

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 090009-EI  
FLORIDA POWER & LIGHT COMPANY

MAY 1, 2009

IN RE: NUCLEAR POWER PLANT COST RECOVERY  
FOR THE YEARS ENDING  
DECEMBER 2009 AND 2010

TESTIMONY & EXHIBITS OF:

JOHN J. REED

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**DIRECT TESTIMONY OF JOHN J. REED**

**DOCKET NO. 090009-EI**

**MAY 1, 2009**

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

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

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

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

**Q. Please describe Concentric.**

A. Concentric is an economic advisory and management consulting firm, headquartered in Marlborough, Massachusetts. Concentric provides consulting services relating to energy industry transactions, energy market analysis, litigation, and regulatory support.

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

A. I have more than 30 years of experience in the energy industry, having served as an executive in energy consulting firms, including the position of Co-Chief Executive Officer of the largest publicly-traded management consulting firm in the United States and as Chief Economist for the largest gas utility in the

1 United States. I have provided expert testimony on a wide variety of  
2 economic and financial issues related to the energy and utility industry on  
3 numerous occasions before administrative agencies, utility commissions,  
4 courts, arbitration panels, and elected bodies across North America.

5 **Q. Have you previously provided expert testimony?**

6 A. Yes. I have been accepted as an expert in dozens of jurisdictions located in  
7 the United States and Canada.

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

9 A. Yes. I am sponsoring Exhibits JJR-1, which are attached to my direct  
10 testimony.

11 Exhibit JJR-1 A Review of Florida Power & Light's System of  
12 Internal Control

13 **Q. Are you the same John J. Reed who filed testimony in this proceeding on**  
14 **March 2, 2009?**

15 A. Yes, I am.

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

17 A. Concentric was retained by Florida Power & Light Company ("FPL" or the  
18 "Company") in December 2008 to review the Company's system of internal  
19 control as they relate to the Company's efforts to develop and implement  
20 Extended Power Uprate ("EPU") Projects at FPL's St. Lucie Units 1 & 2 and  
21 Turkey Point Units 3 & 4 ("PSL 1 & 2" and "PTN 3 & 4" respectively and  
22 collectively the "EPU Project") in the 2010 to 2012 timeframe, and  
23 development and construction of two new nuclear generating units at FPL's

1 Turkey Point site ("PTN 6 & 7" and collectively with the EPU Project, the  
2 "Projects"). The purpose of my testimony is to present and summarize  
3 Concentric's findings with respect to FPL's system of internal control and  
4 how compliance with this detailed system of internal control has resulted in  
5 reasonable costs and projections of the Company's expenditures for 2009 and  
6 2010.

7 **Q. Please describe your experience with nuclear power plants, and**  
8 **specifically your experience with major construction programs at these**  
9 **plants.**

10 A. My consulting experience with nuclear power plants spans more than 25  
11 years. My clients have retained me for assignments relating to the  
12 construction of nuclear plants, the purchase and sale of nuclear plants, power  
13 uprates and other major capital improvement projects at nuclear plants, and  
14 the decommissioning of nuclear plants. I have had significant experience with  
15 these activities at the following plants:

|    |                       |                     |
|----|-----------------------|---------------------|
| 16 | Pilgrim               | GINNA               |
| 17 | Oyster Creek          | Duane Arnold        |
| 18 | Seabrook              | Palisades           |
| 19 | Hope Creek            | Point Beach 1 and 2 |
| 20 | Peach Bottom          | Big Rock Point      |
| 21 | Salem                 | Wolf Creek          |
| 22 | Nine Mile Pt. 1 and 2 | Callaway            |

1 I was also extensively involved in nuclear construction audits and prudence  
2 reviews for nuclear plants built in the 1980s, including Vogtle, Limerick,  
3 Susquehanna, Wolf Creek, and Callaway.

4  
5 I am currently active on behalf of a number of clients in pre-construction  
6 activities for new nuclear plants across the U.S., including state and federal  
7 regulatory processes, raising debt and equity financing for new projects, and  
8 evaluating the costs, schedules and economics of new nuclear facilities.  
9 These activities have included detailed reviews of cost estimation and  
10 construction project management activities of other nuclear project  
11 developers.

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

13 A. The remainder of my testimony is organized into the following four (4)  
14 sections listed below.

15 Section 1: Framework of Review

16 Section 2: The EPU Project

17 Section 3: The PTN 6 & 7 Project

18 Section 4: Conclusions

19 **Q. Please generally describe how, in your experience, the FPL project**  
20 **management processes compare with other extended power uprate**  
21 **projects and new nuclear development projects around the country.**

22 A. Based on Concentric's review of the practices used to manage the Projects,  
23 Concentric has found that the Projects compare favorably with other similar

1 nuclear projects in the United States. These practices include a series of  
2 documented, overlapping processes that ensure the Company's system of  
3 internal control is being implemented within the Projects and the appropriate  
4 levels of senior level oversight. The project management, cost estimation, and  
5 risk management attributes of FPL are highly developed, well documented,  
6 and adhered to by the project teams.

7

8

### SECTION 1: FRAMEWORK OF REVIEW

9

10 **Q. Please describe the process Concentric utilized to review FPL's system of**  
11 **internal control.**

12 **A.** As described more fully in Section II of Exhibit JJR-1: A Review of FPL's  
13 System of Internal Control, Concentric's review of FPL's internal control  
14 began with an initial information request. This request included information  
15 from each of the following categories:

- 16 ● Policies and procedures
- 17 ● Project organization charts
- 18 ● Staffing plans
- 19 ● Internal audit reports
- 20 ● General ledgers
- 21 ● Periodic reporting mechanisms including any daily, weekly, monthly, or
- 22 annual reports
- 23 ● Major contracts, purchase orders, and change orders

- 1           • Any corrective action or recovery plans requested from key vendors
- 2           • Competitive bidding solicitations
- 3           • Single and sole source justifications
- 4           • Project execution plans

5

6           Following receipt of this information, Concentric conducted in-person  
7           interviews in February 2009. While on-site, Concentric focused its review on  
8           how the Company's policies and procedures, as well as each project, had  
9           changed since Concentric reviewed the Projects in 2008.

10

11           Concurrently, Concentric sought to gain an understanding of the Projects'  
12           objectives. With these objectives in mind, Concentric sought to understand  
13           the Company's system of internal control by reviewing the various documents  
14           that were provided in response to Concentric's initial information request.  
15           Concentric then discussed our understanding of the Company's system of  
16           internal control with FPL's employees and requested additional clarification  
17           as required.

18

19           Concentric also verified the Company's various policies and procedures to  
20           ensure that these policies and procedures were appropriately being  
21           implemented. This testing was done by requesting certain documents that  
22           could be used to verify that the Company's policies and procedures were

1 being implemented. The documents that Concentric requested included the  
2 following:

- 3 ● Sample invoices
- 4 ● Copies of all periodic project reports including any senior executive  
5 briefings
- 6 ● Internal audit reports
- 7 ● Single and sole source justifications
- 8 ● Project related contracts
- 9 ● Competitive bidding solicitations
- 10 ● Project organization charts
- 11 ● Project specific general ledgers

12  
13 Additionally, during Concentric's February 2009 site visit, Concentric  
14 discussed the Company's policies and procedures with the various Company  
15 employees who were interviewed by Concentric. These discussions focused  
16 on confirming that the employees had an understanding of the system of  
17 internal control and on how this system was being implemented on a day-to-  
18 day basis.

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1 Nuclear Division has expanded upon the corporate policies by developing its  
2 own set of procedures that are specific to nuclear operations. Similarly, the  
3 project is responsible for developing its own project instructions which  
4 provide specific, stepwise processes for implementing the Company's general  
5 policies and procedures.

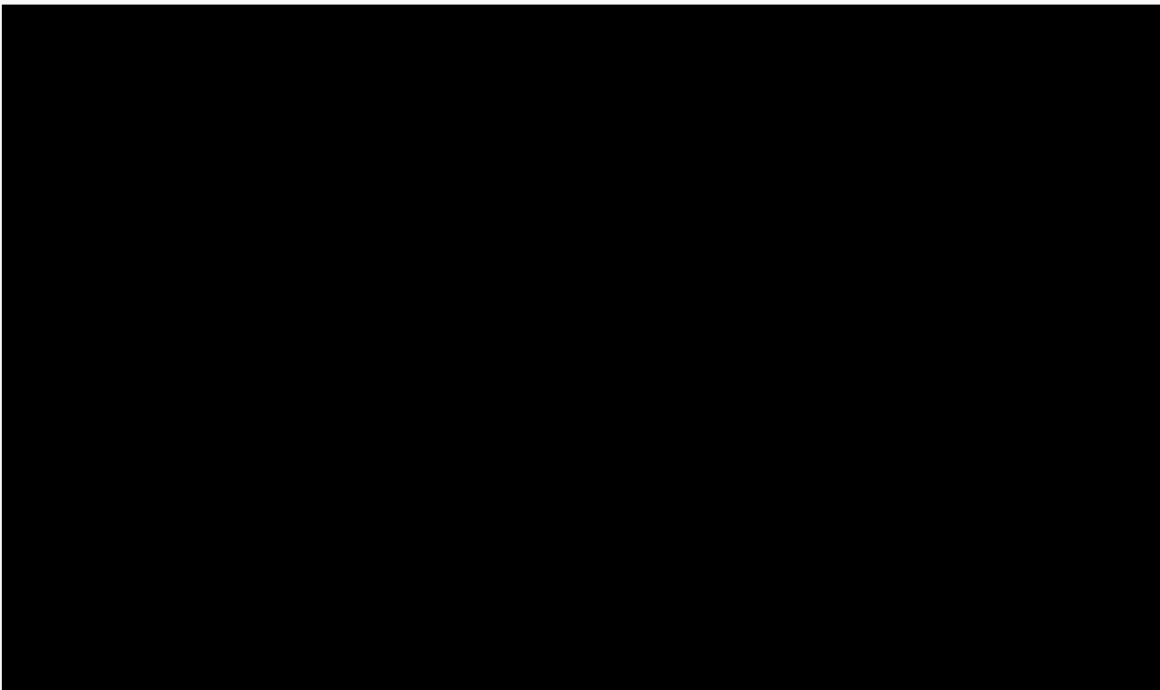
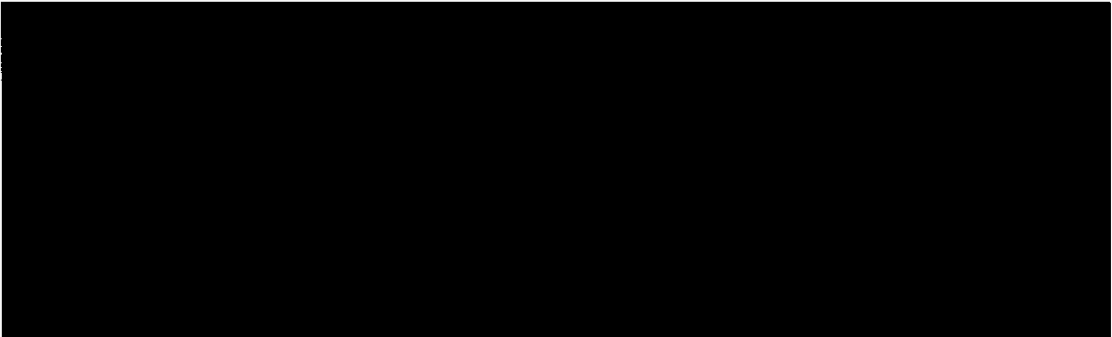
6 **Q. What other internal oversight mechanisms have been implemented by the**  
7 **EPU Project?**

