

FLORIDA PUBLIC SERVICE COMMISSION
Capital Circle Office Center • 2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

M E M O R A N D U M

April 24, 1997

TO: DIRECTOR, DIVISION OF RECORDS AND REPORTING (BAYO)

FROM: DIVISION OF ELECTRIC & GAS (HAFF) *msu TP 23 RT*
DIVISION OF LEGAL SERVICES (PAUGH) *RUE JJP*

RE: DOCKET NO. 970174-EG, PETITION TO TERMINATE GAS ENGINE-DRIVEN DIRECT EXPANSION (DX) AIR CONDITIONING RESEARCH PROJECT BY FLORIDA POWER & LIGHT COMPANY

AGENDA: 5/6/97 - REGULAR AGENDA - PROPOSED AGENCY ACTION - INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: S:\PSC\EAG\WP\970174.RCM

CASE BACKGROUND

In Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, the Commission set numeric demand-side management (DSM) goals for the four largest investor-owned electric utilities (IOUs), including Florida Power & Light Company (FPL). In setting goals, the Commission found that the IOUs did not possess the detailed information needed to set specific goals relating to natural gas substitution for electricity. Therefore, the Commission ordered the IOUs to develop Florida-specific data on the performance and cost-effectiveness of gas technologies.

Concurrent with this action, and pursuant to Rule 25-17.0021(4), Florida Administrative Code, the IOUs filed DSM Plans containing programs designed to meet their DSM goals. The Commission approved FPL's DSM Plan as a Proposed Agency Action (Order No. PSC-95-0691-FOF-EI, issued June 9, 1995). Peoples Gas System, Inc. (Peoples) protested this order, requesting a formal

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hearing. To aid in its collection of Florida-specific data, FPL developed a Natural Gas End-Use Technology Research and Development Plan (Gas R&D Plan), which was approved by the Commission (Order No. PSC-95-1146-FOF-EG, issued September 15, 1995). One of the five technologies included in FPL's Gas R&D Plan was the Gas Engine-Driven Direct Expansion Air Conditioning (Gas DX AC) Research Project. This is a commercial / industrial project intended to determine the actual operating characteristics and cost-effectiveness of natural gas-engine driven direct expansion air conditioning equipment in Florida-specific applications. The project was expected to last approximately 36 months, with expenditures ranging from \$268,000 to \$323,000. FPL and Peoples subsequently entered into a stipulation which was approved by the Commission (Order No. PSC-95-1343-S-EG, issued November 27, 1995). This stipulation resolved Peoples' protests to FPL's DSM Plan and eliminated the need for a formal hearing.

After its Gas R&D Plan was approved by the Commission, FPL petitioned the Commission for approval to add the Gas Business Customer Incentive (Gas BCI) Research Project to its Gas R&D Plan. This petition was granted in Order No. PSC-96-0410-FOF-EG, issued March 22, 1996. In the Gas BCI Research Project, FPL researches customer-specific gas technologies which are not actively pursued in any of FPL's other Gas R&D programs.

The purpose of FPL's petition in this docket is to terminate the Gas DX AC Research Project. FPL and Peoples found limited opportunities for cost-effective development of this technology, and the termination of this specific DSM program will allow FPL to continue evaluating cost-effective applications of the Gas DX AC technology with heat recovery under its existing Gas BCI Research Project.

DISCUSSION OF ISSUES

ISSUE 1: Should the Commission approve Florida Power and Light Company's (FPL) petition to terminate its Gas Engine-Driven Direct Expansion Air Conditioning (Gas DX AC) Research Project?

RECOMMENDATION: Yes. In lieu of a separate research project, staff recommends that Gas DX AC technology be eligible for evaluation in FPL's Gas Business Customer Incentive (Gas BCI) Research Project.

