ORIGINAL

MEMORANDUM

April 24, 2006

TO: DIVISION OF THE COMMISSION CLERK AND ADMINISTRATIVE SERVICES

FROM: OFFICE OF THE GENERAL COUNSEL (FLEMING) KEF

RE: DOCKET NO. 060225-EI – PETITION FOR DETERMINATION OF NEED FOR WEST COUNTY UNITS 1 AND 2 ELECTRICAL POWER PLANTS IN PALM BEACH COUNTY, BY FLORIDA POWER & LIGHT COMPANY.

Attached is the DIRECT TESTIMONY of JUDY G. HARLOW, on behalf of Commission Staff to be filed in the above-referenced docket.

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BEFORE THE PUBLIC SERVICE COMMISSION

In re: Petition for determination of need for West County Units 1 and 2 electrical power plants in Palm Beach County, by Florida Power & Light Company.	DOCKET NO. 060225-EI DATED: APRIL 24, 2006

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the DIRECT TESTIMONY OF JUDY G. HARLOW on behalf of the Florida Public Service Commission Staff has been furnished to the following, this 24th day of April, 2006:

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DOCKET NO.: 060225-EI – Florida Power & Light Company's Petition to Determine Need for West County Units 1 and 2 Electrical Power Plant.

WITNESS: **Direct Testimony of Judy G. Harlow**, Appearing on Behalf of the Staff of the Florida Public Service Commission.

DATE FILED: April 24, 2006

Q. Please state your name and business address.

A. My name is Judy G. Harlow. My business address is 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850.

Q. By whom are you employed and in what capacity?

A. I am employed by the Florida Public Service Commission (FPSC) as an Economic Analyst in the Electric Reliability Section of the Division of Economic Regulation.

Q. Please describe your educational and professional background.

A. I attended Louisiana State University and received a B.S. in Business Administration with an Economics major in 1980, a M.S. in Economics in 1982, and completed the course work and general exams toward a Ph.D. in Economics with a minor in Finance in 1985. I was employed by the FPSC in November 1991 as a Research and Planning Economist in the Division of Research and Regulatory Review. Since August 1996, I have worked in my current position as an Economic Analyst in the Electric Reliability Section.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to express concern over Florida Power & Light Company's (FPL) level of commitment towards a balanced fuel supply (BFS) approach to planning. FPL's actions over the past couple of years have resulted in the delay of adding solid fuel generation to the utility's system. I also discuss several actions FPL should take to reduce its ratepayers' exposure to the risk of high and volatile natural gas prices.

Q. When did the staff begin to express its concern to FPL regarding BFS?

A. For many years, staff has had informal discussions with all utilities regarding the

growing dependence on natural gas. Most of these discussions centered around increasing the supply of gas through a second pipeline or the import of liquefied natural gas. As part of the 2003 Ten-Year Site Plan (TYSP) review process, staff requested supplemental data from each affected utility, including FPL. Part of that data request was targeted at determining when a coal-fired power plant could be added to each utility's fleet. The data request was primarily driven by two factors: (1) utilities had under forecasted prices for natural gas for several years, and (2) the projected use of natural gas was continuing to escalate.

Q. What were FPL's generation plans as contained in its 2003 TYSP?

A. FPL once again had nothing but natural gas additions throughout the planning horizon. Specifically, FPL identified four combined cycle units in the years 2007, 2008, 2010, and 2012. Each unit was to be approximately 1,100 MW in size. None of these units had been through a Request for Proposal (RFP) process or need determination proceeding, and could thus still be avoided or deferred.

Q. What was FPL's response to the data request?

A. FPL responded in the summer of 2003 that "FPL's current fuel forecast, plus its current estimates for the cost and operating parameters of new pulverized coal and combined cycle units, is such that a new 2010 pulverized coal unit may be marginally more economical for FPL's system than a new 2010 combined cycle unit." FPL supported this statement throughout the Commission's review and issuance of its final report in December 2003. This statement was a positive sign that the State's largest utility and consumer of natural gas was seriously considering the addition of solid fuel to its generation fleet. Given the 2010 in-service date and the projected seven to eight year lead time for a coal unit, I would have expected the formal announcement of a coal unit and a need filing in the first quarter of 2004.

