#### **Matilda Sanders**

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Subject:

Electronic Filing for Docket No. 070650-EI / FPL's Prehearing Statement

Attachments: FPL's Prehearing Statement.doc

## **Electronic Filing**

a. Person responsible for this electronic filing:

Jessica A. Cano, Esq.

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**b.** Docket No. 070650-EI

In re: Florida Power & Light Company's Petition to Determine Need for Turkey

Point Nuclear Units 6 and 7 Electrical Power Plant

- c. Documents are being filed on behalf of Florida Power & Light Company.
- **d.** There are a total of 21 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)

Jessica Cano Attorney Law Department

Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408 561-304-5226 Jessica Cano@fpl.com

DOCUMENT NUMBER-DATE

00113 JAN-48

FPSC-COMMISSION CLERK

# BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Florida Power & Light Company's	)	Docket No. 070650-EI
Petition to Determine Need for	)	
Turkey Point Nuclear Units 6 and 7	)	
Electrical Power Plant	)	Dated: January 4, 2008

# FLORIDA POWER & LIGHT COMPANY'S PREHEARING STATEMENT

Florida Power & Light Company ("FPL" or the "Company"), pursuant to Order No. PSC-07-0869-PCO-EI, issued October 30, 2007, hereby files with the Florida Public Service Commission ("FPSC" or the "Commission") its Prehearing Statement in connection with its Petition to Determine Need for Turkey Point Nuclear Units 6 and 7 Electrical Power Plant ("Turkey Point 6 & 7" or the "Project"), and states:

#### I. WITNESSES

Witness	Subject Matter
Armando J. Olivera President Florida Power & Light Company	Provides an overview of FPL's request and addresses the need to develop new nuclear generation at the Turkey Point facility. Addresses key considerations which include: the importance of this Project in achieving meaningful reductions in CO <sub>2</sub> emissions; the significant challenges FPL faces in meeting the growing demand for electricity in the state of Florida; the need for system fuel diversity; the economic uncertainties and other risks associated with the Project; and the critical importance of continued government and regulatory support for the development of new nuclear generation in this state.

DOCUMENT NUMBER-DATE

FPSC-COMMISSION CLERK

Rene Silva
Senior Director,
Resource Assessment and Planning
Florida Power & Light Company

Discusses why the addition of Turkey Point 6 & 7 is the best alternative available for FPL to continue to provide reliable electric service at a reasonable cost; contribute to a balanced, fuel-diverse generation portfolio; and maintain an adequate reserve margin to meet its customers' projected electricity demand beginning in 2018. Also explains why the Project is a critical component of any plan to reduce emissions of CO<sub>2</sub>, a key greenhouse gas, at the same time FPL continues to meet its customers' growing electricity needs.

# J.A. Stall Senior Vice President, Nuclear Operations and Chief Nuclear Officer Florida Power & Light Company

Explains that FPL's nuclear power plants are a source of safe, reliable, and cost-effective energy for FPL's customers, and discusses the Company's technical expertise and organizational strength in safely operating and maintaining its existing fleet of nuclear power plants. Explains that the proposed Turkey Point 6 & 7 will enable FPL to secure an option to deliver safe, reliable, and cost-effective power to customers at reasonable cost.

# Steven D. Scroggs Senior Director of Project Development Florida Power & Light Company

Provides an overview of the proposed Project and the deployment process. Describes FPL's cost estimate range for new nuclear and how the project expenditures relate to the Nuclear Power Plant Cost Recovery Rule, as well as factors which may impact the estimated cost and deployment schedule. Explains that action is required now to pursue this resource option, which is vital to achieving Florida's goals for clean, reliable, fuel-diverse energy and attractive from an economic perspective based on the best information available today. Discusses the incremental decision process that will allow FPL to manage cost risk and provide the FPSC with oversight opportunities. Describes FPL's contact with other electric utilities regarding potential ownership participation in the Project.

Dr. Nils J. Diaz Managing Director ND2 Group	Discusses the current state of the nuclear industry, including recent enhancements made to licensing and improvements in reactor designs. Also addresses the status of physical security protections, plant decommissioning efforts, and spent fuel storage and disposition programs.
Dr. Leonardo E. Green Manager of Load Forecasting, Resource Assessment and Planning Florida Power & Light Company (retired)	Explains FPL's load forecasting process, identifies the underlying methodologies and assumptions, and presents the forecasts used in the Need Study. Discusses the econometric models that have proven to be highly effective in explaining changes in load growth. Provides the basis for projecting continued strong growth in both summer and winter peaks, with an additional 8,100 MW of summer peak demand and 12,500 MW of winter peak demand between 2007 and 2020.
C. Dennis Brandt Director of Product Management and Operations Florida Power & Light Company	Discusses FPL's high rankings among utilities nationally in cumulative conservation and load management. Details FPL's efforts to ensure that it has identified all of the cost-effective demand-side management potential for the 2007 through 2020 time frame, including Commission-approved expansion of eight DSM programs and creation of two new programs. Shows that in spite of the implementation of substantial amounts of DSM from existing programs, and additional projected DSM peak demand reduction, there still exists a need for significant additional capacity as identified in this proceeding.
Henrietta G. McBee Director, Project Development for Renewable Energy Florida Power & Light Company	Demonstrates that FPL is working to develop and purchase as much energy as technically and economically possible from renewable resources and continues to explore the use of emerging technologies. Presents the results of FPL's July 2007 Renewables Request for Proposals, and discusses FPL's own development of renewable generating projects. Explains that there will continue to be ample need on FPL's system to take advantage of new and developing renewable energy projects.