8 A. The other internal oversight mechanisms implemented by the EPU Project are  
9 included in Section III.B of Exhibit JJR-1 and include the Nuclear Fleet  
10 Project Controls organization, several reporting mechanisms established to  
11 ensure that key decisions related to the EPU Project are prudent and made at  
12 the appropriate level of FPL's management structure and the EPU Project  
13 Risk Committee. The EPU Project Risk Committee periodically reviews the  
14 EPU Project and identifies key project risks. The EPU Project tracks these  
15 risks in a Risk Matrix to determine the potential impacts to the budget and  
16 schedule and identifies means to mitigate the risks as the EPU Project  
17 progresses.

18  
19 Similarly, the EPU Project is reviewed by the Company's Internal Audit  
20 organization. The Internal Audit organization reports directly to the FPL  
21 Group Chairman and CEO through the Vice President of Internal Auditing.  
22 Internal Audit adopts a risk-based approach whereby Internal Audit reviews

1 activities within business units that present the greatest risk to meeting the  
2 Company's objectives.

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18 **Q. Please describe how the EPU Project procures goods and services for the**  
19 **EPU Project.**

20 A. The EPU Project team includes several employees from the Integrated Supply  
21 Chain Management ("ISC") organization who are dedicated to the FPL  
22 procurement function and are responsible for implementing several corporate  
23 policies governing the procurement function. FPL procurement policies cover

1 topics such as managing an approved vendor list, conducting an RFP process,  
2 contract formation, issuing a purchase order, and managing a contract.

3 **Q. Does the EPU Project continue to use single and sole source procurement**  
4 **strategies to procure goods and services?**

5 A. Yes. When the Company pursues a single or sole source procurement strategy,  
6 the Company's procedures require the EPU Project team to produce a single  
7 or sole source justification memorandum which describes the reason for this  
8 procurement strategy, including why there is a compelling business reason for  
9 FPL to pursue such a strategy. The Company's procedures require each  
10 memorandum to be reviewed and approved at the executive level.

11 **Q. Has the EPU Project addressed the Florida Public Service Commission's**  
12 **(the "FPSC" or the "Commission") single and sole source justification**  
13 **concerns which were noted in Docket 080009-EI?**

14 A. Yes. The EPU Project Team has worked since the FPSC noted its concerns in  
15 October 2008 to ensure sole or single source justifications are robust and  
16 transparent to enable a third party to understand the appropriateness of the  
17 procurement strategy. This process includes expanding the team that must  
18 review the content of the single and sole source justification memoranda and  
19 standardizing the format for these memoranda. Additionally, FPL held cross-  
20 functional training sessions for the EPU Project team to ensure that these team  
21 members understand the need to thoroughly document the compelling  
22 business reasons for the sole or single source procurement strategy.

1 **Q. Has Concentric reviewed the process the EPU Project used to address the**  
2 **FPSC's concerns?**

3 A. Yes, Concentric reviewed the single and sole source justification training  
4 presentation, the standardized single and sole source justification format, and  
5 completed single and sole source justifications. The EPU Project has  
6 addressed the FPSC's concerns by adding sufficient detail to allow a non-  
7 technical reviewer to understand the need for this procurement strategy.

8 **Q. Please describe the EPU Project's budgeting and cost estimating**  
9 **processes.**

10 A. The process for creating the EPU Project's budget and cost estimates is  
11 included in Section III.C of Exhibit JJR-1. This process includes the use of a  
12 partial take-off estimate and is based on the anticipated man-hours required to  
13 complete each task, as well as the amounts of various commodities and other  
14 resources required to complete these tasks.

15 **Q. How has this process been implemented by the EPU Project?**

16 A. As discussed more fully in Section III.C of Exhibit JJR-1, FPL began the cost  
17 estimating process by first completing the initial scoping study. This scoping  
18 study was then reviewed and confirmed by Shaw – Stone & Webster. This  
19 initial estimate is subsequently used to develop the Project's annual budget  
20 which is further refined to reflect executed contracts and new project scope.

21 **Q. What mechanisms are in place to monitor the EPU Project's budget**  
22 **performance?**

1 A. The EPU Project uses multiple mechanisms to monitor the EPU Project's  
2 budget and spending. These mechanisms are discussed in Section III.C of the  
3 Exhibit JJR-1.

4 **Q. Please describe the EPU Project's schedule estimating processes.**

5 A. The process for establishing the EPU Project schedule began with the initial  
6 scoping studies and is described in Section III.D of Exhibit JJR-1. The  
7 detailed schedule identifies when key equipment will be procured, received,  
8 and installed at each of the sites and when certain activities, including vendor  
9 surveillance activities, must take place. To enable the vendors to  
10 communicate schedule information to the appropriate personnel, the EPU  
11 Project team has established a protocol, including the proper electronic  
12 format, which will aid incorporating this information into Primavera  
13 scheduling software. The Primavera scheduling software is used throughout  
14 the nuclear industry for the schedule a major capital projects.

15 **Q. What mechanisms are used to monitor the EPU's schedule performance?**

16 A. The EPU Project team has instituted several periodic reporting mechanisms  
17 which allow the EPU Project team to monitor its schedule performance.  
18 These reporting mechanisms are included in Section III.D of Exhibit JJR-1.

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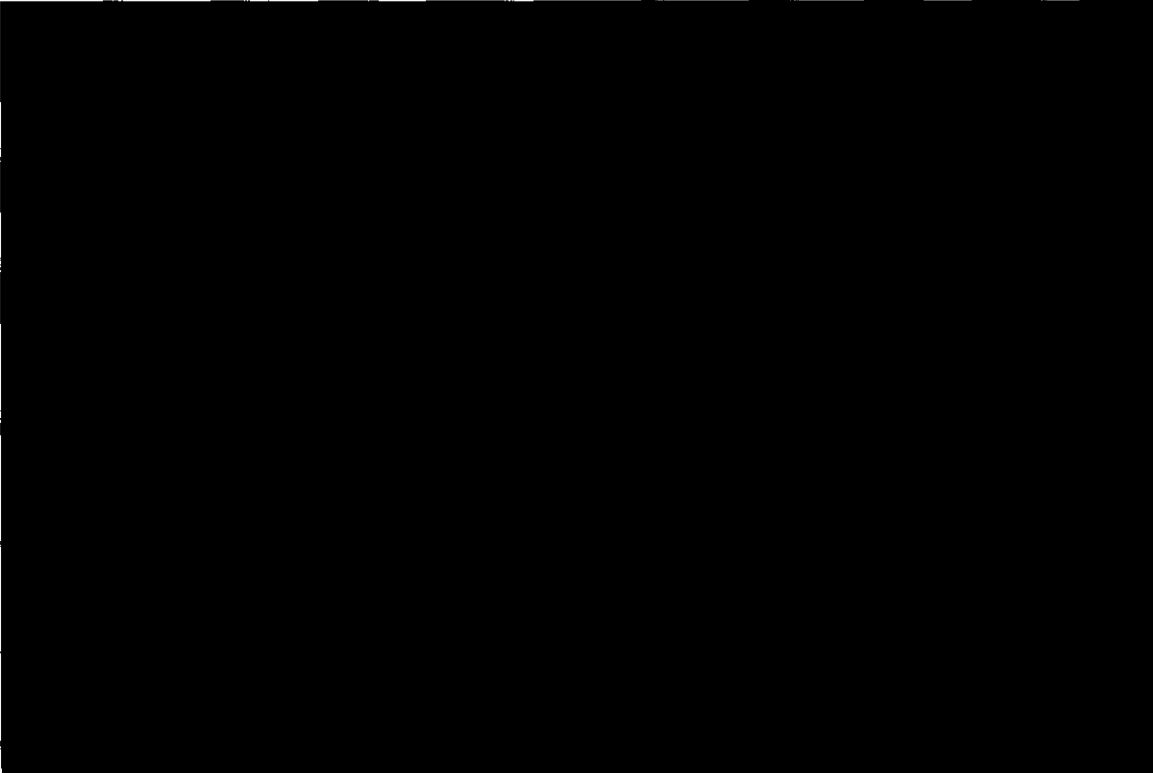


1 NNP-001”) that identifies which nuclear division policies are applicable to the  
2 PTN 6 & 7 project. In addition, the PTN 6 & 7 Project has begun to develop  
3 its own set of project instructions known as New Nuclear Project Instructions  
4 (“NNP-PIs”). A complete description of these oversight mechanisms is  
5 provided in Section IV.B of Exhibit JJR-1.

