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June 25, 2008

080395

Ms. Ann Cole, Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee FL 32399-0850

Dear Ms. Cole:

RE:

Petition for Approval of Modifications to Gulf Power Company's Demand-Side Management Plan

Enclosed are an original and fifteen copies of the Petition for Approval of Modifications to Gulf Power Company's Demand-Side Management Plan.

Also enclosed is a CD containing the Petition in Microsoft Word format as prepared on a Windows NT based computer.

Sincerely,

**Enclosures** 

Beggs & Lane

Jeffrey A. Stone, Esq.

Susan E. Ritanour Sonh

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DOCUMENT NUMBER-DATE

FPSC-COMMISSION CLERK

#### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Approval of	)	Docket No.: 08 <u>0</u> 30 5 -EG
Modifications to Gulf Power Company's	)	
Demand-Side Management Plan	)	
	)	Filed: June 25, 2008
	)	

# PETITION FOR APPROVAL OF MODIFICATIONS TO GULF POWER COMPANY'S DEMAND-SIDE MANAGEMENT PLAN

Gulf Power Company ("Gulf Power" and/or "the Company"), pursuant to sections 366.82 and 366.06(1), Florida Statutes (2007), and Rule 25-17.0021, Florida Administrative Code, petitions the Florida Public Service Commission (the "Commission") for approval of modifications to Gulf Power's Demand-Side Management ("DSM") Plan as described in this petition and for authorization of Gulf Power to recover through the Energy Conservation Cost Recovery ("ECCR") clause reasonable and prudent costs associated with such programs. In support of this petition Gulf Power states:

- 1. Gulf Power is a public utility subject to the jurisdiction of the Commission pursuant to Chapter 366 of the Florida Statutes. The address of Gulf Power's principal business office is: One Energy Place, Pensacola, Florida 32520.
- 2. The names and addresses of Gulf Power's representatives to receive communications regarding this docket are:

Jeffrey A. Stone Russell A. Badders Steven R. Griffin Beggs & Lane P.O. Box 12950 Pensacola, FL 32591 Susan D. Ritenour Secretary and Treasurer Gulf Power Company One Energy Place Pensacola, FL 32520-0780

3. Gulf Power is subject to the Florida Energy Efficiency Conservation Act ("FEECA"), sections 366.80-366.85 and 403.519, Florida Statutes (2007), and its ECCR clause DOCUMENT NUMBER-DATE

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is subject to the Commission's jurisdiction. Pursuant to FEECA and Commission rules implementing FEECA, Gulf Power is required to seek the Commission's approval of any amendments or modifications to its DSM Plan and is entitled to seek recovery of associated expenditures. Gulf Power has a substantial interest in whether the Commission approves the requested modifications to its DSM Plan and authorizes cost recovery for program expenditures.

- 4. By Order No. PSC-05-0273-PAA-EG, issued on March 14, 2005, in Docket No. 040032-EG, the Commission approved Gulf Power's DSM Plan for meeting its conservation goals established in that docket. By Order No. PSC-07-0455-PAA-EG issued on May 29, 2007, in Docket No. 070119-EG, the Commission approved minor modifications to Gulf Power's Commercial and Residential Geothermal Heat Pump Programs. Gulf Power's current DSM Plan consists of a portfolio of individual DSM programs which includes six residential programs, five commercial/industrial programs, one research and development program and a renewable energy program.
- 5. In this petition, Gulf Power is proposing the addition of two new programs to its DSM Plan: a Solar Thermal Water Heating Program Pilot and Energy Education Program.

  Descriptions of each of the programs are contained in Appendices "1" and "2," respectively.
- 6. Approval of the proposed Plan modifications will help further the objectives of FEECA by cost-effectively reducing the growth rate of weather sensitive peak demand, reducing and controlling the growth rate of energy consumption, increasing the conservation of expensive resources and increasing the efficiency of the electrical system. See, § 366.81, Fla Stat. (2007); Rule 25-17.001(2), F.A.C. Reducing the growth rate of weather sensitive peak demand will benefit not only Gulf Power's individual customers who reduce their demand through participation in the modified DSM Plan, but also all other customers on Gulf Power's system.

See, Rule 25-17.001(3), F.A.C. Gulf Power believes that the end result of implementation of these new programs will be greater participation in the Company's DSM Programs, resulting in increased demand and energy reductions due to higher participation levels. Gulf Power plans to initiate the new programs after they have been approved.

