

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for determination of need for expansion of Turkey Point and St. Lucie nuclear power plants, for exemption from Bid Rule 25-22.082, F.A.C., and for cost recovery through the Commission's Nuclear Power Plant Cost Recovery Rule, Rule 25-6.0423, F.A.C.

DOCKET NO. 070602-EI
ORDER NO. PSC-08-0021-FOF-EI
ISSUED: January 7, 2008

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

APPEARANCES:

BRYAN S. ANDERSON, ESQUIRE, R. WADE LITCHFIELD, ESQUIRE, MITCH ROSS, ESQUIRE, and JESSICA A. CANO, ESQUIRE, 700 Universe Boulevard, Juno Beach, Florida 33408-0420
On behalf of Florida Power & Light Company.

JENNIFER S. BRUBAKER, ESQUIRE, and KATHERINE E. FLEMING, ESQUIRE, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850
On behalf of the Florida Public Service Commission.

FINAL ORDER GRANTING PETITION FOR DETERMINATION OF NEED
FOR PROPOSED EXPANSION OF NUCLEAR POWER PLANTS

BY THE COMMISSION:

Background

On September 17, 2007, Florida Power & Light Company (FPL) filed a petition for a determination of need for the proposed expansion of nuclear power plants in Dade and St. Lucie Counties. FPL filed its petition pursuant to Section 403.519, Florida Statutes (F.S.). FPL's proposal consists of the expansion ("uprate") of the electric generating capacity of its existing Turkey Point and St. Lucie nuclear power plants, in Dade and St. Lucie Counties, respectively. FPL's proposed uprate would increase the power output at Turkey Point, units 3 and 4, from approximately 700 megawatts (MW) to 804 MW per unit, for a two-unit total of about 208 MW. At St. Lucie, units 1 and 2, net electrical generation per unit is expected to increase from

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approximately 840 MW to 943 MW, for a two-unit total of 206 MW. FPL proposes to complete the uprate to all four nuclear units during separate outages beginning in 2011 and ending in 2012.

This matter was scheduled for a formal administrative hearing on December 10-13, 2007. No persons intervened in this docket, and no public testimony was presented at the hearing on December 10. At the hearing, after taking all evidence, we considered the proposed stipulations regarding the appropriate resolution of all issues identified for this proceeding. We approved the stipulated positions by a bench decision, thereby resolving all issues in this docket and granting FPL's petition for determination of need. This Order reflects our decision and serves as our report under the Power Plant Siting Act, as required by Section 403.507(4)(a), F.S.

Standard of Review

Section 403.519(4), Florida Statutes, sets forth those matters that we must consider in a proceeding to determine the need for the expansion of an existing electrical power plant, or the construction of a new nuclear power plant:

In making its determination on a proposed electrical power plant using nuclear materials or synthesis gas produced by integrated gasification combined cycle power plant as fuel, the commission shall hold a hearing within 90 days after the filing of the petition to determine need and shall issue an order granting or denying the petition within 135 days after the date of the filing of the petition. The commission shall be the sole forum for the determination of this matter and the issues addressed in the petition, which accordingly shall not be reviewed in any other forum, or in the review of proceedings in such other forum. In making its determination to either grant or deny the petition, the commission shall consider the need for electric system reliability and integrity, including fuel diversity, the need for base-load generating capacity, the need for adequate electricity at a reasonable cost, and whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.

Findings

As discussed above, we were presented a series of stipulations which serve to address each of the issues that had been identified for hearing. We have reviewed the proposed stipulations, and find that they are appropriate based on the record development of this docket, and that they provide a reasonable resolution of the outstanding issues regarding FPL's petition. We, therefore, approve the stipulations set forth below.

Need for Electric System Reliability and Integrity

There is a need for the Turkey Point nuclear power plant ("PTN") and St. Lucie nuclear power plant ("PSL") uprates, taking into account the need for electric system reliability and integrity, as this criterion is used in Section 403.519(4), Florida Statutes. Without the uprates,

FPL's electric system reliability and integrity will be significantly reduced, and FPL will fail to meet its 20% reserve margin beginning in 2012, as shown in the table below.

