BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by City of Lakeland for determination of need for McIntosh Unit 5 and proposed conversion from simple to combined cycle.	DOCKET NO. 990023-EM ORDER NO. PSC-99-0931-FOF-EM ISSUED: May 10, 1999

The following Commissioners participated in the disposition of this matter:

J. TERRY DEASON
SUSAN F. CLARK
JULIA L. JOHNSON

FINAL ORDER GRANTING PETITION
TO DETERMINE NEED FOR ELECTRICAL POWER PLANT

APPEARANCES:

Roy Young, Esquire, Young VanAssenderp & Varnadoe, Post Office Box 1833, Tallahassee, Florida 32302
On behalf of the City of Lakeland (Lakeland).

Wm. Cochran Keating, IV, Esquire, Florida Public Service Commission, Gerald L. Gunter Building, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399
On behalf of the Florida Public Service Commission (Staff).

BY THE COMMISSION:

I. CASE BACKGROUND

The City of Lakeland, through its Department of Electric Utilities (Lakeland) is a municipal electric utility engaged in the generation, transmission, and distribution of electric power to retail customers within the State of Florida. Pursuant to Section 403.519, Florida Statutes, Lakeland filed a petition on January 6, 1999, for determination of need for the proposed addition of a 120 MW steam turbine to its present McIntosh Unit 5, a 249 MW simple cycle combustion turbine currently under construction. This unit is located at Lakeland's existing C.D. McIntosh Power Plant in Polk County, Florida. The simple cycle combustion turbine is scheduled for commercial operation by July 10, 1999, and the 369 MW combined cycle unit which would result from addition of the steam turbine is scheduled for commercial operation on January 1, 2002.

An administrative hearing on the petition was conducted April 1, 1999. No person intervened in this docket. The positions adopted by Lakeland, as set forth in the prehearing order for this proceeding (Order No. PSC-99-0592-PHO-EM, issued March 31, 1999), were presented for our approval at hearing and serve as the basis for our findings of fact and conclusions of law below.

II. STANDARD FOR APPROVAL

Section 403.519, Florida Statutes, sets forth the matters that this Commission must consider in determining the need for an electrical power plant. The statute states, in pertinent part:

> In making its determination, the commission shall take into account the need for electric system reliability and integrity, the need for adequate electricity at a reasonable cost, and whether the proposed plant is the most cost effective alternative available. The commission shall also expressly consider the conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant and other matters within its jurisdiction which it deems relevant.

III. FINDINGS OF FACT

In 1997, Lakeland issued an Invitation for Proposals (IFP) for approximately 200 MW of capacity starting in the year 2002. Lakeland began negotiations with the lowest of the 13 bidders who responded. During these negotiations, Westinghouse submitted an unsolicited proposal to provide Lakeland the first 501G simple cycle combustion turbine (McIntosh Unit 5) at a discounted price for operation in 1999, upon the condition that the unit be operated in simple cycle mode for a period of at least 18 months from start-up. After this initial period, Lakeland would be free to convert the unit to combined cycle operation.

Lakeland studied alternative generating technologies and evaluated the purchase power alternatives identified in its IFP process and Westinghouse's unsolicited proposal. Lakeland selected McIntosh Unit 5 and its proposed conversion to combined cycle as the least-cost of all feasible alternatives under both base case and sensitivity analyses. In late 1997, Lakeland, with the City of Lakeland City Commission's approval, chose to purchase the Westinghouse 501G simple cycle unit and began construction of the

unit. As part of its environmental permitting process for the simple cycle unit, Lakeland agreed to reduce NOx emissions from the unit to a certain level by the year 2002. In order to satisfy this requirement and to meet its system reliability needs, Lakeland proposes to convert McIntosh Unit 5 to combined cycle operation in 2002 using proven technology to reduce emissions.

Upon consideration of the record evidence, as discussed below, we find that Lakeland's petition should be granted. The proposed conversion is the most cost-effective alternative for Lakeland to meet its system reliability needs and to satisfy its environmental permitting requirements in 2002. We recognize that without the proposed conversion Lakeland could meet its reliability needs for retail load in 2002 with its existing units, but retiring certain existing units and making the proposed conversion is more cost-effective.

A. Need for Electric System Reliability and Integrity

The need for the proposed conversion of McIntosh Unit 5 to maintain system reliability and integrity is a result of it providing cost-effective replacement power while allowing Lakeland to meet its environmental permitting requirements. Further, the proposed conversion will provide Lakeland with the capacity needed to meet its obligations under a recently signed wholesale contract to provide 100 MW of power to the Florida Municipal Power Agency (FMPA) starting in June 2001.

We are cognizant that the proposed conversion is not necessary to satisfy a reliability need for Lakeland's retail load at the planned in-service date. We note that if no units on Lakeland's system are retired beyond 2002, Lakeland's retail reliability needs could be met through 2007 without the proposed conversion. Assuming that all of Lakeland's planned unit retirements are made, we find that Lakeland will need additional capacity in 2003 to maintain its 15% reserve margin to serve retail load. Considering Lakeland's obligations under its contract with FMPA, however, the proposed conversion is needed to maintain a 15% reserve margin for Lakeland's system in 2002. In addition, the proposed conversion will enhance reliability for Lakeland's system and Peninsular Florida.

We find reasonable the energy and peak demand forecasts used by Lakeland to determine the need for the capacity to be provided by the proposed conversion of McIntosh Unit 5. Given the planned

retirements, Lakeland has demonstrated a need for 13 MW of additional capacity in 2003 to adequately serve its retail load while meeting its 15% minimum reserve criteria. Considering Lakeland's obligations under its contract with FMPA, Lakeland has demonstrated a system need for 6 MW of capacity in 2002.