Gerard J. Yupp
Director of Wholesale Operations,
Energy Marketing and Trading Division
Florida Power & Light Company

Presents FPL's fuel oil, natural gas, and solid fuel price forecasts and the methodology used to develop them. Explains the benefits of fuel diversity that would result from the addition of Turkey Point 6 & 7, the natural gas pipeline and supply issues facing FPL and Florida, the reliability benefits associated with the addition of Turkey Point 6 & 7 as compared to a natural gasfired plant, and the inherent uncertainty in oil and natural gas price forecasts which necessitates the use of a scenario analysis.

# Claude A. Villard Director, Nuclear Fuels Florida Power & Light Company

Presents FPL's nuclear fuel price forecast and the methodology used to develop it. Explains that nuclear fuel costs have historically been stable and significantly lower than fossil fuels, and that FPL expects there to be sufficient supplies to address the nuclear fuel needs for Turkey Point 6 & 7 at reasonable and stable prices. Discusses that nuclear plants are less vulnerable to fuel supply disruption than fossil plants. Also explains that FPL is confident that there are viable, economic alternatives available for the storage of spent nuclear fuel at Turkey Point 6 & 7 regardless of when the Department of Energy fulfills its statutory and contractual obligations to take delivery of spent nuclear fuel for disposal.

# Kennard F. Kosky Principal Golder Associates, Inc.

Provides an overview of the key environmental issues related to Turkey Point 6 & 7, including the uncertainty regarding the cost of CO<sub>2</sub> emission reduction legislation and regulation. Concludes that nuclear technology is the best available alternative from an environmental perspective, consistent with maintaining fuel diversity in the 2018-2020 timeframe. Discusses the economic advantage of choosing nuclear over fossil-fueled technology under any form of CO<sub>2</sub> mitigation regulation. Discusses FPL's use of projected air emission compliance costs, based on ICF International's published projections, as a basis for quantifying estimated CO<sub>2</sub> and other emission compliance costs.

Hector J. Sanchez Director of Transmission Services and Planning Florida Power & Light Company	Provides a description of the evaluation process used to develop the transmission-related requirements for the Turkey Point 6 & 7 generation expansion plan, considering factors associated with planning, construction, and operation of the electric system. Describes the transmission facilities and upgrades that are needed for the range of generator sizes being contemplated.
Dr. Steven R. Sim Supervisor, Resource Assessment and Planning Florida Power & Light Company	Discusses FPL's integrated resource planning process and the Company's focus on fuel diversity. Explains FPL's economic and non-economic analyses used to evaluate the addition of two new nuclear units versus the most likely alternatives, and presents the results of those analyses. Explains that Turkey Point 6 & 7 is currently projected to be the economically competitive choice for addressing FPL's future capacity needs in the 2018 – 2020 time period, and that it is also projected to be the best choice for both promoting fuel diversity and lowering FPL's system CO <sub>2</sub> emissions beginning in 2018.
Kim Ousdahl Controller Florida Power & Light Company	Explains how FPL will comply with Rule 25-6.0423, F.A.C. (the Nuclear Power Plant Cost Recovery Rule). Explains that payments made for long-lead procurement items during the preconstruction phase are properly categorized as preconstruction costs under the Rule. Addresses FPL's intent, upon an affirmative determination of need for the Project, to file in May 2008 the Nuclear Filing Requirements to support the inclusion of pre-construction costs for recovery through FPL's Capacity Cost Recovery Clause factor starting in 2009.

John J. Reed
Chairman and Chief Executive Officer
Concentric Energy Advisors, Inc.

Explains that FPL's proposal to pursue the development of new nuclear generation is appropriate given the significant uncertainty that currently exists regarding future environmental renewable resource development policies, potential, fossil fuel prices, and the ultimate cost of long lead time baseload generating technologies such as new nuclear facilities and integrated gasification combined cycle facilities. Also addresses the regulatory policies and processes that are needed to maintain a balanced and flexible "regulatory compact" between FPL and the Commission, which will simultaneously serve to establish a new nuclear plant as a baseload option for FPL and protect FPL's customers from being limited to potentially uneconomic generating resource commitments.