Q. Did your expectations come to pass?

A. Unfortunately, no. When the 2004 Ten-Year Site Plans were filed, the 2010 need had vanished. FPL once again identified only natural gas additions, which consisted of two combustion turbine units in 2008, followed by three combined cycle units in 2009, 2011, and 2012. The combustion turbine units were approximately 300 MW each and the combined cycle units remained at approximately 1,100 MW each. None of the combined cycle units had been through an RFP process or need determination proceeding. FPL did commit to provide to the FPSC, by December 2004, a report on FPL's evaluation regarding the possible addition of solid fuel generation capacity in the future. Given the lead time required for a pulverized coal unit, it was clear that the 2009 and 2011 needs would be satisfied with natural gas-fired generation.

Q. Did FPL provide the FPSC with its report?

A. Yes. The completion of the report was delayed due to the numerous hurricanes in 2004. On March 10, 2005, FPL filed its report with the FPSC. The report concluded that pulverized coal would be cost-effective for FPL's system by 2012. On March 28, 2005, FPL provided a briefing of its report to the FPSC at an Internal Affairs meeting.

Q. Was FPL's 2005 TYSP consistent with the findings of the report?

A. Yes, FPL's 2005 TYSP identified coal units in the years 2012 and 2013. However, the plan also showed needs in 2007, 2009, and 2010. Each of these units was identified as a natural gas combined cycle unit with a capacity of approximately 1,100 MW. The 2007 unit was certified by the Siting Board in February 2005. The 2009 and 2010 units are the subject of this proceeding. The 2010 unit was previously identified as having a 2011 in-service date in the 2004 TYSP. Recall that in 2003, FPL stated that a coal unit may be economical by

2010, and that natural gas prices have far exceeded FPL's predictions in 2003. Over time, FPL's claimed need in 2010 has shifted back and forth to a point that a coal unit is no longer feasible due to the lead time required for permitting and construction.

Q. Does this concern you?

A. Yes. The apparent shifting of need seems to indicate a lack of commitment by FPL to seriously pursue coal-fired generation for its system. I understand that a coal unit requires significant lead time to permit and construct. However, FPL should have issued an RFP for a coal unit or requested a waiver from the Commission's RFP rules sometime during 2005. Instead, as of March 2006, FPL is still planning on issuing a coal RFP in the summer of 2006. This would put even a 2012 in-service date in question.

Q. Are there other events that have occurred that also cast doubt on FPL's commitment to develop solid fuel generation for its system?

A. Yes. I can think of two other facts or events. First, FPL has consistently ruled out Integrated Coal Gasification Combined Cycle (IGCC) technology from further review due to size limitations. IGCC technology has not sufficiently matured to be constructed in the 600-800 MW class unit that FPL claims is needed to satisfy its reliability needs. However, this technology type is more widely accepted by the environmental community as a true "clean coal" technology. The Orlando Utilities Commission (OUC) has filed a need determination petition for an IGCC unit of 283 MW with an in-service date of June 2010, just four years from now. While the current size of an IGCC unit may not fulfill FPL's entire need for a year, this technology would provide some much-needed fuel diversity. It is also interesting that OUC in partnership with Southern Power Services, received a $235 million federal grant from the President's Clean Coal Initiative for the proposed plant. Unlike OUC, FPL apparently did

not submit a proposal to receive funding under the most recent round of the President's Clean Coal Initiative. As such, FPL did not take advantage of this unique opportunity to diversify its fuel mix at substantially reduced ratepayer costs.

