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Sent: Wednesday, November 21, 2007 10:58 AM
To: Filings@psc.state.fl.us
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Subject: Electronic Filing for Docket No. 070602-EI / FPL's Prehearing Statement
Attachments: FPL's Prehearing Statement.doc

Electronic Filing

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b. Docket No. 070602-EI

In re: Florida Power & Light Company's Petition to Determine Need for Expansion of Electrical Power Plants and for Exemption from Rule 25-22.082, F.A.C.

c. The document is being filed on behalf of Florida Power & Light Company.

d. There are a total of 13 pages in the attached document.

e. The document attached for electronic filing is Florida Power & Light Company's Prehearing Statement.

(See attached file: FPL's Prehearing Statement.doc)

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DOCUMENT NUMBER-DATE

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11/21/2007

FPSC-COMMISSION CLERK

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

In re: Florida Power & Light Company's)
 Petition to Determine Need for Expansion)
 of Electrical Power Plants and for)
Exemption from Rule 25-22.082, F.A.C.)

Docket No. 070602-EI

Filed: November 21, 2007

FLORIDA POWER & LIGHT COMPANY'S PREHEARING STATEMENT

Florida Power & Light Company ("FPL" or "the Company"), pursuant to Order No. 07-0819-PCO-EI, issued October 11, 2007, files with the Florida Public Service Commission ("the Commission"), its Prehearing Statement in connection with its petition to determine need for the expansion of its Turkey Point ("PTN") and St. Lucie ("PSL") nuclear power plants ("the expansion" or "the uprates"), and states:

I. FPL WITNESSES

<p>J.A. Stall Senior Vice President, Nuclear Operations and Chief Nuclear Officer Florida Power & Light Company</p>	<p>Explains that FPL's nuclear power plants are a source of reliable, safe, and cost-effective energy for FPL's customers. Discusses FPL's technical expertise and organizational strength which will enable FPL to perform the uprates of its PTN and PSL nuclear power plants in a safe, reliable, and cost-effective manner. Explains that given FPL's current fuel mix, the addition of non-fossil fueled, non-greenhouse gas emitting sources for generation is needed to maintain system reliability, increase fuel diversity, and allow progress toward meaningful greenhouse gas reductions.</p>
<p>Stephen T. Hale Senior Project Manager, Nuclear Division Florida Power & Light Company</p>	<p>Describes the proposed expansion of the PTN and PSL nuclear power plants, proposed to be implemented in 2011 for PSL Unit 1 and in 2012 for PTN Unit 3, PTN Unit 4, and PSL Unit 2. Describes the current PTN and PSL power plant sites, including the units that are the subject of the uprates. Explains how the uprates will be</p>

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	implemented in order to add approximately 414 MW of total electrical output without changing the footprint of the existing plants. Presents the Company's cost estimates for the uprates and explains the procedures in place to ensure the costs incurred are managed and controlled.
Claude A. Villard Director, Nuclear Fuels Florida Power & Light Company	Provides the projected nuclear fuel costs used by FPL witness Dr. Steven R. Sim in FPL's economic evaluation of its Plan with Nuclear Uprates and the alternate Plan without Nuclear Uprates.
Dr. Leonardo E. Green Manager of Load Forecasting, Resource Assessment and Planning Florida Power & Light Company (retired)	Describes FPL's summer and winter peak demand forecasts, the customer forecast, and the energy sales forecast. Explains how these forecasts are developed and why they are reasonable. Explains that summer and winter peak demand will continue to show strong growth, and customer growth will continue over the next fifteen years. Demonstrates that energy sales are expected to increase by 3.9% in 2007, 3.8% in 2008, and approximately 2.9% annually from 2009 to 2020.
Kennard F. Kosky Principal Golder Associates, Inc.	Provides FPL's forecast of environmental compliance costs for emissions used by FPL witness Dr. Steven R. Sim in FPL's economic evaluation of its Plan with Nuclear Uprates and the alternate Plan without Nuclear Uprates.
Gerard J. Yupp Director of Wholesale Operations, Energy Marketing and Trading Division Florida Power & Light Company	Presents and explains the methodology used to develop the multiple fuel oil, natural gas and solid fuel price forecasts used by FPL witness Dr. Steven R. Sim in FPL's economic evaluation of its Plan with Nuclear Uprates and Plan without Nuclear Uprates, and the results of those forecasts.
Kim Ousdahl Director of Accounting Florida Power & Light Company	Supports FPL's request that, in connection with granting the need determination, the Commission confirm the applicability of the Commission's Nuclear Power Plant Cost Recovery Rule, Rule 25-6.0423, Florida Administrative Code.

