

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 090009-EI  
FLORIDA POWER & LIGHT COMPANY

MARCH 2, 2009

IN RE: NUCLEAR POWER PLANT COST RECOVERY TRUE-  
UP FOR THE YEARS ENDING  
DECEMBER 2006, 2007 AND 2008

TESTIMONY & EXHIBITS OF:

S. SCROGGS  
R. KUNDALKAR  
W. POWERS  
J. REED

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**  
**FLORIDA POWER & LIGHT COMPANY**  
**DIRECT TESTIMONY OF STEVEN D. SCROGGS**  
**DOCKET NO. 090009-E1**  
**MARCH 2, 2009**

**Q. Please state your name and business address.**

A. My name is Steven D. Scroggs and my business address is 700 Universe Boulevard, Juno Beach, FL 33408.

**Q. By whom are you employed and what is your position?**

A. I am employed by Florida Power & Light Company (FPL) as Senior Director, Project Development. In this position I have responsibility for the development of power generation projects.

**Q. Please describe your duties and responsibilities with regard to the development of new nuclear generation to meet FPL customer needs.**

A. Commencing in the summer of 2006, I was assigned the responsibility for leading the investigation into the potential of adding new nuclear generation to FPL's system, and the subsequent development of new nuclear generation additions to FPL's power generation fleet. I currently lead the development of FPL's Turkey Point Nuclear Units 6 and 7 (Turkey Point 6 & 7).

**Q. Please describe your educational background and professional experience.**

1 A. I graduated from the University of Missouri – Columbia in 1984 with a  
2 Bachelor of Science Degree in Mechanical Engineering. From 1984 until  
3 1994, I served in the United States Navy as a Nuclear Submarine Officer.  
4 From 1994 to 1996, I was a research associate at The Pennsylvania State  
5 University, where I earned a Masters Degree in Mechanical Engineering. I  
6 provided consulting and management services to the regulated and  
7 unregulated power generation industry through a number of positions until  
8 2003, when I joined FPL as Manager, Resource Assessment and Planning.

9 **Q. Are you sponsoring any exhibits in this proceeding?**

10 A. Yes, I am sponsoring the following exhibits:

- 11 • SDS-1, which consists of Appendix II containing schedules T-1 through  
12 T-10 covering 2007 and 2008 actual periods for Turkey Point 6 & 7 Pre-  
13 Construction costs. Page 2 of Appendix II contains a table of contents  
14 listing the T schedules sponsored by FPL Witness Powers and by me,  
15 respectively.
- 16 • SDS-2, which consists of Appendix III containing schedules T-1 through  
17 T-10 covering 2006, 2007 and 2008 actual periods for Turkey Point 6 & 7  
18 Site Selection Costs. Page 2 of Appendix III contains a table of contents  
19 listing the T schedules sponsored by FPL Witness Powers and by me,  
20 respectively.
- 21 • SDS-3, which consists of a table providing a listing of all licenses, permits  
22 and approvals FPL is preparing to support the Turkey Point 6 & 7 project.

- 1           • SDS-4, which consists of a comprehensive list of procedures and work  
2           instructions that governs the internal controls processes and expectations.
- 3           • SDS-5, which provides a list describing various project reports, their  
4           periodicity and target audience.
- 5           • SDS-6, which provides a comprehensive list of project instructions and  
6           forms.
- 7           • SDS-7, which is the Site Selection Study for the Turkey Point 6 & 7  
8           project.
- 9           • SDS-8, which is FPL's detailed engineering evaluation of potential  
10          nuclear technology designs.
- 11          • SDS-9, which is the report from MPR Associates reviewing FPL's  
12          engineering evaluation process.

13   **Q.    What is the purpose of your testimony?**

14   A.    The purpose of my testimony is to describe the activities involved in the  
15   Turkey Point 6 & 7 project from its inception to the end of 2008. Specifically,  
16   my testimony will describe the deliberate stepwise process FPL is employing  
17   to create an option to provide new nuclear generation for our customers and  
18   how that process is being managed and controlled to ensure prudent  
19   expenditures and the best outcome. I will include a discussion of project  
20   internal controls and how those controls, supported by internal and external  
21   oversight, provide for diligent and professional project execution. I will  
22   discuss key issues the project has faced through December 2008 and how  
23   those issues were evaluated and appropriate actions determined. Further, my



1 testimony will discuss the actual expenditures made related to the project and  
2 compare those expenditures to the estimated values provided in 2008.  
3 Collectively, my testimony will provide the information necessary to  
4 demonstrate that FPL's management decisions with respect to the Turkey  
5 Point 6 & 7 project are the product of properly qualified, well-informed FPL  
6 management following appropriate procedures and internal controls, and the  
7 costs incurred for the project are reasonable and prudently incurred.

8 **Q. Please summarize your testimony.**

9 A. My testimony will provide an overview of the project, from inception to  
10 December 2008, including the project management and internal controls  
11 infrastructure that has been developed to provide necessary oversight and  
12 monitoring of the project execution. I will describe key decisions that have  
13 faced the project in this time period, and the rationale behind the actions  
14 taken. I will then walk through all project costs incurred to December 2008,  
15 as presented in the Nuclear Filing Requirement (NFR) schedules. The  
16 information will demonstrate that the Turkey Point 6 & 7 project is  
17 progressing on schedule and within budget. Further, it will be clear that the  
18 project management process is being conducted in a well-informed,  
19 transparent and organized manner which enables executive oversight and  
20 facilitates reviews by internal and external parties. This disciplined  
21 application of process by well-qualified FPL managers results in prudent  
22 decisions with respect to project activities and expenditures.

23

1                                   **HIGH LEVEL PROJECT SUMMARY (2006 – 2008)**

2

3   **Q.    Please summarize the Turkey Point 6 & 7 project from inception to the**  
4           **end of 2008.**

5   **A.    The Turkey Point 6 & 7 project has been underway since mid-2006 when FPL**  
6           **completed initial investigations into the feasibility of new nuclear generation.**  
7           **These initial investigations determined that, in order to more fully define the**  
8           **opportunity, a project team should be formed.**

9

10           **Activities in 2006 focused on identifying candidate sites, conducting due**  
11           **diligence on the various reactor designs available and developing a high level**  
12           **project budget and schedule of milestones. Activities in 2007 focused on**  
13           **completing site selection, investigating issues related to specific candidate**  
14           **designs, obtaining local zoning approvals and preparing a Need Petition. Site**  
15           **Selection activities ended and Pre-Construction activities began, on October**  
16           **16, 2007 at the time of the submission of the Need Petition. On December 20,**  
17           **2007, FPL obtained many of the necessary zoning approvals for Turkey Point**  
18           **6 & 7 from the Miami-Dade County Board of County Commissioners.**  
19           **Conditions of certification were included and will be accomplished as the**  
20           **project moves forward.**

21

22           **Activities in 2008 have been dedicated to selecting a candidate design,**  
23           **identifying the key procurement activities required, and developing the**

1 applications for licenses, permits and approvals needed for construction and  
2 operation of the project. Exhibit SDS-3 provides a listing of these items. On  
3 April 11, 2008, the Florida Public Service Commission (FPSC) issued Order  
4 No. PSC-08-0237-FOF-EI granting its petition for a determination of need  
5 from the FPSC. Additionally, the FSPC issued Cost Recovery Order No.  
6 PSC-08-0749-FOF-EI from the FPSC on November 12, 2008. During 2008  
7 several key decisions were made regarding how FPL would pursue the  
8 commercial aspects of the project. These decisions will be discussed in  
9 greater detail later in my testimony. These key decisions provide good  
10 examples of the project team's management approach, the types of decisions  
11 made and how these decisions help to manage the risk profile of the project.

12

13 To date, the project has proceeded in a deliberate step-wise manner and has  
14 maintained costs under the projected budget. FPL has selected a site, a  
15 technology design and obtained all requested approvals at the state and local  
16 levels. The bulk of project activities and expenditures (71%) have been spent  
17 on the development of the detailed studies and analyses required to facilitate  
18 federal, state and local reviews of the proposed project and, if appropriate,  
19 grant the needed permits, approvals and authorizations for construction and  
20 operation. Additional expenditures have allowed the project to undertake the  
21 initial engineering and commercial steps in the development of an execution  
22 plan for plant deployment.

23

1           The project is staffed by a combination of employees fully dedicated to the  
2           project, matrixed employees from FPL business units who devote a portion of  
3           their time to the project and a select group of contractors and subcontractors  
4           whose subject matter expertise and skills are required to complete the  
5           considerable tasks related to this undertaking. Leading the staff is a project  
6           management team charged with monitoring the day-to-day execution and  
7           strategic direction of the project. The project management team provides  
8           routine, dedicated oversight of the project including a determination of the  
9           timing and appropriateness of external reviews. The project management  
10          team is supported by project controls professionals that execute the day-to-day  
11          project activities and provide direct oversight of procedural compliance. The  
12          project also benefits from routine review, supervision and direction provided  
13          by FPL executive management.

14

15                                   **PROJECT MANAGEMENT INTERNAL CONTROLS**

16

17   **Q.   Please describe the project management structure responsible for the**  
18           **Turkey Point 6 & 7 project.**

19   **A.**   The management structure for Turkey Point 6 & 7 reflects the dual nature of  
20          the project relying on a working combination of two key groups: Project  
21          Development and New Nuclear Projects. The organization of the project into  
22          these two key groups helps maintain a consistent management and reporting  
23          structure with specific focus and areas of responsibility, while allowing the

1 project the flexibility to grow and adapt over time. The overall project  
2 management structure has remained unchanged since initial formation.

3

4 Project Development, which I lead, has the primary responsibility for the  
5 execution of development and licensing activities that are not within the  
6 purview of the Nuclear Regulatory Commission (NRC) as well as all project  
7 communication activities and FPSC interface. Similar to the way other  
8 generation development projects are executed within FPL, Project  
9 Development utilizes matrix relationships with key business units in the  
10 Company to provide essential support. For example, legal and environmental  
11 services are provided by those business units through assigned personnel.

12

13 Recognizing the need for specific nuclear-based skills and experience, FPL  
14 established the New Nuclear Project team within Engineering & Corporate  
15 Services Division (E&CD) to manage the complex and specialized nature of  
16 the Combined Operating License Application (COLA) process and the  
17 engineering, procurement and construction activities. This team is managed  
18 by Martin Gettler, Vice President of New Nuclear Projects. The New Nuclear  
19 Project team has direct responsibility for the production and management of  
20 the COLA as well as the engineering, procurement, site preparation,  
21 construction and start-up aspects of the project. The New Nuclear Project  
22 team will grow as the project evolves, adding or obtaining access to the  
23 necessary skill sets to accomplish project objectives.

1 **Q. What are the key elements of the project management process used to**  
2 **manage the Turkey Point 6 & 7 project?**

3 A. FPL routinely and methodically evaluates the risks, costs, and issues  
4 associated with the Turkey Point 6 & 7 project using a system of internal  
5 controls, routine project meetings and communication tools, management  
6 reports and reviews, internal and external audits and an annual feasibility  
7 analysis.

8 **Q. Please describe the system of internal controls applicable to the project.**

9 A. The project internal controls are comprised of various financial systems,  
10 department procedures, work/desktop instructions and best practices providing  
11 governance and oversight of project cost and schedule processes.

12

13 FPL utilizes SAP software as its ultimate financial reporting system and a  
14 Financial Management Information Process (FMIP) for project report  
15 generation. The E&CD also utilizes an Electronic Approval Database (EAD)  
16 system to initiate and record the management approval process for the  
17 commitment of project funds.

18

19 Exhibit SDS-4 provides a comprehensive list of procedures and work  
20 instructions that governs the internal controls processes and expectations.  
21 These procedures and work instructions are employed by dedicated and  
22 experienced project controls personnel who functionally report through  
23 Business Services and provide project oversight and analysis. The internal

1 controls organization helps to ensure appropriate management decisions are  
2 made based upon assessment of available information leading to reasonable  
3 costs. Accountability is clear and understood throughout the controls  
4 organization and is a cornerstone of the services they provide.

5 **Q. Please describe the specific reports generated to monitor the project and**  
6 **the periodicity and audience for those reports.**

7 A. The project relies on a series of weekly or monthly reports and has standing  
8 meetings to review forward looking analysis with project managers. Exhibit  
9 SDS-5 provides a list describing the reports, and their periodicity and target  
10 audience.

11 **Q. Please describe the staff responsible for administering these internal**  
12 **controls and their specific responsibilities.**

13 A. The internal controls organization is comprised of five personnel. A Business  
14 Manager provides functional leadership, governance and oversight. A Project  
15 Controls Manager provides cost and schedule direction and analysis,  
16 coordinates internal and external audit requests, holds meetings with project  
17 management to review cost and schedule performance, and reviews all cost,  
18 scope changes, schedules and performance indicators. Two Cost Analysts  
19 provide bi-monthly reviews of all project expenditures, maintain cost  
20 templates, support the production of documents and responses to information  
21 requests, and meet monthly or as required with department heads on  
22 forecasting and commitments. A Senior Scheduler manages the master

1 schedule, oversees contractor schedule status and updating, produces weekly  
2 performance indicators and provides Critical Path Method analysis.

3 **Q. How were the internal controls developed?**

4 A. Many of the internal controls procedures, processes or work instructions were  
5 pre-existing FPL company or department processes. However, due to the  
6 unique characteristics of the Turkey Point 6 & 7 project, cost templates were  
7 specifically developed for monitoring expenditures to support FPSC filing  
8 requirements and to facilitate associated reviews. FPL has contractually  
9 placed significant reporting requirements on subcontractors by requiring  
10 trend, tracking and performance indicators. This allows the internal controls  
11 team to monitor events and trends on a forward-looking basis. As the project  
12 matures, additional controls will be developed as necessary.

13 **Q. What are Project Instructions and why are they needed?**

14 A. In the course of project development, FPL identified a need to develop some  
15 business processes unique to new nuclear deployment. These processes  
16 generally involve conducting business in compliance with FPL General  
17 Operating procedures, but also recognize project-specific requirements. For  
18 example, specific instructions are needed to ensure compliance with additional  
19 NRC requirements for quality control and document retention. Direction for  
20 such specific areas of focus is provided to project staff through a set of FPL's  
21 New Nuclear Project - Project Instructions (NNP-PI). These project  
22 instructions establish a standard for the project team which provides guidance,



1 sets expectations and drives consistency. Exhibit SDS-6 provides FPL's  
2 comprehensive list of project instructions and forms list.

3 **Q. What processes and communication tools are used to manage project**  
4 **risk?**

5 Cost and schedule risk is managed by ensuring the project team has visibility  
6 and understanding of the issues facing different sub-teams that comprise the  
7 overall project. A mix of weekly meetings with small teams, monthly  
8 meetings with select members of the project team and routine executive  
9 briefings ensure the project benefits from sufficient and timely  
10 communication. Further, the information flow begins at the working level and  
11 is integrated as it moves to the project management team to ensure that the  
12 issues are adequately captured and that the interaction with other portions of  
13 the project is properly assessed. These meetings result in several reports  
14 identified in Exhibit SDS-5. These routine meetings allow project  
15 management to obtain updates from key project team members, provide  
16 direction on the conduct of the project activities and maintain tight control  
17 over project progress, expenditures and key decisions.

18  
19 Each week the project team holds multiple status meetings. These meetings,  
20 held by teams within the project, track project activities at a level that allows  
21 most issues to be identified, discussed and resolved at the working team level.  
22 Examples include the COLA team, Site Certification Application (SCA) team  
23 and Transmission Siting team, among others. For those issues that cannot be

1 resolved at the working team level, project management has provided a multi-  
2 step process to elevate the issue to the appropriate level for resolution.  
3 Contractor performance is also tracked on a weekly basis. Schedule and cost  
4 metrics are monitored and reported in standard format reports to allow for  
5 close monitoring of contractor performance.

6  
7 Monthly, the project holds four key meetings directed at higher level  
8 management and decision making (Monthly Project Team Meeting, E&CD  
9 Project Dashboard Review, New Nuclear Executive Update, PTN 6 & 7  
10 Monthly Cost Report). The project team meets monthly to review project  
11 schedule, budget performance and key project issues. Project risk is  
12 specifically tracked and reviewed by the E&CD Project Dashboard process.  
13 This is a structured vehicle for assessing project risk exposures and tracking  
14 trends in a peer review process designed to bring project management  
15 expertise throughout the E&CD organization to each specific project. The  
16 monthly Cost Report meeting provides an opportunity to drill down on project  
17 cost issues and expectations. Project management also provides a routine  
18 update to FPL executive management. Normally once per month, this update  
19 provides the opportunity for robust dialogue between the project management  
20 team, Business Unit leaders and executive management. While the executive  
21 team is always available for consultation on developing issues and  
22 opportunities, the routine meetings ensure that a broad range of topics are  
23 regularly reviewed and discussed.

1 **Q. What other periodic reviews are conducted to ensure that the project is**  
2 **appropriately reviewed and analyzed?**

3 A. Periodically, the project is reviewed by the FPL Corporate Risk Committee,  
4 consisting of members in various company leadership roles, to evaluate  
5 project status and specific risk areas. This committee enables senior managers  
6 to critically assess and discuss risks faced by the Turkey Point 6 & 7 project  
7 from different departmental perspectives.

8  
9 Internal and external audits occur during the course of the project to ensure  
10 the project adheres to all corporate guidelines for financial accounting as well  
11 as employs best management and internal controls practices. When a  
12 deficiency is identified in an audit, an analysis is conducted to determine the  
13 cause of the deficiency and corrective actions are implemented to ensure the  
14 deficiencies are mitigated going forward.

15  
16 Finally, the project is annually reviewed to determine its continued economic  
17 feasibility. This analysis is conducted in the same framework as the analysis  
18 justified by the project in the Need Determination proceeding, but is updated  
19 to reflect what is currently known regarding project cost, project schedule, and  
20 the cost and viability of alternative generation technologies. The analysis  
21 conducted in 2008 and presented in the May 1, 2008 Nuclear Cost Recovery  
22 (NCR) filing, demonstrated that the project remains feasible.

23

1 **Q. What steps are taken to ensure that project expenditures are properly**  
2 **authorized?**

3 A. All project expenditures must be formally input and approved in the E&CD  
4 Electronic Approval Database (EAD). The EAD request serves as  
5 documented communication between the Turkey Point 6 & 7 project and the  
6 Integrated Supply Chain (ISC) identifying the need to contract for goods and  
7 services. The database is used by the Turkey Point 6 & 7 project to document  
8 and record procurement activities and to obtain the appropriate level of  
9 management authorization.

10

11 For Initial Commitments, an approved EAD request directs ISC to formally  
12 contract with the selected supplier. Initial Commitments require appropriate  
13 authorizations that include all documentation required by Corporate  
14 Procedures. This would include contracts, purchase orders, notice to proceed  
15 and, if required, a single or sole source justification. For Contract Change  
16 Orders (CCO), the EAD request must be authorized at the appropriate level  
17 and the CCO executed prior to releasing the supplier to perform the requested  
18 scope of work.

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## PROCUREMENT PROCESSES AND CONTROLS

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**Q. What is FPL's preferred method of procurement and when might it be in the best interest of the project to use another method?**

A. The preferred approach for the procurement of materials or services is to use competitive bidding. FPL maintains a strong market presence allowing it to leverage corporate-wide procurement activities to the specific benefit of individual project procurement activities. Maintaining a relationship with a range of service providers offers the opportunity to assess capabilities, respond to changing resource loads and remain knowledgeable of current market trends and cost of service.

However, the use of single or sole source procurement is in the best interest of the company in certain situations. In some cases there is a limited pool of qualified entities to perform specific services or provide certain goods and materials. In other cases a service provider is engaged to conduct a specific scope of work based on a competitive bid or other analysis and additional scope is identified that the vendor can efficiently provide. Circumstances such as the above examples are common in the nuclear industry, and especially on complex long-term projects such as the Turkey Point 6 & 7 project.

1 **Q. Do you anticipate that the use of single or sole source procurement**  
2 **practices will change over the course of the project?**

3 A. Yes. As the project moves through various phases the proportion of single  
4 source procurement will shift based on the nature of the major expenditures  
5 associated with each phase. During the licensing phase, the majority of the  
6 costs are expended on the federal licensing activities, which was  
7 competitively bid. In contrast, the next phase of the project will involve  
8 proprietary engineering and procurement activity that FPL must contract from  
9 the equipment provider, a sole source of these goods and services. Then, as  
10 the project moves to construction, FPL is taking steps to develop credible  
11 providers who can competitively bid specific scopes of the construction work.  
12 Developing a set of credible competitors, especially for the very large and  
13 complex construction phase, requires a concerted effort, but is expected to  
14 result in reduced costs regardless of which vendor is selected.

15 **Q. Please describe the single and sole source procurement procedures that**  
16 **apply to the Turkey Point 6 & 7 project.**

17 A. General Operations (GO) Procedure 705.3 requires proper documentation and  
18 senior-level approval of single or sole source procurement. The procedure  
19 calls for a review of the business interests associated with recommending a  
20 single or sole source procurement contract and a validation that the costs are  
21 reasonable. During 2008, the process by which FPL documents compliance  
22 with GO 705.3 was reviewed. Opportunities for improvement were identified  
23 and documented. Training was conducted to ensure project staff had a

1 working understanding of the required documentation and analysis necessary  
2 to support a sole or single source request.

3  
4 Additionally, it was determined that a specific classification of procurement  
5 identified in the Procurement Process Manual, could be applied to CCO's  
6 associated with the project. Previously, all CCO's were handled as single or  
7 sole source justifications, even if the underlying initial commitment was  
8 competitively bid. Over the course of many years, ISC has developed a more  
9 efficient means of handling this inevitability by prescribing specific  
10 documentation and analysis that can qualify certain vendors as Pre-  
11 Determined Sources (PDS). As appropriate, specific vendors will be brought  
12 under the PDS program through the normal course of business. Such  
13 procurement management is an ordinary trade practice used to increase  
14 procurement efficiency.

15 **Q. What is a Pre-Determined Source (PDS) and how does that help to ensure**  
16 **that procurement decisions are prudent and costs are reasonable?**

17 A. A PDS is a source that has been demonstrated through a competitive  
18 evaluation and/or other documented economic analysis to be the preferred  
19 source for particular goods or services. Specific requirements in the  
20 Procurement Process Manual do not apply in the case of PDS because they  
21 have, in effect, been "pre-bid" or otherwise justified. A PDS is designated  
22 only by the FPL ISC department following documentation review and  
23 approval. The PDS process provides FPL the ability to efficiently manage

1 incremental work requests. For work beyond authorized limits, the full FPL  
2 requisition and procurement process requirements must be met in order to  
3 increase the limits as required by additional work scope being authorized. Other  
4 work awarded to the same supplier for different scopes of work are still  
5 subject to the full FPL procurement process requirements.

6  
7 A review of current new nuclear project contracts identified two vendors that  
8 were considered for PDS status. Both Bechtel and Black & Veatch/Zachry  
9 (BVZ) provide specific scope services to the project. Because of their specific  
10 expertise and the evolving nature of the services provided, these vendors were  
11 good candidates to be considered as PDSs. The analysis was conducted and it  
12 was determined that both vendors would be approved as PDS providers to the  
13 project for specific scope of supply.

14

#### 15 **INTERNAL/EXTERNAL AUDITS AND REVIEWS**

16

17 **Q. What internal audits or reviews have been conducted to ensure that the**  
18 **project controls are adequate and costs are reasonable?**

19 A. Several audits have been conducted to ensure FPL's standards for project  
20 internal controls and cost reasonableness have been maintained. An FPL  
21 internal audit focused on the project financials.

22

23 Turkey Point 6 & 7 project personnel are made aware of process  
24 improvements by attending mandatory training sessions as well as being



1 provided email memorandums. All action items are provided scheduled  
2 completion dates and are tracked to ensure completion. On-going  
3 recommendations are routinely reviewed.

4

5 Team-level audits and reviews are another important means of validating that  
6 the project is being conducted according to good policies and practices. Audit  
7 reviews are used between key process steps to ensure the project is ready to  
8 proceed to the next step. Examples of these reviews are the process reviews  
9 held with work teams (FPL employees and vendor staff) and self-auditing  
10 checklists generated for repetitive processes (travel, etc.). Such careful and  
11 meticulous business practices help catch items before they become issues and  
12 instill policy guidance in project staff.

13 **Q. What external audits or reviews have been conducted to ensure that the**  
14 **project controls are adequate and costs are reasonable?**

15 **A.** In the spring of 2008, Concentric Energy Advisors was engaged to conduct a  
16 review of the project internal controls, with a focus on management processes.  
17 The review identified a strong project management and internal control  
18 structure, and also identified opportunities for clarification and further focus.  
19 The results of the review were discussed in the May 1, 2008 filing by FPL  
20 Witness Reed.

21

22 The FPSC Staff conducted two audits in 2008. These audits included a  
23 financial audit of the project ledger and accounts, and an internal controls

1           audit. The results of the FPSC Staff audits conducted during the 2008 Nuclear  
2           Cost Recovery process validated FPL's findings. Specifically, the FPSC  
3           internal controls audit staff identified that the project processes "appear to  
4           have been reasonable and in keeping with good business practices."

5   **Q.   How would you summarize FPL's overall approach to project**  
6   **management in relation to Turkey Point 6 & 7?**

7   A.   As described above, FPL has robust project planning, management, and  
8           execution processes in place to manage the Turkey Point 6 & 7 project. These  
9           efforts are led by personnel with significant experience in project management  
10          and development supported by project management professionals trained in  
11          the deliberate execution of critical infrastructure projects through a  
12          comprehensive set of internal controls. Additionally, FPL is able to capitalize  
13          on the experience of its other power generation development projects by  
14          implementing lessons learned by those project teams. Finally, FPL  
15          implements an ongoing internal auditing and quality assurance process to  
16          continuously monitor compliance with the controls discussed above. In  
17          summary, FPL has the right people with the right tools and oversight making  
18          decisions with the best available information. For all of these reasons, FPL is  
19          confident that its Turkey Point 6 & 7 management decisions were well-  
20          founded and reasonable. Further, FPL recognizes the unique nature of new  
21          nuclear deployment which demands a continuous watch be maintained to  
22          monitor developments in policy, regulatory and economic arenas. An ongoing  
23          analysis and incorporation of these events is necessary to ensure the

1 appropriate actions are taken at the right time to create the option for new  
2 nuclear generation. The application of sound project management  
3 fundamentals and critical questioning provides the best results.

4

5

## KEY MANAGEMENT DECISIONS

6

7 **Q. What types of decisions must the management team make as the Turkey**  
8 **Point 6 & 7 project evolves from an early stage development activity to a**  
9 **mature licensing, permitting and preconstruction project?**

10 A. In the initial stages of the project, the management team made formative  
11 decisions such as team organization, site selection and technology preference.  
12 As the project proceeds, key decisions are commonly related to trade-offs  
13 between schedule and cost certainty. For example, in order to secure forging  
14 capability which supports the project schedule, a reservation fee was required  
15 in 2008. Because the fee was relatively small in comparison to the potential  
16 impact of project delays, it was determined payment of such a fee was  
17 warranted and prudent. Conversely, the current market appears stable for  
18 certain identified long lead procurement items and a decision was made in  
19 2008 to defer purchasing those items until a later time. Accordingly, FPL has  
20 been able to reasonably defer some long lead procurement until a later time.

21 **Q. What key management decisions were made prior to 2008?**

22 A. FPL conducted an extensive site selection analysis leading to the selection of  
23 the Turkey Point site as the site that, on balance, provided the most favorable

1 location for developing new nuclear generation to serve FPL's customers.  
2 The Site Selection Study, provided as Exhibit SDS-7, employed the principles  
3 of the Electric Power Research Institute (EPRI) siting guidelines and is  
4 modeled upon applicable NRC site suitability and National Environmental  
5 Policy Act (NEPA) criteria regarding the consideration of alternative sites.  
6 The study convened a group of industry and FPL subject matter experts to  
7 develop and assign weighting factors to a broad range of site selection criteria.  
8 Twenty-three candidate sites were then ranked using the siting criteria. This  
9 review allowed the list of candidates to be reduced until the best site emerged.  
10 Key factors contributing to the selection of Turkey Point include the existing  
11 transmission and transportation infrastructure to support new generation, the  
12 large size and seclusion of the site while being relatively close to the load  
13 center, and the long-standing record of safe and secure operation of nuclear  
14 generation at the site since the early 1970s. Turkey Point will also support the  
15 earliest practical deployment schedule, in contrast to use of an undeveloped  
16 site.

17  
18 FPL also selected a preferred reactor design, the Westinghouse AP-1000. The  
19 AP-1000 technology has achieved design certification from the NRC and  
20 employs a proven pressurized water reactor design with an improved passive  
21 safety system. Leading to this decision, FPL conducted a detailed engineering  
22 evaluation that has been provided as Exhibit SDS-8. In this review, FPL  
23 canvassed the range of possible designs and then solicited specific design,

1 construction and operation information from the vendors of the designs that  
2 were deemed viable for commercial utility application in the U.S. The result  
3 of this analysis demonstrated all designs were technically acceptable, and the  
4 decision would be based on commercial considerations. Exhibit SDS-9  
5 provides the results of a review conducted by MPR Associates validating  
6 FPL's engineering evaluation process. Three principal commercial issues  
7 were considered in the choice of the AP-1000. The first two are the estimated  
8 capital cost of the total construction project and the ability of the vendor to  
9 contribute to managing cost and schedule risk throughout the project.  
10 Westinghouse has successfully achieved design certification and, in  
11 partnership with Shaw Group, has been selected as the technology for many  
12 new nuclear projects currently under consideration in the U.S. These two  
13 facts provide an advantage to Westinghouse/Shaw as they establish the  
14 engineering and supply chain partners necessary to execute future projects.  
15 This position also provides significant confidence that by selecting the AP-  
16 1000 technology, FPL will have the opportunity to leverage information  
17 developed by other projects to manage cost and schedule risk as Turkey Point  
18 6 & 7 proceeds. The last issue is the execution capability of the Technology  
19 Vendor, Engineer and Constructor team that would be assembled to  
20 implement the Turkey Point 6 & 7 project. Westinghouse/Shaw continues to  
21 work adaptively with FPL to define the team that will execute the Turkey  
22 Point 6 & 7 project to help optimize the execution capability of the project  
23 team.

1 **Q. What were the key matters addressed by FPL project management in**  
2 **2008?**

3 A. FPL management made key decisions with respect to the following issues  
4 during 2008: 1) how to pursue the contracting strategy for Engineering,  
5 Procurement and Construction (EPC) of the project; 2) the need for a forging  
6 reservation fee payment to secure needed manufacturing capability; 3) the  
7 need to purchase vendor-identified long lead items to maintain project  
8 schedule; and 4) adjustments to schedule created by ongoing activities in the  
9 industry.

10 **Q. What was considered and determined with regard to the contracting**  
11 **strategy for the project?**

12 A. The vendor-proposed business model for new nuclear project deployment of  
13 the AP-1000 design involves an EPC contract with Westinghouse/Shaw with  
14 defined scope and schedule responsibility. FPL challenged this business  
15 model based on several key observations. First, the EPC offered by  
16 Westinghouse/Shaw is limited in its ability to provide cost and schedule  
17 certainty as to key project elements (such as construction labor) that are not  
18 included in the EPC contract scope and pricing. Additionally, the proposed  
19 EPC approach does not provide opportunities for other engineering and  
20 construction firms to compete directly for components of the work. FPL  
21 recognizes the engineering design will be completed over the next few years,  
22 allowing for more precise and competitive bids to be developed for the  
23 construction period at that time. Further, the industry will significantly

1 mature over the next several years and the lessons learned from projects ahead  
2 of FPL can be incorporated to reduce cost or risk to the Turkey Point 6 & 7  
3 project. Therefore, FPL has chosen to pursue an approach wherein the  
4 Engineering and Procurement (EP) portion of the scope is separated from the  
5 Construction (C) scope, enabling the potential to independently bid some or  
6 all of the C scope. The option of choosing an EPC contract is not abandoned,  
7 merely deferred. In order to create this more competitive option for the  
8 construction phase of the project, FPL selected BVZ (an engineering firm  
9 independent of Westinghouse/Shaw) to conduct certain construction planning  
10 and design work. If FPL were to select a vendor other than BVZ for future  
11 construction scope some of these costs may need to be duplicated. The  
12 potential additional costs for the BVZ scope are on the order of several  
13 million dollars, but compares favorably to the potential benefit of the strategy,  
14 which could be on the order of hundreds of millions of dollars through having  
15 fostered competition for large later stages in the project.

16 **Q. Please describe the issues related to the forging reservation fee payment**  
17 **and why the decision was made to make such payment.**

18 A. The need for Ultra Heavy (UH) and specialty forgings is unique to nuclear  
19 construction and other heavy industries (oil refineries, etc.). Based on the  
20 limited international market there is currently only one provider of these  
21 forgings – Japan Steel Works. In consultation with Westinghouse during  
22 2008, it was identified the availability of manufacturing space needed to  
23 produce the specialty forgings was at risk. Westinghouse was then in the

1 process of securing forging slots to support several projects, and agreed to  
2 assign one of those slots to FPL in return for a reservation fee payment in  
3 2008. Recognizing this issue presented a potential critical path for the project,  
4 FPL determined it was reasonable to pay a fee of \$10,860,960 to  
5 Westinghouse in June 2008. Costs associated with an unplanned delay during  
6 construction could be significant (on the order of hundreds of millions of  
7 dollars per year) providing the justification for securing the manufacturing  
8 capability. The terms of the forging reservation agreement require that the  
9 parties enter an Engineering and Procurement agreement by December 2009  
10 or the terms must be renegotiated. The forging reservation payment reflected  
11 in this category is identified on Exhibit SDS-1, Appendix II, Pre-Construction  
12 Schedule T-6, line 6.

13 **Q. What additional long lead items were identified as potentially at risk and**  
14 **why did FPL decide to defer the purchase of the items?**

15 A. In late 2007, Westinghouse identified four specific groups of items that should  
16 be considered for Long Lead Procurement. Similar to the manufacturing  
17 capacity for specialty forgings, other equipment could experience supply  
18 chain limitations. Specifically, these items are forgings and components for  
19 Reactor Coolant Pumps, tubing for the Steam Generators, secondary  
20 components for Steam Generator fabrication and Containment Vessel  
21 materials. Based on discussions with Westinghouse, FPL included  
22 \$35,000,000 in the fourth quarter of 2008 for potentially procuring these  
23 components in its Actual/Estimated amounts for 2008 in the May 1, 2008



1 Nuclear Cost Recovery filing. FPL and Westinghouse continued to monitor  
2 the market for these items and determined by late August 2008 that  
3 procurement in 2008 would not be required. It was judged that procurement  
4 of these items could be deferred without significantly increasing the risk of  
5 meeting the target Commercial Operating Date (COD). Analysis is ongoing  
6 to determine when it is warranted to make this expenditure. The long lead  
7 procurement expense reflected in this category was withdrawn from FPL's  
8 2008 Nuclear Cost Recovery request at the September 2008 Nuclear Cost  
9 Recovery hearing. The adjustments associated with this decision have been  
10 reflected on SDS-1, Appendix II, Schedule T-2, Line 8.

