

BEFORE THE PUBLIC SERVICE COMMISSION

In re: Petition for approval of modifications to
certain demand-side management programs by
Gulf Power Company.

DOCKET NO. 070119-EG
ORDER NO. PSC-07-0455-PAA-EG
ISSUED: May 29, 2007

The following Commissioners participated in the disposition of this matter:

LISA POLAK EDGAR, Chairman
MATTHEW M. CARTER II
KATRINA J. McMURRIAN
NANCY ARGENZIANO
NATHAN A. SKOP

NOTICE OF PROPOSED AGENCY ACTION
ORDER APPROVING MODIFICATIONS TO ENERGY CONSERVATION PROGRAMS

BY THE COMMISSION:

NOTICE is hereby given by the Florida Public Service Commission that the action discussed herein is preliminary in nature and will become final unless a person whose interests are substantially affected files a petition for a formal proceeding, pursuant to Rule 25-22.029, Florida Administrative Code.

Background

As part of its Commission-approved Demand-Side Management (DSM) Plan, Gulf Power Company (Gulf) offers a Residential and Commercial Geothermal Heat Pump (GHP) Program. These programs are intended to reduce the demand and energy requirements of customers by providing incentives to customers who choose more energy efficient geothermal heat pump systems over air source heat pumps.

Geothermal heat pumps use the temperature of the earth as the heat exchange medium instead of air. The earth remains at a relatively constant temperature and so is both warmer in winter and cooler in summer than air temperatures. GHP technology takes advantage of this by exchanging heat with the earth through a series of pipes buried underground.

Gulf's existing Residential GHP Program provides a \$150 per ton incentive for the installation of qualifying geothermal heating, ventilation and air-conditioning (HVAC) units system in a single or multi-family dwelling. Single-family systems above 10 tons and multi-family systems above 50 tons are subject to incentives based on a cost-effectiveness analysis. Gulf's existing Commercial GHP Program provides participating customers with a \$150 per ton incentive for commercial full closed loop GHP projects, or a \$75 per ton incentive for hybrid

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closed loop projects. In a hybrid closed loop system, loops are attached to a cooling tower as well as to underground pipes and the cooling tower is used to supplement summer peak load.

On February 20, 2007, Gulf petitioned for approval to modify both its Residential and Commercial GHP programs. According to Gulf, these programs have experienced moderate success but the company desires to increase customer participation to achieve the Commission-approved DSM goals. Therefore, in an effort to grow participation, Gulf proposes an increase to the incentives offered by these programs. We have jurisdiction pursuant to Sections 366.81 and 366.82, Florida Statutes.

Modifications to energy conservation programs

The Residential and Commercial GHP programs are part of a portfolio of individual Demand-Side Management (DSM) programs approved by this Commission for meeting Gulf's conservation goals in Order No. PSC-05-0273-PAA-EG, issued April 6, 2005 in Docket No. 040032-EG. Though these two programs have experienced moderate success in the past, Gulf desires to increase customer participation to continue achieving the approved DSM goals.

The following shows the current and approved incentives Gulf sought in its petition for modification of its Residential and Commercial GHP Programs:

Gulf Power GHP Program Cash Incentives

	<u>Current Incentives</u>	<u>Approved Incentives</u>
Residential Full Closed Loop	\$150/ton	\$400/ton
Commercial Full Closed Loop	\$150/ton	\$400/ton
Commercial Hybrid Closed Loop	\$75/ton	\$200/ton

Gulf believes that the proposed program modifications will help further the objectives of the Florida Energy Efficiency Conservation Act (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.

When this Commission evaluates conservation programs, we consider the three criteria established in Order No. 22176, issued November 14, 1989, in Docket No. 890737-PU:

- (1) Whether the program advances the policy objectives of Rule 25-17.001, Florida Administrative Code, and Section 366.80-85, Florida Statutes, also known as the "Florida Energy Efficiency and Conservation Act" (FEECA);

- (2) Whether the program is directly monitorable and yields measurable results; and
- (3) Whether the program is cost effective.

The proposed modifications meet criterion (1). The growth rate of weather sensitive summer peak demand on Gulf's electric system should be reduced because of the increased energy efficiency of geothermal units over air source units. Increasing the usage of GHP units will also result in deferring the need for constructing additional generating capacity. Each of these is a stated goal of Rule 25-17.001, Florida Administrative Code (F.A.C.), and is supported by the cost-effectiveness analysis supplied by Gulf.