Estimated Impact on FPL's Summer Reserve Margin		
Year	Reserve Margin w/o Uprates	Reserve Margin with Uprates
2010	22.6%	22.6%
2011	20.1%	20.1%
2012	17.8%	19.2%
2013	16.1%	17.9%
2014	14.2%	16.0%
2015	11.7%	13.4%

FPL has future resource needs of 490 MW of incremental capacity in 2012. All demand side management ("DSM") that is known to be cost-effective through 2013 is already reflected in FPL's 2006/2007 resource planning work, which identified this capacity need. Consequently, to meet FPL's summer reserve margin criterion of 20% through 2013, FPL needs new capacity in the form of power plant construction and/or purchases.

The data in the table above actually reflects an optimistic view by also including 287 MW of renewable energy purchases that are not yet certain. Three contracts for 143 MW from municipal solid waste facilities will expire in 2009-2010, but are assumed to be extendable. FPL is also analyzing three new proposals for a total of 144 MW of capacity beginning in 2011-2012. Even combined, the 287 MW of renewable generation does not significantly defer the need for additional capacity beyond the 2012 time frame.

As the table above shows, considering load projections today, the proposed uprates do not satisfy all reliability needs. Without the uprates, the gap between capacity and need becomes even larger.

Need for Fuel Diversity

There is a need for the PTN and PSL uprates, taking into account the need for fuel diversity, as this criterion is used in Section 403.519(4), Florida Statutes. Increasing nuclear generation through the nuclear uprates will enhance fuel diversity.

During 2006, about 21% of the energy produced by FPL was generated using nuclear fuel. Without the nuclear uprates, due to system growth, the percentage of nuclear-fueled production will decrease to about 17% by 2013 and decline thereafter. In contrast, FPL's analysis shows that the nuclear uprates would contribute to FPL's system supplying approximately 19% of its energy with nuclear-fueled energy by 2013. Likewise, with the uprates, natural gas-fueled production will decrease from 67% to 65%. Thus, the nuclear uprates contribute to improving and maintaining FPL's fuel diversity as well as decreasing reliance on natural gas as a fuel for electric generation. The diversification of fuel type, technology type and

transportation method provided by the uprates will enhance system reliability for FPL's customers.

Need for Baseload Generating Capacity

There is a need for the PTN and PSL uprates, taking into account the need for baseload generating capacity, as this criterion is used in Section 403.519(4), Florida Statutes. The uprates will add approximately 414 MW of nuclear-fueled baseload generating capacity, which is needed to keep pace with the increasing demand for reliable power and the steady growth that the state of Florida continues to experience.

Need for Adequate Electricity at a Reasonable Cost

There is a need for the PTN and PSL uprates, taking into account the need for adequate electricity at a reasonable cost, as this criterion is used in Section 403.519(4), Florida Statutes. The uprates will increase the amount of highly efficient nuclear-fueled generation on FPL's system, and will displace large amounts of higher-cost fossil fuel and purchase power generation, resulting in fuel savings that provide a net benefit (i.e., lower system cost) to customers. In addition, customers will benefit from reduced capacity costs due to the deferral effect of the nuclear uprates upon the timing of subsequent additional units in the 2014-2017 time period.

Furthermore, adding incremental capacity by uprating plants maximizes use of existing sites, as compared to constructing a generating plant of equivalent capacity at a new site. FPL already owns the necessary land at Turkey Point and St. Lucie, it is permitted for electric generation plants, and most of the necessary infrastructure is already in place. The proposed project precludes these costs at a new site.

No Mitigating Renewable Energy Sources and Technologies or Conservation Measures

There are no renewable energy sources and technologies or conservation measures taken by or reasonably available to FPL which might mitigate the need for the proposed expansion of the Turkey Point and St. Lucie nuclear power plants. FPL's forecasted need already accounts for all of the cost-effective DSM identified through the year 2014, plus a projection of continued DSM for the years 2015-2020. This DSM includes FPL's current Commission-approved DSM goals and a significant amount of additional DSM that FPL has identified as cost-effective, and we have since approved, since the current DSM goals were approved. Additional conservation measures cannot be implemented to eliminate the need for the PTN and PSL uprates.

