

FLORIDA PUBLIC SERVICE COMMISSION

Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32399-0850

MEMORANDUM

MAY 21, 1992

TO: DIVISION OF RECORDS AND REPORTING (TRIBBLE)

FROM: DIVISION OF ELECTRIC AND GAS (HAFF) ²³ ^{MSH} ^{RET}
DIVISION OF LEGAL SERVICES (ELIAS) ^{RUE}

RE: DOCKET NO. 920236-EG, PETITION OF PROPOSED IMPLEMENTATION
OF HVAC DUCT AND INFILTRATION AND HVAC TUNE-UP PROGRAMS
AS PILOT STUDY PROGRAMS UNDER APPROVED ENERGY
CONSERVATION PLAN BY GULF POWER COMPANY

AGENDA: JUNE 2, 1992 - PROPOSED AGENCY ACTION - PARTIES MAY NOT
PARTICIPATE

PANEL: FULL COMMISSION

CRITICAL DATES: NONE

CASE BACKGROUND

Gulf Power Company's (Gulf) Conservation Plan was approved by the Commission in Order No. 23561 on October 2, 1990. Included among the 11 programs approved in this plan were the HVAC Duct and Infiltration (Blower Door) Program and the HVAC Tune-Up Program which are the subject of this docket. At the time Order No. 23561 was issued, the two HVAC programs were in the developmental stage and were not ready for implementation. Now that development of the two programs has been completed, Gulf is asking for Commission approval to implement each program on a pilot study basis for one year beginning with the 1992 Summer Cooling season. Gulf is also asking for approval to fund company costs for the pilot programs through the Energy Conservation Cost Recovery Clause.

The HVAC Blower Door Program identifies duct and infiltration leakage which might be occurring in a home. Diagnostic testing will identify total house infiltration rates and air duct leakage, which can then be repaired by sealing the supply and return ducts of central HVAC systems. After repairs are completed, another blower door test is performed. Comparison of pre- and post-repair

DOCUMENT NUMBER-DATE

05176 MAY 21 1992

FPSC-RECORDS/REPORTING

DOCKET NO. 920236-EG
MAY 21, 1992

data will determine the reduction of demand and energy for the customer and, as a result, give the expected dollar savings.

The HVAC Tune-Up Program will provide a one-time cleaning and preventive maintenance check on HVAC systems. Pre- and post-repair testing will be done to verify the adequacy of preventive service on the reduction of kW demand and kWh energy usage.

A test group of customers, identified through Gulf's residential energy audits, will participate in the two pilot programs. For the HVAC Blower Door Program, 100 customers were identified; for the HVAC Tune-Up Program, 200 customers will participate. Customers will not incur any cost to participate in either program, as Gulf will bear all the costs associated with both pilot programs (\$200 for Blower Door Program, \$150 for HVAC Tune-Up). Each pilot program is expected to last for one year, and Gulf anticipates filing a final report within 90 days of the completion of each study.

DISCUSSION OF ISSUES

ISSUE 1: Should the Commission approve Gulf Power Company's proposed implementation of its HVAC Duct and Infiltration (Blower Door) Program and HVAC Tune-Up Program as pilot study programs under its approved Conservation Plan?

RECOMMENDATION: Staff recommends approval of both programs as pilot programs in Gulf's Conservation Plan. Gulf should be required to file a report detailing the results of the two pilot programs within 90 days of completion of each program.

STAFF ANALYSIS: In Order No. 23561, the Commission stated that conservation programs will be judged by the following criteria:

- o whether the program advances the policy objectives set forth in Rule 25-17.001, F.A.C. and the FEECA statute;
- o whether the program is directly monitorable and yields measurable results; and
- o whether the program is cost-effective.

Gulf's HVAC Blower Door pilot program appears to meet the first two criteria stated above. However, projections show that this pilot program is not cost-effective using the rate impact test

DOCKET NO. 920236-EG
MAY 21, 1992

because its benefit/cost ratio (0.95) is less than 1.0. However, the benefit/cost data is projected, and Gulf will have actual cost data only after completion of the program's pilot study period.

Gulf's HVAC Tune-Up pilot program appears to meet all three objectives stated on the previous page. Moreover, it should be noted that both pilot programs are quite similar to existing Commission-approved programs offered by Florida Power Corporation as part of its Conservation Plan.

Gulf's costs for implementing the HVAC Blower Door Program, expected to be \$200/customer, are based on two factors: (1) a survey of local HVAC dealers; and (2) a survey performed in Central Florida by the Florida Solar Energy Center which shows that up to 40% of HVAC efficiency losses are caused by duct leakage, with a resulting repair cost averaging \$200 per home.

Results from the pilot study will enable Gulf to determine the actual demand and energy savings attributed to the Blower Door Program. For purposes of the pilot study, engineering estimates were used to determine the potential kW demand and kWh energy savings. The Blower Door Program is expected to reduce summer demand by 0.2 kW/customer and annual energy usage by 2168 kWh/customer.

Gulf's costs for implementing the HVAC Tune-Up Program, expected to be \$150/customer, are based on a survey of local HVAC dealers. As with the Blower Door Program, engineering estimates were used to predict future kW demand and kWh energy savings attributed to the HVAC Tune-Up Program. This program is expected to result in a reduction in summer demand of 0.4 kW/customer and decrease annual energy usage by 1018 kWh/customer. Results from the pilot study will enable Gulf to determine the actual demand and energy savings attributable to the HVAC Tune-Up Program.

In order for a customer to be eligible to participate in either pilot program, the following criteria must be met:

- o Residence must be a residential, single-family detached home.
- o Customer must be receiving electric service from Gulf Power Company.
- o Customer must have had an energy audit performed by Gulf. From the audit, Gulf will identify eligible customers and offer them the opportunity to participate in the program.

DOCKET NO. 920236-EG
MAY 21, 1992

An additional criterion which must be met in order to participate in the HVAC Blower Door Program is that the customer's house must have an easily accessible duct system and be in good enough condition for the duct test to be performed.

Gulf is requesting Commission authorization to implement the two pilot programs. The HVAC Tune-Up Program appears to meet all criteria established by the Commission in Order No. 23561; therefore, Staff recommends approval of this program. Despite the fact that the HVAC Blower Door Program does not pass the rate impact test for cost-effectiveness, Staff recommends approval of this pilot program because the benefit/cost ratio (0.95) is barely less than 1.0 and the program otherwise appears to meet all other criteria applied to conservation programs of all investor-owned utilities. Gulf should also be required to file a report detailing the results of the two pilot programs within 90 days of completion of each program.

ISSUE 2: Should this docket be closed?

RECOMMENDATION: Yes.

STAFF ANALYSIS: If no substantially affected person files a timely request for a hearing within 21 days, no further action will be required and this docket should be closed.