6 **Q. Is the PTN 6 & 7 Project subject to review by Internal Audit?**

7 A. Yes. In keeping with the Company’s policy of ensuring overlapping control  
8 mechanisms, the PTN 6 & 7 Project is subject to review by the Company’s  
9 Internal Audit organization which reports directly to the FPL Group Chairman  
10 and CEO through a Vice President of Internal Auditing.

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22 **Q. Does the PTN 6 & 7 Project maintain any other processes which provide**  
23 **additional oversight to the PTN 6 & 7 Project?**



1 A. Section IV.B of Exhibit JJR- 3 includes a description of two other oversight  
2 mechanisms that ensure the project's performance. The first of these  
3 mechanisms is a FPL Corporate Risk Committee which consists of FPL  
4 directors and other senior employees, and is tasked with periodically  
5 reviewing the project and its associated risks. The second is specialized  
6 review committees such as the Licensing Review Board which is tasked with  
7 reviewing the COLA prior to its submission to the NRC.

8 **Q. Please describe the PTN 6 & 7 Project's budgeting and cost estimating**  
9 **processes.**

10 A. The PTN 6 & 7 Project was initially scoped in 2006. At that time, FPL  
11 undertook a process to develop an estimate of the cost to construct two new  
12 nuclear units, based on a partial take off estimate produced by the NuStart  
13 consortium. The estimate from this study was adapted to account for the  
14 different reactor technologies being considered by FPL and for conditions  
15 specific to the State of Florida's geology and weather conditions. This cost  
16 estimate is used in conjunction with the Company's annual feasibility analysis  
17 which makes certain that the PTN 6 & 7 remains economically competitive.

18  
19 The PTN 6 & 7 budget is developed based on input from key project team  
20 members and their respective resource, staffing, and procurement needs, and  
21 those team members' substantial project development experience. The budget  
22 is updated in August of each year and includes a two-year look ahead to allow

1 the Company to plan for its near term expenditures. The PTN 6 & 7 Projects  
2 progress is then measured against the updated budget.

3 **Q. How does the PTN 6 & 7 Project team monitor its performance relative**  
4 **to the budget?**

5 A. The PTN 6 & 7 Project team uses at least seven (7) reports to monitor the  
6 PTN 6 & 7 project's budget performance. These reports are issued on a  
7 weekly, monthly, and annual basis and are more fully described in Section  
8 IV.C of Exhibit JJR-1.

9 **Q. Please describe how the PTN 6 & 7 Project develops and manages its**  
10 **target schedule.**

11 A. The PTN 6 & 7 project schedule is managed using an often used software  
12 package developed by Primavera Systems, Inc. This software package uses  
13 the critical path method. The method for updating the PTN 6 & 7 schedule,  
14 including the proper electronic format, is well documented and is being  
15 communicated to vendors.

16 **Q. What mechanisms are in place to monitor the PTN 6 & 7 Project's**  
17 **schedule performance?**

18 A. The PTN 6 & 7 Project team has taken a number of steps to proactively  
19 monitor and manage its schedule performance. These steps include  
20 publishing a number of reports that detail the PTN 6 & 7 project's schedule  
21 performance on a weekly and monthly basis. A list of these reports can be  
22 found in Section IV.D Exhibit JJR-1.

1 **Q. How has the PTN 6 & 7 Project procured goods and services for the**  
2 **project?**

3 A. FPL has a number of corporate policies and procedures related to the  
4 procurement function. These corporate policies are implemented within the  
5 ISC organization and are sufficiently detailed to ensure that the ISC  
6 organization appropriately manages the vast number of procurement activities  
7 that support the PTN 6 & 7 project. Additionally, these procedures state a  
8 clear preference for competitive bidding except in instances where no other  
9 supplier can be identified or when a compelling business reason exists not to  
10 seek competitive bids.

11 **Q. Has the PTN 6 & 7 Project Team responded to the FPSC's concerns**  
12 **relative to the level of detail included in the Company's single and sole**  
13 **source justification memoranda?**

14 A. Yes, following the Commission's order in Docket No 080009-EI, the PTN 6  
15 & 7 conducted cross functional training to review the need to include  
16 additional detail in the single and sole source justification memoranda issued  
17 by the PTN 6 & 7 Project.

18 **Q. Please describe the external oversight mechanisms implemented at the**  
19 **PTN 6 & 7 Project level.**

20 A. The PTN 6 & 7 Project teams have relied on a number of external reviews to  
21 ensure that the project is making decisions based on the best information that  
22 is available at the time of those decisions. A description of each of these  
23 reviews can be found in Section IV.F of Exhibit JJR-1.



1 annual notification to each vendor with scopes of work across multiple  
2 sites.

3 **Q. Has Concentric developed any conclusions regarding the PTN 6 & 7**  
4 **Project?**

5 A. Yes, consistent with the EPU Project, the PTN 6 & 7 Project has strictly  
6 adhered to the Company's detailed set of policies and procedures. These  
7 policies and procedures are sufficiently detailed to allow their implementation  
8 and require the use of well accepted methodologies for developing cost  
9 estimates and schedules. In addition, the PTN 6 & 7 Project's budget has  
10 been developed through input from various project team members based on  
11 their resource and workforce needs. Finally, the PTN 6 & 7 Project is being  
12 developed by an extremely capable project management team which receives  
13 sufficient oversight by the Company's senior executive team and is reviewed  
14 on a reasonable basis by the Company's Internal Audit Division.

15 **Q. What recommendations and observations is Concentric making**  
16 **regarding the PTN 6 & 7 Project?**

17 A. Concentric's recommendations and observations relating the PTN 6 & 7  
18 Project are more fully described in Section V.B of Exhibit JJR-1 and include  
19 the following:

- 20 • Concentric notes that "Key Decision Memoranda" would facilitate the  
21 upcoming prudence reviews before the FPSC.
- 22 • Developing a workforce contingency to mitigate the risk of potential  
23 labor shortages.

- 1                   ● Scheduling a periodic update of PTN 6 & 7 Project Instruction
- 2                   “Quality Assurance for New Nuclear Projects - Project Instructions”
- 3                   (“QI-2-NNP-001”)
- 4                   ● Developing a process that documents why a contractual price change
- 5                   does or does not exceed the original contract scope
- 6                   ● Developing an annual review process to make certain Bechtel is billing
- 7                   the PTN 6 & 7 Project for subcontractors in accordance with the terms
- 8                   of its contract.
- 9    **Q.    Does this conclude your testimony?**
- 10   **A.    Yes it does.**



# **A Review of Florida Power & Light Company's System of Internal Control**

Prepared for  
Florida Power & Light

April 2009

## Executive Summary

The Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) define internal control as system of control that provides reasonable assurance of the effectiveness and efficiency of operations, reliability of financial reporting and compliance with applicable laws and regulations. COSO has further defined internal control to reflect the following four concepts:

- Internal control is a process
- Internal control is effectuated by people
- Internal control can provide only reasonable assurance
- Internal control is geared to the achievement of objectives<sup>1</sup>

Concentric Energy Advisors, Inc (“Concentric”) was retained by Florida Power & Light (“FPL” or the “Company”) in December 2008 to review FPL’s system of internal control as it relates to the Company’s efforts to implement extended power uprates at the Company’s Turkey Point Units 3 and 4 (“PTN 3 & 4”) and Saint Lucie Units 1 & 2 (“PSL 1 & 2”) and collectively with PTN 3 & 4, the “Project”) and to develop two new nuclear power plants at FPL’s Turkey Point site (“PTN 6 & 7”) and collectively with the EPU Project, the “Projects”).

To complete this assignment Concentric first requested information related to FPL’s corporate policies and procedures, the Projects’ organizational structures, and procurement strategies, amongst other items. This information was used in conjunction with information obtained during on-site interviews conducted in February 2009 to gain an understanding of the Projects’ objective and the Company’s system of internal control. Finally, Concentric sought to verify the implementation of this system of internal control by reviewing documents which provide indication that the Projects are complying with FPL’s system of internal control, and by speaking with project team members to verify their knowledge and understanding of the Company’s system of internal control.

Concentric’s review indicates that, in general, the EPU Project has complied with the Company’s system of internal control. This includes establishing an appropriate organizational structure for the EPU Project that includes highly capable individuals with substantial experience executing extended power uprates or other major capital projects at other nuclear power plants. In addition, the EPU Project is subject to a number of internal oversight mechanisms that ensure compliance with the Company’s system of internal controls. These mechanisms include adequate and timely reporting of project developments to increasingly senior levels of the Company, annual reviews by FPL’s Internal Audit organization, and a system of increasingly detailed policies, procedures and instructions which provide a stepwise method for executing the EPU Project. Finally, the EPU Project has sought to leverage lessons learned and industry experience from a variety of industry groups including the Institute of Nuclear Power Operators and the Electric Power Research Institute.

Concentric’s review of the EPU Project did produce several recommendations to further enhance the Company’s system of internal control or its implementation by the EPU Project. These recommendations and observations include:

---

<sup>1</sup> Internal Control – Integrated Framework, Committee of Sponsoring Organizations of the Treadway Commission, May 1994, Pg. 3-18.



- Undertaking a concerted effort in 2009 to make certain that currently vacant oversight positions are filled
- Developing a workforce contingency plan to ensure that adequate labor resources are available to execute the project
- Concentric notes that the upcoming prudence reviews before the Florida Public Service Commission (“FPSC”) would be facilitated by the use of “Key Decision Memoranda” which provide an explanation of key project decisions and the basis for that decision
- Providing additional detail in the EPU Project’s Monthly Budget Variance report to explain the cause of each variance
- Developing a clear process for ensuring vendors with similar scopes of work at FPL’s affiliate, NextEra Energy’s unregulated Point Beach Nuclear Power Plant in Manitowoc, Wisconsin appropriately bill NextEra Energy and FPL for the work being performed at each plant

Concentric’s review of the PTN 6 & 7 Project has similarly found that the Project has implemented and complied with FPL’s system of internal control. The PTN 6 & 7 Project includes two highly qualified organizations within FPL which are positioned to make certain the correct resources are allocated to the various tasks required to develop the PTN 6 & 7 Project. In addition, the PTN 6 & 7 Project has implemented and adhered to the Company’s policies and procedures while developing a set of project specific instructions to provide a methodical means of executing the PTN 6 & 7 Project. Finally, the PTN 6 & 7 has actively sought review from within FPL and by external experts.