#### II. EXHIBITS

Exhibit	Description	Sponsoring Witness
Exhibit AJO-1	Biographical Information	Armando J. Olivera
Exhibit RS-1	Actual Energy Mix 2006	Rene Silva
Exhibit RS-2	Projected Energy Mix 2021	Rene Silva
Exhibit RS-3	Resource Need	Rene Silva
Exhibit RS-4	Economic Analysis Results: Breakeven Cost for Nuclear Capital Costs	Rene Silva
Exhibit JAS-1	WANO Indices	J.A. Stall
Exhibit JAS-2	NRC Performance Indicators	J.A. Stall
Exhibit SDS-1	Development Process Timeline	Steven D. Scroggs
Exhibit SDS-2	Site Selection Study Report	Steven D. Scroggs
Exhibit SDS-3	FPL Technology Review	Steven D. Scroggs
Exhibit SDS-4	COL Application Content	Steven D. Scroggs

Exhibit SDS-5	Estimated Project Milestones	Steven D. Scroggs
Exhibit SDS-6	Overnight Cost Estimate Range (2007\$)	Steven D. Scroggs
Exhibit SDS-7	Comparison to Economically viable Range (2007\$)	Steven D. Scroggs
Exhibit SDS-8	Total Project Cost Estimate Range (Year Spent \$)	Steven D. Scroggs
Exhibit SDS-9	Project Cost Expenditure by NPPCRR Category	Steven D. Scroggs
Exhibit NJD-1	Summary Resume of Dr. Nils J. Diaz, PhD.	Dr. Nils J. Diaz
Exhibit NJD-2	Collective Radiation Exposure of Nuclear Power Plant Personnel	Dr. Nils J. Diaz
Exhibit NJD-3	10 Years of NRC's Safety Indicators	Dr. Nils J. Diaz
Exhibit NJD-4	WANO Indicators & Weighting Factors	Dr. Nils J. Diaz
Exhibit NJD-5	U.S. Nuclear Industry Capacity Factors	Dr. Nils J. Diaz
Exhibit NJD-6	License Renewal Impact on Nuclear Power	Dr. Nils J. Diaz
Exhibit NJD-7	Expected Power Plant Applications	Dr. Nils J. Diaz
Exhibit NJD-8	Design Centered Review Approach	Dr. Nils J. Diaz
Exhibit LEG-1	Total Average Customers	Dr. Leonardo E. Green
Exhibit LEG-2	Summer Peak Load Per Customer	Dr. Leonardo E. Green
Exhibit LEG-3	Summer Peak Load	Dr. Leonardo E. Green
Exhibit LEG-4	Winter Peak Load Per Customer	Dr. Leonardo E. Green
Exhibit LEG-5	Winter Peak Load	Dr. Leonardo E. Green
Exhibit LEG-6	Summer Peak Weather	Dr. Leonardo E. Green
Exhibit LEG-7	Florida Real Personal Income	Dr. Leonardo E. Green
Exhibit LEG-8	Net Energy for Load Use Per Customer	Dr. Leonardo E. Green
Exhibit LEG-9	Net Energy for Load	Dr. Leonardo E. Green

Exhibit LEG-10	Non-Agricultural Employment	Dr. Leonardo E. Green
Exhibit LEG-11	Real Price of Electricity	Dr. Leonardo E. Green
Exhibit LEG-12	Impact of the 2005 Energy Policy Act Adjustment	Dr. Leonardo E. Green
Exhibit DB-1	FPL Current FPSC DSM Goals	C. Dennis Brandt
Exhibit DB-2	FPL DSM Programs & Measures	C. Dennis Brandt
Exhibit HGB-1	Renewables by State	Henrietta G. McBee
Exhibit HGB-2	Renewables by State Excluding Hydro and Geothermal	Henrietta G. McBee
Exhibit HGB-3	NREL United States Classes of Wind Power Density Map	Henrietta G. McBee
Exhibit HGB-4	NREL United States Solar Energy Potential Map	Henrietta G. McBee
Exhibit GJY-1	Historical Fuel Prices	Gerard J. Yupp
Exhibit GJY-2	Nuclear Fuel Savings	Gerard J. Yupp
Exhibit CAV-1	Description of Nuclear Fuel	Claude A. Villard
Exhibit CAV-2	Uranium Projected Prices	Claude A. Villard
Exhibit CAV-3	Conversion Services Projected Prices, Dollars per kgU as UF6	Claude A. Villard
Exhibit CAV-4	Enrichment Services Projected Prices	Claude A. Villard
Exhibit CAV-5	Fabrication Services Projected Prices	Claude A. Villard
Exhibit CAV-6	Annual Nuclear Fuel Expense Projection	Claude A. Villard
Exhibit KFK-1	KFK Curriculum Vitae	Kennard F. Kosky
Exhibit KFK-2	Graphical Representation of Turkey Point Site	Kennard F. Kosky
Exhibit KFK-3	Fossil Fuel and Air Emissions Displaced by FPL's Nuclear Units Since Initial Operation as of 2006	Kennard F. Kosky