11 **Q. What decisions were made regarding the Licensing and Permitting**  
12 **schedule for Turkey Point 6 & 7 in 2008?**

13 A. The licensing and permitting process for the project substantively began in  
14 January 2008. An aggressive 15 month schedule was developed to conduct all  
15 the necessary activities to submit the NRC COLA, Army Corps of Engineers  
16 (ACOE) permit applications and a Florida Department of Environmental  
17 Protection (FDEP) Site Certification Application. Steady progress was made  
18 toward this objective; however several external factors occurred to cause  
19 project management to reevaluate this schedule. Changes were scheduled to  
20 occur in early 2009 to both the Design Certification Document for the AP-  
21 1000 and the reference COLA for the AP-1000 (application submitted by  
22 TVA Bellefonte, i.e., the reference COLA). Also, FPL learned the NRC had  
23 asked for additional information on geological issues at the Levy site that

1 would be similar at the Turkey Point site. In order to preserve the projected  
2 review timeline of the FPL COLA it is important that these changes and  
3 requests for additional information are incorporated into the FPL COLA prior  
4 to submission, as opposed to filing on the original schedule date and making  
5 an amendment at a later time. The deferral also allowed FPL to increase the  
6 robustness of its outreach related to the siting of associated transmission  
7 facilities. The net result of the decision changed the schedule for submission  
8 of the applications from March 2009 to June 2009. While the impact of this  
9 deferred decision on the COD is difficult to determine at this stage, it is  
10 certain that the delay of three months to incorporate the information prior to  
11 submission will reduce the requests for additional information by the NRC  
12 upon submission, and will avoid disrupting the NRC review process with  
13 post-submittal amendments on these topics. Given the evolving nature of the  
14 overall project schedule, it is not possible to determine if this schedule change  
15 will materially affect the target COD for either unit.

16 **Q. Were the above described decisions reasonable?**

17 A. Yes. The project management structure, project internal controls, staffing and  
18 oversight processes available ensure that these decisions were made based  
19 upon consideration of the best information currently available, and were also  
20 properly vetted and considered at the highest levels of the organization.

21 **Q. What other activities has FPL undertaken to ensure that its decision**  
22 **processes are informed by the most current national and international**  
23 **industry information?**

1 A. FPL is an industry leader in nuclear generation, and as such has the  
2 experience, contacts and industry presence to engage in many forums for  
3 exploration of nuclear industry issues. Nonetheless, the specific challenges of  
4 new nuclear deployment have created focus areas that require additional  
5 coordination between entities involved in new plant licensing, construction  
6 and operation. FPL participates in four key industry groups that provide value  
7 to the Turkey Point 6 & 7 project. The NuStart Consortium provides FPL  
8 access to the reference COLA (Bellefonte COLA submitted by TVA) and  
9 associated information developed by other AP-1000 applicants necessary to  
10 submit and maintain the Turkey Point 6 & 7 COLA. This involvement is  
11 necessary to support the federal licensing process. In addition, the Design  
12 Centered Working Group (DCWG) was formed to provide coordination  
13 between owners, vendors and the NRC related to design modifications of the  
14 AP-1000. This critical activity is necessary to ensure design changes for the  
15 AP-1000 is made through a consensus process with the involvement of the  
16 NRC to preserve standardization of design, a cornerstone of new nuclear  
17 development. FPL also is a member of APOG (a consortium of owners of the  
18 AP-1000 design) and the Advanced Nuclear Technology (ANT) group  
19 organized by the EPRI. These groups are primarily forums to identify and  
20 resolve issues that are of primary interest to owners, such as staffing, training  
21 and maintenance activities. For example, programs such as Procurement  
22 Specification Development, Equipment and Nuclear Fuel Reliability  
23 improvements, Advancing Welding Practices, and Modular Equipment

1 Testing and Benchmarking allow FPL increased efficiency in program  
2 development and implementation resulting in future cost savings. The  
3 principle of standardization through operations and maintenance requires this  
4 level of industry coordination and dialogue. These different groups have  
5 unique and important roles in the successful execution of new nuclear  
6 deployment in the United States. Achieving the goal of industry  
7 standardization and realizing the associated economic and operational  
8 efficiencies mandates the need for active participation by industry participants  
9 in these venues. The total expenditure for fees related these groups in 2008  
10 was \$1.3 million.

11

12

#### **2008 PRECONSTRUCTION COSTS**

13

14 **Q. Describe the preconstruction costs incurred for the Turkey Point 6 & 7**  
15 **project in 2008.**

16 A. As represented in Exhibit SDS-1, Appendix II, Schedule T-6, FPL incurred  
17 the following pre-construction costs in 2008: 1) Licensing (\$31,085,381); 2)  
18 Permitting (\$1,694,555); 3) Engineering and Design (\$3,542,947); 4) Long  
19 Lead Procurement advanced payments (\$10,860,960); and 5) Power Block  
20 Engineering and Procurement (\$31,789).

21 **Q. Please describe the costs incurred in the Licensing subcategory.**

22 A. In 2008, Licensing costs were \$31,085,381 as shown in Exhibit SDS-1,  
23 Appendix II, Schedule T-6, Line 3. Table SDS-1 provides a detailed

1           breakdown of the Licensing subcategory costs in 2008, including a description  
2           of items included within each category.   The descriptions provided in the  
3           following tables are demonstrative and not all inclusive.

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**Table SDS – 1 2008 Preconstruction Costs - Licensing**

<b>Category</b>	<b>Actual</b>	<b>May 1, 2008 Filing</b>	<b>Variance Fav/ (Unfav)</b>
NNP Team Costs – NNP FPL payroll and expenses, FPL Project Team Facilities, FPL Engineering, FPL Licensing	\$3,098,408	\$3,389,638	\$291,229
COLA Production – COLA Contractor, Project A&E, NRC and DCWG fees;	\$20,862,229	\$22,428,520	\$1,566,291
SCA Oversight	\$1,705,466	\$3,945,003	\$2,239,537
SCA Subcontractors:			
• ECT – Transmission	\$337,790	\$1,705,500	\$1,367,710
• Golder – Environmental	\$472,713	\$1,895,000	\$1,422,287
• McNabb – Underground Injection	\$52,050	\$189,500	\$137,450
SCA Total	\$2,568,019	\$7,735,003	\$5,166,984
Environmental Services – FPL payroll and expenses, External support expenses	\$1,425,781	\$2,877,609	\$1,451,828
Power Systems – FPL payroll and expenses, System studies, licensing and permitting support and design activities	\$1,406,943	\$2,578,278	\$1,171,335
Licensing Legal – FPL payroll and expenses, External Legal Services, Expert Witnesses	\$609,505	\$873,329	\$263,824
• Regulatory Affairs	\$137,893	\$0	\$(137,893)
• Regulatory Accounting	\$155,398	\$0	\$(155,398)
Total Regulatory Support	\$226,276	\$0	\$(226,276)
<b>Total Licensing</b>	<b>\$31,085,381</b>	<b>\$46,022,594</b>	<b>\$14,937,213</b>

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Licensing costs consist primarily of FPL employee, contractor labor and specialty consulting services necessary to develop the various license and permit applications required by the Turkey Point 6 & 7 project. Table SDS-1 provides a detailed breakdown of the Licensing subcategory costs in 2008, including a description of items included within each category.

1 The majority of these expenditures (\$23,960,637) were a result of the COLA  
2 process. This value is a combination of COLA Team Costs and Bechtel  
3 COLA. These permit and license applications contain project specific  
4 information, assessments and studies required by various regulatory  
5 authorities to support the reviews leading to decisions on the technical,  
6 environmental and social acceptability of the project. Some activities are  
7 common between applications, and therefore offer opportunities to coordinate  
8 efforts and manage costs. However, each application analyzes each issue  
9 from a unique perspective and may require differing levels of detail.

10

11 The COLA development costs were estimated based on the Bechtel proposal  
12 that was obtained through a competitively bid process. The proposal was  
13 reviewed to verify that the scope adequately described the activities necessary  
14 and that reasonable labor rates and resource costs were utilized. Other  
15 licensing and permitting costs were developed in accordance with FPL's  
16 budget and accounting guidelines and policies. Further, these cost estimates  
17 were compared to FPL's recent extensive experience with the development  
18 and permitting of new generation projects in Florida and were found to be  
19 reasonable.

20

21

1 **Q. Please explain the reasons behind major variances between the actual**  
2 **Licensing costs and the costs projected in the 2008 Nuclear Cost Recovery**  
3 **filing.**

4 A. Overall, FPL spent \$14,937,213 less than planned in 2008, primarily due to  
5 moving the COLA submittal date forward from March 2009 to June 2009.  
6 Costs for the New Nuclear Project team were below projected by \$291,229  
7 owing to staffing activities lagging plan. Approximately \$2.7 million of  
8 COLA production costs were deferred into 2009 due to the shift in the COLA  
9 submittal schedule to June 2009. SCA production costs were lower than  
10 expected, due to synergies with COLA activities and some costs deferred to  
11 2009 as a result of the shift in the SCA submittal schedule to June 2009.  
12 Deferral of submittal dates creates the variance seen in Environmental  
13 Services, Power Systems and Legal categories, as well. Regulatory costs were  
14 not budgeted in 2008; therefore the inclusion of these costs shows as a  
15 complete variance.

16 **Q. Please describe the costs incurred in the Permitting subcategory incurred**  
17 **in 2008.**

18 A. In 2008, Permitting costs were \$1,694,555 as shown in Exhibit SDS-1,  
19 Appendix II, Schedule T-6, Line 4. Permitting costs consist primarily of FPL  
20 employee, consulting and legal services necessary to support the various  
21 license and permit applications required by the Turkey Point 6 & 7 project.  
22 Table SDS-2 provides a detailed breakdown of the Permitting subcategory  
23 costs in 2008, including a description of items included within each category.



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**Table SDS-2 2008 Preconstruction Costs - Permitting**

<b>Category</b>	<b>Actual</b>	<b>May 1, 2008 Filing</b>	<b>Variance Fav/ (Unfav)</b>
Marketing and Communications – FPL payroll and expenses, External Media Support, External Polling and Outreach Support, Graphics and Collateral materials	\$289,829	\$644,326	\$354,497
Development – FPL payroll and expenses, various studies	\$858,824	\$771,114	(\$87,710)
Legal – FPL payroll and expenses, external support for permitting legal specialists	\$548,074	\$291,154	(\$256,920)
Contingency	(\$2,172)	\$608,593	\$610,764
<b>Total Permitting</b>	<b>\$1,694,555</b>	<b>\$2,317,866</b>	<b>\$623,309</b>

Marketing and Communications department supports the project by ensuring that the project information is prepared, reviewed and available for distribution to media, customers and key stakeholders. Expenses in this category include personnel dedicated to supporting the many project outreach activities, external contractors who provide specific services (e.g., graphic arts, polling, or other media services), and printing of mailing and collateral materials. Development costs in 2008 include two personnel: myself and a Project Manager. Legal expenditures provide necessary support to activities for all permitting and project interactions. Contingency is established to provide for emerging issues, unanticipated studies or activities, or budget areas that exceed plan for unanticipated reasons.

1 **Q. Please explain any variance between the actual Permitting costs and the**  
2 **costs projected in the 2008 Nuclear Cost Recovery filing.**

3 A. Overall, the project spent \$623,309 below plan in 2008 in the Permitting  
4 subcategory. This variance is a result of the communications expenditures  
5 being under budget, due to less work being required than planned and the  
6 change in application filing dates. Development costs exceeded plan to  
7 accommodate for transition costs for a new hire. Legal costs were higher than  
8 anticipated due to additional legal work required to support local permitting.  
9 Contingency is included in anticipation of emerging critical costs that must be  
10 incurred to move the project forward. In 2008, only comparatively minor  
11 issues of this type were experienced, and the contingency was used to offset  
12 the above-plan legal costs.

13 **Q. Please describe the costs incurred in the Engineering and Design**  
14 **subcategory.**

15 A. In 2008, Engineering and Design costs were \$3,542,947 as shown in Exhibit  
16 SDS-1, Appendix II, Schedule T-6, Line 5. Engineering and Design costs  
17 consist primarily of FPL employee and engineering consulting services  
18 necessary to develop the construction execution plan for the Turkey Point 6 &  
19 7 project. Table SDS-3 provides a detailed breakdown of the Engineering and  
20 Design subcategory costs in 2008, including a description of items included  
21 within each category.

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**Table SDS-3 2008 Preconstruction Costs – Engineering and Design**

<b>Category</b>	<b>Actual</b>	<b>May 1, 2008 Filing</b>	<b>Variance Fav/ (Unfav)</b>
Engineering and Construction Team – FPL payroll and expenses, Preconstruction project management	\$1,348,424	\$1,432,434	\$84,010
Pre-construction External Engineering (BVZ) – construction planning	\$1,919,522	\$3,480,995	\$1,561,473
APOG Membership Participation	\$0	\$0	\$0
EPRI Advanced Nuclear Technology	\$275,000	\$0	(\$275,000)
Contingency	\$0	\$2,997,232	\$2,997,232
<b>Total Engineering and Design</b>	<b>\$3,542,947</b>	<b>\$7,910,661</b>	<b>\$4,367,715</b>

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**Q. Please explain any variance between the actual Engineering and Design costs and the costs projected in the 2008 Nuclear Cost Recovery filing.**

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A. Overall, the project incurred costs that were \$4,367,715 below plan in 2008 in the Engineering and Design subcategory. This variance was primarily caused by FPL's decision to develop BVZ as a credible alternative to the proposed Westinghouse/Shaw EPC model, deferring expenditures originally planned for earlier in the year. FPL engaged in a review that led to identifying BVZ as the

1 appropriate contractor to fill this role. This analysis and associated vetting  
2 process postponed initiation of construction planning activities until October.  
3 This postponement resulted in lower than expected expenditures to the  
4 contractor and no release of unallocated contingency. After budget formation,  
5 it was determined that the Engineering and Design subcategory was the  
6 appropriate budget location for the EPRI and APOG group fees. Therefore a  
7 variance is noted.

8 **Q. Please describe the costs incurred in the Long Lead Procurement**  
9 **subcategory.**

10 A. In 2008, Long Lead Procurement costs were \$10,860,960 as shown in Exhibit  
11 SDS-1, Appendix II, Schedule T-6, Line 6. Long Lead Procurement costs in  
12 2008 consist solely of the Ultra Heavy (UH) and specialty forging reservation  
13 payment. The payment was made to Westinghouse to secure manufacturing  
14 space at Japan Steel Works due to high demand. The fee provides for  
15 reservation of the manufacturing capacity necessary to produce 23 specific  
16 forgings for each of two AP-1000 units, or 46 forgings in total. The  
17 reservation slots are made based on a fabrication schedule that supports Unit 6  
18 commercial operation in mid-2018 and Unit 7 commercial operation in mid-  
19 2020. It was necessary to secure the manufacturing space for the forgings  
20 during 2008 based on competition for the limited manufacturing capacity for  
21 these forgings and the pending queue of international heavy industrial  
22 projects. Table SDS-4 provides a detailed breakdown of the Long Lead  
23 Procurement subcategory costs in 2008 as amended at the time of the Nuclear

1 Cost Recovery hearing. The initial filing included \$35,000,000 for additional  
2 long lead procurement activity that was able to be deferred, for the reasons  
3 discussed earlier in my testimony.  
4

5 **Table SDS-4 2008 Preconstruction Costs – Long Lead Procurement**

<b>Category</b>	<b>Actual</b>	<b>May 1, 2008 Filing</b>	<b>Variance Fav/ (Unfav)</b>
Long Lead Procurement – UH forging reservation payment to Westinghouse	\$10,860,960	\$10,860,960	\$0

6

7 **Q. Please describe any variance between the actual Long Lead Procurement**  
8 **costs and the costs projected in the 2008 Nuclear Cost Recovery filing.**

9 A. No variance exists to the amended filing.

10 **Q. Please describe the costs incurred in the Power Block Engineering and**  
11 **Procurement subcategory.**

12 A. In 2008, Power Block Engineering and Procurement costs were \$31,789 as  
13 shown in Exhibit SDS-1, Appendix II, Schedule T-6, Line 7. Power Block  
14 Engineering and Procurement costs consist solely of FPL payroll and  
15 expenses supporting negotiations with Westinghouse/Shaw. Table SDS-5  
16 provides a detailed breakdown of the Power Block Engineering and  
17 Procurement subcategory costs in 2008, including a description of items  
18 included within each category.  
19

**Table SDS – 5 2008 Preconstruction Costs –  
Power Block Engineering and Procurement**

Category	Actual	May 1, 2008 Filing	Variance Fav/ (Unfav)
Power Block Engineering & Procurement – FPL payroll and expenses	\$31,789	\$60,000	\$28,211
Contingency	\$0	\$2,827,920	\$2,827,920
<b>Total Power Block Engineering &amp; Procurement</b>	\$31,789	\$2,887,920	\$2,856,131

4

5 **Q. Was there a variance between the actual Power Block Engineering and**  
6 **Procurement costs and the costs projected in the 2008 Nuclear Cost**  
7 **Recovery filing?**

8 A. Yes. Costs for support of negotiations were lower than anticipated due to the  
9 pace of the negotiations. Contingency was planned but not used. This  
10 contingency was expected to be required to fund Westinghouse/Shaw pre-  
11 engineering activities if necessary.

12 **Q. Were any costs expended in the Transmission category prior to or during**  
13 **2008?**

14 A. No. All costs associated with Transmission planning or engineering were  
15 related to the licensing and permitting activities, and therefore are  
16 appropriately included in those categories, described above. When activities  
17 move from licensing/permitting support to detailed engineering of the  
18 transmission improvements, costs will begin to be expended in these  
19 categories. It is expected that these expenditures will begin in 2010.

1 **Q. Were the 2008 project activities prudent and were the related costs**  
2 **reasonable?**

3 A. Yes. All costs were incurred as a result of the deliberately managed process at  
4 the direction of well-informed, properly qualified management, that I have  
5 described that were incurred in the process of conducting the necessary pre-  
6 construction activities such as obtaining the necessary licenses and permits,  
7 and the process of obtaining the necessary manufacturing space reservations  
8 for the Turkey Point 6 & 7 project. All costs were reviewed and approved  
9 under the direction of the Turkey Point 6 & 7 management team and were  
10 made fully subject to project internal controls. Costs were processed using  
11 FPL standard procurement procedures and authorization processes, and found  
12 to be reasonable.

13

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#### **2007 PRECONSTRUCTION COSTS**

15

16 **Q. Describe the preconstruction costs incurred for the Turkey Point 6 & 7**  
17 **project in 2007?**

18 A. As represented in Exhibit SDS-1 in Appendix II, Schedule T-6, FPL incurred  
19 the following pre-construction costs in 2007: 1) Licensing (\$2,017,181); 2)  
20 Permitting (\$516,084); 3) Engineering and Design (\$0); 4) Long Lead  
21 Procurement advanced payments (\$0) and 5) Power Block Engineering and  
22 Procurement (\$0). There are no variances for any of these categories because

1 the 2007 expenditures previously provided by FPL were historical, actual  
2 expenditures.

3 **Q. Please describe the costs incurred in the Licensing subcategory.**

4 A. In 2007 Licensing costs were \$2,017,181 as shown in Exhibit SDS-1,  
5 Appendix II, Schedule T-6, Line 4. Table SDS-6 provides a detailed  
6 breakdown of the Licensing subcategory costs in 2007, including a description  
7 of items included within each category.

8

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**Table SDS – 6 2007 Preconstruction Costs - Licensing**

<b>Category</b>	<b>Actual</b>	<b>May 1, 2008 Filing</b>	<b>Variance Fav/ (Unfav)</b>
NNP Team Costs – NNP FPL payroll and expenses, FPL Project Team Facilities, FPL Engineering, FPL Licensing	\$387,722	\$387,722	\$0
COLA Production – COLA Contractor, Project A&E, NRC and DCWG fees;	\$1,438,338	\$1,438,338	\$0
Environmental Services – FPL payroll and expenses, External support expenses	\$131,459	\$131,459	\$0
Power Systems – FPL payroll and expenses, System studies, licensing and permitting support and design activities	\$17,837	\$17,837	\$0
Primarily due to year-end True-up Environmental Services \$35K and payroll pay corrections \$6K	\$41,827	\$41,827	\$0
<b>Total Licensing</b>	<b>\$2,017,181</b>	<b>\$2,017,181</b>	<b>\$0</b>

10



1 Licensing costs consist primarily of FPL employee, contractor labor and  
 2 specialty consulting services necessary to develop the various license and  
 3 permit applications required by the Turkey Point 6 & 7 project. The majority  
 4 of these expenditures (\$1,826,060) were a result of the COLA process.

5 **Q. Please describe the costs incurred in the Permitting subcategory incurred**  
 6 **in 2007.**

7 A. In 2007, Permitting costs were \$516,084 as shown in Exhibit SDS-1,  
 8 Appendix II, Schedule T-6, Line 5. Permitting costs consist primarily of  
 9 FPL employee, consulting and legal services necessary to support the various  
 10 license and permit applications required by the Turkey Point 6 & 7 project.  
 11 Table SDS-7 provides a detailed breakdown of the Permitting subcategory  
 12 costs in 2007, including a description of items included within each category.

13  
 14 **Table SDS-7 2007 Preconstruction Costs - Permitting**

15

Category	Actual	May 1, 2008 Filing	Variance Fav/(Unfav)
Marketing and Communications – FPL payroll and expenses, External Media Support, External Polling and Outreach Support, Graphics and Collateral materials	\$93,071	\$93,071	\$0
Development – FPL payroll and expenses, various studies	\$55,923	\$55,923	\$0
Legal – FPL payroll and expenses, external support for permitting legal specialists	\$362,450	\$362,450	\$0
Year-end True-up	\$4,640	\$4,640	\$0
<b>Total Permitting</b>	<b>\$516,084</b>	<b>\$516,084</b>	<b>\$0</b>

1 As discussed above, Marketing and Communications supports the project by  
2 ensuring the project information is prepared, reviewed and available for  
3 distribution to media, customers and key stakeholders. Development costs  
4 include two personnel, myself and a Project Manager. Legal expenditures  
5 provide support to activities for all permitting and project interactions.  
6 Contingency is established as discretionary funds to be used to cover  
7 emerging issues, unanticipated studies or activities, or allocated to budget  
8 areas that exceed plan for unexpected reasons.

9 **Q. Please describe the costs incurred in the Engineering and Design**  
10 **subcategory.**

11 A. In 2007, Engineering and Design costs were \$0 as shown in Exhibit SDS-1,  
12 Appendix II, Schedule T-6, Line 6.

13 **Q. Please describe the costs incurred in the Long Lead Procurement**  
14 **subcategory.**

15 A. In 2007, Long Lead Procurement costs were \$0 as shown in Exhibit SDS-1,  
16 Appendix II, Schedule T-6, Line 7.

17 **Q. Please describe the costs incurred in the Power Block Engineering and**  
18 **Procurement subcategory.**

19 A. In 2007, Power Block Engineering and Procurement costs were \$0 as shown  
20 in Exhibit SDS-1, Appendix II, Schedule T-6, Line 8.

21

22

1 **Q. Were any costs expended in the Transmission category prior to or during**  
2 **2008?**

3 A. No. All costs associated with Transmission planning or engineering were  
4 related to the licensing and permitting activities, and therefore are  
5 appropriately included in those categories, described above. When activities  
6 move from licensing/permitting support to detailed engineering of the  
7 transmission improvements, costs will begin to be expended in these  
8 categories. It is expected that these expenditures will begin in 2010.

9 **Q. Were the 2007 project activities prudent and were the related costs**  
10 **reasonable?**

11 A. Yes. All costs were incurred as a result of the deliberately managed process at  
12 the direction of well-informed, properly qualified management, that I have  
13 described that were incurred in the process of conducting the necessary pre-  
14 construction activities of obtaining the necessary licenses and permits, for the  
15 Turkey Point 6 & 7 project. All costs were reviewed and approved under the  
16 direction of the Turkey Point 6 & 7 management team and were made fully  
17 subject to project internal controls. Costs were processed using FPL standard  
18 procurement procedures and authorization processes, and found to be  
19 reasonable.

20

1 **PROJECT SITE SELECTION COSTS**

2

3 **Q. Please describe the Site Selection costs incurred in 2006 and 2007.**

4 A. FPL's Site Selection work is discussed in detail earlier in my testimony. As  
5 represented in Exhibit SDS-2, Appendix III, Schedule T-6, Line 6, FPL  
6 incurred Site Selection costs totaling \$6,118,105. Site Selection costs  
7 included: 1) Project Staffing (\$762,841); 2) Engineering (\$3,351,744); 3)  
8 Environmental Services (\$1,220,290) and 4) Legal Services (\$783,231). Site  
9 Selection costs were incurred from the inception of the project in 2006 up to  
10 October 17, 2007 when the Need Determination request was filed with the  
11 FPSC. Site Selection costs in the 2008 Nuclear Cost Recovery filing total  
12 \$6,424,121. The reduction of \$306,016 resulted from an audit finding in the  
13 Project Staffing category and is further explained in the footnote of Exhibit  
14 SDS-2 (Appendix III, Schedule T-6). The majority of Site Selection costs  
15 were related to engineering support and analysis necessary to conduct  
16 preliminary activities leading to the selection of the FPL site and design  
17 technology. Environmental and legal costs were largely related to the local  
18 zoning approvals obtained in December 2007. Additional costs were incurred  
19 for FPL payroll and expenses for the project staff. Table SDS-8 provides a  
20 detailed breakdown of the Site Selection costs, including a description of  
21 items included within each category.

22

1

**Table SDS-8 2006-2007 Site Selection Costs**

<b>Category</b>	<b>Actual Total 2006 and 2007</b>	<b>May 1, 2008 Filing Total 2006 and 2007</b>	<b>Variance Fav/ (Unfav)</b>
Project Staffing – FPL salary and expenses, various studies, Corporate Communications	\$762,841	\$1,068,856	\$306,016
Engineering Team – FPL salary and expenses, Contractor salary and expenses, Preconstruction project management	\$3,351,744	\$3,351,744	\$0
Environmental Services - FPL salary and expenses, Contractor salary and expenses, External Consulting	\$1,220,290	\$1,220,290	\$0
Legal - FPL salary and expenses, external support for legal specialists	\$ 783,231	\$ 783,231	\$0
<b>Total Site Selection</b>	<b>\$6,118,105</b>	<b>\$6,424,121</b>	<b>\$306,016</b>

2

3 **Q. Were the project Site Selection activities prudent and were the related**  
4 **costs reasonable?**

5 A. Yes. All costs were incurred as a result of the deliberately managed process at  
6 the direction of well-informed, properly qualified management, that I have  
7 described that were incurred in support of the Turkey Point 6 & 7 project. All  
8 costs were reviewed and approved under the direction of the Turkey Point 6 &  
9 7 management team and were made fully subject to project internal controls.  
10 Costs were processed using FPL standard procurement procedures and  
11 authorization processes and found to be reasonable.

12

## CONCLUSION

1

2

3 **Q. Please summarize your testimony.**

4 A. The Turkey Point 6 & 7 project is progressing on schedule and well within  
5 budget. The project is being managed by a professional team of engineers,  
6 analysts and managers to ensure process controls are maintained and activities  
7 are compliant with applicable corporate procedures and project specific  
8 instructions. The project management process is being conducted in a well-  
9 informed, transparent and organized manner which enables executive  
10 oversight and facilitates reviews by internal and external parties. The Turkey  
11 Point 6 & 7 project team has the skills, experience and executive oversight to  
12 guide the project through critical decisions using the best available  
13 information. This disciplined application of process by well-qualified FPL  
14 managers results in prudent decisions with respect to project activities and  
15 expenditures.

16 **Q. Does this conclude your testimony?**

17 A. Yes.

**Appendix II is in a separate book.**

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**Appendix III is in a separate book.**

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**FEDERAL AUTHORIZATIONS**

<b>Jurisdictional Agency</b>	<b>Authority, Law, or Regulation</b>	<b>Description of Requirement</b>	<b>Activity Covered</b>
NRC	10 CFR Part 30	By-Product License	Possession of fuel.
NRC	10 CFR Part 40	Source Material License	Possession of source material.
NRC	10 CFR Part 50	Licensing of nuclear power plant	Approval for construction of nuclear power plant.
NRC	10 CFR Part 51, 10 CFR Part 52	NRC approval of an Environmental Report	Evaluation of environmental impacts from construction and operation of a nuclear power plant.
NRC	10 CFR Part 52	COL or LWA	Construction and safety review of the nuclear power plant site.
NRC	10 CFR Part 61	Licensing requirements for land disposal of radioactive wastes	Land disposal of radioactive waste that contains byproduct source and Special Nuclear Material (SNM).
NRC	10 CFR Part 70	Special Nuclear Material License	Possession of SNM.
NRC	10 CFR Part 71	Packaging and transportation of radioactive material	Packaging and transportation of licensed radioactive material.
NRC	10 CFR Part 72	License for Independent Storage of Spent Nuclear Fuel (SNF) and High-Level Radioactive Waste	Storage of SNF and High-Level Radioactive Waste.
DOE	Nuclear Waste Policy Act (42 U.S.C 10101 et seq.) and 10 CFR Part 961	Spent Fuel Contract	Disposal of SNF.
USACE	Clean Water Act of 1976 /33 U.S.C section 1344	Section 404 Permit	Discharge of dredge and fill materials into Waters of the United States.
USACE	Rivers and Harbors Act of 1899/ 33 U.S.C. section 401 <i>et seq.</i>	Section 10 - Rivers and Harbors Act Permit	Excavation or filling within navigable waters of the United States.
USFWS	16 U.S.C 1539(a)(1)(A); 50 CFR Parts 13, 17	Endangered species permit to take American crocodile during monitoring	Provides authorization to take (capture, examine, weigh, sex, collect tissue samples, mark, radio-tag, radio-track, relocate, release) endangered American crocodile individuals during population monitoring.

**Docket No. 090009-EI  
TP 6&7 Licenses,  
Permits and Approvals  
Exhibit SDS-3, Page 2 of 5**

<b>Jurisdictional Agency</b>	<b>Authority, Law, or Regulation</b>	<b>Description of Requirement</b>	<b>Activity Covered</b>
USFWS	16 U.S.C 703-712	Special purpose salvage permit, migratory birds	Provides authorization to: salvage dead migratory birds, abandoned nests, and addled eggs after nesting season; dead bald or golden eagles; and possess live migratory birds for transport to permitted rehabilitator.
DOI	[TBD]	Excavation or mining permit	Excavation in a National Park.

**Docket No. 090009-EI**  
**TP 6&7 Licenses,**  
**Permits and Approvals**  
**Exhibit SDS-3, Page 3 of 5**

**STATE OF FLORIDA AUTHORIZATIONS**

<b>Jurisdictional Agency</b>	<b>Authority, Law, or Regulation</b>	<b>Description of Requirement</b>	<b>Activity Covered</b>
FDEP, Siting Board	F.S. § 403.501-.518, F.S	Power Plant Certification Licenses*	Construction of a power plant with more than 75 MW of steam generated power and associated facilities.
FDEP, USEPA Region IV review	Chapter 62-621, F.A.C.	NPDES Stormwater Operations Permit for Industrial Activities	Operation of an industrial facility.
FDEP	Chapter 403 F.S.	Exploratory Well Construction Permit	Allows for the construction of the exploratory well and dual-zone monitor well.
FDEP	Chapter 403 F.S.	UIC Well Construction Permit	Allows for the conversion of the exploratory well to an injection well and perform operational testing for up to 2 years.
FDEP	Chapter 403 F.S.	Class I Well Operation Permit	Allows for the operation of the injection wells. This permit must be renewed every 5 years.
FDEP, USEPA Region IV review	Chapter 62-212, F.A.C.v	Prevention of Significant Deterioration Construction Permit	Construction and operation of facilities that generate air emissions.
FDEP, USEPA Region IV review	F.S. § 403.0885	NPDES Permit for wastewater discharge	Discharge of wastewater, cooling water, etc. to surface waters.
FDEP/USEPA	Chapters 62-25, 62-40 F.A.C	NPDES Construction Stormwater Permit	Construction of any facility that disturbs 1 acre or more.
Florida Fish and Wildlife Conservation Commission	Title 68A, F.A.C. (68A-9.002; 68A-25.002; 68A-27.003)	Special purpose live-capture permit	Provides authorization for live-capture, insertion of data loggers in nests, and collection of samples, on FPL properties of American crocodiles for mark/recapture and scientific data collection; also provides for live-capture, relocation, and release of American alligators and Eastern indigo snakes and other endangered or threatened species or species of special concern.

**FOREIGN STATE AUTHORIZATIONS**

<b>Jurisdictional Agency</b>	<b>Authority, Law, or Regulation</b>	<b>Description of Requirement</b>	<b>Activity Covered</b>
Utah Department of Environmental Quality Division of Radiation Control	R313-26 of the Utah Radiation Control Rules	Revision of existing General Site Access Permit	Transport of radioactive materials into the State of Utah.
Tennessee Department of Environment and Conservation Division of Radiological Health	TDEC Rule 1200- 2-10.32	Revision of existing Tennessee Radioactive Waste License-for- Delivery	Transport of radioactive waste into the state of Tennessee.