Based on our review of the PTN 6 & 7 Project, Concentric developed the following list of recommendations and observations:

- Developing a workforce contingency plan to address a possible future labor resource constraint
- Concentric notes that the upcoming prudence reviews before the FPSC would be facilitated by the use of “Key Decision Memoranda” which explain key project decisions and provide the basis for that decision
- Ensuring PTN 6 & 7 Project Instruction “Quality Assurance for New Nuclear Projects – Project Instructions” (“QI2-NNP-001”) is updated on a scheduled (i.e., annual) basis.
- Developing a process that documents why a change in a contract price is or is not a result of a change in the original contract scope
- Developing an annual review process to make sure Bechtel is billing the PTN 6 & 7 Project for the use of subcontractors in accordance with the terms and conditions of its contract

Overall, both the PTN 6 & 7 Project and the EPU Project appear to be well positioned to execute on their respective projects. It is important to note that as the Projects continue to move forward the risks faced by both Projects will increase markedly. As a result, it will be important for the Company to maintain its vigilance with respect to the implementation of the Company’s system of internal control.

Concentric appreciates the opportunity to review the Projects, and the cooperation received from both Project teams.

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## **I. INTRODUCTION**

According to the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”), internal control has been defined as a system of control that provides “reasonable assurance” regarding the achievement of objectives in the following categories:<sup>2</sup>

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations

Further, COSO has defined internal control to reflect the following four concepts:<sup>3</sup>

- Internal control is a process. It’s a means to an end, not an end in itself.
- Internal control is effectuated by people. It’s not merely policy manuals and forms, but people at every level of an organization.
- Internal control can be expected to provide only reasonable assurance, not absolute assurance, to an entity’s management and board.
- Internal control is geared to the achievement of objectives in one or more separate but overlapping categories.

In conducting a review of a company’s internal control mechanisms, it is important to keep in mind what internal control is not. For instance, COSO has clearly stated that internal control is not capable of guaranteeing the success of an entity because certain project elements, such as government policy, are beyond management’s control. In addition, COSO has stated that “no two companies will, or should, have the same internal control system.”<sup>4</sup> Despite the importance of a robust system of internal control, it is important to understand the limitations of such a system.

## **II. FRAMEWORK OF REVIEW**

Concentric Energy Advisors, Inc. (“Concentric”) was retained by Florida Power & Light Company (“FPL” or the “Company”) in December 2008 to review the Company’s system of internal control as it relates to the Company’s efforts to implement extended power uprates at FPL’s Turkey Point Units 3 & 4 (“PTN 3 & 4”) and Saint Lucie Units 1 & 2 (“PSL 1 & 2” and collectively with PTN 3 & 4, the “EPU Project”) Nuclear Power Plants and to develop two new nuclear power plants at the Company’s Turkey Point site (“PTN 6 & 7” and collectively with the EPU Project, the “Projects”). As part of this assignment Concentric was asked to review the Company’s system of internal control and how this system of internal control is being implemented by the Projects.

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<sup>2</sup> Internal Control – Integrated Framework, Committee of Sponsoring Organizations of the Treadway Commission, May 1994, Pg. 3.

<sup>3</sup> Ibid at Pg. 13.

<sup>4</sup> Ibid at Pg. 18.

Concentric began its review of FPL's internal controls with an initial information request. This request included information from each of the following categories:

- Policies and procedures
- Project organization charts
- Staffing plans
- Internal audit reports
- General ledgers
- Periodic reporting mechanisms including any daily, weekly, monthly, or annual reports
- Major contracts, purchase orders and change orders
- Any corrective action plans requested from key vendors
- Competitive bidding solicitations
- Single and sole source justifications
- Project execution plans

Following receipt of this information, Concentric conducted in-person interviews from February 2 through 5, 2009. These interviews were considered additive to the on-site review Concentric conducted in April 2008. While on-site, Concentric focused its review on how the Company's policies and procedures, as well as each project, had changed since Concentric reviewed the projects in 2008.

Concurrently, Concentric sought to gain an understanding of the objectives of the Projects. This understanding of the projects' objectives is an important first step in designing and implementing any system of internal controls.<sup>5</sup> With the Projects' objectives in mind, Concentric sought to understand the Company's system of internal controls by expending substantial effort to review the various documents that were provided in response to Concentric's initial information request. Concentric then discussed our understanding of the Company's system of internal control with FPL's employees and sought additional clarification whenever it was necessary.

Based on Concentric's understanding of the Company's system of internal control, Concentric tested the Company's various policies and procedures to ensure that these policies and procedures were appropriately being implemented. This testing was done by requesting certain documents that could be used to verify that the Company's policies and procedures were being followed. The documents that Concentric requested included the following:

- Sample invoices
- Copies of all periodic project reports including any senior executive briefings
- Internal audit reports
- Single and sole source justifications
- Project related contracts
- Competitive bidding solicitations

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<sup>5</sup> Ibid at Pg. 39.

- Project organization charts
- Project specific general ledgers

Additionally, during Concentric's February 2009 site visit Concentric discussed the Company's policies and procedures with the various Company employees who were interviewed. These discussions focused on confirming that the employees had an understanding of the system of internal control and on how this system was being implemented on a day-to-day basis.

### **III. EPU PROJECT**

The EPU Project is being pursued by FPL to make available approximately 415 MW of additional nuclear-powered electric generation capacity. This project entails the replacement or modification of several key components within PTN 3 & 4 and PSL 1 & 2, and will be implemented during a series of planned refueling outages at each of the units. These outages are expected to take place between spring 2010 and fall 2012. The EPU Project team will be responsible for planning the required modifications, applying to the Nuclear Regulatory Commission for a revised operating license, applying to the state for a Site Certification, and bringing the projects online on time and on schedule.

#### **A. EPU Project Organizational Structure**

The EPU Project began in 2006 as an internal scoping study to determine the cost and feasibility of implementing the project. At that time, the EPU Project was organized around the Director of Nuclear Engineering. This structure reflected the scoping and planning phase of the project. At the end of 2008, the EPU Project was restructured to adapt to the execution phase of the EPU Project. As depicted in Exhibit 1, the EPU Project organization is singularly responsible for implementing all aspects of the EPU Project.

The EPU Project organization is headed by the Vice President, Nuclear Power Uprate, who is supported by a number of project directors with experience in nuclear fuels, project implementation, licensing, and engineering. Many of these functions are based at the Company's Jupiter West offices. In addition, the EPU Project team includes two On-Site Project Directors who report to the Vice President of Implementation EPU/Projects. These On-Site Project Directors are responsible for overseeing day-to-day management of on-site project team members at both the PTN 3 & 4 and PSL 1 & 2 sites. FPL's Quality Control/Quality Assurance organization also maintains a matrix reporting relationship to the Vice President, Nuclear Power Uprate.

The Director of EPU Projects, who reports directly to the Vice President, Nuclear Power Uprate, is supported by the Nuclear Fleet Project Controls Manager and amongst others. Nuclear Fleet Project Controls consists of the cost engineering, scheduling, estimating, and document retention functions. The cost engineer function is a critical component of the EPU Project. This position is responsible for reviewing the EPU Project's budget performance, and routing invoices for proper approvals. The scheduling function is responsible for developing and maintaining the EPU Project Schedule and monitoring deviations through periodic reports.

The Director of EPU Projects is also supported by the Director, Operations Interface. This position and its supporting staff are responsible for the required interface with site operations, testing and startup planning, the required site training and outage optimization at each site.

The EPU Project team is further supplemented with employees from the Company's Legal, Nuclear Business Operations and Integrated Supply Chain Management organizations, which maintain a matrix reporting relationship with the EPU Project. The employees in these positions report on a day-to-day basis to the EPU Project team while concurrently reporting up through their respective Company organizations.

#### *Concentric Observations*

The organizational structure employed by FPL for the EPU Project team appears appropriate for the scope of the EPU Project. The individuals employed to fill the positions within the EPU Project team appear to be capable and qualified for the task, and several of the current employees, including the Director, EPU Projects, were responsible for the successful implementation of an extended power uprate at the Company's affiliate, NextEra Energy's Seabrook Generating Station. Other employees and contractors have many years of experience working in the nuclear industry with FPL or other nuclear power plant operators

Concentric identified key project positions that were vacant at the time of the review including the:

1. Saint Lucie Contracts Manager
2. Turkey Point Contracts Manager

Concentric recommends the EPU Project undertake a sustained effort in 2009 to ensure that these positions are filled in a timely fashion. Our recommended means of moving forward with this effort is to produce a monthly report that indicates which positions have been vacant for more than 30 days and why they remain vacant.

Further, Concentric has observed that a number of large infrastructure projects are slated to being construction in the Southeastern U.S., over the next decade. Thus the available labor resources necessary to complete the project may be constrained by the increased demand for these resources. As a result, the EPU Project should consider developing a workforce contingency plan to address any labor shortfalls that might be experienced by the EPU Project.

#### **B. Internal Oversight**

FPL has sought to develop several overlapping control mechanisms that can be used to provide reasonable assurance of the Project's performance. At the corporate level, FPL has developed a general set of procedures, known as General Operating Procedures ("GOS"), which are used to communicate and implement the Company's policies across the Company's various business units. The FPL Nuclear Division has further expanded upon the corporate policies by developing its own set of procedures that are specific to nuclear operations. Finally, the project was responsible for developing its own project instructions, known as Extended Power Uprate Project Instructions ("EPPIs").

The EPPIs are used as a guidebook for the EPU Project team. They provide specific, stepwise processes for implementing the Company's general policies and procedures on a daily basis. Each EPPI was developed by key project oversight staff and is updated on an as needed basis, including the addition of new EPPIs as may be warranted.<sup>6</sup> As can be seen in Exhibit 2, the EPPIs developed to-date cover a wide range of topics including:

- Project Administration
- Procurement
- Project Controls
- Project Management
- Project Training
- Quality, Engineering & Licensing
- Site Specific Instructions

Each of these instructions includes details regarding the responsibilities of Project team members and detailed stepwise processes for implementing the instruction. The EPPIs are made available via a Company intranet that allows all employees and contractors the ability to access the Company procedures and instructions, as they may be needed.