Exhibit KFK-4	Florida CO <sub>2</sub> Emissions Avoided by FPL Nuclear Units	Kennard F. Kosky
Exhibit KFK-5	Avoided Air Emissions from FPL's Nuclear Generation in 2006	Kennard F. Kosky
Exhibit KFK-6	Environmental Benefits of Nuclear Generation	Kennard F. Kosky
Exhibit KFK-7	Future Annual CO <sub>2</sub> Emissions Avoided by FPL New Nuclear Generation	Kennard F. Kosky
Exhibit KFK-8	Reduction in Annual CO <sub>2</sub> Emissions Achieved by Adding 1,000 MW of Non- Emitting CO <sub>2</sub> Generation Alternatives in Florida	Kennard F. Kosky
Exhibit KFK-9	Choosing Nuclear Helps Reduce CO <sub>2</sub> Emissions in the Year 2021 by 76% Toward the Year 2000 Level of 62.6 Million Tons	Kennard F. Kosky
Exhibit HJS-1	Summary of Required Facilities for Turkey Point 6 & 7	Hector J. Sanchez
Exhibit SRS-1	Projection of FPL's 2007 - 2020 Capacity Needs	Dr. Steven R. Sim
Exhibit SRS-2	Projected Incremental FPL DSM: 2006 – 2020	Dr. Steven R. Sim
Exhibit SRS-3	Projection of FPL's 2007 – 2020 Capacity Needs: with Turkey Point 6 & 7	Dr. Steven R. Sim
Exhibit SRS-4	The Three Resource Plans Utilized in the Analyses	Dr. Steven R. Sim
Exhibit SRS-5	Economic Analysis Results for One Fuel and Environmental Compliance Cost Scenario	Dr. Steven R. Sim
Exhibit SRS-6	Economic Analysis Results: Total Costs and Total Cost Differentials for All Fuel and Environmental Compliance Cost Scenarios	Dr. Steven R. Sim
Exhibit SRS-7	Economic Analysis Results: Matrix of Total Cost Differentials for All Fuel and Environmental Compliance Cost Scenarios	Dr. Steven R. Sim

Exhibit SRS-8	Economic Analysis Results: Breakeven Cost for Nuclear Capital Costs for All Fuel and Environmental Compliance Cost Scenarios	Dr. Steven R. Sim
Exhibit SRS-9	Economic Analysis Results: Projection of Approximate Bill Impacts with Turkey Point 6 & 7: 2009 – 2021	Dr. Steven R. Sim
Exhibit SRS-10	Non-Economic Analysis Results: System Fuel Mix Projections by Plan	Dr. Steven R. Sim
Exhibit SRS-11	Non-Economic Analysis Results: FPL System CO <sub>2</sub> Emissions	Dr. Steven R. Sim
Exhibit JJR-1	Curriculum Vitae of John J. Reed	John J. Reed
Exhibit JJR-2	Expert Testimony of John J. Reed	John J. Reed
Exhibit JJR-3	CO <sub>2</sub> Reductions by Technology Type	John J. Reed
Exhibit JJR-4	2007 U.S. Electricity by Technology Sector vs. 2030 US Electricity by Technology Sector Including Advanced Technologies	John J. Reed

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 exhibits necessary for rebuttal, cross-examination or impeachment at the final hearing.

#### III. STATEMENT OF BASIC POSITION

Florida continues to be one of the fastest growing states in the nation, and FPL must continue to make significant investments in new infrastructure to keep pace with the increasing demand for adequate, reliable power associated with such growth. While FPL continues to pursue and implement reduced electricity usage and load management techniques through industry-leading conservation efforts and demand side management ("DSM") programs, and actively cultivates and pursues the development of additional renewable generating capacity within the state, by themselves these efforts are not enough. FPL must also at times construct large, baseload capacity additions. Turkey Point 6 & 7 is intended to help meet FPL's growing need for additional baseload capacity, while also enhancing the reliability of FPL's system by reducing reliance on fossil fuels and diversifying the resource mix. Additionally, Turkey Point 6 & 7 will provide this needed fuel-diverse, baseload capacity without emitting carbon dioxide ("CO<sub>2</sub>") or other greenhouse gases. The Project is essential to effectively address the concerns over climate change illustrated by Governor Crist's Executive Order No. 07-127.

FPL has evaluated various potential power plant designs for the Project and has determined that two – the General Electric Economic Simplified Boiling Water Reactor ("GE ESBWR") and the Westinghouse AP1000 – are best positioned to balance technical, commercial and risk management considerations. The two units comprising Turkey Point 6 & 7 will contribute between 2,200 and 3,040 MW of new generation to FPL's system, depending upon which design FPL ultimately selects. By 2020, FPL expects that it will need approximately 6,200 MW of additional new power supply, *after* taking into account approximately 1,900 MW of additional DSM, all currently committed supply projects, approximately 400 MW of capacity from the recently approved uprates at FPL's four existing nuclear units, and approximately 300 MW of renewable generation. Accordingly, even with the Project's addition of 2,200 MW - 3,040 MW of new capacity, there will be a shortfall relative to need during this time period of approximately 3,120 MW to 3,960 MW, which will have to be filled by other resources, including additional renewable generation.