Based upon Lakeland's fuel price forecast and its underlying assumptions, we find that Lakeland has provided adequate assurances regarding the availability of primary and secondary fuel to serve McIntosh Unit 5 at a reasonable cost. Lakeland intends to make contract and spot purchases of natural gas to provide the primary fuel for McIntosh Unit 5. Lakeland also plans to increase its on-site storage capacity for No. 2 fuel oil, the unit's secondary fuel, to allow full load operation of McIntosh Unit 5 for 2.5 days. Further, we find that Lakeland has provided adequate assurances that sufficient natural gas pipeline capacity will be available to transport natural gas to the McIntosh Unit 5 site.

Lakeland's system currently consists of approximately 70% natural gas powered capacity and 30% coal powered capacity, with a minimal amount of fuel oil capacity. McIntosh Unit 5 will increase Lakeland's natural gas powered capacity to approximately 76% of its total capacity. Thus, the unit will not enhance Lakeland's fuel diversity. However, we note that the use of No. 2 fuel oil as the unit's backup fuel will reduce the risk associated with potential natural gas shortages or price spikes. Further, we note that Lakeland's resource plan includes the addition of a 238 MW fluidized bed coal unit in 2004 which will improve fuel diversity on Lakeland's system.

B. Need for Adequate Electricity at Reasonable Cost

As stated above, Lakeland has demonstrated that the proposed conversion of McIntosh Unit 5 will provide Lakeland with capacity to reliably serve its retail and wholesale load and to satisfy its environmental permitting requirements in 2002. We find that the proposed conversion will allow Lakeland to meet these needs at a reasonable cost. McIntosh Unit 5 and the proposed conversion have an estimated installed cost of $361.8/kW, or approximately $133.5 million total. McIntosh Unit 5 will be the first 501G plant in commercial operation and, when converted to combined cycle operation, will be the most efficient generating unit on Lakeland's system. As discussed below, we find that McIntosh Unit 5 and the proposed conversion to combined cycle operation is the most cost-

effective alternative available to satisfy Lakeland's environmental and reliability needs.

C. Cost-Effectiveness

We find that McIntosh Unit 5 and the proposed conversion to combined cycle operation is the most cost-effective alternative available to Lakeland to meet its environmental permitting requirements and its future reliability needs. The proposed conversion will allow Lakeland to accelerate the retirement of some of the older, less efficient generating units on its system. In addition, revenues from Lakeland's contract with FMPA will offset some of the conversion costs.

Lakeland's economic analysis demonstrated that its proposed expansion plan, which includes the conversion of McIntosh Unit 5 to combined cycle, the contract with FMPA, and the retirement of certain units, is approximately $21 million less costly than an expansion plan which included the apparent low bid from its IFP process. Lakeland's analysis also demonstrated that its proposed expansion plan is approximately $28 million less costly than an expansion plan which included Lakeland's next lowest self-build option.

We find that Lakeland adequately explored and evaluated the availability of purchase power options through its IFP process. As suggested above, none of the responsive proposals was more cost-effective than Lakeland's proposed expansion plan. Further, as discussed below, we note that no demand-side management programs or other conservation measures proved to be cost-effective alternatives.

Lakeland provided sufficient information on the site, design, and engineering characteristics of McIntosh Unit 5 and the proposed conversion for this Commission to evaluate all aspects of the proposed addition. We find that the economic and financial assumptions used by Lakeland in their resource planning studies are reasonable. We also find that Lakeland's fuel price forecasts for coal, No. 6 oil, No. 2 oil, nuclear energy, and natural gas are reasonable.

Further, we find that Lakeland adequately considered the costs of environmental compliance in estimating the costs for McIntosh unit 5 and the proposed conversion. Lakeland included a contingency for increased environmental compliance costs in the

event that its planned Ultra Low NOx burners are ineffective and it is required to use more costly emissions technology. We note that no associated facilities or transmission improvements are required in conjunction with the proposed addition, and, thus, no cost is attributed to those items.

D. Conservation Measures

We find no cost-effective conservation measures taken by or reasonably available to Lakeland that might mitigate the need for all or part of the proposed addition. Lakeland evaluated 66 potential conservation and demand-side management programs, but none were found to be more cost-effective than McIntosh Unit 5 and the proposed conversion.

IV. CONCLUSIONS OF LAW

Pursuant to Section 403.519, Florida Statutes, this Commission is the sole forum for the determination of need for an electrical power plant subject to the Florida Electrical Power Plant Siting Act. The electrical power plant for which Lakeland seeks approval is subject to the Florida Electrical Power Plant Siting Act. Upon consideration of the record evidence in light of the criteria set forth in Section 403.519, Florida Statutes, as discussed above, we find that Lakeland has demonstrated the need for the proposed conversion of McIntosh Unit 5 to combined cycle operation. Thus, we hereby grant Lakeland's petition for determination of need for an electrical power plant.

Pursuant to Section 403.519, Florida Statutes, this order constitutes final agency action and shall serve as our report required by Section 403.507(2)(a)2, Florida Statutes. Since no other action is necessary, this docket shall be closed.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that the City of Lakeland's petition for determination of need for a proposed electrical power plant is hereby granted. It is further

ORDERED that this docket shall be closed.

By ORDER of the Florida Public Service Commission this 10th day of May, 1999.

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BLANCA S. BAYÓ, Director
Division of Records and Reporting

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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 or judicial review of Commission orders that is available under Sections 120.57 or 120.68, 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 or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request: 1) reconsideration of the decision, pursuant to Rule 25-22.080(2), Florida Administrative Code, by filing a motion for reconsideration with the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within five (5) days of the Commission's decision in the form prescribed by Rule 25-22.060, Florida Administrative Code; or 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water and/or wastewater utility by filing a notice of appeal with the Director, Division of Records and reporting and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.