**LOCAL AUTHORIZATIONS**

<b>Jurisdictional Agency</b>	<b>Authority, Law, or Regulation</b>	<b>Description of Requirement</b>	<b>Activity Covered</b>
Miami-Dade County	Chapter 163 F.S.; Miami-Dade County Comprehensive Plan and adopted regulations	Land use and zoning conditional approval (unusual use approval)	Unusual Use to permit a nuclear power plant (atomic reactors) and ancillary structures and equipment.
Miami-Dade County	Chapter 163 F.S.; Miami-Dade County Comprehensive Plan and adopted regulations	Comprehensive Plan amendment zoning change and conditional approval (unusual use approval)	Excavation for fill source.
Miami-Dade County	County Ordinances	IW6 Permit (Industrial Well field) for site investigation	Land use - non-residential, within major well field protection areas not served by sanitary sewers.
Miami-Dade County Health Department	Chapter 373 F.S.; County Ordinances	Well construction for site investigation including pump test and observation wells	Well installation for hydrologic investigation.
Miami-Dade County	County Ordinances	Site Investigation Trailer Permit	Placement of temporary construction trailers on site for site investigation activity.
Miami-Dade County	County Ordinances	Observation well (pending)	Observation well
[TBD]	[TBD]	Radial collector well test permits	Testing of wells
SFWMMD	[TBD]	Permits for pump test	Pump test for test wells

<b>PROCEDURES and WORK INSTRUCTIONS</b>
GO 2 FPL Group Internal Control Policy
GO 7 FPL Documents - Monthly Closing Schedule
GO 300 Cash Disbursement
GO 354 Non-PO Invoice - General
GO 356 Creating an Account Assignment Model
GO 358 Framework PO Invoice - Entering an Invoice
GO 362 Entering a Framework PO Credit Memo
GO 606 Specific ER - General
GO 700 Integrated Supply Chain - Policy
GO 702 Utilization of Small Business Concerns
GO 705 Purchasing Goods and Services - Policy and Definitions
GO 705.1 Methods of Purchasing Goods and Services - Types of Goods and Services
GO 705.3 Purchasing Goods and Services - Using Purchase Orders and Contracts
GO 705.9 Purchasing Goods and Services - Procurement System Controls
GO 720.4 Purchase Order - Receipt of Materials and Services
GO 740 Transportation Freight Payments
QI4-NSC-1Rev6ProcurementControl
NP-1100 Nuclear Division Procurement Control r16
E&C Project Controls Process Overview 04-24-08
E&C Accrual Process Narrative rev 03-28-08
E&C Utility Fixed Assets Process narrative 03-31-08
E&C Monthly Invoice Processing & Accrual Schedule 2009
E&C Project Controls Monthly Deliverables 2009
Desktop online Authorization Procedure rev17 12 17 06
Contract Retention white paper rev 4-28-08
Electronic Invoice Scan Process
NPP-DESKTOP-GUIDE-012009
Updating Monthly Cost Report Process
Work Breakdown Structure -012009
Project Control Guidelines Memo 3-21-08
Rules of Engagement

**Docket No. 090009-EI**  
**TP6&7 Reports**  
**Exhibit SDS-5, PAGE 1 OF 2**

<b>REPORT</b>	<b>REPORT DESCRIPTION</b>	<b>PERIODICITY</b>	<b>AUDIENCE</b>
6 Week Look-a-head Schedule, organized by resource	All FPL activities scheduled within the next six weeks	Weekly	All project staff personnel, project management and project controls
Environmental Final Review Schedule	All remaining environmental final reviews	Weekly	Environmental Licensing lead engineer
License Review Board (LRB) Final Review Schedule	All remaining LRB final reviews	Weekly	Licensing LRB lead engineer, FPL and Black & Veatch/Zachry (BVZ) Engineering Services Project Controls
Schedule Resource profiles	Graphic profile of all FPL resources allocated to scheduled activities	Weekly	All staff on the project assigned as a resource and management
Performance Indicator Earned man hour burn rates	Graphic comparison of earned to budgeted man hours	Weekly	Project Management
Performance Indicators Activity early finish variance	Graphic comparison of original schedule finishes to current schedule finishes	Weekly	Project Management
Performance Indicators Activity total float variance	Graphic comparison of float variances from previous week	Weekly	Project Management
Performance Indicators Scheduled starts and finishes from previous week variance	Graphic comparison of scheduled starts and finishes to actual starts and finishes	Weekly	Project Management
Engineering & Corporate Services Division (E&CD) Executive Summary	Executive report covering cost, schedule and key construction issues	Monthly	Executive Management
Project Dashboard (Cost)	Comprehensive report covering schedule, budget, costs, performance, permitting, safety, and risks	Monthly	Executive Management
Corporate Variance (Cost)	Financial status compared to corporate budget	Monthly	Executive Management

	including Current Month (CM), Quarter (QTR), Year-To-Date (YTD) and End-Of-Year (EOY) with variance explanations		
Annual Forecast Analysis (Cost)	Compares year end forecasts monthly with variance explanations	Monthly	Project Management
Nuclear Filing Requirement (NFR) Cost Summary	Compares filing projections by major category to actual/forecast with variance explanations	Monthly	Project Management
One Page Cost Summary	Compares filing projections by department projections to actual/forecast with variance explanations and major milestone schedule dates	Monthly	Project Management and department heads
Project Cost Summary	Financial status by budget responsibility including CM, QTR, YTD, Period-To-Date (PTD) and EOY	Monthly	Project Management
Cost Recovery by Detail	Compares pre-construction NFR filing projection details to actual/forecast for CM, YTD and EOY	Monthly	Project Management
Due Diligence Report	Project status and potential liabilities that may require disclosure in company financial reports	Quarterly	Executive Management



**NNP PROJECT INSTRUCTIONS & FORM LIST**

Procedure Number	Title	Revision Number	Effective Date
NNP-PI-01	Request For Information (RFI) and RFI Response	0	01/29/2008
NNP-PI-02	Preparation, Revision, Review, and Approval Of New Nuclear Projects Project Instructions	0	02/04/2008
NNP-PI-03	NNP Project Document Retention	0	04/28/2008
NNP-PI-04	COLA Configuration Control		[T 01/20/2009]
NNP-PI-05	NNP Correspondence	0	09/25/2008
NNP-PI-06	NNP NRC Correspondence	0	02/22/2008
NNP-PI-07	NNP Department Training	1	04/17/2008
NNP-PI-08	NNP COLA Review & Approval Process	0	05/21/2008
NNP-PI-09	NNP COLA Submittal		[T 7/26/2008]
NNP-PI-010	NNP PTN COLA Related Project Management Briefs and COLA Related Document Reviews	0	03/11/2008
Desk Top Instruction Number	Title	Revision Number	Effective Date
NNP-AA-01	NNP Regulatory Items & Commitments Database Control	0	09/25/2008
NNP Form Number	Title	Revision Number	Effective Date
NNP-PI-01-01	FPL NNP PTN 6&7 COLA RFI and RFI Response	0	01/29/2008
NNP-PI-02-01	Project Instruction Review and Approval Form	0	02/04/2008
NNP-PI-03	NNP Document Retention		
NNP-PI-04	Not Used	NA	NA
NNP-PI-05	Not Used	NA	NA
NNP-PI-06-01	NNP Outgoing NRC Correspondence Review & Approval Sheet	0	02/22/2008
NNP-PI-07-01	NNP Training Attendance Form	0	03/19/2008
NNP-PI-07-02	NNP Training Exemption Form	0	03/19/2008
NNP-PI-07-03	NNP Required Reading Form	1	04/17/2008
NNP-PI-010-01	NNP Document Review Comment Form	0	03/11/2008
NNP-PI-010-02	NNP Project Management Brief Review And Approval Form	0	03/11/2008

Document is voluminous.

Provided in separate book.

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**CONFIDENTIAL**

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**CONFIDENTIAL**

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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION FLORIDA**

2 **POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF RAJIV S. KUNDALKAR**

4 **DOCKET NO. 090009 -EI**

5 **MARCH 2, 2009**

6

7 **Q. Please state your name and business address.**

8 A. My name is Rajiv S. Kundalkar, and my business address is 700 Universe  
9 Boulevard, Juno Beach, FL 33408.

10 **Q. By whom are you employed and what is your position?**

11 A. I am employed with Florida Power & Light Company (FPL) as Vice  
12 President, Nuclear Power Uprates.

13 **Q. Please describe your duties and responsibilities in that position.**

14 A. In my current role, I report directly to the Chief Nuclear Officer. I am  
15 responsible for the management and execution of the Nuclear Uprate  
16 Project and other capital projects, as well as Nuclear Fuel Procurement and  
17 Core Design, and the Spent Fuel Management Program.

18 **Q. Please describe your educational background and professional  
19 experience.**

20 A. I joined FPL in 1989 and have held positions of increasing responsibility  
21 within the nuclear division. From 1992 to February 1996, I was the Site  
22 Engineering Manager of the Turkey Point Nuclear Facility. From 1996  
23 through January 2000, I was the Engineering Vice President for the Nuclear

1 Division. Between January 2000 and June 2001, I completed a rotational  
2 assignment as the Vice President of the St. Lucie Nuclear Power Plant.  
3 Subsequently I have also worked as Vice President of Nuclear Technical  
4 Services, responsible for FPL Nuclear Division's fleet responsibilities for  
5 engineering fuels and major capital projects. I also led FPL's license  
6 renewal team, which successfully extended the Turkey Point and St. Lucie  
7 operating licenses by 20 years.

8

9 In previous assignments, I was the Site Engineering Manager at Exelon's  
10 Dresden Nuclear Plant. Additionally, I have worked in engineering  
11 positions of increasing responsibility at Sequoyah Nuclear Power Plant and  
12 San Onofre Nuclear Power Plant while an employee of Bechtel Power  
13 Corporation.

14

15 I am a Registered Professional Engineer and a Certified Senior Reactor  
16 Operator at the Turkey Point nuclear power plant. I graduated from the  
17 Indian Institute of Technology in Bombay, India, earned a Master's Degree  
18 in Civil Engineering from the University of New Hampshire, and have  
19 completed coursework for a Doctor of Philosophy Degree in Civil  
20 Engineering from Northwestern University.

21 **Q. What is the purpose of your testimony?**

22 A. The purpose of my testimony is to present and explain key management  
23 decisions and update project activities that occurred in 2008, FPL's 2008

1           update construction expenditures, and the procedures, processes and  
2           controls which help ensure that those expenditures are the result of prudent  
3           decision making. My testimony also explains the careful engineering-based  
4           process employed by FPL to ensure that it is including only nuclear update  
5           costs that are “separate and apart” from other costs, such as those for base  
6           rate nuclear operations and maintenance or capital projects that are  
7           unrelated to the nuclear updates. Additionally, I provide an update on  
8           FPL’s use of competitive bidding and single and sole source contracts for  
9           the EPU projects.

10       **Q.   Please provide a brief overview of the status of the project.**

11       A.   The EPU projects are progressing on schedule and within budget, to deliver  
12       the substantial benefits of additional nuclear generating capacity to  
13       customers from FPL’s existing St. Lucie Units 1 & 2 (PSL) and Turkey  
14       Point Units 3 & 4 (PTN) nuclear power plants, as planned by FPL and  
15       approved by the Commission. Several key activities occurred in 2008,  
16       including: (i) engineering evaluation and analyses in support of license  
17       amendment preparation for Nuclear Regulatory Commission (NRC)  
18       approval; (ii) the progress of activities related to the forging of two main  
19       generator rotors; (iii) the selection of vendors and execution of contracts for  
20       long lead procurement; (iv) the selection of the Engineering, Procurement;  
21       and Construction (EPC) vendor and execution of the EPC contract; and v)  
22       the finalization of project plans and procedures and continuation of project  
23       staffing. During this process, certain savings were achieved through

1 strategic, successful negotiations with vendors and by capitalizing on the  
2 effect of falling commodity prices. In total, FPL spent approximately \$100  
3 million in 2008 to carry out these key activities and otherwise proceeded  
4 with the development of the uprate projects, all of which were subject to the  
5 robust project planning, management, and cost control processes that FPL  
6 has in place and continuously works to improve. FPL's EPU activities and  
7 expenditures, as well as its internal processes and controls, are described in  
8 more detail below.

9 **Q. Have you prepared, or caused to be prepared under your direction,**  
10 **supervision or control, an exhibit in this proceeding?**

11 A. Yes. Exhibit RSK-1 consists of Appendix 1, containing schedules T-1  
12 through T-10. Page 2 of Appendix 1 contains a table of contents listing the  
13 schedules that are sponsored by FPL Witness Powers and myself,  
14 respectively. Also attached hereto are Exhibits RSK-2 through RSK-5.  
15 Those schedules and exhibits are incorporated herein by reference.

16

17 **PROJECT MANAGEMENT INTERNAL CONTROLS**

18

19 **Q. Please describe the EPU project management and organization.**

20 A. As described below, FPL has robust project planning, management, and  
21 execution processes in place. Of equal importance is the fact that these  
22 efforts are spearheaded by personnel with significant experience in project  
23 management within the nuclear industry. FPL has a separate Uprate



1           Organization within the Nuclear Division, responsible for monitoring and  
2           managing the uprate project, schedule, and costs. Through the beginning of  
3           December 2008, the EPU Project Director and EPU Engineering Director  
4           shared oversight responsibility for both the PSL and PTN uprate projects.  
5           Both reported directly to me as Vice President of Nuclear Power Upgrades.  
6           Separate PSL and PTN EPU Project Managers directed the uprate work at  
7           each plant site, and reported to the Uprate Project Director, while separate  
8           PSL and PTN Project Engineers reported to the EPU Engineering Director.  
9           Teams are located on-site to support the projects at each plant. This  
10          framework provided appropriate oversight through 2008. As would be  
11          expected, FPL thoughtfully considers and implements the appropriate  
12          project management structure for the various stages of the project. The  
13          organizational structure was modified in December 2008 as the projects  
14          entered a new stage of execution. The new 2009 management structure will  
15          be discussed in more detail in the testimony I provide in May for 2009  
16          actual/estimated costs.

17       **Q. Please describe the overall project planning process as applicable to the**  
18       **EPU projects.**

19       A. As planned, FPL completed its "Level 1" project budget and schedule in  
20       2008. The schedule identifies the procurement, receipt, and installation  
21       timing for each major piece of equipment as well as the planned completion  
22       timing of required engineering modifications, all of which are being tracked  
23       step-by-step through to their completion. As would be expected, the

1 current schedule includes a greater level of detail than the initial plan, with  
2 the details of additional activities being tracked in FPL's automated project  
3 schedule. In total, the project schedule includes approximately 150 EPU  
4 modifications for FPL's four nuclear units to be performed in two  
5 successive outages for each unit. The last outage for the last unit is  
6 scheduled to be completed in the fall of 2012. The licensing schedule for  
7 NRC approval is planned based upon when each unit will be in a ready  
8 condition to operate at the higher power level.

9 **Q. What schedule and cost monitoring controls are currently in place?**

10 A. FPL utilizes a variety of mutually reinforcing schedules and cost controls,  
11 used in an iterative fashion, and draws upon the expertise provided by  
12 employees within the project team, employees within the separate Nuclear  
13 Business Operations (NBO) group, and executive management. Within the  
14 Project Director's organization is a Project Controls Group. The Project  
15 Controls Manager records schedule changes, project delays, project costs,  
16 and supports project management and contract administration. FPL's  
17 efforts to meet the desired completion date of each uprate is being tracked  
18 through the use of Primavera P-6 scheduling software, enabling FPL to  
19 track the schedule daily and update the schedule weekly. This allows  
20 management to monitor and report on the schedule status. Updates to the  
21 schedule and scope of project work can be made as such changes are  
22 approved by management. FPL's use of this system allows management to  
23 examine the project status at any time as well as request the development

1 and generation of specialized reports. When FPL identifies a risk that a  
2 scheduled milestone date may be missed, a mitigation plan is prepared,  
3 reviewed, approved, and implemented with increased management attention  
4 to restore the scheduled milestone date or reduce any impact of missing the  
5 scheduled date. FPL also employs an Uprate Cost Engineer at each site to  
6 monitor and report project costs associated with the uprate projects. The  
7 Cost Engineer receives contractor invoices and forwards them to technical  
8 representatives to ensure the scope of work has been completed and the  
9 deliverables have been accepted. For fixed-price contracts, the Cost  
10 Engineer matches up the invoice amount and the deliverable work received  
11 from the subject matter expert, which is then sent to the appropriate  
12 personnel for approval and payment. Accruals and variance reports are  
13 prepared monthly for each of the sites to monitor and document  
14 expenditures and commitments to the approved budget.

15  
16 NBO provides accounting and regulatory oversight for the EPU Project.  
17 This organization is independent of the EPU Project team and reports to the  
18 Nuclear Controller. NBO's primary responsibilities include:

- 19 • Review, approval, and recording of monthly accruals prepared by the  
20 Site Cost Engineers;
- 21 • Conducting monthly detail transaction reviews to ensure that internal  
22 labor costs recorded to the EPU Project are only for those FPL personnel  
23 authorized to charge time to the EPU Project;

- 1           ● Creating monthly variance reports that include cost figures used in the
- 2           EPU Monthly Operating Performance Report;
- 3           ● Performing analyses of the costs being incurred by the project to ensure
- 4           that those costs are appropriately allocated to the correct Capital
- 5           Expenditure Requisitions established for each nuclear units' outages;
- 6           ● Assisting in the classification of Property Retirement Units;
- 7           ● Setup and maintenance of the EPU Project account coding structure;
- 8           ● Providing accounting guidance and training to the EPU Team;
- 9           ● Working closely with FPL's Accounting and Regulatory Departments to
- 10          determine which costs related to the EPU Project are capital and which
- 11          are O&M;
- 12          ● Managing all internal and external audit requests and ensuring that
- 13          findings and recommendations are dispositioned, as deemed necessary;
- 14          and
- 15          ● Providing oversight and guidance to the EPU Project Team in
- 16          development and maintenance of accounting related project instructions
- 17          to ensure compliance with corporate policies and procedures and
- 18          Sarbanes Oxley processes.

19   **Q.   What other periodic reviews are conducted to ensure that the project**  
20   **and key decisions are appropriately analyzed and vetted?**

21   A.   Regularly scheduled meetings are held to help effectively manage the  
22   uprate project and communicate the performance of the project in terms of  
23   quality, schedule and costs. These include the following:

- 1           • Daily morning meetings to share information from each of the projects  
2           and to coordinate project activities;
- 3           • Weekly project management, project controls, and risk meetings to  
4           review the status of the schedule and of project costs, and to identify  
5           areas needing attention;
- 6           • Biweekly meetings with the Chief Nuclear Officer, Project Vice  
7           Presidents, Project Directors and Leads to review project progress and  
8           work through any identified risks to schedule or costs;
- 9           • Routine, usually monthly, FPL Executive Steering Committee meetings  
10          where project management presents the status of the project schedule  
11          and costs. Strategy discussions take place to help improve management  
12          of risk areas;
- 13          • Monthly Project Meetings involving FPL and individual major vendors  
14          during which the project schedules and challenges are discussed; and
- 15          • Quarterly Project Meetings involving FPL and its major vendors during  
16          which strategy discussions take place to help improve management of  
17          risk areas.

18          Additionally, the project is annually reviewed to assess its continued  
19          economic feasibility. This analysis is conducted in the same manner as the  
20          analysis that supported the affirmative need determination by the  
21          Commission, but it is updated to reflect what is currently known regarding  
22          project cost, project schedule, and the cost and viability of alternative  
23          generation technologies. The 2008 analysis determined that the uprates

1 project continued to present a significant economic advantage over other  
2 resource options in a majority of fuel and environmental compliance cost  
3 scenarios.

4 **Q. Please describe the risk management process for the uprates project.**

5 A. FPL's risk assessment process, in addition to the schedule and budget  
6 controls described above, is used to identify and control potential risks  
7 associated with the uprates. A Project Risk Committee, consisting of site  
8 project directors and subject matter experts reviews and evaluates initial  
9 cost and schedule projections and any significant variances. This  
10 committee enables senior managers to critically assess and discuss risks  
11 faced by the EPU projects from different departmental perspectives. The  
12 committee also ensures that actions are taken to manage or eliminate  
13 identified risks. Project risks have also been mitigated by contracting with  
14 experienced uprate contractors and hiring experienced uprate personnel and  
15 including the risk of potential licensing delays in its schedule preparation.  
16 An EPU Project Risk Management report is presented to senior  
17 management in bi-weekly and monthly meetings, identifying potential risks  
18 by site, unit, priority, probability, impact, economic cost, and the unit or  
19 persons responsible for mitigating or eliminating the risk. These steps  
20 ensure continuous, vigilant identification of and response to potential  
21 project risks that could cause schedule delay or increased costs.

22

23



1 With respect to contractor management, Senior Directors at each site assure  
2 vendor oversight is provided by the Site Project Manager, the Site  
3 Technical Representative, and Contract Coordinators. Together, these  
4 representatives provide management direction and coordinate vendor  
5 performance reviews while the vendors are on site. The Site Technical  
6 Representative verifies that the vendor has met all obligations and  
7 determines whether any outstanding deliverable issues exist using a  
8 Contract Compliance Matrix. In addition to assisting with the development  
9 and administration of contracts, Nuclear Sourcing and Integrated Supply  
10 Chain (ISC) groups complete weekly updates to a Project Contract Log and  
11 report the status of contracts to project management.

12

13 FPL structures its contracts and purchase orders to include specific scope,  
14 deliverables, completion dates, terms of payment, commercial terms and  
15 conditions, reports from the vendor, and work quality specifications. Fixed  
16 price or lump sum contracts are used where possible. In other cases, target  
17 price contracts are used to control costs and provide performance  
18 incentives. Subject to certain limitations, a “target price contract” is one in  
19 which a target price is agreed upon after some initial portion of the work  
20 has been performed. If the vendor completes the work for less than the  
21 target price, the vendor and FPL will split the difference between the target  
22 price and the actual cost such that both parties benefit from the cost savings  
23 achieved. If the actual cost of the modification exceeds the target price, the



1 vendor only gets half of the difference between the target and the overrun.  
2 These and other contract provisions help ensure that the contractors perform  
3 the right work at the right time for the right price.

4 **Q. Are there additional measures that currently support prudent decision**  
5 **making?**

6 A. Yes. The project team capitalizes on the experience and information that  
7 can be provided by other corporate divisions and affiliates, as well as  
8 industry-wide working groups. For example, other FPL divisions like  
9 Transmission & Distribution and Power Generation have participated as  
10 subject matter experts in technical specification development, bid reviews  
11 and vendor selection. With respect to affiliates, FPL can utilize lessons  
12 learned and compare contract terms, rates, and conditions with those  
13 executed for an affiliated nuclear power uprate project. Such comparisons  
14 provide further assurance that the contract terms are reasonable, especially  
15 in the case of single and sole source procurements. In some circumstances,  
16 FPL can also leverage corporate relationships with vendors in contract  
17 negotiation.

18  
19 In addition, FPL project team members participate in Nuclear Industry  
20 working groups organized by Institute of Nuclear Plant Operators (INPO)  
21 and Nuclear Energy Institute (NEI) and benefit from lessons learned. This  
22 is supplemented with direct engagement with our industry peers through  
23 benchmarking trips to other nuclear sites which have performed similar



1 orders were received for the St. Lucie Units and Turkey Point units on  
2 September 17, 2008, and October 29, 2008, respectively.

3 **Q. What types of licensing or permitting activity took place in 2008?**

4 A. The main licensing activity for both St. Lucie and Turkey Point was the  
5 engineering analyses and preparations for submittal of the License  
6 Amendment Request (LAR) to the NRC. There will be two LAR  
7 submittals for Turkey Point, for Alternate Source Term (AST) and for EPU.  
8 Two are required for St. Lucie (one for each unit), due to the differences in  
9 the units and fuel vendors. FPL plans to submit its LARs in the third quarter  
10 of 2009 for PSL. The LAR submittals for PTN are planned for the third and  
11 fourth quarters of 2009, for the AST and the EPU respectively.

12 **Q. What key activities occurred in 2008 in execution of the uprate  
13 projects?**

14 A. Several key activities occurred in 2008, including: (i) engineering  
15 evaluation and analyses in support of license amendment preparation for  
16 NRC approval; (ii) the progress of activities related to the forging of two  
17 main generator rotors; (iii) the selection of vendors and execution of  
18 contracts for long lead procurement; (iv) the selection of the EPC vendor  
19 and execution of the EPC contract; and (v) the finalization of project plans  
20 and procedures and continuation of project staffing.

21

22 With respect to major component forgings, Siemens – which is contracted  
23 to provide turbine generator equipment and components – completed the

1           forging of one of the Turkey Point main generator rotors. This rotor is  
2           being shipped to the Siemens facility in North Carolina from the Japan  
3           Steel Works foundry in Japan. The second main generator rotor forging  
4           began in September 2008. Exhibit RSK-2 consists of a picture of such a  
5           generator rotor, to give an idea of the size and nature of these major  
6           forgings. Regarding long lead procurement, the engineering analysis was  
7           completed for major equipment and components, leading to procurement of  
8           feedwater heaters, Moisture Separator Reheaters (MSR), main condensers,  
9           heat exchangers, and main Generator Step-Up (GSU) transformers. A  
10          picture of a feedwater heater, similar to the ones procured for the uprate  
11          projects, is attached as Exhibit RSK-3. Additionally, the EPC contract was  
12          competitively bid and awarded to Bechtel Power Corporation (Bechtel).  
13          Bechtel began staffing their project personnel at St. Lucie and Turkey Point  
14          in December 2008. The EPC contracting process is described in detail later  
15          in my testimony.

16

17          In 2008, FPL completed the development of its Extended Power Uprate  
18          Project Instructions (EPPI). These instructions provide desk top  
19          instructions and guidance for project personnel. The purpose of these  
20          instructions is to help ensure appropriate consistency in performance of  
21          EPU Project tasks. I have attached a copy of the EPPI Index to my  
22          testimony as Exhibit RSK-4, listing the various instructions that have been  
23          implemented. The Project Management Plan was also completed which

1 provides overall project information. In turn, each site has developed its  
2 own specific EPU Project Plan which provides information specific to the  
3 respective site. Additionally, task plans have been prepared for the first  
4 outage for each of the major activities or projects needed to implement the  
5 EPU Project. Finally, the project staffing continued to the point where the  
6 project has a staff of 136 personnel. This includes 52 people on site at St.  
7 Lucie and 53 people on site at Turkey Point.

8 **Q. Please describe the long lead procurement activity that has taken place**  
9 **in more detail.**

10 A. Contracts for the procurement of long lead equipment and components were  
11 competitively bid and awarded in 2008. The bidding and negotiation  
12 process for these major procurements was extensive, and ultimately yielded  
13 excellent terms for FPL and savings for FPL customers.

14

15 First, the engineering analysis for the equipment was completed, resulting in  
16 required design specifications for the proposed equipment. These design  
17 specifications were placed into the bid packages for each prospective vendor  
18 to prepare a proposal for manufacture and delivery within the project  
19 schedule. Requests for proposals (RFPs) initially were sent to vendors for  
20 each different type of equipment. Where appropriate, vendors were asked to  
21 provide “best and final” offers which were evaluated by the project team.  
22 Vendors were then asked if there would be additional savings if similar  
23 equipment needed at both sites, such as feedwater heaters, were awarded to a

1 single vendor. The response was that there would be additional savings if a  
2 single vendor was awarded a bundled contract for similar equipment. Again,  
3 where appropriate, "best and final" offers were solicited from the vendors for  
4 all of the various equipment needs, and those offers indicated that savings  
5 would be achieved by bundling contracts for similar components through a  
6 single vendor. This process provided the optimal benefit of competitively  
7 bidding similar types of equipment.

8

9 It is worth describing the bid evaluation process in some detail as well.  
10 After the bid specifications and requests for proposals were prepared, the  
11 technical and commercial evaluation criteria were developed. The technical  
12 evaluation included a direct comparison of the engineering specifications to  
13 each vendor's proposal, and an evaluation of the ability of each vendor to  
14 meet the project schedule and technical requirements. ISC personnel then  
15 communicated with the vendors to request additional information and  
16 obtain proposal clarifications. When all the technical evaluation  
17 information was compiled, the technical review team prepared a scoring  
18 matrix, scoring attributes against each vendor's proposal. A few of the  
19 attributes included in the scoring were performance, dimension/weight  
20 requirements, materials of construction, scope of work exceptions and  
21 deliverables, schedule/delivery/storage, and experience and history. The  
22 commercial evaluation included a comparison of the costs from each  
23 vendor for the equipment and services, any exceptions taken by the

1 vendors, and the completeness of each proposal. The commercial  
2 evaluation also included a corporate financial risk evaluation of each  
3 vendor to ensure they were financially sound and had the means to be  
4 successful if they won the bid award.

5

6 As described above, the competitive bid process, the technical and  
7 commercial evaluations, and extended negotiations resulted in a contract  
8 award to one vendor for a significant portion of the equipment, which  
9 provided excellent value to FPL and its customers. In addition to a reduced  
10 contract price for the equipment, FPL was able to lock in favorable costs for  
11 materials that existed in late 2008. FPL will also realize cost savings from  
12 managing only one vendor as opposed to several.

13

14 FPL's initial 2008 EPU project budget had anticipated a contract award for  
15 only a portion of the equipment and services ultimately procured through  
16 this process. The annual project budget was increased in 2008 to account  
17 for this advantageous contract award, while keeping the overall total project  
18 budget unchanged. The costs incurred during 2008 that relate to these  
19 procurements are reflected in the Power Block Engineering, Procurement,  
20 Etc. category discussed below.

21 **Q. Please describe the execution of the EPC contract in more detail.**

22 A. The contract for Modification Engineering, Procurement, and Construction  
23 (EPC) was competitively bid and awarded to Bechtel. The combined value

1 of the PSL and PTN contracts is expected to be approximately 25% of the  
2 total cost of the Uprate Project. It includes such services as design,  
3 engineering, licensing support, procurement and material handling,  
4 construction/implementation, project controls, quality assurance, quality  
5 control, radiation protection and safety. This contract award was the result  
6 of many months of RFP refinement and contract term negotiations to  
7 achieve the best terms for FPL's customers, which includes a very minimal  
8 mark-up on labor rates and incorporates performance-based incentives.

9

10 The FPL EPU Management team, which is made up of senior project  
11 managers each with 20 plus years of experience in managing large power  
12 plant projects, provided the expertise for assessing the capabilities of  
13 companies to perform the engineering for the plant equipment  
14 modifications, the procurement of some of the project materials and the  
15 construction portion where equipment will be removed, modified, or  
16 replaced to support the power uprate conditions for each facility.

17

18 Many weeks were spent developing the bid specifications and the method  
19 for performing the technical and commercial evaluations to ensure the  
20 greatest opportunity for success along with ensuring value for the cost of  
21 this procurement. Presentations were made to FPL executive management  
22 on the progress of the preparations of the specifications and potential  
23 vendors through the "best and final" negotiations and contract award. At



1           these meetings with executives, strategies were discussed and directions  
2           formulated for the best commercial and technical outcome.

3

4           In May of 2008, six major vendors were invited to submit proposals to meet  
5           the requirements of the RFP. One vendor declined to bid and another  
6           vendor removed itself from consideration early in the evaluation process.  
7           Each member of the team performed independent technical evaluations of  
8           the remaining vendor proposals. This was accomplished using a matrix  
9           where each attribute was numerically rated. The results of each team  
10          member's evaluation were then compiled. The results indicated that the  
11          remaining four vendors were technically qualified to perform the work.

12

13          The four vendors were presented with a risk template which was developed  
14          by the management team and questions specific to their proposals. This  
15          was completed in the July 2008 time frame. During August, the EPU  
16          management team met separately with each of the vendors to discuss and  
17          review their responses to the risk template and questions. Following these  
18          meetings each team member independently completed another evaluation  
19          and rescore of the vendors' proposals based on original and newly provided  
20          information. Concurrent with the technical evaluations, the commercial  
21          evaluations were completed by the ISC team. They evaluated Terms and  
22          Conditions (T&C), cost and the financial condition of each vendor. They

1           also prepared a numerical score for each of these categories for inclusion  
2           with the technical evaluation to provide an overall score for each vendor.

3

4           The weighted scores consisted of the technical evaluation, the commercial  
5           terms and conditions and costs. Using the results, two of the vendors were  
6           eliminated. Some reasons for eliminating these vendors included overall  
7           low score, unfavorable responses to terms and conditions, reliance on a  
8           third party, and historical performance issues experienced by FPL on other  
9           projects. The evaluation team recommended proceeding with negotiating  
10          the best possible overall solution with the remaining vendors. In September  
11          2008, the two remaining vendors were told they were on the “short list” and  
12          were asked additional questions directed at specific issues in their  
13          respective proposals and were asked to provide their “best and final” offers.  
14          Bechtel was then determined to be the most favorable in terms of overall  
15          cost, contract terms and conditions and in meeting the project’s technical  
16          issues.

17

18          Contract negotiations were completed and the contract was signed in  
19          November. Bechtel began project management and engineering personnel  
20          mobilization in December and will continue staffing in 2009. During  
21          outages, local labor will be used to support the craft work activities for the  
22          project. The costs incurred during 2008 that relate to this contract are

1 reflected in the Power Block Engineering, Procurement, etc. category  
2 discussed below.

3 **Q. Please explain FPL's use of single or sole source contracts for the**  
4 **power uprate projects in 2008.**

5 A. As described above, an overwhelming amount of work for the EPU projects  
6 was competitively bid in 2008. In excess of 90% of the total value of  
7 contracts entered into during 2008 was competitively bid, after accounting  
8 for contract costs associated with Original Equipment Manufacturers and  
9 nuclear fuel, which cannot be competitively bid. Where single or sole  
10 source procurements are used, Nuclear Policy NP-1100, Procurement  
11 Control, requires proper documentation of justifications and senior-level  
12 management approval of the procurement. FPL has continued to improve  
13 the process of documenting and approving single and sole source  
14 procurements, to ensure compliance with NP-1100 and to facilitate review  
15 by third parties who are not directly involved in the nuclear procurement  
16 process. These improvements were implemented beginning in late 2008,  
17 and will be discussed in the testimony that will be filed addressing 2009  
18 actual/estimated costs.

19  
20  
21  
22  
23

1 **2008 EPU COSTS – TRUE UP**

2

3 **Q. What type of costs did FPL incur for the uprate projects in 2008?**

4 A. As demonstrated in Schedule T-6, costs were incurred in the following  
5 categories: License Application; Engineering and Design; Permitting;  
6 Project Management; Power Block Engineering, Procurement, Etc.; Non  
7 Power Block Engineering, Procurement, Etc.; and recoverable O&M.  
8 These costs were the direct result of the prudent project management and  
9 decision making described in detail above. Each category reflects some  
10 variance against what was originally estimated and budgeted, which is to be  
11 expected, particularly given the relatively early stage of the project.  
12 Nonetheless, based on all available information, the total project remains  
13 within budget.