FPL's economic analysis shows that Turkey Point 6 & 7 is the most economically competitive alternative for addressing FPL's future capacity needs in the 2018 through 2020 time period. It is also the best alternative for promoting fuel diversity and lowering FPL's CO<sub>2</sub> system emissions beginning in 2018. Based on all the information available today, it is clearly desirable to take the steps and make the expenditures necessary to retain the option of new nuclear capacity coming on line in 2018. Because of the extended nature of the development cycle for a new nuclear plant and the process for annual reviews of the projected costs and system economics for such a plant pursuant to the Nuclear Power Plant Cost Recovery Rule ("the NPPCR Rule"), the Commission will have regular opportunities to review progress on Turkey Point 6 & 7 and to evaluate new information that develops over time. Granting FPL's petition will enable FPL to move forward and preserve the ability to deliver the benefits of new nuclear capacity to its customers on the earliest practical deployment schedule.

Given FPL's current and projected fuel mix, a large part of which relies on natural gas, the addition of a non-fossil fueled, emission free source of baseload generation is necessary to maintain system reliability, increase fuel diversity, and reduce dependence on fuel oil and natural gas. New nuclear generation is the most viable single resource option that can contribute to achieving these recent legislative objectives as codified in sections 366.92(1) and 403.519(4), Florida Statutes. Turkey Point 6 & 7 is a cost-effective and environmentally sound means of helping to meet FPL's growing capacity needs with reliable, fuel-diverse, zero-emission baseload generation. Turkey Point 6 & 7 will also have a positive impact on the Southeast Florida load and generation imbalance and provide adequate power at a reasonable cost. In this regard, the Project presents several key advantages to FPL and its customers.

The Commission should clearly articulate its support for the development of nuclear generation and this project in an order granting a determination of need for Turkey Point 6 & 7. This is not a routine determination of need. The scale, complexity and challenges of this project will be enormous. Taking steps now to preserve the option of new nuclear generation involves significant costs and risks that are unique to this type of resource addition. Given the likely challenges that will be faced during the licensing and development process, considering the regulatory risk associated with the last generation of nuclear construction, and to help overcome past perceptions that the risks associated with nuclear investment are too great to warrant moving

forward, it is imperative that the Commission in its order indicate strong support for this Project and the manner in which it is being pursued. Starting with the Commission's order in this proceeding, active and consistent governmental and regulatory support will be imperative to the successful deployment of new nuclear generation and to help bridge challenges that undoubtedly will arise.

FPL expects that it may need to make substantial advance payments to secure a reservation for specific long-lead procurement items in advance of completing the NPPCR Rule review process in 2008. Obtaining these reservations for the specific long lead procurement items is necessary to preserve the potential for 2018-2020 in-service dates for the Project. Advance payments made prior to the completion of the Project's site clearing work are properly characterized as "pre-construction costs," to be recovered pursuant to the mechanism provided in the NPPCR Rule. FPL intends to file Nuclear Filing Requirements by May 1, 2008, in order to support the inclusion, consistent with Rule 25-6.0423(5)(c), for cost recovery purposes as a component of the 2009 Capacity Cost Recovery Factor those pre-construction costs associated with Turkey Point 6 & 7 that the Commission determines are reasonable and prudent.

FPL's petition and supporting testimony inform the Commission of FPL's discussions related to potential ownership participation in Turkey Point 6 & 7 by other electric utilities, as contemplated by Section 403.519(4)(a)(5) and Rule 25-22.081(2)(d), F.A.C.

#### IV. ISSUES AND POSITIONS

#### **Joint Issues**

Issue 1: Is there a need for the proposed generating units, 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 proposed generating units, taking into account the need for electric system reliability and integrity. FPL determined in its 2006/2007 Integrated Resource Plan ("IRP") that it would need significant additional resources starting in 2012 to meet its reserve margin criterion. FPL determined it would need a minimum of either 6,156 MW of new supply (power plant construction or power purchase) or approximately 5,130 MW of new DSM to meet its reserve margin requirements by 2020. This anticipated need already accounts for approximately 1,900 MW of additional DSM, all currently committed supply projects, approximately 400 MW of capacity from the recently approved uprates at FPL's four existing nuclear units, and approximately 300 MW of renewable generation. With Turkey Point 6 & 7, FPL will still need thousands of additional megawatts of generation (renewable or otherwise) or additional DSM in order to maintain its reliability criterion of a 20% reserve margin for those years.

Additionally, the proposed location of new generating capacity at the Turkey Point site will provide overall system benefits and enhance reliability by placing the new generation in close proximity to an area of concentrated load in Southeastern Florida. (Olivera, Silva, Stall, Green, Sanchez, Sim)

Issue 2: Is there a need for the proposed generating units, 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 proposed generating units, taking into account the need for fuel diversity. FPL conducted fuel diversity analyses which focused on the projected annual fuel mixes for three alternate resource plans for the 2018–2021 time period. Those resource plans are designated as the Plan with Nuclear, the Plan without Nuclear – CC, and the Plan without Nuclear – IGCC. The years 2018-2021 were chosen to address the year when the first new nuclear unit is projected to go in-service (2018) through the first year in which both new nuclear units are in-service for a full year (2021).