The EPU Project also utilizes Nuclear Fleet Project Controls, which is responsible for maintaining and tracking the Project's cost and schedule performance. These reporting processes allow the Project Control group to identify deviations and address them through periodic reports.

Several reporting mechanisms have been established to ensure that key decisions related to the EPU Project are prudent and made at the appropriate level of FPL's management structure. Further, these reporting mechanisms allow the Company to leverage the experience of its executive team and to correct concerns at an early stage. These reporting mechanisms include presentations and status calls, as well as periodic reports.

FPL has also instituted an EPU Project Risk Committee. This committee is responsible for periodically reviewing the EPU Project and identifying key project risks. The EPU Project then tracks these risks in a Risk Matrix to determine the potential impacts to the budget and schedule and identifies means to mitigate these risks as the EPU Project progresses. The EPU Project Risk Committee is composed of directors and managers from within the EPU Project, and allows the EPU Project to leverage the extensive experience of these individuals as the EPU Project is executed.

Similarly, the EPU Project is subject to review by the Company's Internal Audit organization. The Internal Audit organization reports directly to the FPL Group Chairman and CEO through the Vice President of Internal Auditing. Internal Audit consists of four Managers of Auditing who are each supported by a team of between six and seven internal auditors with varying levels of experience.


Internal Audit revised its guidelines in spring 2009. Generally, Internal Audit's guidelines adopt a risk-based approach whereby Internal Audit will review activities within business units that present

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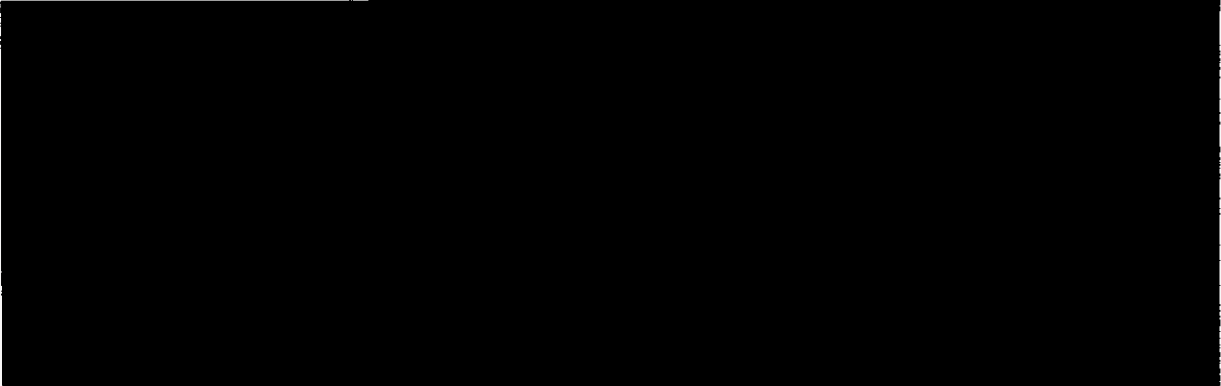
<sup>6</sup> EPPI – 100 describes the process for preparing new EPPIs and revising or canceling existing EPPIs.

the greatest risk to meeting the Company's objectives. These guidelines detail how Internal Audit plans its audits, how those audits are conducted, and how the results of those audits are reported to the respective business unit director and the FPL Group Chairman and CEO. The guidelines also address the required training and continuing education for internal auditors and set forth a mechanism for retaining outside expertise when such expertise is not available internally.

On an annual basis, Internal Audit plans for audits of certain aspects of the FPL Groups' various business units.







In addition to the procedures and overlapping processes used to implement the Company's system of internal control and ensure proper execution of the project, the EPU Project team holds various periodic meetings to review the status of the projects. The EPU Project team has reported that the following meetings occur on a regular basis.

- On a daily basis, the EPU Project team holds a status call to update the EPU Project Management, review the schedule and address emergent issues. These calls include the EPU Site Directors, key EPU Project Managers, the EPU Director, and the Vice President in charge of the EPU Project.
- On a weekly basis, the project management and project controls meets to discuss larger strategy concerns and to address emerging issues.
- On a bi-weekly basis, the EPU Project team produces a technical presentation for the Chief Nuclear Operating Officer. These presentations focus on the technical hurdles being faced by the EPU Project team and provide the team with an opportunity to leverage this executive's extensive nuclear project experience.
- On an approximately monthly basis, the EPU Project Management provides a status update to the FPL Group's senior executive team. These presentations focus on the EPU Project's schedule and budget performance and discuss key strategy issues which require this Committee's input.
- On a monthly basis, FPL and its key vendors meet discuss the project schedule
- On a quarterly basis, FPL meets with key vendors to review the project's management and make certain project risks are identified and addressed.

In addition, Concentric reviewed the following periodic reports that were being issued by the EPU Project:

- On a daily basis, each of the sites produces a Daily Status Report which identifies daily activities

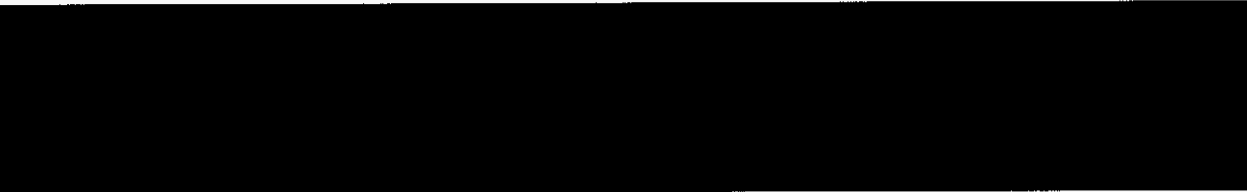
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<sup>7</sup> Florida Power & Light, EPPI - 130

- On a weekly basis, the EPU Project produces a report entitled “Key Project Indicators,” which is used to monitor trends in the project budget and schedule. This report is used to inform the entire EPU Project team of the EPU Project’s performance
- On a monthly basis, the EPU Project produces a Budget Variance Report and Project and Contract Deviation report. These reports are used to monitor longer-term budget and schedule trends.

#### *Concentric Observations*

Internal Audit’s revised guidelines are a robust set of instructions for ensuring that the Company’s various business units are adhering to the Company’s system of internal control and implementing the Company’s policies. Concentric had previously noted the need to ensure that the remedies implemented to correct the deficiencies identified by Internal Audit were appropriately re-tested to make certain that these deficiencies were addressed on a going forward basis. Similarly, Concentric noted the need to maintain all appropriate documentation with internal audit, including management’s response and corrective actions. It would appear that these revised guidelines will address Concentric’s recommendation.



Concentric also notes the upcoming prudence reviews before the FPSC would be facilitated by the use of “Key Decision Memoranda” which include a discussion of the information that was known at the time of the key project decisions (i.e., where the magnitude of the decision is above 1% of the project costs), what decision was made and the basis for that decision. This process would allow the EPU Project and third parties to review past decisions more easily and to understand both the strategy and trade-offs that were considered at the time of the decision.

#### **C. Budgeting and Cost Estimating Processes**

The Nuclear Division cost estimating process is governed by Nuclear Project Department Instruction 304. This procedure requires the use of a well-accepted method for developing a cost estimate. This process is known as a partial take-off estimate and is based on the anticipated man-hours required to complete each task, as well as the amounts of various commodities and other resources required to complete these tasks. Prices for these commodities are defined by the Company’s materials management system and by calling vendors for budgetary quotes. Similarly, wage rates are determined by researching historical contracts and seeking quotes where available. The estimator then includes an appropriate contingency factor based on the stage of the project. Finally, the Company’s policies require the estimator to retain the supporting documentation used to develop the cost estimate.

FPL began the cost estimating process for the EPU Project by first completing an initial scoping study. This scoping study was then reviewed and confirmed by Shaw – Stone & Webster, an

industry leading engineering firm with substantial experience implementing extended power uprates. This initial estimate was subsequently used to develop the Project's annual budget, which is further refined to reflect executed contracts and new project scope.

The EPU Project has developed multiple mechanisms for monitoring the EPU Projects' budget performance. On a daily basis, key members of the EPU Project team conduct a call to discuss the near term schedule, pending critical activities and any challenges they may face. This discussion may be used to identify potential budget issues. These meetings are memorialized in the Extended Power Uprate Daily Report. On a weekly basis, the EPU Project team members meet with project management to review the EPU Project's budget and spending. A similar meeting is held on a bi-weekly basis with the Chief Nuclear Officer of FPL, the Project Vice Presidents, and the Directors. The Company's senior executive team also receives a monthly update of the Project's budget performance. Finally Nuclear Business Operations performs a monthly transaction review to ensure that internal labor costs being charged to the Project relate solely to the EPU Project.

#### *Concentric Observations*

Concentric is recommending FPL provide additional detail in the Monthly Budget Variance Reports published by the EPU Project. Currently, this report identifies the line items which varied positively or negatively relative to the budget, but provides no explanation of the cause of the variance.

#### **D. Scheduling Processes**

The process for establishing the EPU Project schedule began with a definition of the scope for the project through the initial scoping studies mentioned above. This information was then used by schedulers in the Nuclear Fleet Project Controls organization in conjunction with an often used software package known as Primavera P6<sup>®</sup> to define resource interdependencies and an initial project timeline. Primavera "provides Critical Path Method scheduling ("CPM"), which uses the activity duration, relationships between activities, and calendars to calculate a schedule for the project. CPM identifies the critical path of activities that affect the completion date for the project or an intermediate deadline, and how these activity schedules may affect the completion of the project."<sup>8</sup> This software package is widely used by nuclear power plant operators to schedule refueling outages and other major capital projects. The CPM is a commonly cited scheduling methodology for major construction projects.<sup>9</sup> Once this information is entered into the Primavera software package, approved updates can be quickly incorporated into the project schedule.

Within the past year, the EPU Project has expended considerable effort to develop the initial schedule further. This work included creating more detailed relationships between the various project activities and the resources that are required to complete them. In addition, this detailed "level one" schedule identifies when key equipment will be procured, received and installed at each of the sites and when certain activities, including vendor surveillance activities, must occur. The EPU Project team has established a protocol to enable vendors to communicate schedule

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<sup>8</sup> [www.primavera.com/products/p6/planning\\_man.asp](http://www.primavera.com/products/p6/planning_man.asp). Accessed February 20, 2009.