- 7. Gulf Power is not aware of any disputed issues of material fact. Gulf Power's proposed modifications to its DSM Plan should be approved. The Commission should authorize recovery of the reasonable and prudent costs associated with these modifications to Gulf Power's Plan through the ECCR clause. The statutes and rule which entitle Gulf Power to relief are sections 366.82(2), 366.06(1), Florida Statutes (2007), and Florida Administrative Code Rule 25-17.0021 (2007).
- 8. There has not been agency action in this proceeding. Therefore, Gulf Power cannot provide a statement of when and how Gulf Power received notice of agency action.

WHEREFORE, Gulf Power respectfully requests that the Commission: (1) approve Gulf Power's proposed modifications to its DSM Plan, (2) authorize Gulf Power to recover through the ECCR clause reasonable and prudent expenditures associated with the modified Plan, and (3) grant such other relief as may be appropriate.

Respectfully submitted this 25<sup>th</sup> day of June, 2008.

JEFFREY A. STONE

Florida Bar No. 325953

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# Solar Thermal Water Heating Program Pilot

## **Program Description**

Gulf Power Company's Solar Thermal Water Heating Program is a three-year pilot program designed to gauge utility customer interest in, and acceptance of, this technology, as well as determine what economic incentives may be most effective in increasing the public's willingness to install the technology in their homes.

Solar thermal water heating offers customers the opportunity to reduce their overall annual water heating costs by substituting renewable solar thermal water heating for a portion of natural gas or electric resistance domestic water heating. Solar water heaters work by transferring heat energy from the sun to heat water through a series of solar collectors. These systems utilize tank storage and operate in conjunction with a back-up source of water heating to ensure uninterrupted supply to the customer. There are various designs available in the market to meet the needs of the customer and specific application.

The Solar Thermal Water Heating Program will be utilized throughout Gulf Power Company's service area to expand the knowledge and awareness of this technology among Gulf's residential customers.

Gulf Power also proposes to demonstrate solar thermal water heating in a low-income multi-family application. Gulf is working with a planned low-income development to

facilitate installation of solar water heating systems in approximately 88 apartment units.

This project will also meet the "Installation Guidelines" section below.

# Participation Standards

- All Gulf Power residential customers are eligible for the Solar Thermal Water Heating pilot program.
- As a program participation requirement, Gulf Power will perform a
  complimentary home energy check-up which includes comprehensive energy
  savings tips, a voucher for Energy Star® rated compact fluorescent lightbulbs
  (CFL's), and guidelines for successful solar thermal water heating installations.
- Gulf Power will offer a \$1,000 rebate payable to customers after the "qualifying" system has been completely installed and verified by field personnel from the company's Marketing department. Qualified systems are further outlined in the "Installation Guidelines" section of this appendix.
- In addition to the Gulf Power rebate, participating customers may be eligible for an additional \$500 rebate from the State of Florida, as well as a 30% federal tax credit, up to \$2,000, available to tax payers through tax year 2008.

## **Benefits and Costs**

All kW and kWh reduction is compared to standard, storage tank-type electric resistance water heating. The summer kW reduction is projected to be .25 kW and represents 100% of the potential peak demand reduction for electric resistance water heating. The annual kWh reduction is projected to be 2,600 kWh, which equates to a 75% reduction in the

standard water heater's annual energy consumption. These standard water heating assumptions are derived from a combination of modeled and metered water heating data.

The following costs are associated with implementing the Solar Thermal Water Heating Program Pilot:

- Brochures and promotional materials Expenditures for this line item will include a
  one-time charge of \$7,000 for the initial design and printing of program materials and
  brochures for the Solar Thermal Water Heating Program. Ongoing material needs are
  estimated at \$3,000 per year.
- Pre- and Post-Pilot Surveys The estimated cost of these surveys is approximately
   \$30,000 and will include customers who elect not to participate as well as participants in the program.
- Incentives Based on current state rebate applications, Gulf projects a maximum of
   75 participants per year during this pilot phase. This would result in an estimated cost of \$225,000 over the three-year pilot.
- Low-income project The cost of the low-income project is estimated to be \$375,000.
- Advertising Advertising will be utilized to generate solar thermal water heating awareness and interest as well as increase program participation. Estimated advertising expense is \$50,000 per year.

Other – Costs specific to increased participation in Gulf's Solar Thermal Water
 Heating Program Pilot will be captured within this specific program.

Total cost is estimated at \$793,000.