FPL's fuel diversity analyses showed that the Plan with Nuclear holds a significant fuel diversity advantage as compared to the Plan without Nuclear – CC, which is the next most economically viable alternative. With the addition of Turkey Point 6 & 7, it is projected that FPL's system will supply approximately 27% of its energy with nuclear, about 65% with natural gas, and about 7% with coal/petroleum coke. By comparison, the Plan without Nuclear – CC would result in a supply of energy of only approximately 16% from nuclear, about 75% with natural gas, and about 7% with coal/petroleum coke. The primary benefits of the more balanced fuel mix provided by the addition of Turkey Point 6 & 7 are better system reliability and reduced price volatility. (Olivera, Silva, Stall, Yupp, Villard, Sim)

Issue 3: Is there a need for the proposed generating units, taking into account the need for base-load generating capacity, as this criterion is used in Section 403.519(4), Florida Statutes?

FPL: Yes. There is a need for the proposed generating units, taking into account the need for baseload generating capacity. The proposed Project is intended to help meet FPL's growing need for additional baseload capacity. Baseload capacity is the essential foundation of any utility's supply portfolio, because baseload plants run around-the-clock to provide the continuous supply of electricity that customers require. Most renewable generation resources cannot provide baseload capacity or be depended upon to be available at the time of system peak. Rather, to the extent they provide capacity, renewable options are better positioned as intermediate and peaking resources that enable a utility to replace its gas and oil-fired generation. Nuclear generation such as Turkey Point 6 & 7 is a baseload capacity option, available at all hours, 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.

Additionally, new nuclear generation is the only baseload option available in Florida that produces no greenhouse gas emissions. Turkey Point 6 & 7 will therefore provide a significant amount of baseload capacity while emitting no CO<sub>2</sub> or other greenhouse gases. (Silva, Scroggs, Kosky, Sim, Reed)

Issue 4: Is there a need for the proposed generating units, 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 proposed generating units, taking into account the need for adequate electricity at a reasonable cost. Based upon extensive quantitative and qualitative evaluations of alternative technologies, FPL selected Turkey Point 6 & 7 as the best choice to provide reliable power at a reasonable cost, including low and stable fuel costs, in order to meet a growing demand for electricity. Nuclear fuel costs have historically been stable and significantly lower than fossil fuels, and FPL expects there to be sufficient supplies to address the nuclear fuel needs for Turkey Point 6 & 7 at reasonable and stable prices.

Additionally, Turkey Point 6 & 7 will reduce air emissions and air emission compliance costs. These reduced compliance costs are reflected in FPL's economic analysis, discussed in Issue 6 below. Compared with natural gas or IGCC generation that might otherwise be installed, over a 40-year period of operation, Turkey Point 6 & 7 will displace between 21,300 to 49,200 tons of NO<sub>2</sub>, approximately 14,200 to 75,400 tons of SO<sub>2</sub>, and about 266 million to 700 million tons of CO<sub>2</sub>. For possible CO<sub>2</sub> compliance costs alone, the cumulative 40-year cost for alternative generation could range from \$6 billion to \$28 billion or more for combined cycle generation, and \$17 billion to \$73 billion or more for IGCC generation. (Silva, Diaz, Villard, Kosky, Sim, Reed)

Issue 5: Are there any renewable energy sources and technologies or conservation measures taken by or reasonably available to Florida Power & Light Company which might mitigate the need for the proposed generating units?

FPL: No. Neither renewable resources nor conservation and DSM can mitigate the need for Turkey Point 6 & 7, alone or in combination. FPL is working to develop and purchase as much energy as technically and economically possible from renewable resources and continues to explore the use of emerging technologies, but there simply is not enough renewable resources in Florida to make a meaningful contribution towards achieving a 20% reserve margin criterion. Even if renewable resources and conservation are achieved at levels far greater than expected, FPL's need for Turkey Point 6 & 7 will not be eliminated. Moreover, the addition of Turkey Point 6 & 7 will not displace the potential for increasing the use of these resources, given the scope of FPL's system needs and the anticipated rate of growth. (Silva, Brandt, McBee, Reed, Sim)

**Issue 6:** Will the proposed generating units provide the most cost-effective source of power, as this criterion is used in Section 403.519(4), Florida Statutes?

FPL: Yes. Based on reasonable projections and assumptions regarding future conditions, the proposed generating units are projected to provide the most cost-effective source of power, taking into account all the factors listed in Section 403.519(4). Because it is unlikely that the state can count on energy from renewable resources to meet any large portion of its power supply needs, FPL analyzed alternative resource plans that utilize CC and IGCC technologies.

FPL considered a range of fossil fuel price scenarios and environmental compliance cost scenarios, including a range of CO<sub>2</sub> emission compliance costs. FPL then determined breakeven costs for each of the nuclear scenarios compared with each of the scenarios for the two alternative Plans without Nuclear. Under a wide range of assumptions about fuel and environmental costs, the Plan without Nuclear – CC is less expensive on a Cumulative Present Value Revenue Requirements basis than the Plan without Nuclear – IGCC. FPL therefore focused on a comparison of the Plan with Nuclear and the Plan without Nuclear – CC. The economically viable construction cost range for the Plan without Nuclear – CC is \$3,206 to \$7,281/kW, which compares favorably with FPL's non-binding construction cost estimate of \$3,108 to \$4,540/kW for Turkey Point 6 & 7. As a result, Turkey Point 6 & 7 is currently projected to be the most economically competitive choice. (Scroggs, Yupp, Villard, Kosky, Sanchez, Sim)

Issue 7: Based on the resolution of the foregoing issues, should the Commission grant Florida Power & Light Company's petition to determine the need for the proposed generating units?