<sup>9</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.

information to the appropriate personnel, including the proper electronic format that will aid incorporating this information into the Primavera scheduling software.

Similarly, the EPU Project team has required each vendor to provide a feasible target schedule at the beginning of each vendor's scope work. Once this target schedule has been provided, the vendor is required to monitor its progress relative to this target schedule. The EPU Project team carries out this monitoring through weekly status calls and monthly status reports. These reports are of sufficient detail to monitor the contractors' progress and verify this progress through the number of hours worked under the contract.

The EPU Project team has instituted several periodic reporting mechanisms that allow the EPU Project team to monitor its schedule performance. These reporting mechanisms include a daily status call that is used to review near term action items and any challenges. These daily status calls are memorialized in notes and distributed to the EPU Project team. The EPU Project team also issues a variety of other reports, including Project Dashboards, which are issued on a weekly basis, and Project Deviation Reports, which are issued on a monthly basis. Each of these reports includes a discussion of the EPU Project's schedule performance as compared to an initial targeted schedule. Finally, the Primavera software mentioned above also allows FPL to review the project schedule based on approved updates on an almost real-time basis; as soon as changes to this schedule are input into the software, the schedule automatically updates to show changes to the various activity start and end dates as applicable.

#### *Concentric Observations*

Concentric believes the Company has instituted appropriate mechanisms to establish the EPU Project Schedule and to monitor the EPU Project's progress relative to this schedule.

### **E. Procurement Processes**

The EPU Project team includes several employees from the Integrated Supply Chain Management ("ISC") organization. These employees are dedicated to the FPL procurement function and are responsible for implementing several corporate policies governing the procurement function, including Nuclear Policy 1100. These policies include a wide breadth and depth of procurement processes, including a stated preference for competitive bidding wherever possible, the proper means for conducting a competitive solicitation, initial contract formation, and administration of the contract. Further, ISC has developed a desktop Procurement Process Manual that allows its staff to quickly reference the steps required to comply with FPL's corporate policies.

Throughout the EPU Project's life, the EPU Project team has implemented FPL's procurement procedures. For instance, in 2008 the EPU Project team procured engineering, procurement and construction ("EPC") services from Bechtel Power Corporation ("Bechtel") and certain components from Thermal Engineering International. Both procurements used similar processes.

The process to procure the EPC services began in May 2008. Consistent with FPL's policies, the EPU Project team, in conjunction with the ISC managers, collaborated to develop a detailed scope of work on which potential vendors would be asked to submit a bid. ISC, in conjunction with

representatives from FPL's legal department, used this detailed scope of work to develop a request for proposals ("RFP"), including proposed commercial terms and a request for vendor qualifications.

Concurrently, ISC identified six vendors, Areva, Black & Veatch, Bechtel, Fluor, Shaw – Stone & Webster, and URS – Washington Group, as possibly meeting the technical requirements necessary to complete the work and as having a desire to be considered for this project. These six vendors were issued a RFP that included the detailed scope of work and proposed commercial terms that were designed to protect the Company and its customers from unnecessary risks. FPL issued a deadline of June 30, 2008 for submitting responses to the RFP, and vendors were given the opportunity to ask questions related to the scope of work prior to the bid deadline.

After receiving the RFP, Black & Veatch and Areva elected to drop out of the process on their belief that they were not fully qualified or had commitments which included other FPL projects that could potentially divert their resources from the EPC contract. Thus, the competitive solicitation produced four responses to the RFP. These bid submissions were reviewed by internal subject matter experts with expertise in legal, contract administration, engineering and project management to ensure that they were compliant with the RFP and technically correct. Based on this information, the bid review team created a relative ranking of each of the proposals to narrow the number of respondents.

Following the initial round of scoring the vendors were asked a series of targeted questions to help clarify their proposals, and the vendors were allowed to refresh their bid submissions with their best and final offer. At this time vendors were encouraged to improve their bids on the basis of both price and commercial terms.

The Company received the revised bids in September 2008. Based on the responses, FPL identified Bechtel and URS – Washington Group as the preferred vendors with which it would enter into detailed discussions. These discussions included asking each vendor to refine its bid further from both a price and commercial terms standpoint. The results of these discussions and revised bids were then used to select Bechtel as the winning vendor on October 1, 2008.

A contract for each site was issued on November 3, 2008. On an aggregate basis, these contracts represent the largest contracts the EPU Project expects to execute. Since the time these contracts were issued, Bechtel has begun mobilizing its workforce to the Company's facilities and FPL has diligently reviewed the invoices and communications submitted by Bechtel to ensure that the terms of this agreement are fully met.

Once a contract has been issued, it is critically important to make certain the Company receives the full value of the goods and services it procures. FPL has developed an "Invoice Checklist/Approval Form" to verify that this is, in fact, the case. This form is attached by the Cost Engineer to each invoice that is received and requires a review by key project team members who have worked closely with the vendor on the goods and services for which payment has been requested. Each of the reviewers is named on the form and is required to review the invoice to ensure that the costs being billed are correct and appropriate. In addition, the form requires approval by certain senior project team members. This approval is based on the individuals' corporate financial approval authority, and each individual and their respective approval authority is listed on the form.

The EPU Project team's vigilance with these forms has caught instances of potentially inappropriate charges being billed to the Company. In these instances, the EPU Project team has worked with the vendor to investigate the cause for the errant charges, to determine the appropriate charges, and to correct the invoice or to obtain a credit on a future invoice. As an example, in one invoice that Concentric reviewed, Bechtel billed an amount that was deemed questionable by the EPU Project team for the December 2008 time period. After the EPU Project team reviewed this amount with Bechtel, a credit for these charges was included on the Company's February 2009 invoice. Similar instances have been found on other invoices, and the Company has worked with the respective vendor to correct the charges or provide adequate documentation to support the charges.

In other procurement processes, the EPU Project used single and sole source procurement strategies. These instances have been created by the significant amount of proprietary design information which must be recreated in order to offer certain goods or services and by the current state of the nuclear industry, which has atrophied since the initial nuclear construction cycle ceased in the late 1980s and early 1990s. In addition, a handful of large conglomerates have acquired several nuclear service companies and further reduced the number of qualified vendors.<sup>10</sup>

When the Company pursued a single or sole source procurement strategy, the Company's procedures require that the EPU Project team produce a single or sole source justification memorandum that describes the reason for this procurement strategy, including why there is a compelling business reason for FPL to pursue such a strategy. Each memorandum is reviewed and approved at the executive level.

During the 2008 Nuclear Cost Recovery Clause proceeding, the Florida Public Service Commission ("FPSC") noted a need to improve the depth of the single source justification memoranda which are used to support the decision to pursue this procurement strategy.<sup>11</sup> The EPU Projects have worked to make certain that all future sole or single source justifications are robust and transparent so that a third party is able to understand the need for and appropriateness of this procurement strategy. This process has included expanding the team that must review the content of the single and sole source justification memoranda and standardizing the format that is used when completing these memoranda. Additionally, FPL has held cross-functional training sessions for the EPU Project team to ensure that these team members understand the need to document thoroughly the compelling business reasons for the sole or single source procurement strategy.

The EPU Project has included contract language for each vendor that incorporates the Company's standard quality assurance requirements and provides for corrective action mechanisms in the event of delay or other technical issue. When a vendor does fall behind schedule, the EPU Project has requested a written recovery plan from the vendor. These plans are designed to identify the root cause of the delay or technical issue and to provide a stepwise plan for addressing the cause while implementing the necessary changes to get the project back on schedule. To date, the EPU Project has requested Recovery Plans from Westinghouse Electric Company, LLC ("Westinghouse") and Shaw – Stone & Webster related to the vendors' schedule performance and quality assurance.

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<sup>10</sup> See for example "Day & Zimmerman Acquisition of Atlantic Services Reshapes Power Services Market," Day & Zimmerman press release, June 1, 2007.

<sup>11</sup> The Florida Public Service Commission noted this concern in September 2008. However, several sole or single source procurements occurred prior this time.

In order to monitor vendor performance, the EPU Project maintains a Contract Deviation Log that tracks the various change orders that have been received from the EPU Projects' vendors. These change orders are monitored and documented as part of the Project Controls function. The deviation log provides a summary of contracts that are open, closed and cancelled with sufficient information to help determine if the contractual deviations are related to matters that were outside the initial scope of the contract. Additional documentation is maintained to support the summary view presented in the deviation log report.

#### *Concentric Observations*

Each invoice received by the Company is reviewed by subject matter experts to ensure the invoice costs are reasonable and relevant to the end product that has been produced for each site. This review includes capturing any clerical errors where the vendor may have entered the wrong purchase order when billing time or materials to the project and testing the reasonableness of the costs for each of the projects. FPL has worked with the vendor to correct any deficiencies. The FPL Internal Audit organization also serves as a backstop to make certain that any inappropriate or incorrectly categorized costs that might have made it through the first two layers of internal controls are correctly charged. Internal Audit last reviewed the EPU Project in the summer of 2008 and is expected to perform a similar review during 2009.

Concentric reviewed the single and sole source justification training presentation, the standardized single and sole source justification format, and completed single and sole source justifications. The EPU Project has addressed the FPSC's concerns by adding sufficient detail to allow a non-technical reviewer to understand the need for this procurement strategy. The EPU Project team has noted that it anticipates fewer additional large scopes of work that will require a single or sole source procurement strategy. The EPU Project team stated that this is because the EPU Project has moved beyond the stage during which many of the procurement activities related to proprietary design information. As a result, this concern should be diminished as the project moves forward.

Concentric has noted that four vendors were issued contracts that include similar scopes of work for the PSL 1 & 2 and PTN 3 & 4, as well as for the work concurrently progressing at FPL's affiliate, NextEra Energy's unregulated Point Beach Nuclear Power Plant in Manitowoc, Wisconsin ("Point Beach"). This has occurred because these vendors were able to offer substantial savings to the Company and its customers if the vendors were awarded the scope of work for all three projects. Each project was issued a separate contract and purchase order under which the vendor must bill time.