14 **Q. Please describe the costs incurred in the License Application category**  
15 **and the variance, if any, from the 2008 actual/estimated costs in this**  
16 **category.**

17 A. License Application costs consists primarily of charges for FPL employee,  
18 consulting and contractor services rendered in support of preparing the  
19 NRC License Amendment Request (LAR). The LAR contains the nuclear  
20 fuels, mechanical, electrical, chemical and material engineering evaluations  
21 of the units for NRC review and approval of the uprated condition. This  
22 process for requesting and approving a change to a plant's power level is  
23 governed by the Code of Federal Regulations. FPL incurred \$29.5 million

1 in this category in 2008, with a positive variance (underspend) of \$4.5  
2 million from the actual/estimated amount, primarily attributable to lower  
3 than expected Nuclear Steam Supply System (NSSS)/Fuel Engineering  
4 costs.

5 **Q. Please describe the costs incurred in the Engineering and Design**  
6 **category and the variance if any from the actual/estimated costs in this**  
7 **category.**

8 A. Engineering & Design services were provided by Westinghouse and Areva,  
9 and were related to NSSS and associated fuel and licensing design  
10 parameters. Additional Engineering & Design services were provided by  
11 Shaw Stone & Webster, and were related to BOP system design, which  
12 included specifications for components and equipment for procurement.  
13 Engineering services were also provided by Numerical Applications, Inc.  
14 and were related to the radiological analysis supporting the AST LAR. The  
15 Commission determined that FPL's decisions to enter into these contracts  
16 were prudent in last year's NCRC proceeding (Order No. PSC-08-0749-  
17 FOF-EI). FPL incurred \$5.1 million in this category in 2008, which  
18 represents a positive variance of \$2.6 million, primarily attributable to the  
19 fact that the ramp up of staff was behind the original projection.

20 **Q. Please describe the costs incurred in the Permitting category and the**  
21 **variance, if any, from the actual/estimated costs in this category.**

22 A. Permitting costs are primarily attributable to the State of Florida Site  
23 Certification Application Fee for the St. Lucie and Turkey Point sites,

1 consulting services related to environmental work for site certification and  
2 compliance certification, and FPL employee support. FPL incurred \$1.1 in  
3 this category in 2008, representing a positive variance of \$0.6 million. This  
4 underspend was primarily attributable to lower than expected cost to  
5 complete the certification work.

6 **Q. Please describe the costs incurred in the Project Management category**  
7 **and the variance, if any, from the actual/estimated costs in this**  
8 **category.**

9 A. Project Management costs relate to project oversight and contractor  
10 services in support of feasibility study activities, including but not limited  
11 to scope definition, cost estimates, contract negotiations and project  
12 execution. FPL incurred \$12.2 million in this category in 2008. This  
13 results in a positive variance of \$0.8 million, primarily attributable to the  
14 fact that the ramp up of staff was behind the original projection.

15 **Q. Please describe the costs incurred in the Power Block Engineering,**  
16 **Procurement, Etc. category and the variance, if any, from the**  
17 **actual/estimated costs in this category.**

18 A. The majority of Power Block costs are for Siemens services for forging of  
19 Low Pressure Turbines at St. Lucie (Units 1 & 2), forging of the Turbine  
20 Generator Rotor at Turkey Point (Unit 3), studies to evaluate which main  
21 generator modifications are required to support implementation of the EPU,  
22 the procurement of long lead equipment, and costs associated with the EPC

1 contract, as described above. FPL incurred \$51.8 million in this category  
2 in 2008. This represents a negative variance of \$29.3 million when  
3 compared to FPL's 2008 actual/estimated costs presented last year in this  
4 category. The majority of the variance is attributable to the one to two-  
5 month acceleration of the long lead procurement activity cash flow and the  
6 decision to award one bundled equipment contract as explained earlier in  
7 my testimony. This variance has no negative impact on the total budget for  
8 the EPU projects because it reflects an acceleration of an anticipated cost,  
9 not an increase in a particular cost. Moreover, the contract amount is lower  
10 than the total amount FPL would have paid for the same equipment and  
11 services pursuant to multiple, separate contracts. This procurement also  
12 took advantage of favorable material costs then existing and is expected to  
13 offer savings from managing fewer vendors, as described above.

14 **Q. Please describe the costs incurred in the Non-Power Block Engineering,**  
15 **Procurement, Etc. category and the variance, if any, from the**  
16 **actual/estimated costs in this category.**

17 A. Non-Power Block Engineering costs consist primarily of costs for facilities  
18 for engineering and project staff at site locations. FPL incurred \$18,314 in  
19 this category in 2008. There was a nominal positive variance of \$137,743  
20 in this category. This savings was due to the fact that the project did not  
21 have to obtain additional facilities as previously planned.

22 **Q. Please describe the costs incurred as Recoverable O&M.**

1     A.    The T-4 schedule presents the Recoverable O&M being submitted for 2008,  
2           in the amount of approximately \$269,200.  This represents a negative  
3           variance of approximately \$269,200 from FPL's actual/estimated amount  
4           filed in Docket 080009-EI.  At the time of that filing, the project budget and  
5           spending plans were in very early stages, and it was not clear that  
6           recoverable O&M would be incurred.  Consistent with FPL's capitalization  
7           policy, the commodities that make up these expenditures consist of non-  
8           capitalizable computers and peripheral hardware, software, general store  
9           purchases and office supplies, and office fixtures needed for new project-  
10          bound hires, incremental staff, and augmented contract staff.  The supplies  
11          are segregated for EPU Project personnel use only.  One of the software  
12          products purchased was Adobe Acrobat for project personnel use to  
13          electronically communicate with vendors and freely exchange information.  
14          Another is the Primavera P-6 scheduling software discussed above.  This  
15          software was set up on an independent server.  Security access is  
16          maintained to ensure only authorized project personnel can work on the  
17          scheduling of approximately 45,000 activities for the EPU Project.  All of  
18          these expenses were reasonable and necessarily incurred in support the EPU  
19          Project.



1                                   **“SEPARATE AND APART” CONSIDERATIONS**

2

3   **Q.    Would any of the above costs that you described have been incurred if**  
4       **the FPL nuclear generating units were not being updated?**

5    A.   No.   The construction costs and associated carrying charges and  
6       recoverable O&M expenses for which FPL is requesting recovery through  
7       the NCRC process were caused only by activities necessary for the uprate  
8       projects, and would not have been incurred otherwise.  I note that as  
9       explained in FPL Witness Powers’s testimony and schedules, only carrying  
10      costs and recoverable O&M expenses are requested for recovery at this  
11      time for the EPU Projects, consistent with the Commission’s NCRC rule  
12      and procedures.

13   **Q.    Please explain the processes utilized by FPL to ensure that only those**  
14      **costs necessary for the implementation of the uprates are included for**  
15      **NCRC purposes.**

16   A.   FPL conducted engineering analyses to identify major components that  
17      must be modified or replaced in order to enable the units to function  
18      properly and reliably in the uprated condition.  A list of those components  
19      and an explanation of why each modification or replacement is necessary is  
20      attached to my testimony as Exhibit RSK-5.  It is important to note,  
21      however, that as inspections and other engineering evaluations are  
22      performed, the need for additional modifications or replacements necessary  
23      for the uprate could be identified.  Likewise, it could be determined that

1 certain components previously identified as necessary to the uprate project  
2 may be determined, upon physical and technical inspection, to be sufficient  
3 in their present condition. FPL expects that such final determinations with  
4 respect to each component will occur prior to the time that associated cost  
5 recovery is sought through the NCRC.

6  
7 To provide a check on the activities identified by the engineering analysis,  
8 FPL conducted reviews of historical site planning documents to determine  
9 if any of the activities planned for the EPU Project were previously  
10 scheduled to be performed as regular maintenance. Those historical  
11 planning documents covered the time 2005 through 2009. As a result of  
12 this review, FPL determined that each of the activities that occurred in 2008  
13 – and their associated costs – were “separate and apart” and properly  
14 included for NCRC purposes.

15  
16 Finally, FPL considered whether any of the major component modifications  
17 or replacements was already required as a condition of receiving its NRC  
18 license renewals. FPL reviewed the “License Renewal Action Items”  
19 issued by the NRC and compiled by FPL in conjunction with the approval  
20 of FPL’s requested license renewals. In doing so, it verified that none of  
21 the major component modifications or replacements identified by FPL as  
22 necessary for the EPU project was duplicative of the activities required by  
23 the NRC for license extension.

1     **Q. Has FPL considered OPC's proposed approach for identifying**  
2     **"separate and apart" expenditures?**

3     A. Yes. OPC's suggestion that FPL should perform a separate study to  
4     identify each component that may need to be replaced during the 20 years  
5     of each unit's extended license was considered. This approach however, is  
6     inherently inconsistent with the true manner in which nuclear plants are  
7     maintained – which requires constant and real-time monitoring,  
8     surveillance, and maintenance decisions – and it was determined that such a  
9     study would not yield meaningful or useful results. Such a predictive study  
10    is not required by the NRC for the license renewal for a nuclear plant. They  
11    rely on FPL's continued vigilance in performance monitoring and  
12    inspection and maintenance programs for early identification with  
13    appropriate actions to ensure each facility will operate as designed.

14  
15    It is also important to note that, even assuming OPC's approach could be  
16    used and applied, and even if certain costs were identified as candidates for  
17    removal from clause recovery, the shift in accounting for those costs would  
18    offer no substantial economic advantage to FPL's customers. Such capital  
19    expenditures, if moved out of the clause, would simply be moved into  
20    Construction Work in Progress, where they would accrue AFUDC until the  
21    uprated units enter commercial operation. This would result in a higher  
22    total cost of plant ultimately placed into service. This concept is explained  
23    in greater detail in the testimony of FPL Witness Powers.

1 **CONCLUSION**

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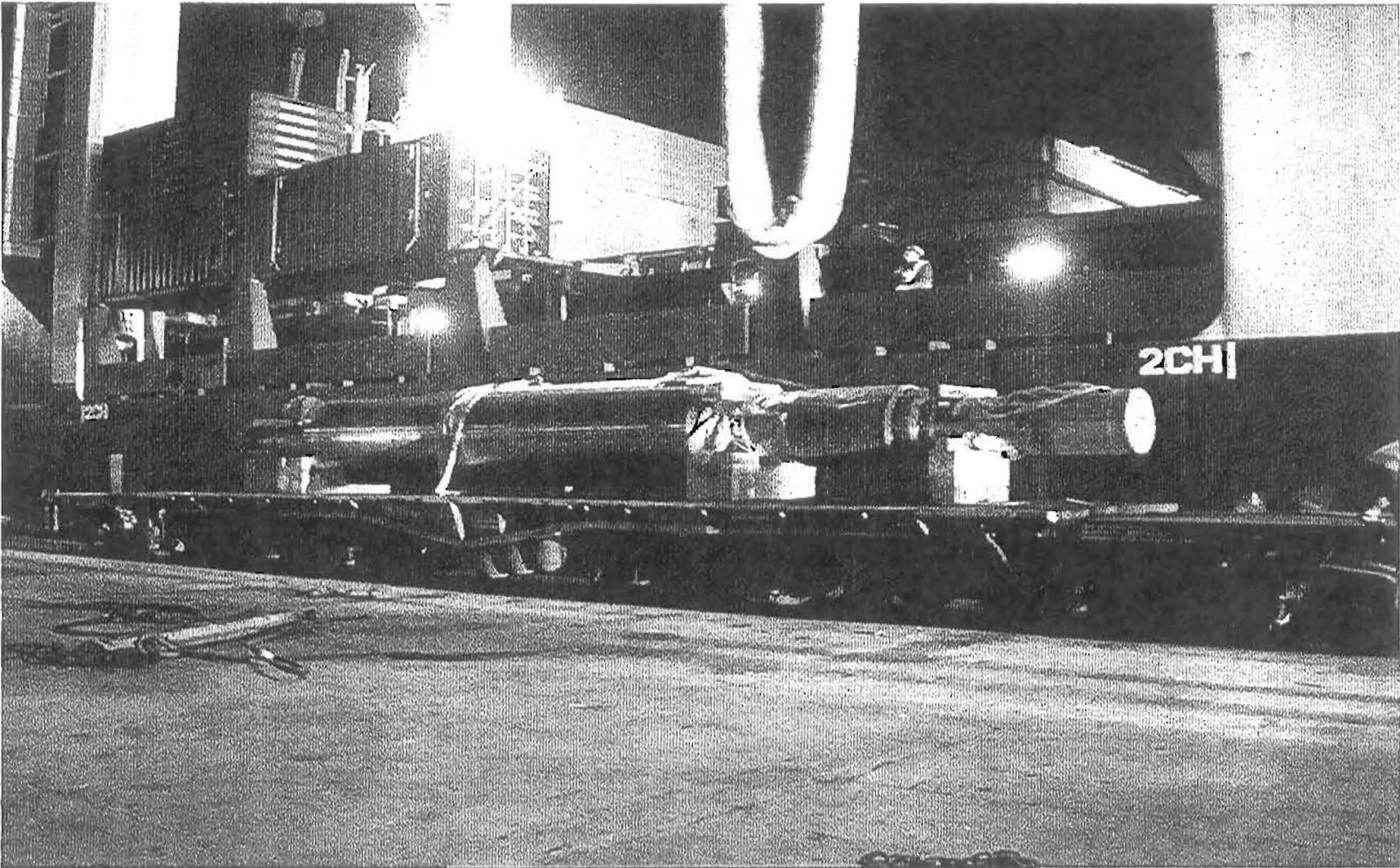
**Q. Were FPL's 2008 EPU expenditures prudently incurred?**

A. Yes. FPL incurred capital expenditures totaling approximately \$100 million and recoverable O&M totaling approximately \$269,200 in 2008. Approximately 8% of FPL's 2008 expenditures flow from decisions made and activities conducted in 2007 which were previously determined to be prudent by this Commission, while the remainder is attributable to decisions made based on available information and activities conducted in 2008. With respect to the expenditures attributable to new activities in 2008, those expenditures were either reasonably necessary to remain on schedule so that the uprate work can be performed during the identified planned outages or, in the case of certain long lead procurement items, were incurred to take advantage of cost savings opportunities. Through experienced personnel's application of the robust internal schedule and cost controls and use of the internal management processes, FPL is confident that its EPU management decisions are well-founded and prudent. All of the costs incurred in 2008 were the product of such decisions and should be approved.

**Q. Does this conclude your direct testimony?**

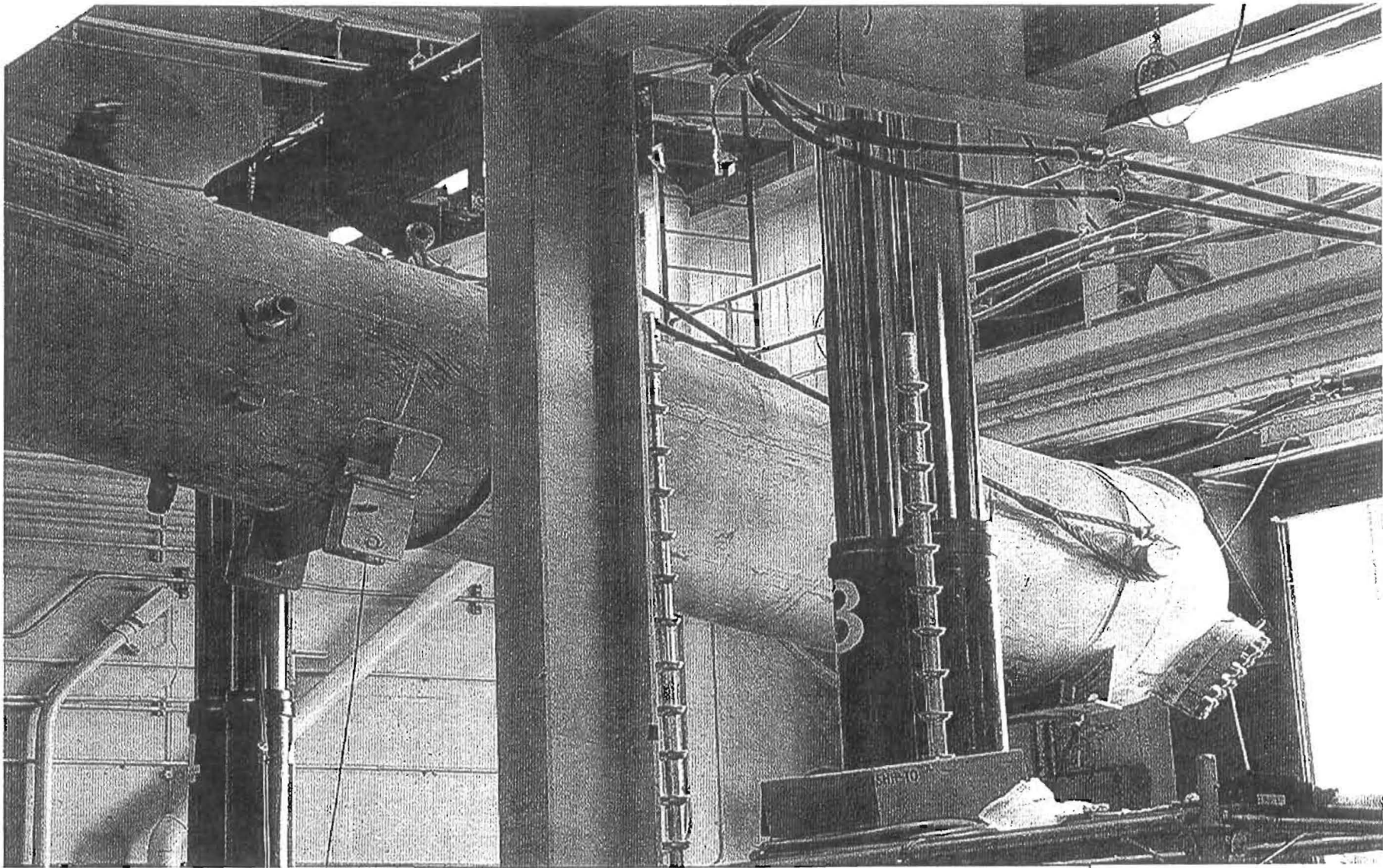
A. Yes.

**Appendix I is in a separate book.**



RSK-2 FPL Extended Power Uprate Project  
Forged Generator Rotor  
Being Transported to North Carolina for Machining  
Approximate Weight: 200,000 pounds





RSK-3 High Pressure Feedwater Heater  
Being removed for replacement of a Larger Feedwater Heater for  
the Extended Power Uprate at an FPL Affiliate Nuclear Unit  
Approximate Weight: 125,000 pounds

Docket No. 090009-EI  
 EPU Instructions, EPPI Index  
 Exhibit RSK 4, Page 1 of 2

Title	PI #	Revs	Issued
<b>Project Administration</b>	<b>100</b>		
Project Instruction Preparation, Revision, Cancellation	100	R1	9/29/2008
EPU Project Expectations & Conduct of Business	110	R10	1/22/2009
EPU Project Contractor Staffing	130	R2	2/3/2009
Roles & Responsibilities	140	R7	9/15/2008
EPU Project-Nuclear Business Ops Interface	150		7/9/2008
EPU Project Formal Correspondence	160	R1	10/6/2008
Time and Expense Reporting to FPLE Support	170		9/22/2008
<b>Procurement</b>	<b>200</b>		
Contract Administration	210		3/10/2008
Project Requisition and Purchase Order Process	220		3/19/2008
Project Invoices	230	R1	8/28/2008
EPU Contract Compliance Program	240	R2	11/20/2008
Preparation of Installation Services Specifications	250	R1	7/7/2008
P Procurement	270		8/29/2008
<b>Project Controls</b>	<b>300</b>		
Project Scope Control Process	300	R1	8/28/2008
Development, Maintenance, and Update of Schedules	310	R3	1/12/2009
Cost Estimating	320		3/26/2008
EPU Project Risk Management Program	340	R1	12/1/2008
Project Controls File Management	360		
FPL Accrual Process	370	R1	12/10/2008
Project Self Assessment	380		11/20/2008
Dormant Material Expense (DME)	390		9/11/2008
<b>Project Management</b>	<b>400</b>		
Project Plans and Task Plans	410	R1	10/7/2008
Project Governance & Oversight ( & KPIs)	420		2/28/2008
EPU Field Activity Monitoring Plans	440		5/7/2008
Final Project/Task Plan Closeout	450		
EPU Operating Experience Review	460		8/28/2008
EPU Project Recovery Plans	470		7/8/2008
EPU Work Package Planning Standards	480		12/10/2008
EPU Project Outage Preparations	490		12/10/2008
<b>Project Training</b>	<b>500</b>		
EPU Project Training Program	510		11/19/2008
EPU Project Personnel Training Requirements	520	R1	12/19/2008
Maintenance of Qualification Matrix & Training Records Retention	530	R1	12/19/2008
EPU Project Site Training Plan Development	550		9/2/2008



**Docket No. 090009**  
**EPU Instructions, EPPI Index**  
**Exhibit RSK - 4, Page 2 of 2**

<b>Title</b>	<b>PI #</b>	<b>Revs</b>	<b>Issued</b>
EPU Project Qualification Guidelines	560	R1	12/19/2008
<b>Quality, Engineering &amp; Licensing</b>	600		
EPU Uprate License Amendment Request	610	R1	12/3/2008
Regulatory Communications Guideline	630		11/20/2008
<b>Point Beach Specific</b>	700		
Fire, Weather, Medical, and Other Emergencies	710		8/27/2008
<b>Saint Lucie Specific</b>	800		
St. Lucie EPU Project Severe Weather Preparation	810		5/7/2008
<b>Turkey Point Specific</b>	900		
Turkey Point EPU Project Severe Weather Preparations	910		7/15/2008
<b>Project Administration</b>	100		

St. Lucie Uprate Activity	Summary Explanation of Need for Activity
<b>Nuclear Steam Supply System (NSSS)</b> <ul style="list-style-type: none"> <li>● NSSS / Fuel Engineering &amp; Licensing</li> <li>● Simulator upgrade</li> <li>● Safety Injection upgrades (Unit 1)</li> <li>● PRA Model upgrades</li> <li>● NRC License Fees</li> </ul>	<p>The Nuclear Regulatory Commission (NRC) requires extensive engineering evaluations to ensure the uprate conditions remain within the safety design basis and design limits.</p>
<b>Balance of Plant (BOP) – Upgrades and Evaluations</b> <ul style="list-style-type: none"> <li>● BOP Engineering &amp; Licensing</li> <li>● BOP Instrumentation &amp; Control Setpoint, Rescaling &amp; Hardware Changes</li> <li>● Control Room Habitability</li> <li>● Equipment Qualification</li> <li>● Circulating Water Pump upgrades</li> <li>● Turbine Cooling Water System modifications</li> <li>● Environmental Permit</li> </ul>	<p>The BOP engineering evaluations and modifications are required to support operation in the uprate conditions.</p>
<b>Project Staffing for Management and Oversight</b> <ul style="list-style-type: none"> <li>● Project Management</li> <li>● Project Engineering</li> <li>● Project Controls</li> <li>● Office Space</li> <li>● Third Party Reviews</li> <li>● Community Interface</li> </ul>	<p>Coordination, tracking and management of the project at the project team's home site and at the project site are required. Independent reviews occur as needed. Certain public disclosures are also necessary over the course of the project.</p>

St. Lucie Uprate Activity	Summary Explanation of Need for Activity (cont.)
<p>Main Steam System</p> <ul style="list-style-type: none"> <li>● Main Steam Safety Valves / Piping modifications</li> <li>● Main Steam Isolation Valves upgrade (Unit 1)</li> <li>● Moisture Separator Reheater replacement</li> <li>● Atmospheric Steam Dump Valves upgrades (Unit 2)</li> </ul>	<p>Higher steam flow requires larger piping, valves, equipment, supports and controls.</p>
<p>High and Low Pressure Turbine Upgrades</p> <ul style="list-style-type: none"> <li>● HP Rotor replacement</li> <li>● LP Rotor replacement</li> <li>● Turbine Gantry Crane upgrade</li> <li>● DEH Computer replacement</li> <li>● DEH Constant Pressure Pumps</li> </ul>	<p>Design, procurement and replacement of the High and Low Pressure turbines and associated equipment are needed to process the higher steam flows.</p>
<p>Condensate and Feedwater – System Upgrades</p> <ul style="list-style-type: none"> <li>● Condenser modifications</li> <li>● Condensate Pumps (Unit 2)</li> <li>● Condensate Pump Repowering</li> <li>● Feedwater Pump replacement</li> <li>● Feedwater Heaters (5) replacement</li> <li>● Leading Edge Flow Meter, Measurement Uncertainty Recapture (MUR)</li> <li>● Heater Drain Pump upgrades</li> <li>● Heater Drain Control Valves</li> <li>● Feedwater Regulating Valve upgrades</li> <li>● Feedwater Heater Level Controls</li> </ul>	<p>Upgrades are needed because condensing capabilities of the existing main condenser will not be adequate in the uprated conditions. Higher steam and water flows require larger piping, pumps, valves, supports and feedwater heaters in the uprate condition.</p>

St. Lucie Uprate Activity	Summary Explanation of Need for Activity (cont.)
<p>Electrical – Modifications/analyses</p> <ul style="list-style-type: none"> <li>● Grid Stability Risk Study and upgrades</li> <li>● Electrical Bus System improvements</li> <li>● Main Transformer upgrades</li> </ul>	<p>The generation and distribution equipment capability must be evaluated and equipment replaced due to higher electrical output of the unit.</p>
<p>Main Generator – Upgrades</p> <ul style="list-style-type: none"> <li>● Rotor rewind; Stator rewind; Exciter rewind</li> <li>● Current transformer and bushings</li> <li>● Isolated Phase Bus Duct Cooling System</li> <li>● Seal Oil Skid upgrades</li> </ul>	<p>Modifications to the Main Generator and associated equipment are needed to generate additional electrical output in the power uprate condition.</p>

Turkey Point Uprate Activity	Summary Explanation of Need for Activity
<p>Nuclear Steam Supply System (NSSS)</p> <ul style="list-style-type: none"> <li>● NSSS / Fuel Engineering &amp; Licensing</li> <li>● Pressurizer Safety Relief Valves modifications</li> <li>● Emergency Containment Filter Removal</li> <li>● Containment Cooling</li> <li>● Simulator upgrade</li> <li>● PRA Model upgrade</li> <li>● NRC License Fees</li> </ul>	<p>The Nuclear Regulatory Commission (NRC) requires extensive engineering evaluations to ensure the uprate conditions remain within the safety design basis and design limits.</p>
<p>Balance of Plant (BOP) –Upgrades and evaluations</p> <ul style="list-style-type: none"> <li>● BOP Engineering &amp; Licensing</li> <li>● BOP Instrumentation &amp; control Setpoint, Rescaling &amp; Hardware modifications</li> <li>● Steam Generator modifications</li> <li>● Control Room Habitability</li> <li>● Equipment Qualification</li> <li>● Containment Sump pH Control modifications</li> <li>● Alternate SFP Cooling System</li> <li>● Turbine Cooling Water System modifications</li> <li>● Turbine Building analysis and modifications</li> <li>● Environmental Permit</li> </ul>	<p>The BOP engineering evaluations and modifications are required to support operation in the uprate conditions.</p>

Turkey Point Uprate Activity	Summary Explanation of Need for Activity (cont.)
<b>Project Staffing for Management and Oversight</b> <ul style="list-style-type: none"> <li>● Project Management</li> <li>● Project Engineering</li> <li>● Project Controls</li> <li>● Office Space</li> <li>● Third Party Reviews</li> <li>● Community Interface</li> </ul>	<p>Coordination, tracking and management of the project at the project team's home site and at the project site are required. Independent reviews occur as needed. Certain public disclosures are also necessary over the course of the project.</p>
<b>Main Steam System Upgrades</b> <ul style="list-style-type: none"> <li>● Main Steam Safety Valve / Piping modification</li> <li>● Main Steam Isolation Valves</li> <li>● Main Steam Piping Support modifications</li> <li>● Main Steam Pipe Whip Restraints modifications</li> <li>● Steam Dump to condenser, Atmospheric Dump Valves and Piping modifications</li> <li>● Moisture Separator Reheaters replacements &amp; Valves</li> </ul>	<p>Higher steam flow requires larger piping, valves, equipment, supports and controls.</p>
<b>High Pressure Turbine Upgrades</b> <ul style="list-style-type: none"> <li>● HP Rotor replacement</li> <li>● Turbine Controls modification</li> <li>● Turbine High Lift Valve modification</li> </ul>	<p>Design, procurement and replacement of the High Pressure main turbine and associated equipment are needed to process the higher steam flows.</p>

Turkey Point Uprate Activity	Summary Explanation of Need for Activity (cont.)
<p>Condensate and Feedwater System Upgrades</p> <ul style="list-style-type: none"> <li>● Condenser and Subsystems replacement</li> <li>● Condensate Pump and Motor replacement</li> <li>● Feedwater Heaters replacement</li> <li>● Feedwater Heater Level Controls</li> <li>● Feedwater Isolation Valves</li> <li>● Feedwater Regulating Valves</li> <li>● Feedwater Pump replacements</li> <li>● Leading Edge Flow Meter, Measurement Uncertainty Recapture (MUR)</li> <li>● Heater Drain Pump Recirculation Line automatic control system</li> <li>● Auxiliary Feedwater Controls</li> <li>● Auxiliary Feedwater Pump Capacity</li> <li>● Condensate Storage Tank Volume</li> <li>● Normal and Emergency Heater Drain Valve replacements</li> <li>● Heater Drain Piping modifications</li> </ul>	<p>The main condenser must be replaced due to increased steam flow. Higher steam and water flows require larger piping, pumps, valves, supports and feedwater heaters in the uprate condition.</p>
<p>Electrical evaluations and Upgrades</p> <ul style="list-style-type: none"> <li>● Grid Stability evaluation</li> <li>● Station Electrical Load Study and Bus modifications</li> <li>● Main Transformers</li> <li>● Switchyard modifications</li> <li>● "C" Bus Heating Ventilation Air Conditioning modifications</li> </ul>	<p>The generation and distribution equipment capability must be evaluated and equipment replaced due to higher electrical output of the unit.</p>

Turkey Point Uprate Activity	Summary Explanation of Need for Activity (cont.)
Main Generator – Upgrades/Replacement <ul style="list-style-type: none"> <li>• Rotor replacement</li> <li>• Stator Rewind</li> <li>• Current Transformers &amp; Bushings</li> <li>• Isolated Phase Bus Duct Cooling System</li> <li>• Generator Coolers; Exciter Coolers</li> </ul>	Modifications to the Main Generator and associated equipment are needed to generate additional electrical output in the power uprate condition.



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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**DIRECT TESTIMONY OF WINNIE POWERS**

**DOCKET NO. 090009-EI**

**MARCH 2, 2009**

**Q. Please state your name and business address.**

A. My name is Winnie Powers. My business address is 9250 West Flagler Street, Miami, FL 33174.

**Q. By whom are you employed and what is your position?**

A. I am employed by Florida Power & Light Company (FPL or the Company) as New Nuclear Accounting Project Manager.

**Q. Please describe your duties and responsibilities in that position.**

A. I am responsible for the accounting related to our new nuclear projects, Turkey Point 6 & 7 and the Uprate Project at Turkey Point and St. Lucie. My responsibilities are to ensure the costs projected and expended for these projects are accurately reflected in the Nuclear Cost Recovery Filing Requirements (NFR) schedules. In addition, I am responsible to ensure the Company's assets associated with these projects are appropriately recorded and reflected in FPL's financial statements.

1 **Q. Please describe your educational background and professional**  
2 **experience.**

3 A. I graduated from the University of Florida in 1976 with a Bachelor of Science  
4 Degree in Business Administration, majoring in Accounting. After college, I  
5 was employed as an accountant by RCA Corporation in New York. In 1983 I  
6 was hired by Southeastern Public Service Company in Miami and attained the  
7 position of manager of corporate accounting. In 1985 I joined FPL and have  
8 held a variety of positions in the regulatory and accounting areas during my  
9 24 years with the Company. I obtained my Masters of Accounting from  
10 Florida International University in 1994, I am a Certified Public Accountant  
11 (CPA) licensed in the State of Florida, and I am a member of the American  
12 Institute of CPAs.

13 **Q. Are you sponsoring any exhibits in this case?**

14 A. Yes, I am sponsoring the following exhibits:

- 15 • Exhibit WP-1 details the components of the revenue requirements  
16 reflected in the True-Up Schedules by project, by year and by category of  
17 costs being recovered (e.g. site selection costs, preconstruction costs,  
18 carrying costs on unrecovered balances and on the deferred tax asset, and  
19 for uprates, carrying costs on construction costs and on the deferred tax  
20 asset.)
- 21 • Exhibit WP-2 details the total company costs and jurisdictional costs for  
22 which FPL is seeking a prudence determination by project, by year and by  
23 cost categories. These total company costs, variances from the

1 actual/estimated costs and the necessity for them are further described in  
2 the testimonies of FPL Witness Kundalkar and FPL Witness Scroggs.

3 ● Exhibit WP-3 flowcharts the process used to determine incremental  
4 payroll costs chargeable to the projects.

5 ● Exhibit RSK-1, sponsored by FPL Witness Kundalkar, consists of  
6 Appendix I containing 2008 Uprate schedules T-1 through T-10. Page 2  
7 of Appendix I contains a table of contents which lists the T schedules  
8 sponsored by FPL Witness Kundalkar and by me, respectively.

9 ● Exhibit SDS-1, sponsored by FPL Witness Scroggs, consists of Appendix  
10 II containing 2007 and 2008 Turkey Point 6 & 7 Pre-Construction  
11 schedules T-1 through T-10. Page 2 of Appendix II contains a table of  
12 contents which lists the T schedules sponsored by FPL Witness Scroggs  
13 and by me, respectively.

14 ● Exhibit SDS-2, sponsored by FPL Witness Scroggs, consists of Appendix  
15 III containing 2006, 2007 and 2008 Turkey Point 6 & 7 Site Selection  
16 schedules T-1 through T-10. Page 2 of Appendix III contains a table of  
17 contents which lists the T schedules sponsored by FPL Witness Scroggs  
18 and by me, respectively.

19 **Q. What is the purpose of your testimony?**

20 **A.** The purpose of my testimony is to present:

21 (1) NFR True-Up Schedules for Turkey Point 6 & 7 site selection costs for  
22 2006, 2007 and 2008;

1 (2) NFR True-Up Schedules for Turkey Point 6 & 7 preconstruction costs for  
2 2007 and 2008; and

3 (3) NFR True-Up Schedules for the 2008 Uprate costs.  
4

5 I also describe how these Schedules comply with the Commission's Rule 25-  
6 6.0423, Nuclear or Integrated Gasification Combined Cycle Power Plant Cost  
7 Recovery (Nuclear Cost Recovery Rule), explain how carrying costs are  
8 provided for under this Rule, and discuss the Accounting controls FPL relies  
9 upon to ensure costs are appropriately charged to the projects.