For purposes of analysis, FPL's forecast assumed successful contracting for and delivery of 144 MW of renewable firm capacity bid in response to its 2007 request for proposals for renewable energy, and successful extension of 143 MW of renewable firm capacity from three expiring municipal waste-to-energy contracts. There are not sufficient additional renewable energy options to mitigate the need for the 414 MW of nuclear baseload capacity that will be provided by the uprates. The table previously shown in this Order shows the need for additional capacity even after including DSM and purchased power from renewable energy sources.

Most Cost-Effective Source of Power

The proposed uprates will provide the most cost-effective source of power, as this criterion is used in Section 403.519(4), Florida Statutes. The estimated nominal costs for the PTN and PSL uprates, not including construction carrying costs, are approximately \$750 million and \$651 million, respectively. The costs of changes to the transmission system that are needed to support the uprates are estimated at \$45 million.

To fully evaluate the system impacts of the nuclear uprates, FPL developed a long-term resource plan that included the uprates (“the Plan with Nuclear Uprates”) and an alternate resource plan not including the nuclear uprates (“the Plan without Nuclear Uprates”). The Plan without Nuclear Uprates represents the addition of combined-cycle (CC) units that could be sited and receive permitting approval in the relative near term. FPL also utilized three different fuel cost forecasts and four different environmental compliance cost forecasts in its economic analysis to address the impacts of uncertainty in future fuel and environmental compliance costs. Because 3 of these 12 scenarios represent a highly unlikely combination of low natural gas costs and high CO₂ environmental compliance cost, FPL used 9 scenarios in its economic analysis. FPL’s analysis shows that in eight of the nine economic scenarios comparing the generating technology choices represented in the two plans, the Plan with Nuclear Uprates is the most cost effective option. The estimate is that total net savings realized by customers are expected to range from \$222 million to \$963 million on a cumulative present value revenue requirement basis.

Proposed Expansion is Exempt from Rule 25-22.082, F.A.C.

The PTN and PSL uprates are within the definition of electrical power plants utilizing nuclear materials as fuel (see Sections 403.513(13), 403.506(1), and 366.93, Florida Statutes). Accordingly, pursuant to Section 403.519.(4)(c), the proposed uprates are exempt from Rule 25-22.082, Florida Administrative Code.

Rule 25-6.0423, F.A.C., Applicable to the costs of the Proposed Expansion

Rule 25-6.0423, F.A.C., is applicable to the costs of the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants after the issuance of our order granting this determination of need. For example, if FPL were to file for recovery by May 1, 2008, as called for in Rule 25-6.0423(5)(c)(1)(b), F.A.C., carrying costs on construction that we determine to be reasonable and prudent pursuant to the Rule would be included for cost recovery purposes as a component of the 2009 Capacity Cost Recovery Factor in the annual Fuel and Purchased Power Cost Recovery proceeding, pursuant to Rule 25-6.0423(5)(c)(4), F.A.C.

Conclusion

Based on the resolution of the foregoing issues, and as more fully developed in FPL's prefiled testimony and its petition, we hereby find it appropriate and in the public interest to approve the proposed stipulations set forth above, and grant FPL's petition to determine the need for the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants.

Based on the foregoing, it is therefore

ORDERED by the Florida Public Service Commission that Florida Power & Light Company's petition for determination of need for expansion of Turkey Point and St. Lucie nuclear power plants is hereby approved. It is further

ORDERED that this docket shall be closed.

By ORDER of the Florida Public Service Commission this 7th day of January, 2008.



ANN COLE
Commission Clerk

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JSB

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 by filing a motion for reconsideration with the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within five (5) days of the issuance of this order 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 Office of Commission Clerk, 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.