#### Monitoring and Evaluation

Gulf Power will undertake an annual survey of customers who participate in the Solar Thermal Water Heating Program to determine their level of satisfaction with the technology, as well as gauge customers' perceived value of the incentive level offered for the pilot program. This survey will also attempt to assess customer attitudes in regard to the technology's perceived environmental and economic value. Evaluation techniques could include pre- and post-installation surveys, focus groups, etc. In addition, randomly selected non-participants and non-participants who expressed interest in the program will be surveyed in an effort to determine the value of alternative incentive and promotional practices. Monitoring and evaluation results will be compared to available utility or governmental baseline and/or historical solar thermal water heating participation figures in order to assess the effectiveness of Gulf Power's program.

Gulf Power will further validate estimates of demand and energy reductions associated with solar thermal water heating using billing data and metering of customer equipment.

#### **Cost-Effectiveness**

The program will be evaluated at the end of the three-year pilot period for costeffectiveness. Due to a very limited supplier base in Northwest Florida, accurate
estimates of installed costs are difficult to obtain. During the pilot phase, monitoring of
actual installed costs and actual demand and energy impacts will provide more reliable
information for a cost-effectiveness evaluation.

#### Limitations

The homeowner recognizes and agrees that Gulf Power Company is not a seller, distributor, manufacturer or installer of the equipment described herein, and that Gulf Power Company makes no warranties, express or implied, including warranties of merchantability or fitness for purpose. The homeowner agrees that Gulf Power Company will not be liable for any direct, indirect or consequential damage suffered by the homeowner or third parties caused by the solar thermal water heating system, its use, installation, manufacture, performance or lack of performance.

#### **Inspections**

Gulf Power Company shall have the right to verify installation of the solar thermal water heating system by conducting an inspection of the homeowner's dwelling. Gulf Power Company shall have the right to enter the homeowner's dwelling and to make an inspection at a reasonable time by giving to the homeowner a notice of intention to inspect at least 48 hours prior to such inspection. The customer shall not withhold

consent to Gulf Power Company to conduct an inspection and agrees to be present at the dwelling at the time of the inspection.

# **Installation Guidelines**

- Qualifying systems must be installed by a contractor with a valid solar or plumbing license.
- The system must be certified as operational by the contractor that installs it and must meet applicable local building codes.
- Qualifying systems must utilize new equipment.
- Qualifying systems must be used for domestic water heating purposes.
- Qualifying systems must be certified by the Solar Rating and Certification
   Corporation (SRCC) or the Florida Solar Energy Center (FSEC).

# **Energy Education Program**

## **Program Description**

The objective of the Energy Education Program (the "Program") is to raise awareness of energy efficiency and conservation and to increase participation in all of Gulf's energy efficiency and conservation programs. The Program will consist of multiple broad based education and awareness campaigns and will focus on general energy efficiency and conservation principles as well as supplement more specific measures in individually approved programs. Also, the Program will serve as a mechanism to increase education and awareness of conservation principles not traditionally promoted though existing programs, such as renewable energy alternatives. Finally, the Program will help foster understanding among current and future generations of the importance of meeting future energy needs through an increased reliance on energy efficiency and conservation.

The Energy Education Program will meet these objectives through a multi-faceted approach. The Program will consist of four components:

- 1. Consumer Awareness
- 2. School-Based Education
  - a. Science Teacher Training
  - b. Eighth Grade Instructional Assistance
- 3. Community-Based Education
- 4. Contractor Education

These combined efforts will significantly enhance Gulf's ability to promote energy efficiency in both existing and future housing and building stock, as well as conservation and environmental stewardship among our current and future customers. Effectiveness of these efforts will be measured by customer surveys and incremental program participation changes.

## Consumer Awareness Campaign

Gulf Power Company plans to launch a comprehensive theme-based advertising campaign to encourage consumer participation in energy efficiency and conservation programs. A primary goal of the campaign is to increase consumer awareness of the benefits – and ease – of personal energy conservation at home or work as a tool for improving the environment while reducing and controlling the growth rate of energy consumption and increasing the conservation of expensive resources.

The campaign will be an overall "umbrella" message about energy conservation and efficiency. It will be in addition to existing Gulf Power advertising for energy conservation programs and services, yet will associate all the existing programs and services with a common message in order to build consumer awareness with each additional piece of the campaign.

This multi-media plan will deliver high customer reach and message frequency on a consistent level by introducing conservation messages that include a call to action for consumers and then incorporating all promotions for Gulf Power energy conservation

products and messages into a coordinated approach. The campaign will use traditional media such as television, radio, outdoor, newspaper, Web online and direct mail. It also will use non-traditional media which might include point of sale displays or retail edutainment to achieve a higher level of consumer engagement and participation in Gulf Power conservation programs.