10 **Q. Please summarize your testimony.**

11 **A.** My testimony addresses the Nuclear Cost Recovery Rule passed by the  
12 Florida Legislature in 2006 to promote utility investment in nuclear power  
13 plants. In addition, my testimony refers to exhibits and True-up schedules  
14 detailing the uprate expenditures incurred in 2008, the Turkey Point 6 & 7 site  
15 selection expenditures incurred in 2006, 2007, and 2008, and the Turkey Point  
16 6 & 7 preconstruction expenditures incurred in 2007 and 2008 for which FPL  
17 is requesting a determination of prudence. FPL is also requesting a prudence  
18 determination of recoverable O&M expenses for its uprate project detailed on  
19 schedule T-4. My testimony describes the comprehensive corporate and  
20 overlapping business unit controls for incurring costs and recording  
21 transactions associated with any of FPL's capital projects such as Uprate and  
22 Turkey Point 6 & 7. My testimony lists these controls and outlines the

1 documentation, assessment, and auditing processes for these overlapping  
2 control activities.

3

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#### NUCLEAR COST RECOVERY RULE

5

6 **Q. Please describe the Commission's Nuclear Cost Recovery Rule and the**  
7 **NFR Schedules.**

8 A. On March 20, 2007, in Order No. PSC-07-0240-FOF-EI, this Commission  
9 adopted the Nuclear Cost Recovery Rule to implement Section 366.93,  
10 Florida Statutes (the Statute), which was enacted by the Florida Legislature in  
11 2006. The stated purpose of the Statute is to promote utility investment in  
12 nuclear power plants. The Statute directed the Commission to establish  
13 alternative mechanisms for cost recovery and step-wise, periodic prudence  
14 determinations with respect to costs incurred to both build and uprate nuclear  
15 power plants. The Nuclear Cost Recovery Rule implements this mechanism  
16 for cost recovery and provides for the annual recovery of eligible costs  
17 through the Capacity Cost Recovery Clause (CCRC). FPL has been working  
18 with Commission Staff, the Office of Public Counsel, Progress Energy Florida  
19 and others to develop a comprehensive set of NFR Schedules, setting forth  
20 construction and cost information on nuclear power plant projects.

21

22 The NFR Schedules provide an overview of nuclear power plant projects and  
23 a roadmap to the detailed project costs. The NFR Schedules consist of T, AE,

1 P and TOR Schedules. The T Schedules are to be filed each March and  
2 provide the True-Up for the prior year. The T schedules filed along with my  
3 testimony present the resulting revenue requirements based on actual costs  
4 compared to the projected revenue requirements through December 31, 2008,  
5 filed in Actual/Estimated Schedules in Docket No. 080009-EI that we are  
6 recovering pursuant to Order No. PSC-08-0749-FOF-EI. The comparison of  
7 the revenue requirements resulting from actual costs compared to the  
8 projected costs results in the overrecovery for the uprates of \$1,118,917 and  
9 the overrecovery for the new nuclear projects of \$23,829,703.

#### 11 UPRATES

12  
13 **Q. What are FPL's uprate expenditures for the period January 2008**  
14 **through December 2008 for which FPL is requesting a determination of**  
15 **prudence?**

16 **A. FPL's actual uprate expenditures for which it is requesting a prudence**  
17 **determination for the period January 2008 through December 2008 on a total**  
18 **system basis are \$99,754,304. These costs are discussed throughout FPL**  
19 **Witness Kundalkar's testimony and are shown in Appendix I of Exhibit RSK-**  
20 **1, Schedule T-6, and Exhibit WP-2, page 2 of 2. Schedule T-6 in Appendix I**  
21 **deducts the portion for which the St. Lucie Unit 2 participants are responsible**  
22 **and then applies the retail jurisdictional factor to the remainder. After these**  
23 **adjustments, the net 2008 uprate expenditures for which retail customers are**

1 responsible are \$95,097,049. FPL is also requesting a prudence determination  
2 for \$269,184 (\$256,091 jurisdictional, net of participants) of recoverable  
3 O&M expenses shown on Schedule T-4 and further described in FPL Witness  
4 Kundalkar's testimony. FPL respectfully requests the Commission review and  
5 approve these expenditures together with related carrying charges of  
6 \$2,357,995 as shown on the T Schedules and summarized on my Exhibit WP-  
7 1, as prudently incurred and the jurisdictional O&M expenses and carrying  
8 charges as recoverable consistent with the Nuclear Cost Recovery Rule.

9 **Q. Please describe the NFR Schedules included in this filing for the recovery**  
10 **of 2008 nuclear uprate costs.**

11 A. FPL has included the Final True-up (T Schedules) in Appendix I of this filing  
12 as Exhibit RSK-1. These T Schedules calculate the revenue requirements  
13 associated with 2008 actual costs compared to the revenue requirements being  
14 recovered as a result of last year's Actual/Estimated (A/E) filing in the AE  
15 Schedules in Docket No. 080009-EI. The difference produced an  
16 overrecovery amount of \$1,118,917 in revenue requirements.

17 **Q. Please explain Schedule T-4, Recoverable O&M Monthly Expenditures.**

18 A. FPL is filing Schedule T-4, Recoverable O&M Monthly Expenditures as part  
19 of the true-up of 2008 costs. In FPL's prior filings in Docket 080009-EI, FPL  
20 did not project to incur recoverable O&M expenses associated with the  
21 uprates. In reviewing actual costs incurred in 2008, it was determined the  
22 Company incurred O&M expenses directly related to the Uprate Project. FPL  
23 is requesting recovery of these O&M expenses on T-4. A description of these

1 costs and the necessity for them is covered in FPL Witness Kundalkar's  
2 testimony.

3 **Q. What accounting and regulatory treatment would be provided for costs**  
4 **that would have been incurred regardless of uprate projects during an**  
5 **outage?**

6 A. Expenditures that are not "separate and apart" from the nuclear Uprate Project  
7 will be treated similarly to other capital expenditures and will accrue AFUDC  
8 while in CWIP until the system or component is placed into service. Only  
9 costs incurred for activities necessary for the Uprate Projects are charged to  
10 the uprate work orders and included in the calculation of carrying charges in  
11 the NFR Schedules. This method ensures that FPL only receives the  
12 appropriate cash return currently under the Nuclear Cost Recovery Rule and  
13 accrues a return that will be recovered in the future when the project is placed  
14 into service and recovered through base rates.

15

16

#### **TURKEY POINT 6 & 7**

17

18 **Q. What are FPL's Turkey Point 6 & 7 Site Selection expenditures and**  
19 **related carrying charges for the period January 1, 2006 through**  
20 **December 31, 2008?**

21 A. FPL's actual Turkey Point 6 & 7 site selection total company expenditures,  
22 jurisdictional expenditures and related carrying charges for 2006 – 2008 are as  
23 follows:



1

	Total Company Expenditures	Jurisdictional Expenditures	Carrying Charges
2006	\$2,656,186		
2007	\$3,461,920	\$6,092,571	\$134,642
2008	\$ 0	\$ 0	\$686,727
Total	\$6,118,106	\$6,092,571	\$821,369

2 Note: 2006 Total Company Site Selection costs were transferred at the 2007 jurisdictional  
3 separation factor of .9958265 effective with the filing of our need petition on October 16,  
4 2007.

5

6 These expenditures are discussed in FPL Witness Scroggs' testimony, SDS-2,  
7 Appendix III Schedule T-6 for 2006-2008, Exhibit WP-1 and Exhibit WP-2,  
8 page 1 of 2. Carrying costs were not incurred until 2007 when FPL filed its  
9 Need Determination and no site selection costs were incurred after 2007. For  
10 the reasons stated in FPL Witness Scroggs' testimony, FPL respectfully  
11 requests the Commission review and approve these Turkey Point 6 & 7 site  
12 selection expenditures as prudently incurred and the jurisdictional  
13 expenditures and carrying charges as recoverable consistent with the Nuclear  
14 Cost Recovery Rule.

15 **Q. What are FPL's Turkey Point 6 & 7 Preconstruction expenditures and**  
16 **related carrying charges for the period January 1, 2007 through**  
17 **December 31, 2008?**

18 A. FPL's actual Turkey Point 6 & 7 preconstruction expenditures, jurisdictional  
19 expenditures and related carrying charges for 2007 – 2008 are as follows:

20

	Total Company Expenditures	Jurisdictional Expenditures	Carrying Charges
2007	\$ 2,533,265	\$ 2,522,692	\$ 20,547
2008	\$47,215,633	\$47,049,854	\$2,199,754
Total	\$49,748,898	\$49,572,546	\$2,220,301

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10 **Q. Please describe the NFR Schedules included in this filing for the recovery**  
 11 **of 2008 Turkey Point 6 & 7 costs.**

12 A. FPL has included the Final True-up (T Schedules) in Appendix II of this filing  
 13 as SDS-1. For Site Selection costs, FPL has included T Schedules for 2006  
 14 through 2008 in SDS-2, Appendix III. For Preconstruction costs, FPL has  
 15 included T schedules for 2007 and 2008 in SDS-1, Appendix II. These T  
 16 Schedules calculate the revenue requirements using 2007 and 2008 actual  
 17 costs compared to the revenue requirements currently being recovered as a  
 18 result of Actual/Estimated costs filed in the AE Schedules in Docket No.  
 19 080009-EI. The result is the over recovery of \$36,758 for Site Selection and  
 20 \$23,792,946 for Pre-Construction shown on the NFR Schedules and in Exhibit

1 WP-1.

2

3

### ACCOUNTING CONTROLS

4

5 **Q. Please describe the accounting controls FPL relies on to ensure proper**  
6 **cost recording and reporting for these projects.**

7 A. FPL relies on its comprehensive corporate and overlapping business unit  
8 controls for recording and reporting transactions associated with any of its  
9 capital projects including the Uprate Project and Turkey Point 6 & 7. These  
10 comprehensive and overlapping controls include:

- 11 • FPL's Accounting Policies and Procedures;
- 12 • Financial systems and related controls including FPL's general ledger and  
13 construction asset tracking system (CATS);
- 14 • FPL's annual budgeting and planning process and reporting and  
15 monitoring of plan costs to actual costs incurred; and
- 16 • Business Unit specific controls and processes.

17 The project controls are further discussed in the testimony of FPL Witnesses  
18 Scroggs and Kundalkar.

19 **Q. Are these controls documented, assessed and audited and/or tested on an**  
20 **ongoing basis?**

21 A. Yes. The FPL corporate accounting policies and procedures are documented  
22 and published on the Company's internal website, INFPL. In addition,  
23 accounting management provides formal representation as to the continued

1 compliance with those policies and procedures each year. The Company's  
2 external auditors, Deloitte & Touche, LLP conduct an annual assessment of  
3 the Company's internal controls over financial reporting. Sarbanes-Oxley  
4 processes are identified, documented, tested and maintained, including  
5 specific processes for planning and executing capital work orders and  
6 acquiring and developing fixed assets. Certain key financial processes are  
7 tested during the Company's annual test cycle. In addition, Deloitte &  
8 Touche, LLP, as a part of its annual audit, assesses the Company's internal  
9 controls over financial reporting and expresses an opinion as to the  
10 effectiveness of those controls. The audit procedures performed by Deloitte &  
11 Touche, LLP include tests of general computer controls and of those policies  
12 and procedures that pertain to the maintenance of records that, in reasonable  
13 detail, accurately and fairly reflect the transactions and dispositions of the  
14 assets of the Company.

15 **Q. Describe the responsibilities and accounting controls of the New Nuclear**  
16 **Accounting Project Group.**

17 A. The primary responsibility of the New Nuclear Accounting Project Group is  
18 to determine the financial accounting for the recovery of costs under the  
19 Nuclear Cost Recovery Rule, to prepare and maintain NFR schedules, (e.g.  
20 True Up, Actual/Estimated, and Projection schedules) and on a monthly basis,  
21 ensure the costs included in the NFR Schedules agree with the amounts  
22 recorded on the books and records of the Company. The Nuclear Cost  
23 Recovery projects utilize unique work orders to capture only the costs directly

1 related to these projects. After ensuring the costs are accurately recorded,  
2 adjustments are made to reflect participants' credits, jurisdictionalize the costs  
3 and make other adjustments for the calculations required in the NFR  
4 Schedules. Monthly journal entries are prepared to reflect the effects of the  
5 recovery of these costs and monthly reconciliations of the NFR accounts are  
6 performed.

7  
8 The Nuclear Cost Recovery team works closely with the Nuclear, Engineering  
9 and Construction, and Transmission business units to address issues  
10 surrounding the costs related to the projects. The team is involved in  
11 researching, providing direction and resolving project accounting issues that  
12 arise as the new nuclear projects develop. The New Nuclear Accounting  
13 Project group also actively participates in the continued development and  
14 enhancement of FPL's asset tracking system to plan for the automation of  
15 processes surrounding the nuclear filing requirements at the appropriate time.

#### 16 17 **UPRATE SPECIFIC CONTROLS**

18  
19 **Q. Describe the Nuclear Business Unit accounting controls which ensure**  
20 **costs are appropriately incurred and charged to the Uprate Projects.**

21 A. The Nuclear Business Operations Group (NBO) is independent of the EPU  
22 Project Team and provides oversight of the costs charged to the Uprate  
23 Project. The NBO Group is primarily responsible for the work order

1 maintenance function, reviewing payroll to ensure only appropriate payroll is  
2 charged to the uprates, determining appropriate accounting for costs, raising  
3 potential issues to the Property Accounting Group when necessary, providing  
4 accounting guidance and training to the uprate team, assisting with internal  
5 and external audit-related matters, reviewing project projections and  
6 producing monthly variance reports. The NBO Manager is a licensed CPA  
7 with extensive public and private accounting experience who leads a team  
8 staffed by employees with business and accounting degrees. The NBO  
9 Manager reports to the Nuclear Division Controller.

10

### 11 **Cost Capture and Tracking**

12

13 The Nuclear Business Unit identifies the activities necessary to perform the  
14 uprates at the four nuclear units, Turkey Point Units 3 and 4 and St. Lucie  
15 Units 1 and 2. The uprate activities will be completed over the course of two  
16 consecutive outages at each of the four units. Costs associated with the work  
17 performed for each outage will be transferred from CWIP to plant in service at  
18 the end of each outage. In order to facilitate this process, a separate budget  
19 activity was set up for each unit and 2 different capital work orders were set  
20 up within each budget activity to capture costs related to each outage (8  
21 capital work orders in total). As purchase orders (PO) are issued in the  
22 Procurement Control and Inventory Management System (PASSPORT) for  
23 work to be performed at each unit, the work is identified by outage and the PO

1 is coded to charge the appropriate work order. This structure facilitates cost  
2 analysis to track discrete projects and tasks.

3

4 **Invoice Processing**

5

6 Invoices are routed to the St. Lucie or Turkey Point site budget analyst, as  
7 appropriate. The analyst checks the invoices for accuracy and for agreement  
8 to the PO terms and conditions. Once the invoice has been appropriately  
9 verified, the analyst records invoice information on an Invoice Tracking Log  
10 and attaches the Invoice Approval Form to the invoice, which gets routed for  
11 verification of receipt of goods/services and all required approvals. In  
12 accordance with the EPU Project Authorization Matrix, any invoice greater  
13 than \$1 million requires the approval of the Vice President, Nuclear Power  
14 Uprates before payment may be made. Once all necessary approvals have  
15 been obtained, the Analyst processes the invoice for payment in PASSPORT  
16 against the respective purchase order. Extended Power Uprate Project  
17 Instruction Number EPPI-230, *Project Invoice*, details the flow of the invoice  
18 through the approval, receipt and payment process at the sites and establishes  
19 responsibilities at each stage of the process.

20

21

22

23

1           **Detail Transactions Reviews**

2

3           Throughout the month, general ledger detail transactions are monitored by the  
4           EPU Project Controls Team and NBO to ensure that costs charged to the  
5           uprates are appropriate and are accurately classified as capital or O&M. Site  
6           cost engineers perform reviews to ensure invoices are accurately coded to the  
7           appropriate activity/scope work order. NBO reviews internal labor costs to  
8           ensure that only appropriate payroll is charged to the uprates. In addition, all  
9           steps in this process are subject to internal and external audits and reviews.

10

11           **Variance Reporting**

12

13           The NBO group drafts monthly variance reports that compare actual  
14           expenditures incurred to the originally estimated budget and report year end  
15           forecast estimates. The draft reports are sent to the St. Lucie and Turkey Point  
16           Uprate Project Controls Teams responsible for providing variance  
17           explanations and forecast updates to NBO. The reports are reviewed by  
18           uprate project control supervisors and management prior to the submission to  
19           NBO. NBO reviews the variance explanations and forecast numbers for  
20           reasonableness and accuracy prior to compilation and inclusion in the Nuclear  
21           Business Unit corporate variance report. NBO is also responsible for  
22           reviewing numbers reported to the FPL Executive Steering Committee to  
23           ensure consistency with corporate variance reports and for providing the



1 Accounting Department with project numbers for inclusion in the NFR  
2 schedules.

3

4

#### NEW NUCLEAR SPECIFIC CONTROLS

5

6 **Q. Describe the Engineering and Construction business unit accounting**  
7 **controls to ensure costs are appropriately incurred and charged to the**  
8 **Turkey Point 6 & 7 project.**

9 A. The Project Controls Group reports through the Director of Construction and  
10 provides structural leadership, governance and oversight for the project. On a  
11 monthly basis, the group completes a thorough review of all costs to ensure  
12 they are appropriately charged to the project. Additionally, monthly variance  
13 reports are generated against budgeted information and meetings are held with  
14 team members and project management to review and understand existing  
15 budget variances and any projected variances. The Group consists of a  
16 Business Manager with an economics degree and 27 years experience at FPL,  
17 20 years in the Nuclear Business Unit and 7 years in the Auditing, Property  
18 and Financial Accounting Groups. He is supported by business, finance and  
19 accounting degreed staff with nuclear and construction experience.

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**Cost Capture and Tracking**

When the project was determined to be viable and FPL filed its Need Determination in October 2007, costs related to the project that had been recorded in a deferred debit account were transferred to CWIP. A separate work order was set up for Site Selection costs and Preconstruction costs. As stated in the Rule, a site is deemed to be selected upon the filing of a petition for a determination of need; therefore, all costs expended prior to the Need Filing are categorized as site selection costs. Costs incurred up to the filing were captured in a unique work order and are included in the Site Selection 2006, 2007 and 2008 T Schedules. Preconstruction costs are costs that are expended after a site has been selected and are also captured in a unique work order and are included in the Preconstruction 2007 and 2008 T Schedules.

**Invoice Processing**

When a potential expenditure greater than \$5,000 is identified, project personnel input the expenditure request detailing the need, justification, estimated cost and documentation in the Engineering and Construction Development Electronic Approval Database (EAD). The request is sent to the Project Controls Group which inputs all pertinent budget information, verifies appropriate accounts charged and verifies the budgeted resources for the proposed transaction are available. This information is sent through the EAD

1 to the Project Manager of the functional area who verifies the expense is  
2 applicable to the project. The Project Manager then routes the EAD to the  
3 appropriate approvers based on authorization levels, to the Integrated Supply  
4 Chain (ISC) department and to the Project Controls Group. Once the  
5 expenditure is approved, ISC completes the requisition. After the goods have  
6 been received or services rendered, and an invoice is received by the  
7 functional area, it is reviewed, determined appropriate, approved and input  
8 into the SAP payment processing system. In SAP, online approvals based on  
9 authorization levels are required for any expenditure greater than \$250 prior to  
10 the invoice being paid. For items less than \$250, the monthly SAP transaction  
11 register detailing the document number, work order, account, amount,  
12 description, purchase order and the total dollar amount of the transaction  
13 must be reviewed and approved monthly by the approver designated in SAP  
14 as appropriate for charging the project.

15

16 At the present time, the majority of expenditures are for two vendors, Bechtel  
17 which is handling the Combined Operating License Application (COLA), and  
18 Black & Veatch/Zachary (BVZ) which is providing preliminary construction  
19 planning. The invoices from these vendors are voluminous and are received  
20 electronically by the Project Controls Group. They are loaded into a  
21 SharePoint database and routed to the appropriate business unit contacts to  
22 access, review and approve. The Contract Administrator ensures that all  
23 parties have signed off on their appropriate section of the invoice prior to

1 payment. The charges on the invoices are also reviewed for compliance with  
2 the purchase order and/or contract and differences with vendors are resolved.  
3 The remaining invoices relate to charges incurred by groups such as Legal,  
4 Marketing and Communications, Transmission, Environmental Services and  
5 long lead procurement items.

### 6 7 **Variance Reporting**

8  
9 The Project Controls organization is responsible for preparing, analyzing and  
10 clearly and concisely explaining variances against planned budgets for current  
11 month, year-to-date and year end. Monthly meetings are held with team  
12 members and project management to review and understand existing budget  
13 variances and any projected variances. The resulting expenditures are then  
14 transmitted to Accounting for inclusion in the NFR schedules.

### 15 16 **ADDITIONAL NEW NUCLEAR AND UPRATE OVERSIGHT**

17  
18 **Q. Are there any additional controls being implemented and relied on for**  
19 **these projects and the related reporting?**

20 **A.** Yes. The Company has again issued specific guidelines for charging costs to  
21 the project work orders. These guidelines reemphasize the need for particular  
22 care in charging only incremental labor to the project work orders included for  
23 nuclear cost recovery and ensure consistent application of the Company's

1 capitalization policy. The implementation of these guidelines will continue to  
2 provide for the exclusion of non-incremental labor from current recovery  
3 while providing full capitalization of all appropriate labor costs through the  
4 maintenance of separate project capital work orders that will be included in  
5 future base rate recovery. Exhibit WP-3 provides a flowchart depicting this  
6 process.

7  
8 The Company continues to undergo specific project related internal audits.  
9 The objective of these audits is to test the process of recording and capturing  
10 costs related to the Uprate and Turkey Point 6 & 7 projects in the pre-  
11 established work orders to ensure compliance with the Commission's Rule.  
12 FPL will continue to ensure these projects are audited on an ongoing basis.  
13 The 2008 costs and controls related to the Turkey Point 6 & 7 and Uprate  
14 Projects will have been audited prior to the start of the hearing in this docket.  
15 Their audits, findings and follow-ups will provide additional assurance that  
16 the internal controls surrounding transactions and processes are established,  
17 maintained and communicated to employees and provide reasonable assurance  
18 that the financial and operating information generated within the Company is  
19 accurate and reliable.

20 **Q. What other unique control or oversight exists in the Company's conduct**  
21 **of these processes?**

22 A. By virtue of the Commission Rule and the process being conducted herein, the  
23 Company and all parties have an even higher degree of transparency and

1 oversight into the costs being incurred in these projects than would be  
2 provided under the traditional base ratemaking process.

3

4 The ongoing cycles of cost collection, aggregation, analysis and review which  
5 lead to the NFR filings provides for a level of detailed review that is  
6 unprecedented. For example, in the preparation of the NFR Schedules  
7 transactional expenditures are projected by activity and, subsequent to the  
8 conduct of that activity and the incurrence of the cost, an immediate review of  
9 projection to actual, in many cases at the transactional level, is conducted. In  
10 addition, we cannot immediately automate the NFR preparation process, so  
11 the manual nature of the data collection and aggregation process, along with  
12 the manual calculation of carrying charges and construction period interest,  
13 provides for a level of detailed review that is not typically performed. The  
14 requirements of the Rule have, by design, increased significantly the review,  
15 effort and transparency of the costs themselves.

16 **Q. How are carrying charges provided for under the Nuclear Cost Recovery**  
17 **Rule?**

18 A. The Nuclear Cost Recovery Rule allows current cash recovery through the  
19 Capacity Cost Recovery Clause of a carrying charge at a fixed rate in effect at  
20 June 12, 2007. For FPL this fixed rate is 7.42% (11.04% on a pretax basis),  
21 consistent with the provisions of the Nuclear Cost Recovery Rule. The  
22 Company's AFUDC rate is calculated in accordance with the FPSC Rule No.  
23 25-6.0141, Allowance for Funds Used During Construction (AFUDC Rule)

1           and is applied to all eligible CWIP charges. When the Commission approves  
2           a change in the AFUDC rate in accordance with the AFUDC Rule during  
3           construction of the nuclear projects, all eligible costs including those  
4           associated with the new nuclear projects will accrue AFUDC at the approved  
5           rate. In April 2008, the FPSC approved the change in the AFUDC rate from  
6           7.42% to 7.65% effective January 1, 2008. As FPL is only allowed to recover  
7           a carrying charge through the Capacity Cost Recovery Clause at the fixed rate  
8           specified in the Nuclear Cost Recovery Rule, any resulting  
9           incremental/decremental AFUDC amounts will remain in CWIP on the  
10          Company's books and records until the projects are placed into service, at  
11          which time any increment or decrement will be transferred to plant in service.

12   **Q.    Does this conclude your testimony?**

13   **A.    Yes.**

(In Jurisdictional \$'s adjusted for participants)

	2006			2007			2008		
	As Approved in Order No. PSC-08-0749-FOF-EI in Dkt 080009-EI	As Filed in True-Up Schedules	(Over)/ Under Recovery	As Approved in Order No. PSC-08-0749-FOF-EI in Dkt 080009-EI	As Filed in True-Up Schedules	(Over)/ Under Recovery	As Approved in Order No. PSC-08-0749-FOF-EI in Dkt 080009-EI	As Filed in True-Up Schedules	(Over)/ Under Recovery
1									
2 Turkey Point 6 & 7									
3 Site Selection Costs	\$ 2,645,056 (a)	\$ 2,645,056 (a)	\$ -	\$ 6,397,310 (a)	\$ 6,092,571 (a)	\$ (304,738)			
4 Carrying Costs	-	-	-	141,951	134,731	(7,220)	\$ 726,669	\$ 689,750	\$ (36,919)
5 Carrying Costs on DTA	-	-	-	(94)	(90)	5	(3,184)	(3,023)	161
6 Total Carrying Costs	\$ -	\$ -	\$ -	\$ 141,857	\$ 134,642	\$ (7,215)	\$ 723,484	\$ 686,727	\$ (36,758)
7 Total Site Selection	\$ 2,645,056	\$ 2,645,056	\$ -	\$ 6,539,167	\$ 6,227,213	\$ (311,953)	\$ 723,484	\$ 686,727	\$ (36,758)
8									
9 Preconstruction Costs				\$ 2,522,692	\$ 2,522,692	\$ -	\$ 69,707,855	\$ 47,049,854	\$ (22,658,001)
10 Carrying Costs				20,555	20,555	-	3,340,690	2,204,114	(1,136,567)
11 Carrying Costs on DTA				(8)	(8)	-	(5,952)	(4,359)	1,623
12 Total Carrying Costs				\$ 20,547	\$ 20,547	\$ -	\$ 3,334,699	\$ 2,199,754	\$ (1,134,944)
13 Total Preconstruction				\$ 2,543,239	\$ 2,543,239	\$ -	\$ 73,042,554	\$ 49,249,608	\$ (23,792,946)
14 Total TP6&7	\$ 2,645,056	\$ 2,645,056	\$ -	\$ 9,082,406	\$ 8,770,453	\$ (311,953)	\$ 73,766,038	\$ 49,936,335	\$ (23,829,703)
15 Uprates									
16 Carrying Costs							\$ 3,740,411	\$ 2,363,019	\$ (1,377,391)
17 Carrying Costs on DTA							(7,407)	(5,024)	2,383
18 Total Carrying Costs							\$ 3,733,003	\$ 2,357,995	\$ (1,375,008)
19 Recoverable O&M								\$ 256,091	\$ 256,091
20 Total Uprates							\$ 3,733,003	\$ 2,614,087	\$ (1,118,917)
21									
22 Total TP6&7 and Uprates	\$ 2,645,056	\$ 2,645,056	\$ -	\$ 9,082,406	\$ 8,770,453	\$ (311,953)	\$ 77,499,041	\$ 52,550,421	\$ (24,948,620)

Notes:

(a) 2006 Site Selection revenue requirements are reported at the 2006 jurisdictional separation factor of .9958099. In 2007, Site Selection costs were transferred to Construction Work In Progress at the 2007 jurisdictional separation factor of .9958265. The costs associated with site selection for the Turkey Point Units 6&7 project were included in Account 183, Preliminary Survey and Investigation Charges, for the period April 2006 through October 2007. Effective with the filing of our need petition on October 16, 2007, all costs were transferred to Construction Work in Progress, Account 107, and site selection costs ceased.

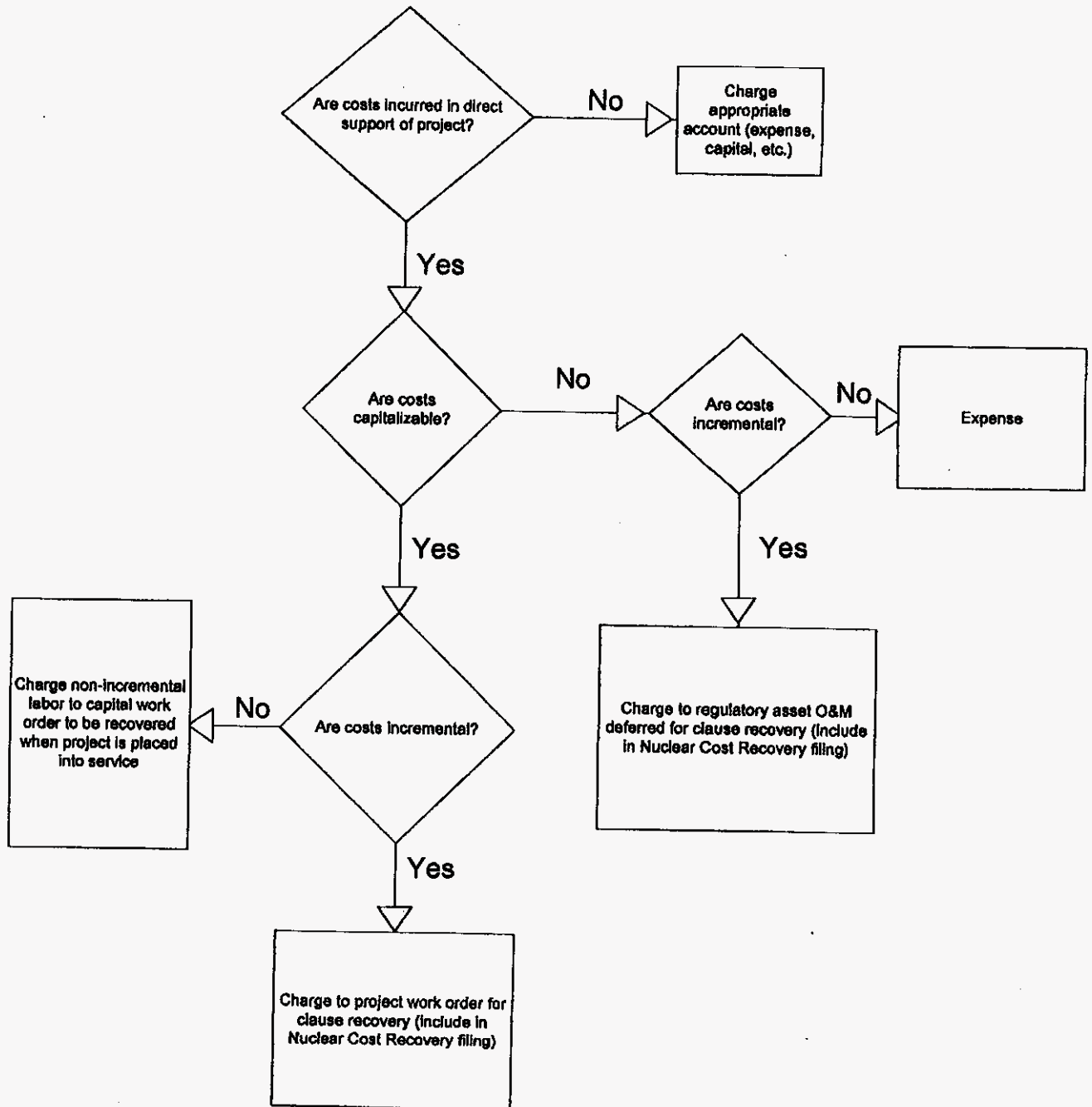


	2006	2007	(a) Site Selection 2007 - PTD	2008	Total
<b>Turkey Point 6 &amp; 7</b>					
<b>Site Selection:</b>					
Project Staffing	\$ 442,676	\$ 320,164	\$ 762,841		
Engineering	2,077,555	1,274,189	3,351,744		
Environmental Services	113,473	1,106,817	1,220,290		
Legal Services	22,482	780,749	783,231		
<b>Total Site Selection Costs:</b>	<b>\$ 2,656,186</b>	<b>\$ 3,461,920</b>	<b>\$ 6,118,105</b>		<b>\$ 6,118,105</b>
Jurisdictional Factor	0.9958099	0.9958265	0.9958265		
<b>Total Jurisdictional Site Selection Costs</b>	<b>\$ 2,645,056</b>	<b>\$ 3,447,471</b>	<b>\$ 6,092,571 (a)</b>		<b>\$ 6,092,571</b>
<b>Pre-Construction:</b>					
<b>Generation:</b>					
Licensing		\$ 2,017,181		\$ 31,085,381	
Permitting		516,084		1,694,555	
Engineering and Design		0		3,542,947	
Long lead procurement advanced payments		0		10,860,960	
Power Block Engineering and Procurement		0		31,789	
<b>Total Generation Costs</b>		<b>\$ 2,533,265</b>		<b>\$ 47,215,633</b>	<b>\$ 49,748,898</b>
Jurisdictional Factor		0.9958265		0.99648888	
<b>Total Jurisdictional Generation Costs</b>		<b>\$ 2,522,692</b>		<b>\$ 47,049,854</b>	<b>\$ 49,572,546</b>
<b>Transmission</b>					
Line Engineering					
Substation Engineering					
Clearing					
Other					
<b>Total Transmission Costs</b>					
Jurisdictional Factor					
<b>Total Jurisdictional Transmission Costs</b>					
<b>Total Company Turkey Point 6 &amp; 7 Costs</b>	<b>\$ 2,656,186</b>	<b>\$ 5,995,185</b>		<b>\$ 47,215,633</b>	<b>\$ 55,867,004</b>
<b>Total Jurisdictional Turkey Point 6 &amp; 7 Costs</b>	<b>\$ 2,645,056</b>	<b>\$ 5,970,184</b>		<b>\$ 47,049,854</b>	<b>\$ 55,665,118 (a)</b>

**Notes:**

(a) 2006 Site Selection revenue requirements are reported at the 2006 jurisdictional separation factor of .9958099. In 2007, Site Selection costs were transferred to Construction Work in Progress at the 2007 jurisdictional separation factor of .9958265; therefore, Total Jurisdictional Site Selection Costs will not sum across by \$44. The costs associated with site selection for the Turkey Point Units 6&7 project were included in Account 183, Preliminary Survey and Investigation Charges, for the period April 2006 through October 2007. Effective with the filing of our need petition on October 16, 2007, all costs were transferred to Construction Work in Progress, Account 107, and site selection costs ceased.