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 Turkey Point 6 & 7. (Olivera, Silva, Stall, Scroggs, Diaz, Green, Brandt, McBee, Yupp, Villard, Kosky, Sanchez, Sim, Ousdahl, Reed)

**Issue 8:** Should this docket be closed?

FPL: Yes.

#### Additional Issues: FPL

If the Commission grants Florida Power & Light Company's petition to determine the need for the proposed generating units, should the Commission's order expressly state support for the development of new nuclear generation, affirm the need to take steps now to preserve new nuclear generation as a resource option to meet future customer needs, acknowledge the risks and costs associated with a project of such magnitude and the corresponding stepwise role of the annual

review process, and emphasize the importance of continued regulatory support throughout the process?

FPL:

Yes. The Commission should be very clear in articulating its support for the development of nuclear generation and this project in an order granting a determination of need for Turkey Point 6 & 7. This is not a routine determination of need. The scale, complexity and challenges of this project will be enormous. Taking steps now to preserve the option of new nuclear generation involves significant costs and risks that are unique to this type of resource addition. Given the likely challenges that will be faced during the licensing and development process, considering the regulatory risk associated with the last generation of nuclear construction, and to help overcome past perceptions that the risks associated with nuclear investment are too great to warrant moving forward, it is imperative that the Commission in its order indicate strong support for this Project and the manner in which it is being pursued. Starting with the Commission's order in this proceeding, active and consistent governmental and regulatory support will be imperative to the successful deployment of new nuclear generation and to help bridge challenges that undoubtedly will arise. (Olivera, Ousdahl, Scroggs, Reed)

Issue 10:

If the Commission grants Florida Power & Light Company's petition to determine the need for the proposed generating units, is it prudent for FPL to make advance payments for such long-lead procurement items as are reasonably necessary to preserve the potential for 2018-2020 in-service dates for the proposed generating units?

FPL:

Yes. Long-lead procurement involves reserving manufacturing space and executing the design, purchase and delivery of special heavy forgings and equipment so that they will be prepared and ready to be placed at the appropriate time during the complex construction process. The unique nature (e.g., size, shape, quality requirements) of these forgings requires several years to design, fabricate and deliver them to the site. Procurement of an option for certain long-lead items will be required soon after an affirmative determination of need, to preserve a target in-service date of 2018 for the first unit. (Stall, Scroggs, Reed)

Issue 11:

If the Commission grants Florida Power & Light Company's petition to determine the need for the proposed generating units, are prudent advance payments made prior to the completion of the proposed generating units' site clearing work properly characterized as "pre-construction costs," to be recovered pursuant to the mechanism provided in Rule 25-6.0423, F.A.C.?

FPL:

Yes. Prudent advance payments made prior to the completion of the Turkey Point 6 & 7 site clearing work are "pre-construction costs," as defined in Rule 25-6.0423(2)(e), F.A.C., to be recovered pursuant to the mechanism provided in Rule 25-6.0423, F.A.C. (Ousdahl, Scroggs)

- Issue 12: If FPL were to file for recovery by May 1, 2008, would pre-construction costs associated with the proposed generating units that the Commission determines are reasonable and prudent 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), F.A.C.?
- FPL: Yes. Consistent with Rule 25-6.0423(5)(c), pre-construction costs associated with Turkey Point 6 & 7 that the Commission determines are reasonable and prudent will be included for cost recovery purposes as a component of the 2009 Capacity Cost Recovery Factor if FPL files for recovery by May 1, 2008. (Ousdahl)

# Additional Issues: Florida Municipal Electric Association ("FMEA")/Florida Municipal Power Agency ("FMPA")\*

- Issue 13: Does FPL's nuclear power plant petition contain a summary of any discussions with other electric utilities regarding ownership of a portion of the plant by such electric utilities, consistent with the requirements of Rule 25-22.081, F.A.C.?
- FPL: Yes. FPL's petition and supporting testimony summarizes its discussions with other electric utilities concerning Turkey Point 6 & 7, as required by the statute and rule. (Scroggs)

### Additional Issues: Orlando Utilities Commission ("OUC")\*

- Issue 14: Does not 403.519(4)(b), Fla. Stat., stating that the Commission shall "take into account matters within its jurisdiction, which it deems relevant" allow the Commission to conclude that co-ownership is relevant especially in light of (4)(b)(2) which requires the Commission to consider whether the approval will enhance the reliability of power production within the state (not just in FPL's territory) and (4)(b)(3) requiring the Commission to take into account the plant's contribution to the long-term stability and reliability of the electric grid?
- FPL: This is a legal, not factual, issue. It also is worded in an improperly argumentative fashion. Section 403.519(4) should not be interpreted in a manner that requires co-ownership discussions or authorizes consideration of co-ownership in the need determination process. Furthermore, co-ownership would have no effect on the reliability of power production within the state or the long-term stability and reliability of the electric grid, so it would be irrelevant to the considerations identified under subsections (4)(b)(2) and (4)(b)(3). (Scroggs, Sanchez)
- Issue 15: Did Florida Power & Light's petition, as required by Rule 25-22.081(2)(d) F.A.C., contain a summary of any discussions Florida Power & Light had with other electric utilities concerning the other electric utilities' ownership of a portion of the Florida Power & Light nuclear plant?