STAFF ANALYSIS: Pursuant to the Commission-approved stipulation between FPL and Peoples, the two parties met to discuss potential sites for FPL's Gas DX AC Research Project. Peoples questioned whether this technology was feasible in Florida, given that Gas DX AC was in use at only one site in Peoples' service territory. Based on this observation, FPL and Peoples performed a joint study to determine the feasibility of Gas DX AC applications in Florida, using performance data provided by equipment manufacturers and agreed upon by FPL and Peoples. Staff notes that the primary purpose for the Commission's approval of gas research projects was to foster agreement between the electric and gas utilities on performance and economic data.

The joint feasibility study concluded the following:

[U]nless a customer has a specific interest in gas DX or unusual circumstances that greatly offset the higher installation costs for the gas equipment, a customer will typically not choose gas DX for straight cooling applications.

However, the joint study concluded that Gas DX AC technology might be cost-effective in certain applications where the customer could utilize the waste heat recovery option. The economics of this arrangement vary widely, and thus customer-specific analysis would be necessary to determine feasibility.

Based on the results of the joint study, FPL and Peoples concluded that the best approach for Gas DX AC would be to discontinue active field monitoring and evaluation of the technology. However, FPL and Peoples wished to continue gathering

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useful data on potential applications of Gas DX AC with heat recovery technology.

The Gas BCI Research Project is an existing Commission-approved program which allows FPL to research gas technologies in customer-specific applications. Only gas technologies not actively being pursued by FPL in other programs are eligible for inclusion in the Gas BCI Research Project. Thus, Gas DX AC with heat recovery technology would become eligible for research under the Gas BCI Research Project. FPL and Peoples believe that this treatment will allow the two parties to gather useful, Florida-specific data on the type of customer applications that are more likely seen with this technology. In addition, treating Gas DX AC with heat recovery in this manner would ensure the monitoring of installations that are cost-effective under the Rate Impact Measure (RIM) and Participant tests, as this is a requirement of the Gas BCI Research Project.

FPL states that terminating the Gas DX AC Research Project will save its customers \$236,250. These savings are due to FPL not having to perform the following activities:

Site Selection & Incentives	\$ 20,000
Equipment	\$ 57,500
Installation & Labor	\$ 18,750
Monitoring & Measurement	\$ 110,000
Cost-Effectiveness Analysis	\$ 25,000
Draft and Submit Final Report	\$ 5,000
TOTAL	\$ 236,250

While these costs cannot be attributed to the Gas DX AC Research Project after its termination, continued research of this technology will result in comparable activities and costs to be borne under the Gas BCI Research Project. Therefore, staff believes that terminating the Gas DX AC Research Project will shift costs rather than save them. It should also be noted that the Gas BCI Research Project does not have a spending cap, and, due to the diverse nature of the research involved, future costs are difficult to estimate. However, costs should be minimized since each installation under the Gas BCI Research Project must be cost-effective under the RIM and Participant tests. Furthermore, FPL is required to file an annual report which updates the Commission

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staff on the research results obtained from all technologies evaluated in the Gas BCI Research Project.

In light of all these facts, staff recommends approval of FPL's petition to terminate its Gas Engine-Driven DX Air Conditioning Research Project. Staff further recommends that FPL be allowed to continue cost-effective research of Gas DX AC with heat recovery technology in its Gas BCI Research Project.

ISSUE 2: Should this docket be closed?

RECOMMENDATION: Yes. If no person whose substantial interests are affected by the Commission's proposed agency action, timely files a protest within twenty-one days, this docket should be closed.

STAFF ANALYSIS: If no person whose substantial interests are affected, files a timely request for a Section 120.57, Florida Statutes, hearing within twenty-one days, no further action will be required and this docket should be closed.

State of Florida

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DIVISION OF RECORDS &
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Public Service Commission

February 10, 1997

Charles A. Guyton, Esquire
Steel Hector & Davis LLP
215 South Monroe, Suite 601
Tallahassee, Florida 32301-1804

RE: Docket No. 970174-EG

Dear Mr. Guyton:

This will acknowledge receipt of a petition to terminate gas engine-driven DX air conditioning research project by Florida Power & Light Company, which was filed in this office on February 7, 1997 and assigned the above-referenced docket number. Appropriate staff members will be advised.

Division of Records and Reporting
Florida Public Service Commission