	2006	2007	2008
<b>Uprates</b>			
<b>Generation:</b>			
License Application			\$ 29,509,091
Engineering & Design			5,087,650
Permitting			1,093,519
Project Management			12,207,968
Clearing, Grading and Excavation			-
On-Site Construction Facilities			-
Power Block Engineering, Procurement, etc.			51,837,763
Non-Power Block Engineering, Procurement, etc.			18,314
<b>Total Generation costs</b>			<b>\$ 99,754,304</b>
<b>Participants Credits PSL unit 2</b>			
OUC			\$ (1,766,973)
FMPA			(2,555,208)
<b>Total participants credits PSL unit 2</b>			<b>\$ (4,322,181)</b>
<b>Total FPL Generation Costs</b>			<b>\$ 95,432,123</b>
Jurisdictional Factor			0.99648888
<b>Total FPL Jurisdictional Generation Costs</b>			<b>\$ 95,097,049</b>
<b>Transmission:</b>			
Line Engineering			
Substation Engineering			
Clearing			
Other			
<b>Total Transmission Costs</b>			
Jurisdictional Factor			
<b>Total Jurisdictional Transmission Costs</b>			
<b>Recoverable O&amp;M</b>			
			\$ 269,183
Less Total Participants Credits PSL unit 2			12,189
<b>Total FPL O&amp;M Costs</b>			<b>\$ 256,994</b>
Jurisdictional Factor			0.99648888
<b>Total Jurisdictional O&amp;M Costs</b>			<b>\$ 256,091</b>
<b>Total Uprate Generation and Transmission Costs</b>			<b>\$ 95,353,141</b>
<b>Total Turkey Point 6 &amp; 7 Costs from Page 1</b>	<b>\$ 2,645,056</b>	<b>\$ 5,970,164</b>	<b>\$ 47,049,854</b>
<b>Total Uprate and TP6&amp;7 Costs</b>	<b>\$ 2,645,056</b>	<b>\$ 5,970,164</b>	<b>\$ 142,402,994</b>



1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                   **FLORIDA POWER & LIGHT COMPANY**

3                   **DIRECT TESTIMONY OF JOHN J. REED**

4                   **DOCKET NO. 090009-EI**

5                   **March 2, 2009**

6  
7   **Q.    Please state your name and business address.**

8    A.    My name is John J. Reed. My business address is 293 Boston Post Road West,  
9           Marlborough, Massachusetts 01752.

10 **Q.    By whom are you employed and what is your position?**

11 A.    I am the Chairman and Chief Executive Officer of Concentric Energy Advisors,  
12           Inc. ("Concentric").

13 **Q.    Please describe Concentric.**

14 A.    Concentric is an economic advisory and management consulting firm,  
15           headquartered in Marlborough, Massachusetts, which provides consulting  
16           services related to energy industry transactions, energy market analysis, litigation,  
17           and regulatory support.

18 **Q.    Please describe your educational background and professional experience.**

19 A.    I have more than 30 years of experience in the energy industry, having served as  
20           an executive in energy consulting firms, including the position of Co-Chief  
21           Executive Officer of the largest publicly-traded management consulting firm in  
22           the United States and as Chief Economist for the largest gas utility in the United  
23           States. I have provided expert testimony on a wide variety of economic and

1 financial issues related to the energy and utility industry on numerous occasions  
2 before administrative agencies, utility commissions, courts, arbitration panels and  
3 elected bodies across North America.

4 **Q. Are you sponsoring any exhibits in this case?**

5 A. Yes. I am sponsoring Exhibits JJR-1 through JJR-3, which are attached to my  
6 direct testimony.

7 Exhibit JJR-1 Curriculum Vitae

8 Exhibit JJR-2 Testimony of John J. Reed 1998 – 2009

9 Exhibit JJR-3 Comparison of Cost Estimates for New AP 1000

10 **Q. What is the purpose of your testimony in this proceeding?**

11 A. The purpose of my testimony is to review the appropriate prudence standard  
12 that should be applied in this Nuclear Cost Recovery Proceeding. In addition,  
13 my testimony provides a review of the processes and procedures used by Florida  
14 Power and Light (“FPL” or the “Company”), a subsidiary of the FPL Group, to  
15 manage the development and implementation of the Extended Power Uprate  
16 (“EPU”) Projects at FPL’s St. Lucie Units 1 & 2 and Turkey Point Units 3 & 4  
17 (“PSL 1 & 2” and “PTN 3 & 4” respectively, and collectively the “EPU Project”) in the 2011 to 2012 timeframe, and the development and construction of two  
18 new nuclear generating units at FPL’s Turkey Point site (“PTN 6 & 7”, and  
19 collectively with the EPU Project, the “Projects”). Specifically, I review FPL’s  
20 internal controls governing the development of the Projects and how these  
21 internal controls have led to prudent decisions between the date when the  
22 projects were first initiated and the end of 2008.  
23

1 **Q. Please describe your experience with nuclear power plants, and**  
2 **specifically your experience with major construction programs at these**  
3 **plants.**

4 A. My consulting experience with nuclear power plants spans more than 25 years.  
5 My clients have retained me for assignments relating to the construction of  
6 nuclear plants, the purchase, sale and valuation of nuclear plants, power uprates  
7 and major capital improvement projects at nuclear plants, and the  
8 decommissioning of nuclear plants. I have had significant experience with these  
9 activities at the following plants:

- Big Rock Point
- Callaway
- Duane Arnold
- Fermi
- Ginna
- Hope Creek
- Limerick
- Millstone
- Nine Mile Point
- Oyster Creek
- Palisades
- Peach Bottom
- Point Beach
- Saint Lucie
- Salem
- Seabrook
- Wolf Creek
- Vogtle

10 I am currently active on behalf of a number of clients in pre-construction  
11 activities for new nuclear plants across the U.S. and Canada. These activities  
12 include state and federal regulatory processes, raising debt and equity financing  
13 for new projects and evaluating the costs schedules and economics of new  
14 nuclear facilities. These activities have included detailed reviews of cost  
15 estimation and construction project management activities of other new nuclear  
16 project developers.

17 **Q. Has Concentric made any recommendations or come to any conclusions**  
18 **regarding the Projects?**

1 A. Yes. As a general matter, Concentric has first, and most importantly, determined  
2 that FPL has adequately followed its internal controls processes and procedures,  
3 and decisions that have been made consistent with these processes and  
4 procedures appear to be prudent. Further, Concentric has made several  
5 recommendations to the Company regarding ways to improve its internal  
6 controls on a going forward basis. These recommendations are fully discussed  
7 later in my testimony. It is important to note that none of Concentric's  
8 recommendations should raise a concern with the Company's 2008 and prior  
9 expenditures. Instead, Concentric's recommendations primarily provide  
10 enhancements to the Company's existing processes. It is Concentric's view that  
11 these enhancements will assist the Company in preventing future issues or  
12 concerns.

13 **Q. Please describe how the remainder of your testimony is organized.**

14 A. The remainder of my testimony is organized into five sections. In Section I, I  
15 describe the prudence standard as it was originally expressed in the 1920s by  
16 Justice Brandeis, how this standard has been applied by the Florida Public  
17 Service Commission ("Commission") and how I believe it should be applied in  
18 this proceeding. In Section II, I describe the framework Concentric used to  
19 review FPL's internal controls. Section III describes how these internal controls  
20 have been implemented for the EPU projects. Section IV of my testimony  
21 describes how these internal controls have been implemented with the new  
22 nuclear project. Finally, Section V of my testimony describes Concentric's  
23 recommendations and conclusions.

1 **Section I: The Prudence Standard**

2 **Q. Please generally describe the prudence standard as you understand it.**

3 A. The original standard of prudence was expressed by Supreme Court Justice Louis  
4 Brandeis in 1923 as a means of guiding regulators conducting reviews of utility  
5 capital investments. Since that time, a substantial amount of jurisprudence has  
6 been developed to refine the Prudent Investment Test. Much of this was  
7 developed in the 1980s following the nuclear construction programs of the  
8 previous two decades. As originally proffered, the test provides a basis for  
9 establishing a utility's investment or rate base based on the cost of such  
10 investment by stating the following:

11           There should not be excluded from the finding of the base,  
12           investments which, under ordinary circumstances, would be deemed  
13           reasonable. The term is applied for the purpose of excluding what  
14           might be found to be dishonest or obviously wasteful or imprudent  
15           expenditures. Every investment may be assumed to have been made  
16           in the exercise of reasonable judgment, unless the contrary is  
17           shown... adoption of the amount prudently invested as the rate base  
18           and the amount of the capital charge as the measure of the rate of  
19           return ... [would provide ] a basis for decision which is certain and  
20           stable. The rate base would be ascertained as a fact, not determined  
21           as a matter of opinion.<sup>1</sup>

22           Two key features of a prudence determination are captured in this language.  
23           First, prudence relates to actions and decisions; costs themselves are not prudent  
24           or imprudent. It is the decision or action that must be reviewed, not simply  
25           whether the costs are above or below expectations. The second feature is that  
26           the standard incorporates a presumption of prudence, which is often referred to  
27           as a rebuttable presumption. Thus, the burden of showing that a decision is

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<sup>1</sup> Separate, concurring opinion of Justice Louis Brandeis, Missouri ex. Rel. Southwestern Bell Telephone Co. v. Public Service Commission, 262 U.S. 276 (1923).



1 outside of the reasonable bounds falls, at least initially, on the party challenging  
2 the utility's actions.

3 The position of Justice Brandeis was endorsed in 1935 when Supreme Court  
4 Justice Benjamin N. Cordozo stated:

5 Good faith is to be presumed on the part of managers of a  
6 business. In the absence of a showing of inefficiency or  
7 improvidence, a court will not substitute its judgment for theirs  
8 as to the measure of a prudent outlay.<sup>2</sup>

9 The Prudent Investment Test offered by Justice Brandeis was applied sparingly  
10 for the first four decades following its pronouncement. It was not until the  
11 nuclear construction projects of the 1970s and 1980s that the Prudent  
12 Investment Test, at least in name, was applied frequently in various electric utility  
13 rate cases.

14 **Q. Are there various interpretations of the Prudent Investment Test that have  
15 been proffered in other nuclear construction prudence reviews?**

16 A. Yes, three interpretations of the Prudent Investment Test were offered by  
17 utilities, regulators and industry experts during the 1980s. Such interpretations,  
18 at times, were in violation of the strict standard first developed by Justice  
19 Brandeis. Despite this, these interpretations were often used to justify large  
20 disallowances, possibly as a rough means of mitigating the "rate shock"  
21 associated with placing a multi-billion dollar investment into rate base.

22 The first interpretation of the Prudent Investment Test developed during this  
23 time closely follows the traditional standard proffered by Justice Brandeis.  
24 Under this standard, regulators must utilize a balanced retrospective review based

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<sup>2</sup> West Ohio Gas Co. v. Public Utilities Commission of Ohio (No.1), 249 U.S. 63, (1935), Opinion.

1 upon the information that was known or knowable at the time of the decision.  
2 In addition, this interpretation of the standard considers a range of reasonable  
3 behavior given the circumstances, rather than requiring perfection or even  
4 consistently above-average performance.

5 The National Regulatory Research Institute (“NRRRI”) advocated for similar  
6 principles in a research paper in 1984.<sup>3 4</sup> In this paper the NRRRI stated that the  
7 prudent investment standard should include the following four guidelines:

- 8 • “...a presumption that the investment decisions of the utilities  
9 are prudent...”
- 10 • “...the standard of reasonableness under the circumstances...”
- 11 • “...a proscription against the use of hindsight in determining  
12 prudence...”
- 13 • “...determine prudence in a retrospective, factual inquiry.  
14 Testimony must present facts, not merely opinion, about the  
15 elements that did or could have entered into the decision at  
16 the time.”

17 **Q. Please describe the two remaining interpretations of the prudence**  
18 **standard.**

19 A. The two remaining interpretations of the prudence standard are related to the  
20 perfect execution of the project in one instance and the economic benefits or fair  
21 value of a project in the second instance. Both of these interpretations of the

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<sup>3</sup> National Regulatory Research Institute, The Prudent Investment Test in the 1980's, April 1985.

<sup>4</sup> NRRRI is the state commissions' research resource. Its primary funding comes from voluntary dues paid by state commissions. *NRRRI website accessed on January 10, 2009.*

1 standard reflect the use of hindsight to second guess utility decision-makers  
2 based on circumstances that were clearly unknown or unknowable at the time the  
3 utility was required to make a decision.

4 In the first instance, the standard compares the performance of the project to the  
5 perfect execution of the project. This interpretation focuses purely on the  
6 mistakes or missed opportunities to lower specific costs of the project, and is  
7 solely results-based. This interpretation of the standard fails to understand the  
8 inherent trade-offs that occur in any large construction project, and fails to  
9 recognize that prudent behavior encompasses a range of reasonable and  
10 acceptable conduct. The application of a prudence standard must begin by  
11 defining the range of acceptable behavior and measuring the actual behavior  
12 against this range.

13 The third interpretation of the standard relies upon an economic benefits or fair  
14 value test used to compare the value of the project to other capacity resources  
15 that are available at the time of the prudence review, rather than at the time the  
16 decision to proceed with construction was made. In the 1980s, this  
17 interpretation of the standard almost always resulted in a very large disallowance  
18 for the utilities involved in such a review. As a result, utility managers were often  
19 left penalized for unforeseen changes in the economic or political climate  
20 associated with constructing a new nuclear facility.

21 **Q. Which interpretation of the Prudence Standard has been adopted by the**  
22 **Commission?**

1 A. The original interpretation of the Prudent Investment Test appears to be the  
2 interpretation used by the Commission in several orders:

3 Prudence has been defined as “what a reasonable utility manager  
4 would have done in light of conditions and circumstances which  
5 were known or reasonably should have been known at the time  
6 the decision was made,”<sup>5</sup>

7 A utility should not be charged with knowledge of facts which  
8 cannot be foreseen or be expected to comply with future  
9 regulatory policies. Expectations are not always borne out. The  
10 prudence of decision making should be viewed from the  
11 perspective of the decision maker at the time of the decision.

12 Contract administration must be viewed at a point in time which  
13 takes into consideration the facts which were known or which  
14 should have been known at the time the contract is entered into  
15 or amended...

16 We have not sought to retroactively apply new policies to Gulf's  
17 prior actions and we have recognized that a utility cannot foresee  
18 the future.<sup>6</sup>

19 We must avoid impermissibly applying hindsight review, which is  
20 the application of facts that are known today to decisions made in  
21 the past (i.e., Monday morning quarterbacking). As we consider  
22 whether PEF acted prudently, we must ask ourselves, did PEF  
23 know or should PEF have known about a particular set of  
24 circumstances.<sup>7</sup>

25 As can be seen from these statements, the Commission has generally prohibited  
26 the use of hindsight when reviewing utility management decisions. Instead, the  
27 Commission has chosen to strictly follow the traditional standard by developing  
28 a range of reasonable behaviors based on the circumstances that were known at  
29 the time of the decision or action. Further, the Commission has noted a need to  
30 apply a consistent standard to reviewing utility decisions.

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<sup>5</sup> Staff recommendation in Docket no. 060658-EI – Petition on behalf of Citizens of the State of Florida to require Progress Energy Florida, Inc to refund customers \$143 million, citing.

<sup>6</sup> Docket No. 820001-EU-A, In Re: Investigation of Fuel Cost Recovery Clauses of Electric Utilities (Gulf Power Company – Maxine Mine).

<sup>7</sup> FL PSC Order No. PSC-07-0816-FOF-EI, Pg. 4.

1 **Q. Have other regulatory bodies adopted prudence standards that are similar**  
2 **to that which has been used in Florida?**

3 A. Yes. For instance, the Federal Energy Regulatory Commission ("FERC")  
4 offered its view of the Prudent Investment Test in 1984 by stating the following:

5 We note that while in hindsight it may be clear that a  
6 management decision was wrong, our task is to review the  
7 prudence of the utility's action and the cost resulting there from  
8 based on the particular circumstances existing either at the time  
9 the challenged costs were actually incurred, or the time the utility  
10 became committed to incur those expenses.<sup>8</sup>

11 The New York Public Service Commission shared similar observations when  
12 reviewing Consolidated Edison Company of New York's Indian Point 2 nuclear  
13 plant.

14 The Company's conduct should be judged by asking whether the  
15 conduct was reasonable at the time, under all the circumstances,  
16 considering that the company had to solve its problems  
17 prospectively rather in reliance on hindsight. In effect, our  
18 responsibility is to determine how reasonable people would have  
19 performed the tasks that confronted the company.<sup>9</sup>

20 **Q. Please describe how the Commission should treat costs that may have**  
21 **been imprudently incurred.**

22 A. If a utility's decision-making process is found to be imprudent, the analysis used  
23 to quantify the cost of this imprudent decision must follow four basic guidelines.  
24 The first is to consider only those costs which are caused by the imprudent act.  
25 The second is to not penalize a utility for cost increases that were beyond the  
26 control of the utility. Third, the analysis should limit a utility's responsibility for  
27 consequential damages to those costs that were reasonably foreseeable at the

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<sup>8</sup> Decision of the Federal Energy Regulatory Commission, In Re: New England Power Company, 31 FERC 61,047.

<sup>9</sup> Decision of the New York Public Service Commission, In Re: Consolidated Edison Company, Opinion 79-1, January 16, 1979, Case No. 27123.

1 time of the imprudent act. Lastly, the quantification of imprudence should base  
2 a disallowance on the incremental costs related to imprudence, that is, the  
3 present value of additional costs that ratepayers would have to bear. In order to  
4 correctly measure the incremental costs of imprudence, the commission must  
5 first define what a “minimally prudent” action would have been, and then  
6 measure the difference in costs between the minimally prudent action and the  
7 imprudent action.

8 **Section II: Framework of Review**

9 **Q. Please describe the framework Concentric used to review the Company’s**  
10 **internal controls.**

11 A. In order to review the Company’s internal controls, Concentric utilized a  
12 framework for reviewing the Company’s policies and procedures that was very  
13 similar to that framework which was employed by Concentric in the 2008  
14 Nuclear Cost Recovery proceeding. That framework was based on Concentric’s  
15 experience advising prospective investors in new nuclear projects and  
16 Concentric’s regulatory experience.

17 In summary, the framework has focused on six elements of the Company’s  
18 internal controls, including:

- 19 • Defined corporate procedures
- 20 • Written project execution plans
- 21 • Involvement of key internal stakeholders
- 22 • Reporting and oversight requirements
- 23 • Corrective action mechanisms

- 1                   • Reliance on a viable technology

2           Each of these elements was reviewed for five processes including:

- 3                   • Project estimating and budgeting process
- 4                   • Project schedule development and management process
- 5                   • Contract management and administration process
- 6                   • Internal oversight mechanisms
- 7                   • External oversight mechanisms

8   **Q.   Please describe how Concentric performed this review.**

9   A.   Concentric began by reviewing the Company's policies, procedures and  
10       instructions with particular emphasis placed on those policies, procedures or  
11       instructions which may have been revised since the time of Concentric's review  
12       in the spring of 2008. Concentric then expended considerable effort reviewing  
13       documents and conducting interviews to ensure that these policies, procedures  
14       and instructions were being implemented by the projects and have resulted in  
15       prudent decisions based on the information that was available at the time of  
16       decision. Lastly, Concentric developed representative benchmarks of the PTN 6  
17       & 7 budget that might serve as reference points, but not a determination of  
18       prudence or imprudence, when reviewing the project.

19   **Q.   Please describe why you believe it is important for FPL to have defined  
20       corporate procedures in place throughout the development of the Projects.**

21   A.   Defined corporate procedures are critical to any project development process as  
22       they detail the methodology in which the project will be completed and make

1 certain that processes are consistently applied to the projects. To be effective,  
2 these procedures should be documented with sufficient detail to allow the  
3 project teams to implement the procedures, and they should be clear enough to  
4 allow the project teams to comprehend the procedures easily. It is also  
5 important to assess whether the procedures are known by the project teams and  
6 adopted into the Company's culture, including a process that allows staff to  
7 openly challenge and seek to improve the existing procedures and to incorporate  
8 lessons learned from other projects into the Company's procedures. Within  
9 FPL, the Project Controls staff is primarily responsible for ensuring the  
10 Company's corporate procedures are applied correctly by the various FPL and  
11 contractor staff members who are working on the projects. However, it is well  
12 accepted that this is a shared responsibility held by all project team members,  
13 including the project managers.

14 **Q. Please explain the importance of written project execution plans.**

15 A. Written project execution plans are necessary to prudently develop the project.  
16 These plans lay out the resource needs of the project, the scope of the project,  
17 key project milestones or activities and the objectives of the project. These  
18 documents are critical as they provide a "roadmap" for completing the project as  
19 well as a "yardstick" by which overall performance can be monitored and  
20 managed. It is also important for the project sponsor to require its large-value  
21 contract vendors to provide similar execution plans. Such plans allow the project  
22 sponsor to accurately monitor the performance of these vendors and makes  
23 certain at an early stage of the project that each vendor's approach to achieving  
24 key project milestones is consistent with the project sponsor's needs.



1 **Q. Why is it important that key internal stakeholders are involved in the**  
2 **project development process?**

3 A. One of the most difficult aspects of prudently developing a large project is the  
4 ability to balance the needs of all stakeholders, including various Company  
5 representatives and the Company's customers. This balance is necessary to make  
6 certain that the maximum value of the project is realized. For example, it is  
7 important that an extended power uprate project be successfully implemented in  
8 a timely and efficient manner to avoid extending or unnecessarily interfering with  
9 each plant's existing refueling outage schedule. By including these stakeholders  
10 in a transparent project development process, the project sponsor will be better  
11 positioned to deliver on these high-value projects.

12 **Q. Why is it important to have established reporting and oversight**  
13 **requirements?**

14 A. By having an established reporting structure and periodic reporting requirements,  
15 the project sponsor's senior management will be well informed on the status of  
16 the project's various activities. Reporting requirements give senior management  
17 the information it needs in order to leverage their background and previous  
18 experience to direct the various aspects of the project prudently. Secondly,  
19 established reporting requirements ensure that senior management is fully aware  
20 of the activities of the respective project teams so management can effectively  
21 control the overall project risks. This level of project administration by senior  
22 management is prudent considering the large expenditures that will be required  
23 to complete the Projects, and the potential impact of these Projects on the  
24 Company overall.

1 In order to be considered robust, these reporting requirements should be  
2 frequent and periodic (i.e., established daily, weekly and/or monthly reporting  
3 requirements) and should include varying levels of detail based on the frequency  
4 of the report. For instance, a daily status report may not need as much detail as  
5 it will soon be reviewed by a project manager who is able to quickly address  
6 issues and concerns. In contrast, a monthly status report will require significantly  
7 more detail to discuss the status of the Projects, as well as plans for near-term  
8 activities. The need for timely and effective project reporting is well recognized  
9 in the industry, as demonstrated by the following statement:

10 “Cost and time control information must be timely with little  
11 delay between field work and management review of  
12 performance. This timely information gives the project manager  
13 a chance to evaluate alternatives and take corrective action while  
14 an opportunity still exists to rectify the problem areas.”<sup>10</sup>

15 **Q. What is the purpose of corrective action mechanisms and why are they**  
16 **important to ensure the Company is prudently incurring costs?**

17 A. A corrective action mechanism is a defined process whereby a learning culture is  
18 implemented and nurtured throughout an organization to help eliminate  
19 concerns that can interfere with the successful completion of the project.  
20 Corrective action mechanisms help to identify the root cause of issues such as an  
21 activity that is trending behind schedule, and provides the opportunity to adopt  
22 mechanisms that mitigate and correct the negative impact from these issues. A  
23 robust corrective action mechanism assigns responsibility for implementing the  
24 corrective actions and a means by which these activities are managed. In

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<sup>10</sup> Sears, Keoki S., Glenn A. Sears, and Richard H. Clough, Construction Project Management: A Practical Guide to Field Construction Management. 5<sup>th</sup> Edition, John Wiley & Sons, Hoboken, NJ, 2008, Pg. 20.

1 addition, a corrective action mechanism educates the project team in such a  
2 manner as to ensure project risks are prudently managed in the future.

3 **Q. Are there any other elements of the Company's internal controls included**  
4 **in your review?**

5 A. No. There were no other elements of the Company's internal controls included  
6 in my review. While I have attempted to review the categories for each process,  
7 some processes require greater emphasis in certain categories than the others  
8 included in my review.

9 **Section III: The EPU Project**

10 **Q. How did FPL develop the project budget for the EPU Project?**

11 A. The Company used an industry standard means of creating a budget estimate for  
12 the EPU Projects. This process is known as a partial take-off estimate and is  
13 based on anticipated man-hours required to complete each task, as well as the  
14 amounts of various commodities and other resources required to complete these  
15 tasks.

16 **Q. Does FPL have a specific mechanism in place to monitor the EPU**  
17 **Project's performance relative to the initial budget?**

18 A. Yes. FPL has multiple mechanisms for monitoring the EPU Projects'  
19 performance relative to initial budget. This includes a comprehensive budget  
20 summary document that includes the appropriate level of detail for reporting. In  
21 addition, the EPU Project Team produces a monthly budget variance report.  
22 This report compares the actual expenditures incurred within the past month to  
23 the originally estimated budget on both a cumulative and a monthly basis. By

1 performing this comparison from both perspectives, FPL is able to track both  
2 project performance relative to the initial budget and the project's schedule of  
3 cash flows relative to the original budget.

4 **Q. Are there any other activities used to monitor the EPU Project's**  
5 **performance relative to the initial budget?**

6 A. Yes. Consistent with FPL's corporate philosophy of maintaining multiple  
7 overlapping layers of oversight for each of the projects, the EPU Project's  
8 periodic reports and status calls to various groups of stakeholders make certain  
9 project milestones and goals are being met.

10 **Q. Please describe the status briefings and meetings that are currently being**  
11 **used within the EPU Project.**

12 A. On a daily basis, key members of the EPU Project Team conduct a call to  
13 discuss the near term schedule, pending critical activities and any challenges they  
14 may face. This discussion may be used to identify potential budget issues as well  
15 as address other project team concerns. These meetings are memorialized in the  
16 Extended Power Uprate Daily Report. On a weekly basis, the project team  
17 members meet with project management to review key project risks and ensure  
18 that the project is tracking closely to the budget and schedule. A similar meeting  
19 is held on a bi-weekly basis with the Chief Nuclear Officer of FPL, the Project  
20 Vice Presidents and the Directors. Finally, the Company's Executive Steering  
21 Committee receives a monthly update of the project's schedule, budget and other  
22 critical matters which help them to make or review key strategic decisions that  
23 may be needed to proceed with the projects. In addition, this meeting allows the

1 project team to capitalize on the experience of these senior officers to help  
2 mitigate project risks.

3 **Q. Please describe the separate and apart concept.**

4 A. The separate and apart concept ensures that only costs that are “related to or  
5 resulting from” the uprate of PSL 1 & 2 and PTN 3 & 4 are recovered in  
6 Nuclear Cost Recovery proceedings, as required by Rule 25-6.0423. The separate  
7 and apart concept is not concerned with whether or not the costs were prudently  
8 incurred, but whether they are necessary to the uprate project as opposed to  
9 ongoing nuclear capital or maintenance activities.

10 **Q. Please describe the results of the “separate and apart” review that FPL  
11 conducted for this case.**

12 A. In order to confirm that none of the major components that are expected to be  
13 replaced during the EPU Project were previously scheduled for replacement,  
14 FPL conducted extensive reviews of the actual components, historical budgets  
15 and planning documents and the Nuclear Regulatory Commission (“NRC”)  
16 license renewals for the PSL 1 & 2 and PTN 3 & 4 sites. The process began with  
17 an extensive technical evaluation that identified the major components which  
18 would need to be replaced or modified in order to function safely in an uprated  
19 condition. Following this evaluation, the Company sought to make certain that  
20 the repair or replacement of these components was not previously scheduled as  
21 part of the ongoing upkeep of the plants by reviewing planning documents, such  
22 as the stations’ capital budgets prepared between 2005 and 2009. This review  
23 included an evaluation of the Company’s commitments to the NRC to determine

1 if any of the components slated for replacement or modification were required as  
2 a condition of the PSL 1 & 2 and PTN 3 & 4 license renewals. Each of these  
3 reviews confirmed that none of the major components that are scheduled for  
4 replacement during the EPU Project were previously scheduled to be replaced as  
5 part of the ongoing maintenance of the sites.

6 As part of our assessment, Concentric reviewed the process that the FPL used to  
7 make this determination as well as the information that was relied upon by the  
8 team to make their decisions. Based on our review of this information,  
9 Concentric believes the results are reasonable and that the appropriate costs have  
10 been included in this Nuclear Cost Recovery proceeding.

11 **Q. Are there other considerations related to the separate and apart concept?**

12 A. Yes. It is important to remember what will result from the type of analysis that  
13 is being conducted. In this instance, the prudence of FPL's decisions is not  
14 being addressed, nor is the reasonableness of its costs. Instead, the question  
15 solely relates to whether the costs should be included in this proceeding or one  
16 of the Company's future base rate proceedings. During the intervening time the  
17 cost of these components would be included in Construction Work in Progress  
18 and accrue an Allowance for Funds Used during Construction until such time as  
19 the components are placed into service.

20 **Q. Did Concentric have any recommendations related to the company's**  
21 **budget estimating and tracking process as it has been implemented by**  
22 **FPL?**

1 A. Yes. Concentric has recommended that FPL consider providing additional detail  
2 in the Monthly Budget Variance Reports published by the EPU Project.  
3 Currently this report identifies the line items which varied positively or negatively  
4 relative to the budget, but provides little explanation of the variance. Concentric  
5 has recommended that a concise explanation of why the variance occurred be  
6 included in the report. This explanation will allow the reader to quickly  
7 understand the basis for the variance without having to research the back-up  
8 documentation, and will assist the EPU Project Team in providing suggestions  
9 that would help to prevent future adverse variances.

10 **Q. Please describe the process the EPU Project has employed to develop and**  
11 **manage the EPU Project's schedules.**

12 A. The process for establishing the EPU Project schedule began with a detailed  
13 definition of the scope for the project. This information was then used in  
14 conjunction with an industry standard software package known as Primavera  
15 P6®. Primavera "provides Critical Path Method Scheduling ("CPM"), which uses  
16 the activity duration, relationships between activities, and calendars to calculate a  
17 schedule for the project. CPM identifies the critical path of activities that affect  
18 the completion date for the project or an intermediate deadline, and how these  
19 activity schedules may affect the completion of the project."<sup>11</sup> This software  
20 package is used throughout the nuclear power industry to schedule refueling  
21 outages and major capital projects. In addition, the CPM is a commonly cited

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<sup>11</sup> [www.primavera.com/products/p6/planning\\_man.asp](http://www.primavera.com/products/p6/planning_man.asp). Accessed February 20, 2009.

1 scheduling methodology for construction projects as a whole.<sup>12</sup> Once this  
2 schedule has been established within the Primavera software, the addition of any  
3 new activities is automated. Interdependent relationships are established to  
4 understand the impact of such additions.

5 Within the past year, the EPU Project has expended considerable effort to  
6 develop this schedule further. This work included creating more detailed  
7 relationships between the various project activities and the resources that are  
8 required to complete them. In addition, this detailed “level one” schedule  
9 identifies when key equipment will be procured, received and installed at each of  
10 the sites.

11 **Q. What internal controls are in place to monitor the EPU Project relative to**  
12 **the schedule?**

13 A. As discussed above, the EPU Project Team has instituted several periodic  
14 reporting mechanisms including daily, weekly, bi-weekly and monthly conference  
15 calls. In addition, the EPU Project Team issues a variety of reports, including  
16 Project Dashboards, which are issued on a weekly basis, and Project Deviation  
17 Reports, which are issued on a monthly basis. Each of these reports includes a  
18 discussion of the EPU Project’s schedule performance as compared to an initial  
19 targeted schedule. The Primavera software mentioned above also allows FPL to  
20 review the project schedule based on approved updates on an almost real-time  
21 basis. In other words, as soon as changes to this schedule are input into the

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<sup>12</sup> Oberlender, Garold D., Project Management for Engineering and Construction, McGraw-Hill, 2000, Pg. 143.

Sears, S Keoki, Glenn A. Sears and Richard H. Clough, Construction Project Management: A Practical Guide to Field Construction Management, 5<sup>th</sup> Edition, John Wiley & Sons, Inc., Hoboken, NJ, 2008, Pg. 21.



1 software, the schedule automatically updates to show changes to the various  
2 activity start and end dates as applicable.

3 In addition to monitoring the EPU Project Team's efforts, the Company has also  
4 required that status reports be provided by its key vendors. At the beginning of  
5 each vendor's scope of work, FPL requires the vendors to provide a reasonable  
6 target schedule from which all future progress will be measured. The vendors  
7 are then responsible for providing monthly progress reports regarding this  
8 schedule. The Company also receives some insight regarding the vendors'  
9 progress by monitoring the number of work hours that have been included on  
10 each monthly invoice. This is done by comparing the number of work hours  
11 expended during the prior month with the target schedule's projection. Finally,  
12 the project also uses a Project Deviation Log which is used to track changes in  
13 the schedule and to provide a brief explanation of the reasons for the deviation.

14 **Q. What internal controls are in place to ensure the EPU Project is prudently  
15 managing and administering the Company's procurement functions?**

16 A. FPL has several corporate policies governing the procurement function. These  
17 policies are administered through the Integrated Supply Chain ("ISC")  
18 organization and include a wide breadth and depth of procurement processes,  
19 including a stated preference for competitive bidding wherever possible, the  
20 proper means for conducting a competitive solicitation, initial contract  
21 formation, and administration of the contract. Further, ISC has developed a  
22 desktop Procurement Process Manual that allows its staff to quickly reference  
23 the steps required to comply with FPL's corporate policies. The policies are then

1 further expanded within the Nuclear Division and within the EPU Project  
2 through a series of written procedures and instructions that detail how the  
3 corporate policies will be implemented at the project level.