## School-Based Education

Gulf plans to address a non-traditional market in our approach to this school-based education program with an investment in our future customers through the public and private school systems. This two-part approach will implement a training program for middle school and high school science teachers and will provide support materials designed to augment the teachers' energy-related lesson plans.

The training program will prepare these teachers to better present the energy efficiency and environmental portions of their school district's science curriculum. Gulf Power will partner with a local college to prepare and deliver an instructional course for these teachers. This course will allow participating teachers to earn hours toward teacher certification while providing intensive training relative to energy conservation, energy efficiency, electricity generation, environmental impacts of generation and renewable energy. This training program is essentially a "train the trainer" approach to assist teachers in educating the students on this subject matter. Because of limited time and space, this training program will take place only once a year for a limited number of

participants. This will require a commitment to training over a period of three to five years in order for all of these teachers to be educated in this manner.

Gulf Power will further support eighth grade science teachers by providing materials such as hands-on experiment kits or labs and other experiential reinforcement of the students' "book learning." The type of support materials necessary for each school or school district will be customized to their specific needs in carrying out Gulf's energy education objectives and the Sunshine State Standards for Science. One constant will be the delivery of a Mail-In Energy Survey or Online Energy Survey to every eighth grade student and provision of a free compact fluorescent lightbulb (CFL) for each completed energy survey. The completed surveys will be processed to provide a custom Home Energy Profile for each participant, including recommendations for improving the energy efficiency of their home and their household energy practices. These recommendations along with the CFL will provide the tangible benefit of energy savings in the household of each participating student.

#### Community-Based Education

Gulf will also deliver the Program using a community-based approach by providing presentations to civic groups, clubs, neighborhood associations and other public organizations. PowerPoint style presentations with interactive displays will be developed for these groups. In addition, home shows, home building seminars, home expos and demonstration sites will be utilized for demonstration and delivery of Gulf's Program.

# Contractor Education

Gulf's contractor-based education component of the Program will consist of building science training and concepts which encourage the construction of homes and buildings that are more energy efficient, durable, comfortable and safe. More effective than building construction programs based solely on prescriptive features and guidelines, Gulf's contractor education component will provide participants with the training, tools and consultation services necessary to meet the strict building performance evaluations and verifications required by a variety of federal energy efficiency certification programs.

## Participation Standards

The Energy Education Program will be utilized throughout Gulf Power Company's service area to expand the knowledge and awareness of energy efficiency and conservation among all classes of Gulf's customers.

## **Benefits and Costs**

The Program will encourage increased participation in energy efficiency programs and activities offered by Gulf and other entities and will increase general awareness of energy efficiency and conservation. The following costs are associated with implementing the Energy Education Program:

Program manager – Gulf Power Company plans to fill a new position to coordinate
the Energy Education Program. This position will be responsible for the coordination
of all activities under this Program including: teacher training, school programs,

- community-based education and contractor training. Estimated cost is approximately \$75,000 per year.
- Advertising Multi-media advertising will be utilized to generate energy efficiency and conservation awareness and interest as well as increased program participation.
   Estimated advertising expense is \$800,000 per year.
- Teacher training Development and delivery of training to middle school and high school science teachers including necessary materials and supplies is estimated to cost \$30,000 per year.
- School support Energy experiment or lab kits for eighth grade classrooms and
   CFL's for students are estimated to cost \$10,000 per year.
- Contractor training Materials and supplies for the development and delivery of building science and construction training are estimated to cost \$20,000 per year.
- Brochures and promotional materials Expenditures for this line item will include a
  one-time charge of \$60,000 for the initial design and printing of program materials
  and brochures related to the Energy Education Program. Ongoing needs are
  estimated to cost \$10,000 per year.
- Annual survey The estimated cost of this survey is approximately \$15,000 and will
  include a baseline survey prior to Program implementation along with annual updates
  to enable the assessment of Program effectiveness.
- Other Costs specific to increased participation in Gulf's approved energy efficiency and demand-side management programs will be captured within the specific programs.

Total cost is estimated at \$1,010,000 for the first year and \$960,000 for each subsequent year of full deployment.

# **Monitoring and Evaluation**

Gulf Power will undertake an annual survey of customers to determine the effectiveness of efforts to increase the awareness of energy efficiency and conservation with the Program. Gulf will also monitor participation in energy efficiency programs and activities. These results will be compared to a baseline survey and historical program participation figures in order to assess the effectiveness of the Energy Education Program.