<p>Dr. Steven R. Sim Supervisor, Resource Assessment and Planning Florida Power & Light Company</p>	<p>Discusses the nuclear uprates which represent a unique resource addition opportunity from which FPL's customers will benefit from the perspectives of economics, system fuel diversity, and greenhouse gas emissions. Presents FPL's economic and non-economic analyses and explains that the uprates upon operation will immediately result in fuel cost savings, greater fuel diversity, and reduced emissions. Shows that the additional capacity supplied by the uprates could also contribute to deferral of new capacity additions in the 2014 – 2017 time period.</p>
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II. FPL EXHIBITS

Exhibit	Description	Sponsoring Witness
JAS-1	WANO Indices	J.A. Stall
JAS-2	NRC Performance Indicators	J.A. Stall
STH-1	Turkey Point Units 3 & 4 Plant Site	Stephen T. Hale
STH-2	Turkey Point Units 3 & 4 Nuclear Electric Generating System	Stephen T. Hale
STH-3	St. Lucie Units 1 & 2 Plant Site	Stephen T. Hale
STH-4	St. Lucie Units 1 & 2 Nuclear Electric Generating System	Stephen T. Hale
CAV-1	Nuclear Fuel Cost	Claude A. Villard
LEG-1	Total Average Customers	Dr. Leonardo E. Green
LEG-2	Summer Peak Load Per Customer	Dr. Leonardo E. Green
LEG-3	Summer Peak Load	Dr. Leonardo E. Green
LEG-4	Winter Peak Load Per Customer	Dr. Leonardo E. Green
LEG-5	Winter Peak Load	Dr. Leonardo E. Green
LEG-6	Summer Peak Weather	Dr. Leonardo E. Green

LEG-7	Florida Real Personal Income	Dr. Leonardo E. Green
LEG-8	Net Energy for Load Use Per Customer (KWH)	Dr. Leonardo E. Green
LEG-9	Net Energy for Load (GWH)	Dr. Leonardo E. Green
LEG-10	Non-Agricultural Employment	Dr. Leonardo E. Green
LEG-11	Real Price of Electricity	Dr. Leonardo E. Green
LEG-12	Impact of the 2005 Energy Policy Act Adjustment	Dr. Leonardo E. Green
KFK-1	KFK Curriculum Vitae	Kennard F. Kosky
KFK-2	Environmental Compliance Costs	Kennard F. Kosky
GJY-1	FPL's Fuel Cost Forecast	Gerard J. Yupp
SRS-1	Projection of FPL's 2007-2020 Capacity Needs	Dr. Steven R. Sim
SRS-2	Projected Incremental FPL DSM: 2006 – 2020	Dr. Steven R. Sim
SRS-3	Projection of FPL's 2007 – 2020 Capacity Needs: with Proposed Nuclear Capacity Uprates	Dr. Steven R. Sim
SRS-4	The Two Resource Plans Utilized in the Analyses	Dr. Steven R. Sim
SRS-5	Assumptions Used in the Analyses	Dr. Steven R. Sim
SRS-6	Economic Analysis Results for One Fuel and Environmental Compliance Cost Scenario	Dr. Steven R. Sim
SRS-7	Economic Analysis Results: Total Costs and Total Cost Differentials for All Fuel and Environmental Compliance Cost Scenarios	Dr. Steven R. Sim
SRS-8	Economic Analysis Results: Matrix of Total Cost Differentials for All Fuel and Environmental Compliance Scenarios	Dr. Steven R. Sim
SRS-9	Economic Analysis Results: Projection of Nuclear Uprates Non-Fuel Costs for the First 12 Months of Operation	Dr. Steven R. Sim
SRS-10	Economic Analysis Results: Projection of Approximate Bill Impacts with Nuclear Uprates: 2009 – 2013	Dr. Steven R. Sim

SRS-11	Non-Economic Analysis Results: FPL System Fuel Mix Projections by Plan	Dr. Steven R. Sim
SRS-12	Non-Economic Analysis Results: Cumulative FPL System CO ₂ Emission Reductions from Nuclear Uprates	Dr. Steven R. Sim

In addition to the above pre-filed exhibits, FPL reserves the right to utilize any exhibit introduced by any other party. FPL additionally reserves the right to introduce any additional exhibit necessary for rebuttal, cross-examination or impeachment at the final hearing.

III. STATEMENT OF BASIC POSITION

FPL has requested an affirmative determination of need for the expansion of its PTN and PSL nuclear power plants, which will provide 414 MW of fuel-diverse baseload generation at a net savings to customers, while emitting zero carbon dioxide (“CO₂”). The nuclear uprates will consist of an expansion to each of FPL’s four nuclear units, and will be achieved through major plant modifications that will increase gross power at PTN and PSL by approximately 14% and 11%, respectively. The uprates will require no changes to the footprints of the existing plants and have no significant adverse environmental impacts.