4 **Q. Are there examples of how these internal controls were implemented in**  
5 **2008?**

6 A. Yes. There were a number of instances in which these policies were  
7 implemented during the calendar year 2008. Two clear examples include the  
8 procurement of Engineering, Procurement and Construction (“EPC”) services  
9 from Bechtel Power Corporation (“Bechtel”) and of certain components from  
10 Thermal Engineering Incorporated.

11 **Q. Please describe how these internal controls were implemented for the**  
12 **procurement of EPC services from Bechtel.**

13 A. The process of procuring EPC services began in May 2008. Consistent with  
14 FPL’s policies, the EPU Project Team, in conjunction with the ISC managers  
15 assigned to the project and legal department representatives, collaborated to  
16 develop a detailed scope of work on which potential vendors would be asked to  
17 bid. ISC used this detailed scope of work to develop a request for proposals  
18 (“RFP”), including a request for vendor qualifications, and began contacting  
19 potential vendors to determine if the vendor might have an interest in  
20 participating in the bidding process. Based on this outreach, six vendors were  
21 identified as possibly meeting the technical requirements necessary to complete  
22 the work and as having a desire to be considered for this project. These six  
23 vendors were then issued a RFP that included the detailed scope of work and

1 proposed commercial terms that were designed to protect the Company and its  
2 customers from unnecessary risks. This RFP included an appropriate level of  
3 detail to allow the bidders to make a complete bid. FPL issued a deadline of  
4 June 30, 2008 for submitting proposals, and vendors were given the opportunity  
5 to ask questions related to the scope of work prior to the bid deadline. After  
6 receiving the RFP, two vendors elected to drop out of the process on their belief  
7 that they were either ill equipped to pursue the project or had commitments to  
8 other FPL projects that could divert their resources from the EPC services. FPL  
9 ultimately received bids from four bidders. These bid submissions were  
10 reviewed by several internal subject matter experts with expertise in legal,  
11 contract administration, engineering and project management to ensure that they  
12 were compliant with the RFP and technically correct. The bid review group then  
13 created a relative ranking of each of the proposals to narrow the number of  
14 respondents. The vendors were then asked a series of targeted questions to help  
15 clarify their proposals, and the vendors were allowed to refresh their bid  
16 submissions with their best and final offer. The Company received these revised  
17 bids on October 1, 2008. Based on these bid submissions, FPL identified two  
18 vendors with which it would enter into further, detailed discussions. As part of  
19 these discussions, FPL asked each bidder to refine its bid further from both a  
20 price and commercial terms standpoint. The results from these discussions were  
21 used to select Bechtel as the winning vendor on October 1, 2008 and a contract  
22 for each site was issued on November 3, 2008. When combined, these two  
23 contracts represent the largest contracts the EPU Project expects to execute.  
24 Since the time these contracts were issued, FPL has diligently reviewed the

1 invoices and communications submitted by Bechtel to ensure that the terms of  
2 this agreement are fully met.

3 **Q. What processes or procedures are in place to ensure that the Company**  
4 **and its customers receive the full value of the goods and services that are**  
5 **being procured?**

6 A. In order to make certain the Company and its customers receive the full value of  
7 the goods and service being procured for the projects, FPL has developed an  
8 "Invoice Checklist/Approval Form." This form is attached to each invoice that  
9 is received and includes a review by key project team members who have worked  
10 closely with the vendor on the goods and services for which payment has been  
11 requested. These reviewers are named on the form and are required to review  
12 the invoice to ensure that the costs being billed are correct and appropriate. In  
13 addition, the form requires approval by certain senior project team members.  
14 This approval is based on the individuals' corporate approval authority.

15 **Q. Have these reviews found instances of incorrect charges?**

16 A. Yes. The EPU Project Team's vigilance has caught instances of potentially  
17 incorrect charges being billed to the Company from the vendors. In these  
18 instances, the EPU Project Team has worked with the vendor to investigate the  
19 cause for the errant charges, to determine what the appropriate charges should  
20 be, and either to correct the invoice or to obtain a credit on a future invoice. As  
21 an example, in one invoice that Concentric reviewed, a vendor billed an amount  
22 that was deemed questionable by the EPU Project Team for the December 2008  
23 time period. After the EPU Project Team reviewed this amount with the

1 vendor, a credit for these charges is expected on the Company's February 2009  
2 invoice.

3 **Q. What has the EPU Project done to address the concerns raised last year**  
4 **related to FPL's use of single and sole source procurement practices?**

5 A. First, it is important to note that, consistent with FPL policies, Concentric found  
6 that the EPU Project continues to prefer competitive bidding. Second, the EPU  
7 Project has reached a point where there will be few additional large procurement  
8 items that will require a single or sole source procurement strategy. As discussed  
9 during last year's proceeding, however, certain instances in the EPU Project's  
10 development have and will require use of single or sole source procurement  
11 strategies. The reasons for this include the fact that there are very few suppliers  
12 that have retained their qualifications to work on nuclear, safety-related systems  
13 and components and the vast amount of proprietary technical information which  
14 must be relied upon when operating a nuclear power plant.

15 To respond to the Commission's concerns raised during last year's proceeding,  
16 the EPU Projects have undertaken a proactive process to ensure that all future  
17 sole or single source justifications are robust and transparent so that a third  
18 party is able to fully understand the need for and prudence of this procurement  
19 strategy. This process has included expanding the team that must review the  
20 content of the single and sole source justification memoranda and standardizing  
21 the template that is used when completing these memoranda. Additionally, FPL  
22 has held cross-functional training meetings for the EPU Project Team to ensure

1 that these team members understand the need to thoroughly document the  
2 prudent business reasons for the sole or single source procurement strategy.

3 Concentric was given the opportunity to review this training presentation, the  
4 standardized template, and completed single and sole source justifications. It is  
5 clear from this review that the EPU Project has adequately addressed these  
6 concerns by adding a sufficient amount of detail to allow a non-technical  
7 reviewer to understand the need for this procurement strategy.

8 **Q. What options does the EPU Project retain to ensure that contractors and**  
9 **vendors maintain the EPU Project's schedules, budgets and quality**  
10 **assurance requirements?**

11 A. Consistent with FPL's corporate procedures, the EPU Project has included  
12 contract language that incorporates the Company's standard quality assurance  
13 requirements and provides for corrective action mechanisms in the event of  
14 delay or other technical issue. When a vendor does fall behind schedule, the  
15 EPU Project has requested a written recovery plan from the vendor. These  
16 plans are designed to identify the root cause of the delay or technical issue and  
17 provide a stepwise plan for addressing the cause while implementing the  
18 necessary changes to get the project back on schedule.

19 **Q. Has the EPU Project taken such steps with any of the vendors?**

20 A. Yes. At least one instance has occurred whereby the EPU Project Team was  
21 required to issue a request for a recovery plan to one vendor related to a negative  
22 schedule trend and a potential misapplication of certain data.

- 1 **Q. How does the EPU Project keep track of contractual deviations and**  
2 **changes?**
- 3 A. The EPU Project maintains a Contract Deviation Log that tracks the various  
4 change orders that have been received from the EPU Projects' vendors. These  
5 change orders are monitored and documented as part of the Project Controls  
6 function. The deviation log provides a summary of contracts that are open,  
7 closed and cancelled with sufficient information to help determine if the  
8 contractual deviations are related to matters that were outside the initial scope of  
9 the contract. Additional documentation is maintained to support the summary  
10 view presented in the deviation log report.
- 11 **Q. Are there certain contractors that hold contracts for similar scopes of work**  
12 **that are being performed at both the Company's regulated nuclear plants**  
13 **and its affiliate NextEra Energy's ("NextEra") non-regulated nuclear**  
14 **plants?**
- 15 A. Yes. Four vendors were issued contracts that include similar scopes of work for  
16 the Company's PSL 1 & 2 and PTN 3 & 4 units, as well as for the work  
17 concurrently progressing at NextEra's unregulated Point Beach Nuclear Power  
18 Plant in Manitowoc, Wisconsin. This has occurred because these vendors were  
19 able to offer substantial savings to the Company and its customers if they were  
20 awarded the scope of work for all three projects.
- 21 **Q. What has been done to make certain that the charges for the work being**  
22 **performed for the NextEra's Point Beach facility are kept separate from**  
23 **the regulated PSL 1 & 2 and PTN 3 & 4 units?**

1 A. FPL has established a series of overlapping processes that are designed to ensure  
2 that these costs are separated. Foremost amongst these processes, is that each  
3 project was issued a separate contract and purchase order under which the  
4 vendor must bill time. The Company has then sought to educate these vendors  
5 of the need to bill employee time appropriately to the correct contract and  
6 purchase order. In addition, as described earlier, each invoice received by the  
7 Company is reviewed by subject matter experts to ensure the invoice costs are  
8 reasonable and relevant to the end product that has been produced for each site.  
9 This review includes capturing any clerical errors where a vendor employee has  
10 entered the wrong purchase order when billing time or materials to the project  
11 and testing the reasonableness of the costs for each of the projects. Lastly, the  
12 EPU Project is on an annual internal audit review cycle. These audits serve as a  
13 backstop to make certain that any Point Beach related costs that might have  
14 made it through the first two layers of internal controls are correctly charged to  
15 Point Beach. Internal Audit last reviewed the EPU Project in the summer of  
16 2008 and is expected to perform a similar review during 2009.

17 **Q. Did Concentric have any recommendations related to the EPU Project's**  
18 **Contract Management and Administration practices and internal controls?**

19 A. Yes. Concentric has made two recommendations to FPL related to ways in  
20 which the Company can improve its oversight of the EPU Project's vendors.  
21 The first of these recommendations relates to the Contract Deviation Log  
22 mentioned earlier. Concentric has recommended that the Company include a  
23 field in this document that provides an explanation for the deviation. Concentric



1 has made this recommendation to allow the EPU Project to track the cause of  
2 the deviation, and to institute corrective actions.

3 Additionally, Concentric has recommended that the EPU Project develop a clear  
4 procedure for ensuring that the EPU Project's vendors with similar scopes of  
5 work at the Company's regulated and NextEra's unregulated plants are billed  
6 separately and appropriately for the work being performed. Concentric has  
7 recommended that this procedure be communicated to relevant project vendors  
8 on an annual basis through a training presentation, and that a record of this  
9 training be maintained for later reference. It is important to note that Concentric  
10 has not found evidence that this is a persistent problem that would affect the  
11 costs the Company is seeking to recover in this proceeding. Instead, Concentric  
12 is making this recommendation on a proactive basis to make certain that as  
13 spending with these vendors increases, the costs associated with Point Beach are  
14 kept separate from the work completed for the Company's regulated nuclear  
15 plants. Additionally, the EPU Project Team has noted that the Point Beach  
16 Uprate project is maintaining a schedule that is approximately one year ahead of  
17 the EPU Project. Thus, there is little potential overlap in the scopes of work that  
18 is being performed at a given time.

19 **Q. What internal oversight mechanisms are in place to ensure the project  
20 costs are the result of prudent decision-making?**

21 A. The EPU Project is subject to a number of internal oversight mechanisms which  
22 ensure that the costs the Company is seeking to recover in this proceeding are  
23 prudently incurred. These mechanisms start with a series of EPU Project

1 Instructions (“EPPI”) that are used to implement the Company’s general  
2 corporate policies and procedures. In addition, various reporting mechanisms by  
3 the EPU Project Team ensure that every level of the FPL management structure  
4 is kept up-to-date and involved in key decisions. Finally, the Company has  
5 instituted an internal audit procedure that is currently reviewing the EPU Project  
6 on an annual basis to make certain that the EPU Project is complying with the  
7 Company’s accounting policies and procedures.

8 **Q. Please further describe the EPPIs.**

9 A. The EPPIs are used as a guidebook for the EPU Project Team and provide  
10 specific, stepwise processes for implementing the Company’s general policies and  
11 procedures into the EPU Project on a daily basis. The EPPIs were initially  
12 developed by key project oversight staff and are updated on an as needed basis,  
13 including the addition of new EPPIs as may be warranted. In summary, the  
14 EPPIs are a valuable desktop reference guide used to manage the projects on a  
15 daily basis.

16 **Q. Please describe the various reporting mechanisms which are used by  
17 FPL’s corporate management to monitor various aspects of the EPU  
18 Project.**

19 A. Several reporting mechanisms have been established to ensure that key decisions  
20 related to the EPU Project are prudent and made at the appropriate level of  
21 FPL’s management structure. This allows the Company to leverage the  
22 experience of its executive team and to correct concerns at an early stage. These  
23 reporting mechanisms include presentations and status calls as well as periodic

1 reports. Concentric found evidence of the following presentations and status  
2 calls:

- 3 • On a daily basis, the EPU Project Team holds a status call to  
4 update the entire EPU Project Team, review the schedule and  
5 address emergent issues. These calls include the EPU Site  
6 Directors, the EPU Project Managers, the EPU Director and the  
7 Vice President in charge of the EPU Project. Minutes of these  
8 meetings are produced to memorialize them for later reference.
- 9 • On a weekly basis, the project management team meets to discuss  
10 larger strategy concerns and to address emerging issues.
- 11 • On a bi-weekly basis, the EPU Project Team produces a technical  
12 presentation for the Chief Nuclear Operating Officer. These  
13 presentations focus on the technical hurdles being faced by the  
14 EPU Project Team and provide the team with an opportunity to  
15 leverage this executive's extensive nuclear project experience.
- 16 • On an almost monthly basis, the EPU Project Management  
17 provides a status update to the FPL Group's Executive Steering  
18 Committee. These presentations focus on the EPU Project's  
19 schedule and budget performance and discuss key strategy issues  
20 which require this Committee's input.

21 In addition, Concentric reviewed the following periodic reports that were being  
22 issued by the project:

- 1                   • On a weekly basis, the EPU Project produces a report entitled
- 2                   “Key Project Indicators,” which is used to monitor trends in the
- 3                   project budget and schedule. This report is used to inform the
- 4                   entire EPU Project Team of the EPU Project’s performance
- 5                   • On a monthly basis, the EPU Project produces a “Budget
- 6                   Variance and Project and Contract Deviation” report. These
- 7                   reports are used to monitor longer term budget and schedule
- 8                   trends.

9   **Q. Please describe some of the key decision-making processes that were**  
10 **completed in 2008.**

11 A. Several key strategic decisions related to the EPU Project were made in 2008,  
12 including the decision to reorganize the project team from a project scoping and  
13 planning organization to one that is focused on executing the EPU Project. This  
14 planned shift occurred near the end of 2008 and was done to ensure that  
15 employees and contractors are focused on efficiently executing the EPU Project.  
16 Additionally, the EPU Project shifted from a strategy whereby FPL would be  
17 responsible for coordinating the various vendors utilized in the EPU Project to a  
18 strategy that employs an EPC vendor. In the last case, the decision to pursue the  
19 EPC strategy was made within the Executive Steering Committee, based on a  
20 recommendation of the EPU Project Team; following that team’s recognition  
21 that potential cost savings could result from this strategy.

22 **Q. Please describe the Internal Audit process used to monitor the EPU**  
23 **Project.**

1 A. The Internal Audit process is used as a backstop to make certain the EPU  
2 Project is complying with the Company's internal policies and procedures. The  
3 projects are currently reviewed on an annual basis. This financial review ensures  
4 that costs are being appropriately charged to the project and that the EPU  
5 Project is complying with the Company's accounting policies. These reviews are  
6 completed by the Internal Audit Division which does not report to any of the  
7 EPU Project Team members to protect the Internal Audit employees'  
8 independence. Instead, Internal Audit reports to the FPL Group Chairman and  
9 CEO.

10 **Q.**

11

12 **A.**

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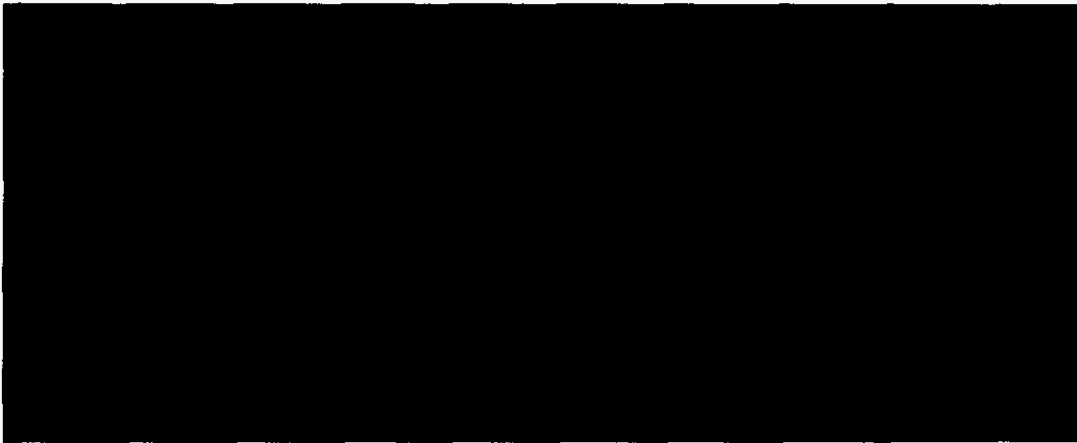
19 **Q.**

20

21 **A.**

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7 **Q. Have the other recommendations of the internal audits been addressed by**  
8 **the EPU Project?**

9 A. Yes. Concentric has reviewed a document produced by representatives assigned  
10 to the EPU Project from Nuclear Business Operations. This report documents  
11 the date that each Internal Audit finding was addressed, how they were addressed  
12 and who was responsible for implementing the actions.

13 **Q. What other forms of internal oversight are in place to review the EPU**  
14 **Project?**

15 A. FPL has also instituted a Corporate Risk Committee. This committee is  
16 responsible for periodically reviewing the EPU Project and identifying key  
17 project risks. The EPU Project then tracks these risks in a Risk Matrix to  
18 determine the potential impacts to the budget and schedule and identifies means  
19 to mitigate these risks as the EPU Project progresses. The Corporate Risk  
20 Committee is composed of directors from various divisions of the Company and  
21 allows the EPU Project to leverage the extensive experience of these individuals  
22 as the EPU Project is executed.

1 **Q. Did Concentric have any recommendations related to the EPU Project's**  
2 **internal oversight mechanisms?**

3 A. Yes. Concentric has provided several recommendations to FPL to help develop  
4 improved oversight mechanisms. These recommendations include a more  
5 robust and documented internal audit process to ensure that Internal Audit  
6 recommendations are corrected and that the processes in question are re-tested  
7 to ensure future compliance with the Company's policies. In addition,  
8 Concentric has recommended that Internal Audit require the EPU Project Team  
9 to submit documented evidence that indicates when and how each finding was  
10 corrected and who was responsible for making this correction. This  
11 documentation should then be stored as a single document package along with  
12 the report to simplify comparisons between each year's annual reviews. Finally,  
13 Internal Audit should schedule a follow-up review to selectively re-test its  
14 recommendations to make certain that each finding has not only been corrected  
15 on a retrospective basis, but also on a prospective basis. This ensures that the  
16 lessons learned from each annual review cycle are effectively implemented.

17 Similarly, Concentric has recommended that the Company begin documenting  
18 key project decisions that are made each year. These decisions should be  
19 published as "Key Decision Memoranda" and should include a discussion of the  
20 information that was known at the time of the decision, what decision was made  
21 and the basis for that decision. This process will allow the EPU Project and  
22 independent third parties to review more easily past decisions and to understand  
23 both the strategy and trade-offs that were considered at the time of the decision.

1 **Q. What external oversight mechanisms has the Company put in place to**  
2 **ensure the EPU Project has adequate internal controls and is prudently**  
3 **incurring costs?**

4 A. The primary external oversight mechanism put in place for the EPU Project  
5 relates to Concentric's review of the EPU Project's internal controls. As has  
6 been noted throughout my testimony, Concentric has conducted a thorough  
7 review of the EPU Project, its procedures and the various mechanisms in place  
8 to ensure compliance with these procedures. Concentric has focused on  
9 ensuring that these internal controls have been implemented, and as a result, that  
10 the EPU Project has been prudently managed.

11 The EPU Project Team members also maintain close relationships with their  
12 counterparts at other nuclear power plants around the country. These valuable  
13 relationships allow the EPU Project Team to monitor developments or  
14 challenges at other plants and leverage those experiences at PSL 1 & 2 and PTN  
15 3 & 4.

16 **Q. Based on Concentric's review are there additional recommendations that**  
17 **have been made to the Company?**

18 A. Yes. Concentric has provided the Company with several additional  
19 recommendations related to project staffing. These recommendations include  
20 the development of a workforce contingency plan in the event that other  
21 infrastructure projects around the country divert resources from the EPU  
22 Project, undertaking a concerted effort to fill the currently vacant oversight  
23 positions, and a "Monthly Staffing Report" that identifies and explains the



1 reasons for the vacant positions that have been open for more than 30 days.  
2 These recommendations are being made to make certain that FPL has the right  
3 people in place to deliver the best possible results for the Company's customers.

4 With regard to the first recommendation, Concentric has seen in other projects  
5 that an exceedingly high demand for a highly skilled workforce, such as is  
6 required for the EPU Project, has led to project delays due to an inability to  
7 attract workers. This type of shortage could occur again if the economy begins  
8 to return to a period of growth during the project's implementation phase. As a  
9 result, the Company should be prepared for a possible decrease in the number of  
10 available workers.

11 Similarly, Concentric understands that certain key oversight positions within the  
12 project remain unfilled. Thus, Concentric has recommended that the Company  
13 undertake a concerted effort during 2009 to fill these positions. One means of  
14 monitoring the progress of this effort is the use of a Monthly Staffing Report  
15 that identifies positions that have been vacant for more than 30 days and  
16 provides explanation as to why the EPU Project Team has not filled the open  
17 positions.

18 **Section IV: Turkey Point 6 & 7**

19 **Q. Please describe how the project budget was developed for PTN 6 & 7.**

20 A. The PTN 6 & 7 project budget was developed in a similar manner as the EPU  
21 Projects' budget. In other words, the PTN 6 & 7 project has used the same  
22 bottom-up analysis needed to ensure a rigorous estimate has been developed.

1 **Q. Has Concentric attempted to benchmark the project budget that was**  
2 **developed for PTN 6 & 7?**

3 A. Yes. Although being consistent or inconsistent with an industry average cost  
4 estimate is not a demonstration of prudence or imprudence, Concentric has  
5 attempted to compare the Company's project budget with those of other  
6 developers of the AP 1000 reactor technology. This benchmarking analysis is  
7 presented as Exhibit JJR-3, Comparison of Cost Estimates for new AP 1000  
8 Reactors. As can be seen from this exhibit, FPL's budget has been compared  
9 to estimates provided by Duke Energy, Progress Energy Carolinas, Progress  
10 Energy Florida, South Carolina Electric & Gas, Southern Company and the  
11 Tennessee Valley Authority. Based on this comparison it is clear that the  
12 Company's estimate is consistent with the estimates developed by other utilities  
13 around the country.

14 **Q. What mechanisms does the PTN 6 & 7 Project Team use to monitor**  
15 **budget performance?**

16 A. The PTN 6 & 7 Project Team uses at least seven (7) different reports to manage  
17 the PTN 6 & 7 project's budget performance. As an example, these reports  
18 include a weekly "Performance Indicator Report" that monitors the number of  
19 work hours incurred relative to those that were originally forecast. On a monthly  
20 basis, the PTN 6 & 7 Project Management receives several reports that detail  
21 budget variances by department and provide explanations of those variances. In  
22 addition, these reports include a description of all costs expended in the current  
23 month and quarter as well as year-to-date and total cumulative spending.  
24 Additionally, the PTN 6 & 7 Project Team publishes monthly Project Dashboard

1 and Corporate Variance reports for the Company's senior executives. These  
2 reports include a description and explanation of any budget variances.

3 **Q. Did Concentric have recommendations related to the PTN 6 & 7 project**  
4 **budget processes?**

5 A. Concentric has found that the PTN 6 & 7 Project Team has acted prudently  
6 when developing its initial budget and in tracking its performance relative to the  
7 initial estimate. The PTN 6 & 7 Project Team has developed multiple reports  
8 that track budget performance on a cumulative and periodic basis, along with a  
9 process for describing variances in actual expenditures relative to the budget. In  
10 addition, Concentric found that the PTN 6 & 7 project budget processes include  
11 multiple overlapping oversight mechanisms that help ensure that the project's  
12 management and the Company's senior management are well informed of the  
13 project's performance.

14 **Q. Please describe how the PTN 6 & 7 Project Team produces and manages**  
15 **the PTN 6 & 7 project schedule.**

16 A. Consistent with the discussion of the EPU Project, the PTN 6 & 7 project  
17 schedule is managed using an industry standard software package developed by  
18 Primavera Systems, Inc. This software package uses the CPM of scheduling to  
19 define activity relationships and resource loadings. The schedule that has been  
20 developed to date is continuously updated to reflect any new information that is  
21 received from the PTN 6 & 7 project's vendors. The method for updating this  
22 schedule, including the proper electronic format, is well documented and is being

1           communicated to vendors to make certain that the PTN 6 & 7 project's  
2           expectations are clear.

3   **Q.    What mechanisms are in place to ensure that the PTN 6 & 7 Project Team**  
4   **is prudently managing its schedule performance?**

5   A.    The PTN 6 & 7 Project Team has taken a number of steps to proactively  
6           monitor and manage its schedule performance. These steps include publishing a  
7           number of reports that detail the PTN 6 & 7 project's schedule performance on  
8           a weekly and monthly basis. These reports include Key Performance Indicators  
9           that provide a comparison of the number of activity starts and finishes in a given  
10          week to the number of activities that were expected to start and/or finish in the  
11          week. Additionally, a "Six Week Look-Ahead Report" is issued on a weekly basis  
12          to provide an update on the activities that are projected to start during the next  
13          six weeks. This report gives the PTN 6 & 7 Project Team adequate notice of  
14          upcoming activities and allows the team to plan their time accordingly. Lastly,  
15          the PTN 6 & 7 Project Team has incorporated similar reporting requirements  
16          into its contracts with key vendors such as Bechtel and Black & Veatch/Zachry  
17          ("BVZ"). As a result, both vendors are required to submit monthly progress  
18          reports detailing their progress to date, including any projected delays.

19   **Q.    How is the PTN 6 & 7 Project Team making certain that it is prudently**  
20   **managing and administering its procurement processes?**

21   A.    As described earlier in my testimony, FPL has a number of corporate policies  
22           and procedures related to the procurement function. These corporate policies,  
23           implemented within the ISC organization, are sufficiently detailed to ensure that

1 the ISC organization prudently manages the vast number of procurement  
2 activities that must take place to support an endeavor such as the PTN 6 & 7  
3 project. Additionally, these procedures clearly state a preference for competitive  
4 bidding except in instances where no other supplier can be identified, in cases of  
5 emergencies or when a compelling business reason not to seek competitive bids  
6 exists.

7 Certain members of the ISC organization that maintain a matrix reporting  
8 relationship to the PTN 6 & 7 project are also members of the AP 1000 Owner's  
9 Group – Supply Chain Management Working Group. This is a collaborative  
10 group that is working to enhance the supply chain management for all developers  
11 of the AP 1000 through information sharing and possible joint procurement  
12 initiatives.

13 **Q. Did Concentric review examples of how these processes were**  
14 **implemented throughout 2008?**

15 A. Yes. Concentric reviewed how these processes were implemented for a number  
16 of procurements, including the competitively bid Bechtel Construction and  
17 Operating License Application (“COLA”) contract as well as the single sourced  
18 contract for preliminary engineering, which was issued to BVZ.

19 **Q. Please describe the competitive bidding process that resulted in the**  
20 **Bechtel COLA contract.**

21 A. Beginning in the summer of 2007, ISC met with several members of the PTN 6  
22 & 7 Project Team to develop a written scope of work that would encompass the  
23 preparation of a COLA for the PTN 6 & 7 project. Concurrently, ISC sought to

1 determine the universe of potential vendors who might be interested in receiving  
2 the RFP. This process identified two potential vendors, and an RFP was issued  
3 to these companies. Each company was then given an opportunity to submit  
4 clarifying questions. The answers to these questions were provided to both  
5 vendors to ensure that a level playing field was maintained. Responses to the  
6 RFP were obtained from both companies in August 2007, and ISC assembled a  
7 team of subject matter experts that were responsible for objectively evaluating  
8 the proposals based on the PTN 6 & 7 project's needs and the vendors'  
9 capabilities. FPL then entered into negotiations with both companies and  
10 ultimately awarded the contract to Bechtel in November 2007.

11 **Q. How has the PTN 6 & 7 Project Team responded to the concerns raised**  
12 **last year related to the Company's use of single and sole source**  
13 **justifications?**

14 A. The PTN 6 & 7 Project Team has responded to the Commission's concern by  
15 ensuring all sole or single source justification memoranda which are issued on a  
16 going forward basis include sufficient detail so as to make certain that a non-  
17 technical third party can understand the prudent business reason for this  
18 procurement strategy. This process was achieved by expanding the number of  
19 reviewers of the single and sole source justification memoranda and by  
20 conducting training to heighten the PTN 6 & 7 Project Team's awareness of the  
21 issue.

1 **Q. Does the PTN 6 & 7 Project Team expect the number of goods and**  
2 **services procured on a single or sole source basis to grow or contract in**  
3 **the future?**

4 A. In contrast to the EPU Projects, which are expected to see a decrease in the  
5 number of single and sole source procurements as the EPU Projects proceed, the  
6 PTN 6 & 7 project anticipates the number of goods and services procured on a  
7 single or sole source basis will grow as the PTN 6 & 7 project progresses. This  
8 results from the fact that many of the future goods and services that must be  
9 procured relate to proprietary information that is specific to a single reactor  
10 design. Thus, it will often be impossible to locate another vendor that is capable  
11 of providing these goods or services in a cost effective manner.

12 **Q. What processes are in place to ensure that the PTN 6 & 7 project is**  
13 **receiving the full value for the goods and services that have been procured**  
14 **and that appropriate charges are being invoiced to the projects?**

15 A. In order to ensure that the Company and its customers receive the full value of  
16 the goods and services that are procured, the PTN 6 & 7 Project Team includes a  
17 Project Controls Manager. This Project Controls Manager is responsible for  
18 reviewing the invoices received from each vendor and ensuring that the vendors  
19 are complying with the terms and conditions of their contracts. To do this, the  
20 Project Controls Manager receives the invoices from each vendor. Upon receipt,  
21 an Invoice Review and Verification Form that details who is responsible for  
22 reviewing each section of the invoice is attached to the invoice. This form is sent  
23 to each reviewer who must verify that the appropriate charges are included in the

1 bill and that the work product meets the PTN 6 & 7 project's needs prior to  
2 payment.

3 **Q. Has Concentric developed any recommendations to improve the PTN 6 &**  
4 **7 project's procurement and contract administration processes?**

5 A. Yes. Concentric has provided the Company with recommendations concerning  
6 the PTN 6 & 7 project's procurement and contract administration processes.  
7 These recommendations include developing a process that documents why a  
8 contract change order does or does not exceed the original contract scope and an  
9 annual review process to make certain that Bechtel is billing the PTN 6 & 7  
10 project for subcontractors in accordance with its contract.

11 **Q. Please describe how the PTN 6 & 7 Project Team is organized.**

12 A. The PTN 6 & 7 Project Team consists of two groups with the talent and skill  
13 sets required to make certain that the best resource is used to execute the project.  
14 These two groups are the Project Development and New Nuclear Projects  
15 personnel. The Project Development organization is responsible for executing  
16 all facets of the project that do not fall under the purview of the NRC.  
17 Conversely, the New Nuclear Projects organization is responsible for submitting  
18 the COLA and all aspects of engineering, procurement, construction and  
19 subsequent startup. Both organizations are led by senior members of FPL's  
20 management structure who have extensive experience. Additionally, both  
21 organizations have key employees from other business groups within FPL that  
22 maintain matrix organizational relationships with the project.



1 **Q. What internal reporting mechanisms are used to inform the Company's**  
2 **senior management of the PTN 6 & 7 project's status and the key**  
3 **decisions?**

4 A. The PTN 6 & 7 Project Team uses a number of periodic reports to inform the  
5 project management team and the Company's Executive Steering Committee.  
6 These reports are detailed in direct testimony of Company Witness Steven D.  
7 Scroggs<sup>13</sup> and are used to make certain that the costs the PTN 6 & 7 project is  
8 incurring are the result of prudent decision-making processes. These reports  
9 include both weekly and monthly reports that detail key performance indicators,  
10 budget and schedule performance and key project decisions.

11 **Q. Please describe what key decisions related to the PTN 6 & 7 project were**  
12 **made between project inception and year-end 2008.**

13 A. Several key decisions were made since the PTN 6 & 7 project's inception,  
14 including the Company's decision to site the new units at the Turkey Point site,  
15 the selection of the AP 1000 reactor technology, the decision to enter into a  
16 reservation agreement for the procurement of a manufacturing slot for certain  
17 heavy forgings, the decision to separate construction services from the  
18 engineering and procurement contract and certain decisions related to the water  
19 source for PTN 6 & 7.

20 **Q. Please describe the process the Company used to select the AP 1000**  
21 **reactor technology.**

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<sup>13</sup> Direct Testimony of Steven D. Scroggs, March 2, 2009, Exhibit SDS-5.

1 A. Beginning in 2006, the PTN 6 & 7 Project Team met to determine which reactor  
2 technologies should be considered for the PTN 6 & 7 project. Criteria for this  
3 review included the vendor's qualifications, the safety and reliability of the  
4 technology, as well as how far the technology had advanced relative to other  
5 technologies. Based on these criteria FPL invited four vendors to submit a  
6 response to the Company's request for information ("RFI"). The Company then  
7 invited each vendor to a meeting with FPL staff to discuss their respective  
8 technologies. These meetings took place in July 2006 and included an  
9 appropriate mix of subject matter experts to review and properly assess the  
10 presentations provided by the vendors. Following these meetings, FPL  
11 submitted additional clarifying questions to the vendors. From the information  
12 received during the vendor presentations and the vendors' responses to the  
13 additional clarifying questions, FPL developed a comparison of the various  
14 reactor technologies to ultimately select the AP 1000 as the preferred technology.  
15 The selection criteria included such factors as first-of-a-kind engineering, the  
16 maturity of the technology, construction schedule and operating efficiency.