FPL: Yes. (Scroggs)

Issue 16: Does [Section] 403.519(4)(a)(5), Fla. Stat., and Rule 25-22.081(2)(d) F.A.C., create any duty on FPL to initiate discussion with other utilities that might have an interest in ownership of a portion of the nuclear plants or is this legislation and rule meaningless and may be ignored all together (FPL says they can satisfy law and rule by not having any discussions and reporting that fact at FPL Response, Paragraph 2, page 2)?

FPL: This is a legal, not factual, issue. It also is worded in an improperly argumentative fashion. While FPL has had discussions with other electric utilities about ownership participation in Turkey Point 6 & 7, and expects to have further discussions at an appropriate time in the future when the Project has crystallized commercially, nothing in Section 403.519 or Rule 25-22.081 creates any duty upon FPL to initiate such discussions. (Scroggs)

Issue 17: Does OUC, a utility that presently has ownership in two nuclear power plants, have a substantial interest in having meaningful discussions with Florida Power & Light regarding ownership of a portion of the nuclear power plants at issue here as required by 403.519(4)(a)(5), Fla. Stat.?

FPL: This is a legal, not factual, issue. It also is worded in an improperly argumentative fashion. There is no interest recognized by statute or rule for an electric utility such as OUC to have ownership-participation discussions with FPL regarding Turkey Point 6 & 7. (Scroggs)

Issue 18: Should the Commission infer any intent by Legislature from actions that were not taken by the Legislature (an amendment was proposed but withdrawn)?

FPL: This is a legal, not factual, issue. It also is worded in an improperly argumentative fashion. Section 403.519, Florida Statutes, is clear on its face that it creates no duty for electric utilities to offer ownership participation in a proposed nuclear power plant and that it does not authorize the Commission to take discussions regarding such ownership participation into account in making a need determination for such a plant. Therefore, there is no need for any interpretation of the Legislature's intent in this regard. However, if one were to consider the Legislature's intent, one would properly look to the fact that the Legislature considered and then withdrew an amendment to the Power Plant Siting Act that would have required discussions of ownership participation to be taken into account, as evidence that the Legislature would not have intended Section 403.519 to be interpreted as creating a duty for electric utilities to offer ownership participation or as authorizing the Commission to take discussions regarding ownership participation into account in need determinations. (Scroggs)

# Additional Issues: Seminole Electric Cooperative, Inc. ("Seminole")\*

Issue 19: Has FPL engaged in meaningful discussions with other electric utilities regarding ownership of a portion of the proposed nuclear plants by such utilities?

FPL: This is not a proper issue. Neither Section 403.519, Florida Statutes, nor Rule 25-22.081, F.A.C., contains any requirement for "meaningful" discussions of ownership participation in Turkey Point 6 & 7. FPL's petition and supporting testimony summarizes its discussions with other electric utilities concerning Turkey Point 6 & 7, as required by the statute and rule. (Scroggs)

**Issue 20:** If not, should the Commission require such discussions?

**FPL:** This is a legal, not factual, issue. The Commission does not have statutory authority to require discussions of ownership participation in Turkey Point 6 & 7. (Scroggs)

\* FMEA, FMPA, OUC, and Seminole have filed petitions to intervene that are pending and which FPL opposes. These proposed intervenors' issues should be excluded if intervention is ultimately denied.

#### V. POLICY ISSUES

FPL believes resolution of the foregoing issues may involve determining matters of policy.

#### VI. STIPULATED ISSUES

There are no stipulated issues at this time.

#### VII. PENDING MOTIONS

The following motion is pending:

FPL's Motion for Temporary Protective Order, filed January 3, 2008

#### VIII. PENDING REQUESTS FOR CONFIDENTIAL CLASSIFICATION

The following requests for confidential classification are pending:

1) FPL's Request for Confidential Classification of Exhibit SDS-3, filed October 16, 2007

2) FPL's Request for Confidential Classification of material provided in response to Staff's Fourth Request for Production of Documents Nos. 16 and 17, filed December 21, 2007

# 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

No witnesses have pre-filed testimony other than FPL's witnesses, so there are no witness qualifications to which FPL could object.

Respectfully submitted this 4th day of January, 2008.

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#### **CERTIFICATE OF SERVICE**

**I HEREBY CERTIFY** that a true and correct copy of the foregoing has been furnished electronically this 4th day of January, 2008, to the following:

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<sup>\*\*</sup>Indicates not an official party of record as of the date of this filing