In FPL’s 2006/2007 resource planning work, FPL identified future resource needs beginning in 2012 and continuing thereafter. The uprates are needed to help FPL meet its summer reserve margin requirement of 20% through 2013, and are therefore needed for system reliability and integrity. FPL employs comprehensive and cost-effective demand side management (“DSM”) programs to reduce load requirements and encourage conservation, and is a nationally ranked industry leader in conservation and load management. FPL’s projections of future resource needs, however, already incorporate all of the known, cost-effective DSM identified and projected through the year 2020. In addition to providing needed baseload

capacity, the uprates will also enhance system reliability and integrity by diversifying FPL's fuel mix and favorably affecting the generation and load imbalance in Southeastern Florida.

The expansion of PTN and PSL is the most cost-effective option available to provide 414 MW of baseload electric generating capacity beginning in 2011 and 2012. That capacity is an amount sufficient to meet the annual electricity requirements of 213,000 residential customers, while helping to satisfy FPL's future summer reserve margin requirements. The uprates will provide this capacity while also providing many millions of dollars of expected fuel cost savings that will directly benefit customers through lower fuel charges as each uprate is placed into service. As a result, the expansion of PTN and PSL will provide adequate electricity at a reasonable cost, or in this case at a net savings, through additional nuclear power.

To assess the economics of the expansion, FPL developed two alternate resource plans; the Plan with Nuclear Uprates and the Plan without Nuclear Uprates, which represents the addition of combined cycle ("CC") natural gas-fueled units instead of the PTN and PSL uprates. FPL also developed several fossil fuel cost projections and environmental cost projections to properly compare the cumulative present value revenue requirements ("CPVRR") of the two different resource plans in a variety of fuel and environmental compliance cost scenarios. In eight of the nine scenarios considered, the Plan with Nuclear Uprates is the most cost effective option, with the economic advantage ranging from \$222 million (\$2007) to \$963 million (\$2007) in CPVRR. The one scenario not showing an economic advantage from the uprates represents an unlikely scenario of lower than expected gas costs and environmental compliance costs, and would nonetheless result in \$33 billion in CPVRR savings for customers on an FPL system-wide basis, due to the large amount of natural gas used on FPL's system.

In addition to providing a significant baseload capacity addition at a net savings to customers, the uprates will enhance fuel diversity and reduce the CO₂ emissions of FPL's system. FPL's analyses show that in 2013 the uprates would contribute to FPL's system supplying approximately 19% of its energy with nuclear-fueled energy, rather than 17% if the nuclear uprates are not implemented. Likewise, in 2013, the nuclear uprates would contribute to FPL's system supplying 65% of its energy with natural gas, as opposed to the 67% that would be supplied if the nuclear uprates were not implemented. The PTN and PSL uprates will also result in environmental benefits for customers by avoiding the emission of about one million tons per year of CO₂. In total, the uprates will avoid the emission of about 27 million tons of CO₂ over their operating lives.

The Commission's Bid Rule, Rule 25-22.082, F.A.C., is inapplicable to power plants using nuclear materials as fuel, pursuant to section 403.519(4)(c), Florida Statutes. *See*, Sections 403.513(13), 403.506(1), and 366.93, Florida Statutes. Accordingly, the Bid Rule is not applicable. Additionally, no other generation can provide additional baseload power at a net savings to customers with the additional fuel diversity and environmental benefits of the uprates; therefore, even if the Bid Rule were applicable, soliciting alternatives would be unproductive, resulting only in delay and reductions in the substantial fuel savings benefits that the uprates will provide to customers.

Consistent with the Florida Legislature's intent to encourage additional nuclear-fueled generation in the state of Florida as provided for in Sections 366.93 and 403.519(4), Florida Statutes, *inter alia*, the Commission's Rule 25-6.0423, Florida Administrative Code should be confirmed as applicable to the costs of the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants after the Commission has issued a final order granting a determination of

need. An affirmative determination of need, confirmation of exemption from the bid rule, and confirmation that Rule 25-6.0423 is applicable to the costs associated with the uprates are warranted.

IV. ISSUES AND POSITIONS

Issue 1: **Is there a need for the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants, taking into account the need for electric system reliability and integrity, as this criterion is used in Section 403.519(4), Florida Statutes?**

FPL: Yes. There is a need for the expansion of PTN and PSL, 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 expansion, FPL's electric system reliability and integrity will be significantly reduced, and FPL will fail to meet its 20% reserve margin beginning in 2012 by a considerable margin.

FPL has future resource needs of 490 MW of incremental capacity in 2012, and the resource needs for 2012 and 2013 combined are 907 MW of incremental capacity. All 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, in order 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.