Concentric is recommending the EPU Project develop a clear process for ensuring that the EPU Project's vendors with similar scopes of work at the Company's regulated and NextEra's unregulated plants appropriately bill each site for the work being performed. The need for this separation should be communicated to relevant project vendors on an annual basis through a written notice, and copies of this notice should be maintained for later reference. Concentric has not found evidence that this is a problem that has not been captured by the Company's existing overlapping processes. Concentric is making this recommendation to make certain that as spending with these vendors increases, the costs associated with each site are kept separate.

The EPU Project team has noted that the Point Beach Uprate project is maintaining a schedule that is approximately one year ahead of the EPU Project. Thus, there is little potential overlap in the scopes of work that are being performed at any given time.

#### **F. External Oversight**

The primary external oversight mechanism put in place for the EPU Project relates to Concentric's review of the EPU Project's internal controls. Concentric has conducted a thorough review of the EPU Project, its procedures and the various mechanisms in place to ensure compliance with these procedures. Concentric has focused on ensuring that these internal controls have been implemented, and as a result, that the EPU Project has been prudently managed.

Additionally, the EPU Project team members maintain close relationships with their counterparts at other nuclear power plants around the country. These valuable relationships allow the EPU Project team to monitor developments or challenges at other plants and leverage those experiences at PSL 1 & 2 and PTN 3 & 4. The EPU Project team has access to these industry relationships through the Company's membership in several industry organizations including the Electric Power Research Institute ("EPRI"), the Nuclear Energy Institute ("NEI"), and the Institute of Nuclear Power Operators ("INPO").

##### *Concentric Observations*

Concentric has observed that FPL has sought to consider input from a variety of external resources as it seeks to implement the EPU Project. This includes the feedback derived from Concentric's review of the Projects.

FPL is an active member of at least three well-known and respected industry groups: NEI, EPRI, and INPO. Each of these organizations should help to provide FPL with access to lessons learned from other nuclear operators and will allow the Company the opportunity to avoid repeating others' missteps.

#### **IV. NEW NUCLEAR PROJECT**

Through the PTN 6 & 7 Project, FPL is seeking to develop the option to deploy two new nuclear units at the Company's Turkey Point site in 2018 and 2020. This strategy is being pursued to provide the likely substantial fuel cost savings provided by nuclear generation while pursuing a measured strategy to committing funds to the PTN 6 & 7 Project.

Since the PTN 6 & 7 Project's inception, the PTN 6 & 7 Project team has selected the site for the new units, selected the AP 1000 reactor technology, entered into a reservation agreement for the procurement of a manufacturing slot for certain heavy forgings, decided to pursue a contracting strategy that may separate construction services from the engineering and procurement contract and decided to defer the procurement of certain long lead materials. Each of these decisions was made using a management approval process that ensures FPL's senior executive team is fully informed of the PTN 6 & 7 Project's direction.



In 2006, FPL undertook a process to select the preferred site on which the company would seek to develop two new nuclear power plants. This process was conducted by the Company in conjunction with outside experts from Enercon Service, Inc and McCallum-Turner and utilized a process outlined in the *EPRI Siting Guide: Site Selection and Evaluation Criteria for An early Site Permit Application, March 2002*. Through this process, FPL identified twenty-three sites that were in or immediately adjacent to the Company's service territory and worthy of additional study. Twelve of these sites were locations where FPL has previously sited generation facilities. Ten of the locations were new greenfield sites. Certain locations were eliminated during initial rounds of the site selection study and the Company ultimately chose the Turkey Point site based on its known geology, existing land ownership, and cooling water availability.

Also in 2006, the PTN 6 & 7 Project team met to determine which reactor technologies should be considered for use at the Turkey Point site. Criteria for this review included the vendor's qualifications, the safety and reliability of the technology, as well as how far the technology had advanced relative to other technologies. Based on these criteria FPL invited four vendors to submit a response to the Company's request for information ("RFI"). Collectively these four vendors represented seven reactor technologies. The Company then invited each vendor to a meeting with FPL staff to discuss their respective technologies. These meetings took place in July 2006 and included an appropriate mix of subject matter experts to review and properly assess the presentations provided by the vendors. Following these meetings, FPL submitted additional clarifying questions to the vendors. From the information received during the vendor presentations and the vendors' responses to the additional clarifying questions, FPL developed a comparison of the various nuclear reactor designs to ultimately select the AP 1000 as the preferred technology. The selection criteria included such factors as first-of-a-kind engineering, the maturity of the technology, construction schedule, and operating efficiency.

FPL became aware that the global market for ultra heavy forging manufacturing slots was becoming increasingly constrained in early 2008 after conferring with Westinghouse. This situation resulted from an unusually robust global demand for ultra heavy forgings that are used in the construction of new nuclear power plants and other heavy industrial processes, such as chemical production and petroleum refining, as well as the limited number of global suppliers for these components. The World Nuclear Association noted in December 2008 that the International Atomic Energy Agency is now predicting that at least 70 new reactors will be constructed within the next fifteen years.<sup>12</sup> This number does not include several additional reactors that are currently under consideration in countries such as France, India, Italy, and the United Kingdom. As a result of this information, FPL entered into an agreement with the reactor vendor to procure the manufacturing slots for ultra heavy forgings necessary to maintain the PTN 6 & 7 project schedule.

Also in 2008, FPL held discussions with a consortium of Shaw Nuclear Services and Westinghouse (the "Consortium") regarding an engineering, procurement, and construction ("EPC") contract. Through discussions with the Consortium, it became apparent that the structure of the agreement proposed by the Consortium did little to manage the risk of price escalation during the five-year construction and startup period. In addition, FPL noted that an opportunity to incur substantial savings existed if the construction scope of work were competitively bid a later date. This opportunity will result from the completion of detailed design work that will better define the

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<sup>12</sup> "Plans for New Reactors," World Nuclear Association, December 2008. <http://www.world-nuclear.org/info/inf17.html>

quantity of commodities and labor resources required to construct the plant and allow potential vendors to provide a more refined estimate of the cost to construct the facility. As a result, FPL made a strategic decision to split the EPC contract into two pieces: an engineering and procurement contract and a construction contract. By splitting the agreement into parts, FPL will continue to pursue the AP 1000 technology for use at PTN 6 & 7, but will preserve the option to competitively bid the construction of the project at a later date. In order to accomplish this strategy, FPL has retained Black & Veatch/Zachry (“BVZ”) to perform certain preliminary engineering and site layout activities.

#### **A. Project Organization Structure**

Exhibit 3 provides an organization chart for the PTN 6 & 7 Project team. This Project team has been developed based on the concept of ensuring the “best athlete” is utilized to undertake each portion of the PTN 6 & 7 Project’s development. Consistent with this notion, the PTN 6 & 7 Project team consists of two separate but collaborative groups, the Company’s Project Development and New Nuclear Projects organizations. Both organizations ultimately report up to the Chief Operating Officer of FPL Group.

The Project Development organization is responsible for executing all facets of the project that do not fall under the purview of the Nuclear Regulatory Commission (“NRC”). This group has been responsible for the development of several power generation facilities that were developed in Florida in the past several years. The Project Development portion of the PTN 6 & 7 Project team is headed by the Project Director – Development which reports up through the Chief Development Officer.

The New Nuclear Projects organization is responsible for submitting the construction and operating license application (“COLA”) to the NRC and all aspects of engineering, procurement, construction, and subsequent startup. The New Nuclear Projects organization is headed by the Vice President of New Nuclear Projects. The Vice President of New Nuclear Projects is supported directly by a Project Director and License Director. Similarly, the Licensing Director is supported by the environmental, engineering, and document control personnel.

Both the New Nuclear Projects and Project Development groups receive support from FPL’s Quality Control/Quality Assurance, Business Operations, Project Controls, Integrated Supply Chain Management, Environmental Services and Legal Services organizations.

#### *Concentric Observations*

Through its review, Concentric has not observed any conflicts or inefficiencies that result from the dual structure of the PTN 6 & 7 Project. The PTN 6 & 7 Project’s dual structure is consistent with the principles of the project organization as it ensures the resources necessary to meet FPL’s specific requirements are mobilized from the resource bases that hold those resources.<sup>13</sup> Additionally, the PTN 6 & 7 Project’s structure allows each group of individuals to remain singularly focused on

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<sup>13</sup> Lowe, David and Roine Lerfinger. Commercial Management of Projects: Defining the Discipline. Blackwell Publishing, Malden, MA, 2006. Pg. 329.

completing their respective assignments while being overseen by the Company's Chief Operating Officer.

Concentric has observed that a large number of infrastructure construction projects in the Southeastern U.S. are expected to enter construction within the next decade. As a result the region's labor resources could be constrained by the increase in demand for these resources. The PTN 6 & 7 Project should consider develop a workforce contingency plan to address this possible shortage. It is important to note, however, that the PTN 6 & 7 Project is still several years from entering the construction phase of the project, and adequate time exists to plan for such a scenario.

## **B. Internal Oversight**

The PTN 6 & 7 Project is subject to FPL's corporate GOs. However, the PTN 6 & 7 Project is being developed external to FPL's Nuclear Division. As a result, the PTN 6 & 7 Project is not explicitly subject to the Nuclear Divisions' policies. The FPL Quality Assurance/Quality Control organization has developed a procedure that identifies which nuclear division policies are applicable to the PTN 6 & 7 project.<sup>14</sup> In addition, the PTN 6 & 7 Project has begun to develop its own set of project instructions known as New Nuclear Project Instructions ("NNP-PIs"). The NNP-PIs currently relate to the following activities:

- Preparation of Project Instructions
- Project Document Retention
- NRC Correspondence
- Project Management Briefs and COLA Related Document Reviews
- Department Training

In addition, PTN 6 & 7 project personnel are responsible for reading Nuclear Administrative Policies, Nuclear Engineering Quality Instructions, and Nuclear Policies. This process allows the Company to make certain a system of internal control is communicated and implemented at the project level while also ensuring adequate flexibility exists to meet the PTN 6 & 7 Project's unique challenges and risks.

