manual N, lighting designs both interior and exterior, equipment recommendations, recommendations of energy storage systems, heat recovery systems, economizers, demand control equipment, and specialized equipment recommendations.

During the construction phase, the Company representative visually inspects for the installation of the Good ¢ents features and equipment agreed upon. At the end of the construction phase, the Company representative assists in acquiring electrical service to meet the customer's needs.

Program Objectives

The objective of the Commercial/Industrial Good ¢ents Building Program is to provide Gulf Power's commercial customers with guidance concerning energy efficiency in new construction and renovation of commercial/industrial buildings.

The effect of the program will result in reductions in kWh energy usage and peak kW demand.

Customer Eligibility

The Commercial/Industrial Good ¢ents Building Program is available to all new or existing commercial and industrial customers who maintain conditioned space within their buildings.

Program Standards

Prescriptive Envelope Option:

The Prescriptive Envelope Option will provide architects/designers/building owners a menu of items available for a Commercial/Industrial Good ¢ents Building certification. Except for one, the features in this option are all structural in nature. The minimum requirements listed are those for insulation levels and window (glass) shading.

The Additional Requirements section of the Prescriptive Option allows the customer a choice of three of the seven requirements listed. These choices include increased insulation levels above the minimum requirements, improved entry ways with the incorporation of vestibules and exterior door improvements, and increased glass performance. One option is more behavioral rather than structural, that being the installation of an Energy Management System.

A. Minimum Insulation Requirements:

- R-19 Roof/Ceiling structure
- R-11 Exterior Walls

B. Minimum Window (including glass doors) Requirements:

- All glass is 100% externally shaded at 3:00 p.m.

OR

- All glass has a shading coefficient (without any internal shading) of .65 or lower as rated by the manufacturer.

C. Additional Requirements:

In addition to the above requirements, the building must also meet at least 3 of the 7 requirements listed below.

1. Increase roof/ceiling insulation to R-30.
2. Increase exterior wall insulation to R-13.
3. Incorporate a vestibule on all regularly used entrances and exits.
4. Total glass area is less than 12% of gross exterior wall area.
5. All exterior glass (except glass doors) is double pane.
6. Metal insulated or double pane glass exterior doors.
7. Install programmable thermostats or Energy Management Systems on all HVAC systems.

Thermal Performance Option:

This option will require a building to use the entire exterior thermal envelope by calculating both solar and transmission heat gains into the performance formula. The resulting BTUH heat gain will then be divided by the total envelope square footage (total exterior shell of the conditioned space including walls, windows, roof/ceiling, and floors if off-grade) to obtain a BTUH/Sq.Ft. ratio. Depending upon the conditioned floor square footage of the building, this ratio must meet the requirements of the applicable building size described in the program

The solar and transmission heat gain designed at 93° outside and 78° inside shall not exceed the following levels of heat gain per square foot of above grade exterior envelope.

Conditioned Floor Square Footage	BTU/h/Sq. Ft. of Exterior Envelope
0 to 5,000	5.5
5,001 to 15,000	5.0
over 15,000	4.5

HVAC Efficiency Requirements:

To qualify for the Commercial/Industrial Good Cents Building certification, customers must meet the HVAC requirements and meet or exceed the standards in either the Prescriptive or Performance options.

A. Systems with cooling capacity < 65,000 BTU/h

- Unitary split systems
  - a) Single Phase — **Min. 11.0 SEER**
  - b) Three Phase — **Min. 10.2 SEER**
- Unitary package systems — **Min. 10.0 SEER**
- Packaged Terminal A/C or Heat Pump (PTAC or PTHP)
  - a) <12,000 — **Min. 9.0 EER**
  - b) >12,001 — **Min. 8.7 EER**

B. Systems with cooling capacity ≥ 65,001 and ≤ 135,000 BTU/h

- Unitary split systems — **Min. 9.0 EER**
- Unitary package systems — **Min. 9.0 EER**

C. Systems with cooling capacity ≥ 135,001 BTU/h

- Unitary split systems — **Min. 9.0 EER**
- Unitary package systems — **Min. 8.5 EER**

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Approval of Demand-Side Management Plan of Gulf Power Company) Docket No. 941172-EI

Certificate of Service

I HEREBY CERTIFY that the original of Gulf's response has been furnished this 2nd day of January 1996 by U.S. Mail or hand delivery to the following:

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