17 **Q. Please describe how the Company decided to enter into a reservation**  
18 **agreement?**

19 **A.** In early 2008, upon advice from the reactor vendor, FPL became aware that the  
20 global market for ultra heavy forging manufacturing slots was becoming  
21 increasingly constrained. This situation resulted from an unusually robust global  
22 demand for ultra heavy forgings that are used in the construction of new nuclear  
23 power plants and other heavy industrial processes such as chemical production  
24 and petroleum refining, as well as the limited number of global suppliers for

1           these components. As a result, FPL determined it was appropriate to enter into  
2           an agreement with the reactor vendor to procure the manufacturing slots for  
3           ultra heavy forgings necessary to maintain the PTN 6 & 7 project schedule.

4   **Q.   What evidence of a constrained global market for these components**  
5           **existed at the time of the Company's decision to enter the reservation**  
6           **agreement?**

7   A.   In 2008, it became clear, based on the number of nuclear reactors projected to be  
8           built before 2025, that demand for these components was likely to be quite  
9           robust. The World Nuclear Association noted in December 2008 that the  
10          International Atomic Energy Agency is now predicting that at least 70 new  
11          reactors will be constructed within the next fifteen years.<sup>14</sup> This number does  
12          not include several additional reactors that are under consideration in countries  
13          such as France, India, Italy and the United Kingdom. In addition, it was well  
14          known within the industry that there is currently a single supplier in the world  
15          that is capable of supplying these components, Japan Steel Works. While other  
16          manufacturers are investigating the possibility of investing in this capability,  
17          Japan Steel Works remains to this day the only supplier reasonably certain of  
18          being able to produce these components. As a result, it is clear that without  
19          significant expansion in the number of suppliers for these components or  
20          significant cancellation of new construction programs, the global supply chain  
21          for ultra heavy forgings will remain severely constrained. Thus, FPL prudently  
22          sought to secure the necessary manufacturing slots for these components in  
23          order to preserve the benefits of nuclear power for its customers.

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<sup>14</sup> "Plans for New Reactors," World Nuclear Association, December 2008. <http://www.world-nuclear.org/info/inf17.html>

1 **Q. Please describe why FPL chose to split the engineering and procurement**  
2 **scopes of work and the construction scope of work.**

3 A. FPL held discussions with a consortium of Shaw-Stone & Webster and  
4 Westinghouse (the "Consortium") regarding an engineering, procurement and  
5 construction ("EPC") contract throughout 2008. Through these discussions, it  
6 became apparent that the structure of the agreement proposed by the  
7 Consortium did little to manage the risk of price escalation during the five-year  
8 construction and startup period. As a result, FPL made a strategic decision to  
9 split the EPC contract into two pieces; an engineering and procurement contract  
10 and a construction contract. By splitting the agreement into parts, FPL will  
11 continue to pursue the AP 1000 technology for use at PTN 6 & 7, but will  
12 preserve the option to competitively bid the construction of the project at a later  
13 date. In order to accomplish this strategy, FPL has retained BVZ to perform  
14 certain preliminary engineering and site layout activities. While there is a cost  
15 associated with this work, the opportunity exists to save substantially more for  
16 FPL's customers once the construction agreement is put out for bid. This  
17 opportunity will result from the completion of detailed design work that will  
18 better define the quantity of commodities required to construct the plant and  
19 from the sharing of lessons learned from the first wave of AP 1000 construction  
20 projects.

21 **Q. Has the PTN 6 & 7 project undergone an internal audit since its**  
22 **inception?**

23 A. Yes. The PTN 6 & 7 project was reviewed by the Company's Internal Audit  
24 organization in July 2008. The Internal Audit organization is separate from the

1 PTN 6 & 7 Project Team and tested the PTN 6 & 7 project's internal and  
2 financial controls to make certain that only appropriate charges were being billed  
3 to the project and that these charges were being accounted for correctly. [REDACTED]

4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 **Q. Does the Company maintain other internal oversight mechanisms for the**  
10 **PTN 6 & 7 project?**

11 **A.** Yes. The Company maintains two other internal oversight mechanisms that  
12 ensure that the PTN 6 & 7 project is prudently incurring costs. The first of these  
13 mechanisms is a FPL Corporate Risk Committee. As discussed earlier in my  
14 testimony, this committee consists of FPL directors and other senior employees,  
15 and is tasked with periodically reviewing the project and its associated risks. The  
16 PTN 6 & 7 Project Team went before the FPL Corporate Risk Committee on  
17 June 25, 2008 to present initial details of the project, and to seek guidance on  
18 certain aspects of the project. The FPL Corporate Risk Committee then  
19 presented its recommendations in documented meeting minutes that were issued  
20 the same day.

21 The second internal oversight mechanism is the Licensing Review Board. This  
22 group is tasked with reviewing the COLA prior to its submission to the NRC.  
23 This review is done to ensure that the COLA is consistent with FPL's

1 requirements and of a high quality. By conducting this review, the PTN 6 & 7  
2 Project Team is ensuring it receives the highest value from its COLA vendor and  
3 possibly preventing delays in the NRC review schedule.

4 **Q. Did Concentric have any recommendations related to the PTN 6 & 7**  
5 **project's internal oversight mechanisms?**

6 A. Yes. Concentric has provided three recommendations to enhance the PTN 6 &  
7 7 project's internal oversight mechanisms on a going forward basis. These  
8 recommendations are intended to help demonstrate that the costs being incurred  
9 by the PTN 6 & 7 project are the result of prudent decision making processes.

10 The first of these recommendations relates to the Company's Internal Audit  
11 organization. Concentric has recommended the Company institute a more  
12 robust and documented internal audit procedure to ensure that all  
13 recommendations of the internal audits are adequately corrected and that the  
14 processes in question are re-tested. Concentric has also recommended that  
15 Internal Audit maintain this documentation as a single document package along  
16 with the Internal Audit report.

17 Secondly, the PTN 6 & 7 Project Team should begin producing "Key Decision  
18 Memoranda" to memorialize critical project decisions. These memoranda should  
19 include a discussion of the information that was known at the time of the  
20 decision, what decision was made and the basis for that decision. These  
21 documents will allow management and third-parties to quickly review previous  
22 decision making processes.

1 Finally, Concentric has recommended that the PTN 6 & 7 Project Instruction  
2 “Quality Assurance for New Nuclear Projects - Project Instructions” (“QI-2-  
3 NNP-001”) become a living document that is updated on a periodic (i.e.,  
4 quarterly) basis.

5 **Q. What external oversight mechanisms have been used by the PTN 6 & 7**  
6 **Project Team to ensure that the Company is prudently incurring costs?**

7 A. The PTN 6 & 7 Project Teams have relied on a number of external reviews to  
8 ensure that the project is making decisions based on the best information that is  
9 available at the time of those decisions. These reviews have included a review of  
10 the reactor technology selection process by MPR Associates, a nationally  
11 recognized engineering firm, to ensure that the process that was used to select a  
12 reactor vendor was thorough and fairly conducted.

13

14 **Section V: Recommendations and Conclusions**

15 **Q. Please summarize your conclusion and recommendations regarding the**  
16 **EPU Project.**

17 A. Concentric has determined that the EPU Project, as a general matter, has  
18 followed FPL’s processes and procedures, and that the resultant decisions that  
19 were made consistent with these processes and procedures appear to be prudent.  
20 The EPU Project’s progress has included several key decisions in 2008, including  
21 the Company’s decision to pursue an EPC contracting strategy and to reorganize  
22 the project from an initial project scoping structure to a structure that is better  
23 suited to execute the project. Finally, Concentric has determined that the

1 appropriate level of oversight has been included to ensure that the project is  
2 making reasonable and prudent decisions.

3 With regard to Concentric's specific recommendations, Concentric has  
4 recommended that the EPU Project undertake certain enhancements to the  
5 Company's policies and procedures including adding additional detail to certain  
6 project reports, developing a time and expense billing training procedure for  
7 EPU Project vendors with similar scopes of work at NextEra's Point Beach  
8 facility and the Company's St. Lucie and Turkey Point Facilities, developing a  
9 more robust Internal Audit process that documents and retests corrective actions  
10 taken to address Internal Audit's recommendations, developing a process that  
11 documents key decisions, and working to staff key project oversight positions in  
12 2009.

13 **Q. Please summarize Concentric's finding and conclusions relative to the**  
14 **PTN 6 & 7 project.**

15 A. Concentric has found that FPL has acted prudently while incurring certain costs  
16 related to the PTN 6 & 7 project from the beginning of the projects through  
17 year-end 2008. These actions were specifically designed to methodically preserve  
18 the option to pursue new nuclear generating capacity at the Company's Turkey  
19 Point site while delaying a commitment to build this capacity for as long as is  
20 reasonably feasible. By doing so, the Company is preserving its customers'  
21 ability to receive the substantial economic benefits of nuclear power at a future  
22 date while minimizing the near term expenditures required to maintain this  
23 option.



1           Additionally Concentric has proposed specific procedural recommendations to  
2           enhance the PTN 6 & 7 project's internal controls including developing a more  
3           robust Internal Audit process that documents and retests corrective actions taken  
4           to address Internal Audits recommendations, developing a process to document  
5           key decisions, developing a process to identify and verify with subject matter  
6           experts why contract change orders do or do not exceed the original contract  
7           scope, developing a process to ensure that Bechtel is passing along sub-  
8           contractor costs without mark-up, and periodically updating certain project  
9           instructions.

10          Finally, Concentric has determined that the project budget that has been  
11          developed by FPL is consistent with the budget forecasts of other developers of  
12          the AP 1000 who are pursuing two units on a schedule that is similar FPL's  
13          projected in-service dates.

14   **Q.**     **Does this conclude your testimony?**

15   **A.**     Yes, it does.

**John J. Reed**  
**Chairman and Chief Executive Officer**

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John J. Reed is a financial and economic consultant with more than 30 years of experience in the energy industry. Mr. Reed has also been the CEO of an NASD member securities firm, and Co-CEO of the nation's largest publicly traded management consulting firm (NYSE: NCI). He has provided advisory services in the areas of mergers and acquisitions, asset divestitures and purchases, strategic planning, project finance, corporate valuation, energy market analysis, rate and regulatory matters and energy contract negotiations to clients across North and Central America. Mr. Reed's comprehensive experience includes the development and implementation of nuclear, fossil, and hydroelectric generation divestiture programs with an aggregate valuation in excess of \$20 billion. Mr. Reed has also provided expert testimony on financial and economic matters on more than 150 occasions before the FERC, Canadian regulatory agencies, state utility regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada. After graduation from the Wharton School of the University of Pennsylvania, Mr. Reed joined Southern California Gas Company, where he worked in the regulatory and financial groups, leaving the firm as Chief Economist in 1981. He served as executive and consultant with Stone & Webster Management Consulting and R.J. Rudden Associates prior to forming REED Consulting Group (RCG) in 1988. RCG was acquired by Navigant Consulting in 1997, where Mr. Reed served as an executive until leaving Navigant to join Concentric as Chairman and Chief Executive Officer.

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**REPRESENTATIVE PROJECT EXPERIENCE**

**Executive Management**

As an executive-level consultant, worked with CEOs, CFOs, other senior officers, and Boards of Directors of many of North America's top electric and gas utilities, as well as with senior political leaders of the U.S. and Canada on numerous engagements over the past 25 years. Directed merger, acquisition, divestiture, and project development engagements for utilities, pipelines and electric generation companies, repositioned several electric and gas utilities as pure distributors through a series of regulatory, financial, and legislative initiatives, and helped to develop and execute several "roll-up" or market aggregation strategies for companies seeking to achieve substantial scale in energy distribution, generation, transmission, and marketing.

**Financial and Economic Advisory Services**

Retained by many of the nation's leading energy companies and financial institutions for services relating to the purchase, sale or development of new enterprises. These projects included major new gas pipeline projects, gas storage projects, several non-utility generation projects, the purchase and sale of project development and gas marketing firms, and utility acquisitions. Specific services provided include the development of corporate expansion plans, review of acquisition candidates, establishment of divestiture standards, due diligence on acquisitions or financing, market entry or expansion studies, competitive assessments, project financing studies, and negotiations relating to these transactions.

**Litigation Support and Expert Testimony**

Provided expert testimony on more than 150 occasions in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included gas distribution utilities, gas pipelines, gas producers, oil producers, electric utilities, large energy consumers, governmental and regulatory agencies, trade associations, independent energy project developers, engineering firms, and gas and power marketers. Testimony has focused on issues ranging from broad regulatory and economic policy to virtually

all elements of the utility ratemaking process. Also frequently testified regarding energy contract interpretation, accepted energy industry practices, horizontal and vertical market power, quantification of damages, and management prudence. Have been active in regulatory contract and litigation matters on virtually all interstate pipeline systems serving the U.S. Northeast, Mid-Atlantic, Midwest, and Pacific regions.

Also served on FERC Commissioner Terzic's Task Force on Competition, which conducted an industry-wide investigation into the levels of and means of encouraging competition in U.S. natural gas markets. Represented the interests of the gas distributors (the AGD and UDC) and participated actively in developing and presenting position papers on behalf of the LDC community.

#### **Resource Procurement, Contracting and Analysis**

On behalf of gas distributors, gas pipelines, gas producers, electric utilities, and independent energy project developers, personally managed or participated in the negotiation, drafting, and regulatory support of hundreds of energy contracts, including the largest gas contracts in North America, electric contracts representing billions of dollars, pipeline and storage contracts, and facility leases.

These efforts have resulted in bringing large new energy projects to market across North America, the creation of hundreds of millions of dollars in savings through contract renegotiation, and the regulatory approval of a number of highly contested energy contracts.

#### **Strategic Planning and Utility Restructuring**

Acted as a leading participant in the restructuring of the natural gas and electric utility industries over the past fifteen years, as an adviser to local distribution companies (LDCs), pipelines, electric utilities, and independent energy project developers. In the recent past, provided services to many of the top 50 utilities and energy marketers across North America. Managed projects that frequently included the redevelopment of strategic plans, corporate reorganizations, the development of multi-year regulatory and legislative agendas, merger, acquisition and divestiture strategies, and the development of market entry strategies. Developed and supported merchant function exit strategies, marketing affiliate strategies, and detailed plans for the functional business units of many of North America's leading utilities.

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## **PROFESSIONAL HISTORY**

### **Concentric Energy Advisors, Inc. (2002 – Present)**

Chairman and Chief Executive Officer

### **CE Capital Advisors (2004 – Present)**

Chairman, President, and Chief Executive Officer

### **Navigant Consulting, Inc. (1997 – 2002)**

President, Navigant Energy Capital (2000 – 2002)

Executive Director (2000 – 2002)

Co-Chief Executive Officer, Vice Chairman (1999 – 2000)

Executive Managing Director (1998 – 1999)

President, REED Consulting Group, Inc. (1997 – 1998)

### **REED Consulting Group (1988 – 1997)**

Chairman, President and Chief Executive Officer

### **R.J. Rudden Associates, Inc. (1983 – 1988)**

Vice President

**Stone & Webster Management Consultants, Inc. (1981 – 1983)**

Senior Consultant  
Consultant

**Southern California Gas Company (1976 – 1981)**

Corporate Economist  
Financial Analyst  
Treasury Analyst

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**EDUCATION AND CERTIFICATION**

B.S., Economics and Finance, Wharton School, University of Pennsylvania, 1976  
Licensed Securities Professional: NASD Series 7, 63, and 24 Licenses

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**BOARDS OF DIRECTORS (PAST AND PRESENT)**

Concentric Energy Advisors, Inc.  
Navigant Consulting, Inc.  
Navigant Energy Capital  
Nukem, Inc.  
New England Gas Association  
R. J. Rudden Associates  
REED Consulting Group

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**AFFILIATIONS**

National Association of Business Economists  
International Association of Energy Economists  
American Gas Association  
New England Gas Association  
Society of Gas Lighters  
Guild of Gas Managers

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SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
<b>Colorado Public Utilities Commission</b>				
Xcel Energy	8/04	Xcel Energy	Docket No. 031-134E	Cost of Debt
<b>CT Dept. of Public Utilities Control</b>				
United Illuminating	3/99	United Illuminating	Docket No. 99-03-04	Nuclear Plant Valuation
Southern Connecticut Gas	2/04	Southern Connecticut Gas	Docket No. 00-12-08	Gas Purchasing Practices
Southern Connecticut Gas	4/05	Southern Connecticut Gas	Docket No. 05-03-17	LNG/Trunkline
Southern Connecticut Gas	8/08	Southern Connecticut Gas	Docket No. 06-05-04	Peaking Service Agreement
<b>District Of Columbia PSC</b>				
Potomac Electric Power Company	3/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Direct)
Potomac Electric Power Company	5/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Supplemental Direct)
Potomac Electric Power Company	7/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Rebuttal)
<b>Fed'l Energy Regulatory Commission</b>				
BEC Energy - Commonwealth Energy System	2/99	Boston Edison Company/ Commonwealth Energy System	EC99-___-000	Market Power Analysis – Merger
Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	10/00	Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	Docket No. EC00-___	Market Power 203/205 Filing
Wyckoff Gas Storage	12/02	Wyckoff Gas Storage	CP03-33-000	Need for Storage Project
Indicated Shippers/Producers	10/03	Northern Natural Gas	Docket No. RP98-39-029	Ad Valorem Tax Treatment
Maritimes & Northeast Pipeline	6/04	Maritimes & Northeast Pipeline	Docket No. RP04-360-000	Rolled-In Rates
ISO New England	8/04	ISO New England	Docket No. ER03-563-030	Cost of New Entry
Transwestern Pipeline Company, LLC	9/06	Transwestern Pipeline Company, LLC	Docket No. RP06-614-000	

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Portland Natural Gas Transmission System	6/08	Portland Natural Gas Transmission System	Docket No. RP08-306-000	Market Assessment, natural gas transportation; rate setting
<b>Florida Public Service Commission</b>				
Florida Power and Light Co.	10/07	Florida Power & Light Co.	Docket No. 07____-EI	Need for new nuclear plant
Florida Power and Light Co.	5/08	Florida Power & Light Co.	Docket No. 080009-EI	New Nuclear cost recovery
<b>Florida Senate Committee on Communication, Energy and Utilities</b>				
Florida Power and Light Co.	2/09	Florida Power & Light Co.		Securitization
<b>Hawaii Public Utility Commission</b>				
Hawaiian Electric Light Company, Inc. (HELCO)	6/00	Hawaiian Electric Light Company, Inc.	Cause No. 41746	Standby Charge
<b>Indiana Utility Regulatory Commission</b>				
Northern Indiana Public Service Company	10/01	Northern Indiana Public Service Company	Docket No. 99-0207	Direct Testimony, Valuation of Electric Generating Facilities
Northern Indiana Public Service Company	01/08	Northern Indiana Public Service Company	Cause No. 43396	Asset Valuation
Northern Indiana Public Service Company	08/08	Northern Indiana Public Service Company	Cause N. 43526	Fair Market Value Assessment
<b>Iowa Utilities Board</b>				
Interstate Power and Light	7/05	Interstate Power and Light and FPL Energy Duane Arnold, LLC	Docket No. SPU-05-15	Sale of Nuclear Plant
Interstate Power and Light	5/07	City of Everly, Iowa	Docket No. SPU-06-5	Public Benefits
Interstate Power and Light	5/07	City of Kalona, Iowa	Docket No. SPU-06-6	Public Benefits
Interstate Power and Light	5/07	City of Wellman, Iowa	Docket No. SPU-06-10	Public Benefits
Interstate Power and Light	5/07	City of Terril, Iowa	Docket No. SPU-06-8	Public Benefits
Interstate Power and Light	5/07	City of Rolfe, Iowa	Docket No. SPU-06-7	Public Benefits
<b>Maryland Public Service Commission</b>				
Potomac Electric Power Company	8/99	Potomac Electric Power Company	Docket No. 8796	Stranded Cost & Price Protection (Direct)

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
<b>Mass. Department of Public Utilities</b>				
Berkshire Gas Company	6/98	Berkshire Gas Mergeco Gas Co.	D.T.E. 98-87	Regulatory Issues
Eastern Edison Company	8/98	Montaup Electric Company	D.T.E. 98-83	Marketing for divestiture of its generation business.
Boston Edison Company	98	Boston Edison Company	D.T.E. 97-113	Fossil Generation Divestiture
Boston Edison Company	98	Boston Edison Company	D.T.E. 98-119	Nuclear Generation Divestiture
Eastern Edison Company	12/98	Montaup Electric Company	D.T.E. 99-9	Sale of Nuclear Plant
NStar	9/07, 12/07	NStar, Bay State Gas, Fitchburg G&E, NE Gas, W. MA Electric	DPU 07-50	Decoupling
<b>Michigan Public Service Commission</b>				
Detroit Edison Company	9/98	Detroit Edison Company	Case No. U- 11726	Market Value of Generation Assets
Consumers Energy Company	8/06	Consumers Energy Company	Case No. U- 14992	Sale of Nuclear Plant
<b>Minnesota Public Utilities Commission</b>				
Xcel Energy/No. States Power	9/04	Xcel Energy/No. States Power	Docket No. G002/GR-04- 1511	NRG Impacts
Interstate Power and Light	8/05	Interstate Power and Light and FPL Energy Duane Arnold, LLC	Docket No. E001/PA-05- 1272	Sale of Nuclear Plant
Northern States Power Company d/b/a Xcel Energy	11/05	Northern States Power Company	Docket No. E002/GR-05- 1428	NRG Impacts on Debt Costs
Northern States Power Company d/b/a Xcel Energy	09/06	NSP v. Excelsior	Docket No. E6472/M-05- 1993	Industry Norms and Financial Impacts
Northern States Power Company d/b/a Xcel Energy	11/06	Northern States Power Company	Docket No. G002/GR-06- 1429	Return on Equity
<b>Missouri Public Service Commission</b>				
Missouri Gas Energy	1/03	Missouri Gas Energy	Case No. GR- 2001-382	Gas Purchasing Practices; Prudence
Aquila Networks	2/04	Aquila-MPS, Aquila_L&P	Case Nos. ER- 2004-0034 HR-2004-0024	Cost of Capital, Capital Structure
Aquila Networks	2/04	Aquila-MPS, Aquila_L&P	Case No. GR- 2004-0072	Cost of Capital, Capital Structure

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Missouri Gas Energy	11/05	Missouri Gas Energy	Case Nos. GR-2002-348 GR-2003-0330	Capacity Planning
<b>Nat. Energy Board of Canada</b>				
Maritimes & Northeast Pipeline	2/02	Maritimes & Northeast Pipeline	GH-3-2002	Natural Gas Demand Analysis
TransCanada Pipelines	8/04	TransCanada Pipelines	RH-3-2004	Segmented Service
Brunswick Pipeline	9/06	Brunswick Pipeline	GH-1-2006	Market Study
TransCanada Pipelines Ltd.	3/07	TransCanada Pipelines Ltd.: Gros Cacouna Receipt Point Application	RH-1-2007	
Repsol Energy Canada Ltd	3/08	Repsol Energy Canada Ltd	GH-1-2008	Market Study
<b>New Brunswick Energy and Utilities Board</b>				
Atlantic Wallboard/JD Irving Co	1/08	Atlantic Wallboard/JD Irving Co.	MCTN #298600	Rate Setting for EGNB
<b>New York Public Service Commission</b>				
Central Hudson, ConEdison and Niagara Mohawk	9/00	Central Hudson, ConEdison and Niagara Mohawk	Case No. 96-E-0909 Case No. 96-E-0897 Case No. 94-E-0098 Case No. 94-E-0099	Section 70
Central Hudson, New York State Electric & Gas, Rochester Gas & Electric	5/01	Joint Petition of NiMo, NYSEG, RG&E, Central Hudson, Constellation and Nine Mile Point	Case No. 01-E-0011	Section 70, Rebuttal Testimony
Rochester Gas & Electric	12/03	Rochester Gas & Electric	Case No. 03-E-1231	Sale of Nuclear Plant
Rochester Gas & Electric	01/04	Rochester Gas & Electric	Case No. 03-E-0765 Case No. 02-E-0198 Case No. 03-E-0766	Sale of Nuclear Plant; Ratemaking Treatment of Sale
<b>Oklahoma Corporation Commission</b>				
Oklahoma Natural Gas Company	6/98	Oklahoma Natural Gas Company	Case PUD No. 980000177	Evaluate their use of storage



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Oklahoma Gas & Electric Company	9/05	Oklahoma Gas & Electric Company	Cause No. PUD 200500151	Prudence of McLain Acquisition
Oklahoma Gas & Electric Company	03/08	Oklahoma Gas & Electric Company	Cause No. PUD 200800086	Acquisition of Redbud generating facility
<b>Ontario Energy Board</b>				
Market Hub Partners Canada, L.P.	5/06	Natural Gas Electric Interface Roundtable	File No. EB-2005-0551	Market-based Rates For Storage
<b>Rhode Island Public Utilities Commission</b>				
Providence Gas Company and The Valley Gas Company	1/01	Providence Gas Company and The Valley Gas Company	Docket No. 1673 and 1736	Gas Cost Mitigation Strategy
The New England Gas Company	3/03	New England Gas Company	Docket No. 3459	Cost of Capital
<b>Texas Public Utility Commission</b>				
Oncor Electric Delivery Company	8/07	Oncor Electric Delivery Company	Docket No. 34040	Rate Filing Package; Regulatory Policy, Rate of Return, Return of Capital and Consolidated Tax Adjustment
Oncor Electric Delivery Company	6/08	Oncor Electric Delivery Company	Docket No. 35717	Rate Filing
Oncor Electric Delivery Company	10/08	Oncor, TCC, TNC, ETT, LCRA TSC, Sharyland, STEC, TNMP	Docket No. 35665	Competitive Renewable Energy Zone
<b>Utah Public Service Commission</b>				
Questar Gas Company	12/07	Questar Gas Company	Docket No. 07-057-13	benchmarking
<b>Vermont Public Service Board</b>				
Green Mountain Power	7/98	Green Mountain Power	Docket No. 6107	Direct Testimony
Green Mountain Power	9/00	Green Mountain Power	Docket No. 6107	Rebuttal Testimony
<b>Wisconsin Public Service Commission</b>				
WEC & WICOR	11/99	WEC	Docket No. 9401-YO-100 Docket No. 9402-YO-101	Approval to Acquire the Stock of WICOR
Wisconsin Electric Power Company	1/07	Wisconsin Electric Power Co.	Docket No. 6630-EI-113	Sale of Nuclear Plant

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
<b>American Arbitration Association</b>				
Attala Generating Company	12/03	Attala Generating Co v. Attala Energy Co.	Case No. 16-Y-198-00228-03	Power Project Valuation; Breach of Contract; Damages
Nevada Power Company	4/08	Nevada Power v. Nevada Cogeneration Assoc. #2		Power Purchase Agreement
<b>State of Colorado District Court, County of Garfield</b>				
Questar Corporation, et al	11/00	Questar Corporation, et al.	Case No. 00CV129-A	Partnership Fiduciary Duties
<b>State of Delaware, Court of Chancery, New Castle County</b>				
Wilmington Trust Company	11/05	Calpine Corporation vs. Bank Of New York and Wilmington Trust Company	C.A. No. 1669-N	Bond Indenture Covenants
<b>Illinois Appellate Court, Fifth Division</b>				
Norweb, plc	8/02	Indeck No. America v. Norweb	Docket No. 97 CH 07291	Breach of Contract; Power Plant Valuation
<b>Independent Arbitration Panel</b>				
Alberta Northeast Gas Limited	2/98	ProGas Ltd., Canadian Forest Oil Ltd., AEC Oil & Gas		
Ocean State Power	9/02	Ocean State Power vs. ProGas Ltd.	2001/2002 Arbitration	Gas Price Arbitration
Ocean State Power	2/03	Ocean State Power vs. ProGas Ltd.	2002/2003 Arbitration	Gas Price Arbitration
Ocean State Power	6/04	Ocean State Power vs. ProGas Ltd.	2003/2004 Arbitration	Gas Price Arbitration
Shell Canada Limited	7/05	Shell Canada Limited and Nova Scotia Power Inc.		Gas Contract Price Arbitration
<b>State of New Jersey, Mercer County Superior Court</b>				
Transamerica Corp., et. al.	7/07	IMO Industries Inc. vs. Transamerica Corp., et. al.	Docket No. L-2140-03	Breach-Related Damages, Enterprise Value
<b>State of New York, Nassau County Supreme Court</b>				
Steel Los III, LP	6/08	Steel Los II, LP & Associated Brook, Corp v. Power Authority of State of NY	Index No. 5662/05	Property seizure

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
<b>Province of Alberta, Court of Queen's Bench</b>				
Alberta Northeast Gas Limited	5/07	Cargill Gas Marketing Ltd. vs. Alberta Northeast Gas Limited	Action No. 0501-03291	Gas Contracting Practices
<b>State of Utah Third District Court</b>				
PacifiCorp & Holme, Roberts & Owen, LLP	1/07	USA Power & Spring Canyon Energy vs. PacifiCorp. et. al.	Civil No. 050903412	Breach-Related Damages
<b>U.S. Bankruptcy Court, District Of New Jersey</b>				
Ponderosa Pine Energy Partners, Ltd.	7/05	Ponderosa Pine Energy Partners, Ltd.	Case No. 05-21444	Forward Contract Bankruptcy Treatment
<b>U.S. Bankruptcy Court, So. District Of New York</b>				
Johns Manville	5/04	Enron Energy Mktg. v. Johns Manville; Enron No. America v. Johns Manville	Case No. 01-16034 (AJG)	Breach of Contract; Damages
<b>U.S. Bankruptcy Court, Northern District Of Texas</b>				
Southern Maryland Electric Cooperative, Inc. and Potomac Electric Power Company	11/04	Mirant Corporation, et al. v. SMECO	Case No. 03-4659; Adversary No. 04-4073	PPA Interpretation; Leasing
<b>U. S. Court of Federal Claims</b>				
Boston Edison Company	7/06	Boston Edison v. Department of Energy	No. 99-447C No. 03-2626C	Spent Nuclear Fuel Litigation
Consolidated Edison of New York	08/07	Consolidated Edison of New York, Inc. and subsidiaries v. United States	No. 06-305T	Leasing Litigation
Consolidated Edison Company	2/08	Consolidated Edison Company v. United States	No. 04-0033C	SNF Expert Report
Vermont Yankee Nuclear Power Corporation	6/08	Vermont Yankee Nuclear Power Corporation	No. 03-2663C	SNF Expert Report
<b>U. S. District Court, District of Connecticut</b>				
Constellation Power Source, Inc.	12/04	Constellation Power Source, Inc. v. Select Energy, Inc.	Civil Action 304 CV 983 (RNC)	ISO Structure, Breach of Contract

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
<b>U.S. District Court, New Hampshire</b>				
Portland Natural Gas Transmission and Maritimes & Northeast Pipeline	9/03	Public Service Company of New Hampshire vs. PNGTS and M&NE Pipeline	Docket No. C-02-105-B	Impairment of Electric Transmission Right-of-Way
<b>U. S. District Court, Southern District of New York</b>				
Central Hudson Gas & Electric	11/99	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Expert Report, Shortnose Sturgeon Case
Central Hudson Gas & Electric	8/00	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Revised Expert Report, Shortnose Sturgeon Case
Consolidated Edison	3/02	Consolidated Edison v. Northeast Utilities	Case No. 01 Civ. 1893 (JGK) (HP)	Industry Standards for Due Diligence
Merrill Lynch & Company	1/05	Merrill Lynch v. Allegheny Energy, Inc.	Civil Action 02 CV 7689 (HB)	Due Diligence, Breach of Contract, Damages
<b>U. S. District Court, Eastern District of Virginia</b>				
Aquila, Inc.	1/05	VPEM v. Aquila, Inc.	Civil Action 304 CV 411	Breach of Contract, Damages
<b>District of Columbia Court City Council</b>				
Potomac Electric Power Co.	7/99	Potomac Electric Power Co.	Bill 13-284	Utility restructuring

Exhibit JJR-3: Comparison of Cost Estimates for New AP 1000 Reactors (all projects assume two units)

Project Sponsor	Date of Estimate	Estimate Type	\$ Year	Project Cost (billions)	\$/kW	In-Service Date	Notes and Assumptions
Florida Power & Light	Oct. 2007	Overnight	2007	\$8.01	\$3,643	2018, 2020 *	AFUDC rate: 11.04%, escalation of 2.5% for all expenses. Estimate includes full owner's scope and cost, mid-range transmission integration estimate and a pre-construction cost adjustment. * This estimate is the mid-range figure of three scenarios. Estimates ranged from \$3,155 to \$4,587/kW based on a variety of transmission integration and owner's scope and cost assumptions.
Florida Power & Light	Oct. 2007	All-in	Year Spent	\$14.00	\$6,372	2018, 2020 **	AFUDC rate: 11.04%, escalation of 2.5% for all expenses. Includes full owner's scope and cost and a mid-range transmission integration estimate. ** This estimate is the mid-range figure of three scenarios. Estimates ranged from \$5,492 to \$8,071/kW based on a variety of transmission integration and owner's scope and cost assumptions.
Progress Energy	Jan. 2009	All-in	Year Spent	\$14.00	\$6,335	2016, 2018	Progress Energy has stated that this estimate, which excludes project-related transmission costs, applies to both the Levy County, FL project and to its proposed Shearon Harris project in North Carolina.
Progress Energy Florida	Jan. 2009	All-in	Year Spent	\$17.00	\$7,692	2016, 2018	Estimate includes transmission equipment and costs specific to the Levy County, FL project.
SCE&G	Dec. 2008	All-in	Year Spent	\$11.50	\$5,127	2016, 2019	All-in cost figure includes transmission upgrades (expected to total \$1.1 billion). Figures include only very limited AFUDC (\$550 million). In addition, this estimate assumes favorable financing terms for Santee Cooper.
Southern Company	May 2008	All-in	Year spent	\$14.00	\$6,400	2016, 2017	Estimate includes financing costs, transmission, other owner's costs, and expected inflation.
Duke Energy	Nov. 2008	Overnight	2008	\$11.00	\$4,924	2018, 2019	
Duke Energy	Nov. 2008	All-in	Year Spent	\$17.00	\$7,580	2018, 2019	Estimate assumes 8.45% WACC & 3% inflation, and is based on the plant being operable in the 2018 time frame, which is consistent with Duke's recent statements.
Tennessee Valley Authority	Dec. 2008	All-in	Year Spent	\$8.00	\$3,636	2014, 2015 †	This figure is TVA's best estimate "if it could start today." \$8 billion is the midpoint of a \$5.6 and \$10.4 billion range given by the utility † Assumes 5 years from start of construction to commercial operation of first unit with the second unit following one year later.