Issue 2: **Is there a need for the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants, taking into account the need for fuel diversity, as this criterion is used in Section 403.519(4), Florida Statutes?**

FPL: Yes. There is a need for the expansion of PTN and PSL, taking into account the need for fuel diversity, as this criterion is used in Section 403.519(4). Increasing nuclear generation through the expansion of these plants will enhance fuel diversity.

During 2006, about 21% of the energy produced by FPL was generated using nuclear fuel. Without the expansion of PTN and PSL, due to system growth, the percentage of nuclear-fueled production will decrease to about 17% in 2013 and decline thereafter. In contrast, FPL's analysis shows that the expansion would contribute to FPL's system supplying approximately 19% of its energy with nuclear-fueled energy in 2013. Likewise, with the expansion, natural gas-fueled production will decrease from 67% to 65% in 2013. Thus, the expansion of PTN and PSL contributes 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 expansion will enhance system reliability for FPL's customers.

Issue 3: **Is there a need for the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants, taking into account the need for baseload generating capacity, as this criterion is used in Section 403.519(4), Florida Statutes?**

FPL: Yes. There is a need for the expansion of PTN and PSL, taking into account the need for baseload generating capacity, as this criterion is used in Section 403.519(4), Florida Statutes. The expansion 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.

Issue 4: **Is there a need for the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants, taking into account the need for adequate electricity at a reasonable cost, as this criterion is used in Section 403.519(4), Florida Statutes?**

FPL: Yes. There is a need for the expansion of PTN and PSL, 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 expansion 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 expansion on the timing of subsequent additional units in the 2014-2017 time period, as well as lower capital requirements for subsequent units during this period due to the capacity provided by the expansion. This will be accomplished without expanding the current footprints of the existing power plant sites.

Issue 5: **Are there any 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: No. FPL's forecasted need already accounts for all 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 the Commission has approved, since the current DSM goals were approved. Additional conservation measures cannot be implemented to eliminate the need for the expansion of PTN and PSL.

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 expansion of PTN and PSL.

Additionally, FPL's analysis shows that the expansion will contribute toward reducing FPL's CO₂ emissions. The cumulative total CO₂ emission reduction from the nuclear expansion is expected to be approximately 27 million tons, as compared to an alternate resource plan utilizing natural gas-fired CC units.

Issue 6: Will the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants provide the most cost-effective source of power, as this criterion is used in Section 403.519(4), Florida Statutes?

FPL: Yes. The proposed expansion 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 expansions, not including construction carrying costs, are approximately \$750 million and \$651 million, respectively. The costs of changes to the transmission system that are needed in order to support the expansion are estimated at \$45 million.

In order to fully evaluate the system impacts of the proposed expansion, FPL developed a long-term resource plan that included the expansion ("the Plan with Nuclear Uprates") and an alternate resource plan not including the expansion ("the Plan without Nuclear Uprates"). The Plan without Nuclear Uprates represents the addition of 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 in order to address the impacts of uncertainty in future fuel and environmental compliance costs. Because FPL determined that three of these twelve scenarios represent a highly unlikely combination of low natural gas costs and high CO₂ environmental compliance cost, FPL used nine 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. FPL estimates 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.

Issue 7: Is the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants exempt from the Commission's Bid Rule, Rule 25-22.082, Florida Administrative Code?

FPL: Yes. The expansion of PTN and PSL is within the definition of an electrical power plant 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 Bid Rule is not applicable.

Issue 8: **Based on the resolution of the foregoing issues, should the Commission grant FPL's petition to determine the need for the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants?**

FPL: Yes. For the foregoing reasons, and as more fully developed in FPL's prefiled testimony and its petition, the Commission should grant FPL's petition to determine the need for the proposed expansion of PTN and PSL.

Issue 9: **Is Rule 25-6.0423, Florida Administrative Code, applicable to the costs of the proposed expansion of the Turkey Point and St. Lucie Nuclear Power Plants after the Commission has issued a final order granting a determination of need?**

FPL: Yes.

Issue 10: **Should this docket be closed?**

FPL: Yes, following the issuance of an affirmative determination of need for the expansion of PTN and PSL.

V. POLICY ISSUES

FPL believes issues 1-9 involve issues of policy.

VI. STIPULATED ISSUES

No issues have been stipulated at this time.

VII. PENDING MOTIONS

There are no motions pending at this time.

VIII. PENDING REQUESTS FOR CONFIDENTIAL CLASSIFICATION

There are no requests for confidential classification pending at this time.

IX. REQUIREMENTS OF THE PREHEARING ORDER THAT CANNOT BE MET

At this time, FPL is not aware of any requirements in the Order Establishing Procedure with which it cannot comply.

X. OBJECTIONS TO WITNESSES' QUALIFICATIONS

At this time, FPL has no objections to a witness's qualifications as an expert.

Respectfully submitted this 21st day of November, 2007.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished electronically and by United States Mail this 21st day of November, 2007, to the following:

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