Second, FPL has recently filed its second standard offer for renewable generation pursuant to Section 366.91, Florida Statutes. Even though the Commission has had discussions at Agenda and at a workshop about a possible portfolio approach to defining avoided cost, FPL has apparently taken a gas only approach towards pricing power from renewable generators. FPL's proposed contract is based on a 160 MW natural gas-fired combustion turbine generating unit with a 2008 in-service date. FPL's expansion plan also contains a coal unit in 2012. Because coal units typically take seven to eight years to site and build, FPL's pricing strategy of selecting its next avoided unit will never result in a standard offer contract with a coal unit as the avoided unit. The higher capacity payments and operating parameters associated with a contract based on a coal unit could benefit renewable energy providers. Given FPL's approach to defining avoided cost, FPL will potentially forego opportunities to mitigate the environmental effects of a new coal unit by adding renewable generation to its fuel mix. Renewable generators should be at the forefront of any balanced fuel supply (BFS) approach to planning. While renewables may not satisfy the entire need of a utility from a reliability standpoint, I can think of no other resource so unique from a fuel diversity point of view. Utilities should be doing everything they can to cost-effectively promote the development of renewable resources. However, FPL has apparently taken the all or nothing approach to fuel diversity. In other words, it appears that if a resource will not fully satisfy a reliability need, then the resource is not considered any further.

Q. Has FPL taken any positive steps towards maintaining a BFS approach to planning?

A. Yes. Pursuant to Order No. PSC-05-0084-FOF-EI issued on January 24, 2005, in

Docket No. 050001-EI, In Re: Fuel and purchased power cost recovery clause with generating performance incentive factor, FPL received approval to recover the costs associated with three purchased power contracts from the Southern Company. Of the total 955 MW of firm capacity, only 165 MW will be delivered from coal resources, with the remaining 790 MW delivered from natural gas-fired resources. On page 3 of its order, the Commission stated:

> FPL states that the benefits of the new UPS agreements, such as fuel diversity, enhanced reliability, and opportunities for economy energy purchases, are difficult to quantify. We agree. A pure dollar and cents cost-effectiveness comparison suggests that a self-build option would be more cost-effective by approximately $69-$93 million. Therefore, we are faced with the decision of how much of a premium should be paid for the types of benefits provided by the new UPS agreements. The concept is similar to that of purchasing car insurance. You pay a premium for something you hope to never use, but are glad you have it if needed. We estimate that the "premium" would equate to approximately 0.02 cents/kwh, or about 20 cents/month per residential customer over the 5.5 year term of the UPS agreements.

FPL's customers will pay a premium for these contracts, which FPL claimed would provide fuel diversity and allow FPL time to further evaluate a coal unit for its system.

Q. What future actions do you believe that FPL should take to achieve a more balanced fuel supply?

A. I am concerned that FPL's reliance on natural gas for future generation additions is the highest of any of Florida's investor-owned utilities, further exposing FPL's ratepayers to the risk of high and volatile natural gas prices. FPL should reduce this risk by taking the following actions:

1. FPL should accelerate its actions to install additional coal capacity. FPL has claimed in its two previous need determination filings that coal capacity was not an option because of the lengthy time period required to site and build coal. If coal is to remain an option to meet FPL's 2012 need, FPL must take action today. If FPL believes that the RFP process will delay the project beyond the 2012 need, FPL should petition the Commission for a rule waiver for approval to go forward without issuing an RFP.

2. FPL should immediately petition the Commission for approval of a standard offer contract for renewable energy based on its 2012 coal unit. A renewable purchase power agreement priced on coal would reduce FPL's ratepayers' risk exposure to natural gas prices in the same manner as installing additional coal capacity, and would provide additional benefits. Renewable capacity can be placed in service in far less time than pulverized coal capacity. In addition, renewable capacity reduces Florida's dependence on fossil fuels, potentially dampening the price of these scarce resources. Also, a standard offer based on FPL's 2012 coal unit would be consistent with the intent of Section 366.91, Florida Statutes, to encourage the development of renewables in Florida.

3. FPL should pursue additional coal-based purchase power contracts. In its petition for approval of the UPS agreements with Southern, FPL touted its right of first refusal on additional coal capacity from Southern as one of the reasons for the Commission to approve cost recovery. FPL should exercise this right if additional coal capacity becomes available from Southern, and pursue purchase power contracts with other parties as planned coal capacity is added to the grid.

Q. Does this conclude your testimony?

A. Yes.