The proposed modifications meet criterion (2) because Gulf will track all GHP installations through its account reporting system and will validate engineering analysis of energy and demand savings through billing data. Customer interviews and surveys may be used to assess levels of satisfaction and/or reasons for non-participation. Finally, Gulf will report the results of this DSM program as part of its annual FEECA report to this Commission.

Whether the program is cost effective (criterion 3) is determined in accordance with Rule 25-17.008, F.A.C., which establishes the format that electric utilities shall use for reporting cost effectiveness data and specifies the three cost-effectiveness tests that are required for conservation programs: the Total Resource Test, the Participants Test, and the Rate Impact Test. In support of its petition, Gulf provided a cost-effectiveness analysis of each of the proposed DSM programs using the Commission-approved methodology.

Based on information provided by Gulf, we determined that the Commercial GHP program passes the RIM test with a value of 1.04 and passes the Participants test with a value of 1.53. Gulf's analysis shows that it takes approximately 13 years for a participant in the Commercial GHP program to realize any net savings. Such a long payback period may dissuade customers from participating in the program; therefore, Gulf's proposed modifications may not achieve the desired results. We find that customers shall be informed of the payback period involved so that they can make an informed decision.

Based on information provided by Gulf, we determined that the Residential GHP program passes the RIM test with a value of 1.06 and passes the Participants test with a value of 1.22. A key factor to look at in a Participant's test is the payback period. Gulf's analysis shows that it takes approximately 18 years for a participant in the Residential GHP program to realize any net savings. The RIM and Participant values are also premised on a customer converting from natural gas heat to a geothermal heat pump. Our staff requested that Gulf perform cost effectiveness tests based on a conversion from an electric air source heat pump to a GHP. The result was a RIM value of 0.93 and slightly longer payback period of approximately 19 years. The table below illustrates the results of the cost-effectiveness tests and the payback period for the Residential GHP program under the two assumptions.

Cost Effectiveness Analysis for Residential GHP Program

Assumptions	Rate Impact Measure	Total Resource Cost	Participant Test	Customer Payback Period
Displaces natural gas heating. Avoided unit is 2014 combined cycle.	1.06	1.33	1.22	18 years
Displaces air source heat pump. Avoided unit is 2014 combined cycle.	0.93	1.18	1.22	19 years

A RIM value of less than one indicates the program is not cost effective to Gulf's general body of ratepayers. Ultimately, participation in the program is the customer's choice. However, Gulf shall not use the Residential GHP program solely to displace end-use natural gas appliances.

Conclusion

Based on the information submitted, we approve Gulf's proposed modifications to its Residential and Commercial Geothermal Heat Pump programs. The programs are hereby approved because they meet the Florida Energy Efficiency and Conservation Act policy objectives and the cost-effectiveness tests established by this Commission in Rule 25-17.008, F.A.C. As discussed previously, it will take customers participating in the residential program 18 years to receive a net benefit and 13 years for customers participating in the commercial program to receive a net benefit. Because of the length of time it will take participants to achieve payback, Gulf shall disclose the payback period to potential participants in both programs. Gulf shall recover all reasonable and prudent costs through the energy conservation cost recovery (ECCR) clause for implementing these programs.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that Gulf Power Company's modifications to its energy conservation programs are hereby approved as set forth herein. It is further

ORDERED that the provisions of this Order, issued as proposed agency action, shall become final and effective upon the issuance of a Consummating Order unless an appropriate petition, in the form provided by Rule 28-106.201, Florida Administrative Code, is received by the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on the date set forth in the "Notice of Further Proceedings" attached hereto. It is further

ORDERED that these modifications shall become effective upon the issuance of a Consummating Order. It is further

ORDERED that if a timely protest is filed, the modifications shall not be implemented until after the resolution of the protest. It is further

ORDERED that in the event this Order becomes final, this docket shall be closed.

By ORDER of the Florida Public Service Commission this 29th day of May, 2007.



ANN COLE
Commission Clerk

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NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing that is available under Section 120.57, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The action proposed herein is preliminary in nature. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, in the form provided by Rule 28-106.201, Florida Administrative Code. This petition must be received by the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on June 19, 2007.

In the absence of such a petition, this order shall become final and effective upon the issuance of a Consummating Order.

Any objection or protest filed in this/these docket(s) before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.