The PTN 6 & 7 Project team uses a number of periodic reports to inform the project management team and the Company's senior executive team. These reports are described later and include weekly, monthly, and annual reports that detail key performance indicators, budget and schedule performance and key project decisions.

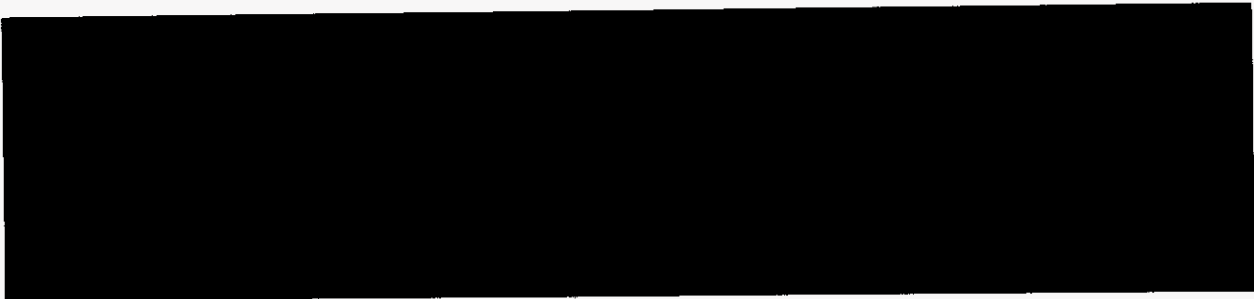
In keeping with the Company's policy of ensuring overlapping control mechanisms, the PTN 6 & 7 Project is subject to review by the Company's Internal Audit organization, which reports directly to the FPL Group Chairman and CEO through a Vice President of Internal Auditing.

Internal Audit's work is dictated by a series of guidelines which were revised in spring 2009. These guidelines dictate how Internal Audit prepares for its audits, how those audits are conducted and how the results are reported to the respective business unit manager and the FPL Group Chairman

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<sup>14</sup> "Quality Assurance for New Nuclear Projects - Project Instructions" ("QI-2-NNP-001")

and CEO. The guidelines further address the required training and continuing education for internal auditors while setting forth a mechanism for retaining outside expertise when such expertise is not contained in-house.



Similarly, the FPL Corporate Risk Committee consists of FPL directors and other senior employees, and is tasked with periodically reviewing the project and its associated risks. The PTN 6 & 7 Project team went before the FPL Corporate Risk Committee on June 25, 2008 to present initial details of the project and to seek guidance on certain aspects of the project, including potential cooling water sources. The FPL Corporate Risk Committee then presented its recommendations in documented meeting minutes.

The PTN 6 & 7 Project has also established specific review committees which are responsible for making certain the project complies with applicable laws and regulations during the permitting and licensing phase of the PTN 6 & 7 Project. An example of this is the Licensing Review Board ("LRB") which consists of PTN 6 & 7 Project team members and senior representatives from Bechtel. The LRB is tasked with reviewing the COLA prior to its submission to the NRC. This review is done to make certain the COLA is consistent with the NRC's requirements, and the review affords the PTN 6 & 7 Project team an opportunity to ensure the COLA is of a high quality. The status of this Licensing Review Board's work is presented to the PTN 6 & 7 Project management on a weekly basis.

#### *Concentric Observations*

Concentric believes Internal Audit's revised guidelines will provide Internal Audit with a robust set of instructions for ensuring that the Company's various business units are adhering to the Company's system of internal control. Concentric had previously noted that the Company needed to ensure any remedies implemented to correct the deficiencies identified by Internal Audit were appropriately re-tested to make certain that these deficiencies were addressed on a going forward basis. Similarly, Concentric noted the need to maintain all appropriate documentation with internal audit, including management response and corrective actions. It would appear that these revised guidelines will address Concentric's recommendations.

Concentric also notes that upcoming prudence reviews before the FPSC would be facilitated by the use of "Key Decision Memoranda" to memorialize critical project decisions (i.e., where the magnitude of the decision is above 1% of the project costs). These memoranda would include a discussion of the information that was known at the time of the decision, what decision was made and the basis for that decision, and would allow management and third parties to quickly review previous decision-making processes. The PTN 6 & 7 Project completed a similar process for certain

major decisions such as the selection of the Turkey Point site and the AP 1000 reactor. A more concise memorandum (i.e., 1-2 pages) could be used to document lesser key project decisions.

Finally, Concentric is recommending the PTN 6 & 7 Project Instruction “Quality Assurance for New Nuclear Projects - Project Instructions” (“QI-2-NNP-001”) be updated on a scheduled (i.e., annual) basis. This document has been described by members of the PTN 6 & 7 Project team as the “bridge document” which defines which Nuclear Division policies and procedures are applicable to the PTN 6 & 7 Project. Thus it is necessary to make certain that this bridge document is routinely updated to reflect the dynamic nature of the PTN 6 & 7 Project. The PTN 6 & 7 Project has indicated it plans to assign an “owner” for each NNP-PI. These owners will be responsible for reviewing each NNP-PI on an annual basis and updating them as necessary.

### **C. Budgeting and Cost Estimating Processes**

The scope for PTN 6 & 7 Project was initially completed in 2006. At that time, FPL undertook a process to develop an estimate of the cost to construct two new nuclear units, based on a partial take off estimate produced by the NuStart consortium to develop and construct two ABWR reactors at the Tennessee Valley Authority’s Bellefonte site. The estimate from this study was adapted to account for the different reactor technologies being considered by FPL and for conditions specific to the State of Florida’s geology and weather conditions. This cost estimate is used in conjunction with the Company’s annual feasibility analysis, which makes certain that the PTN 6 & 7 remains economically competitive.

The PTN 6 & 7 budget is developed based on input from key project team members and their respective resource, staffing, and procurement needs. The budget is updated in August of each year and includes a two-year look ahead to allow the Company to plan for its near term expenditures. The PTN 6 & 7 Project’s progress is then measured against the updated budget.

The PTN 6 & 7 Project team uses at least seven (7) different reports to monitor the PTN 6 & 7 project’s budget performance. As an example, these reports include a weekly “Performance Indicator Report” that monitors the number of work hours incurred relative to those that were originally forecast. On a monthly basis, the PTN 6 & 7 Project Management & Senior Executive Team receives several reports that detail budget variances by department and provide explanations of those variances. In addition, these reports include a description of all costs expended in the current month and quarter, as well as year-to-date and total cumulative spending. Additionally, the PTN 6 & 7 Project team publishes monthly Project Dashboard and Corporate Variance reports for the Company’s senior executives. These reports include a description and explanation of any budget variances.

#### *Concentric Observations*

Concentric believes that the PTN 6 & 7 Project’s initial budget was appropriately developed. Concentric found the PTN 6 & 7 project budget processes include multiple overlapping oversight mechanisms that help ensure that the project’s management and the Company’s senior management are well informed of the project’s performance. Additionally, the PTN 6 & 7 Project team has developed multiple reports that track budget performance on a cumulative and periodic basis, along with a process for describing variances in actual expenditures relative to the budget.

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

#### **D. Scheduling Processes**

The PTN 6 & 7 project schedule is managed with an often used software package developed by Primavera Systems, Inc. This software package uses the CPM of scheduling to define activity relationships and resource loadings. The schedule that has been developed to date is routinely updated to reflect new information. The method for updating this schedule, including the proper electronic format, is well documented and is being communicated to vendors to make certain that the PTN 6 & 7 project's expectations are clear.

The PTN 6 & 7 Project team has taken a number of steps to proactively monitor and manage its schedule performance. These steps include publishing a number of reports that detail the PTN 6 & 7 project's schedule performance on a weekly and monthly basis. These reports include:

- Key Performance Indicators that provide a comparison of the number of activity starts and finishes in a given week to the number of activities that were expected to start and/or finish in the week
- A "Six Week Look-Ahead Report" is issued on a weekly basis to provide an update on the activities that are projected to start during the next six weeks. This report gives the PTN 6 & 7 Project team adequate notice of upcoming activities and allows the team to plan their time accordingly
- Schedule Resource Profiles, which are issued weekly and provide a visual depiction of all FPL resource allocated scheduled activities
- A weekly Environmental Final Review schedule, which provides the status of all remaining environmental reviews of the PTN 6 & 7 project's permits
- A weekly License Review Board Final Review Schedule, which provides the status of all remaining License Review Board reviews of the PTN 6 & 7 project's permits

The PTN 6 & 7 Project team has incorporated similar reporting requirements into its contracts with key vendors such as BVZ and Bechtel. As a result, both vendors are required to submit monthly progress reports detailing their work to date, including any projected delays. The vendors' progress is monitored relative to an initial schedule that each vendor is required to provide to FPL at the beginning of each vendor's scope of work

### *Concentric Observations*

Concentric believes the PTN 6 & 7 Project has instituted appropriate mechanisms to establish the PTN 6 & 7 project schedule and to monitor the progress relative to this schedule. These mechanisms include a robust system of reports which inform the PTN 6 & 7 Project team of various near term activities.

#### **E. Procurement Processes**

FPL has a number of corporate policies and procedures related to the procurement function including the following:

- Selecting and auditing vendors
- Maintaining and administering an approved vendor list
- Issuing an RFP
- Contract negotiations
- Issuing a purchase order
- Managing changes in scope and/or budget
- The inspection of vendor deliverables

These corporate policies, implemented within the ISC organization, are sufficiently detailed to ensure that the ISC organization appropriately manages the vast number of procurement activities that support the PTN 6 & 7 project. Additionally, these procedures clearly state a preference for competitive bidding except in instances where no other supplier can be identified or when there exists a compelling business reason not to seek competitive bids.

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

Concentric reviewed how these processes were implemented for the competitively bid Bechtel Combined Operating License Application (“COLA”) contract as well as the single sourced contract for preliminary engineering, which was issued to Black & Veatch.

In order to competitively bid the engineering services required to produce the PTN 6 & 7 COLA, ISC met with several members of the PTN 6 & 7 Project team in the summer of 2007 to develop a written scope of work that would encompass the preparation of a COLA for the PTN 6 & 7 project. Additionally, PTN 6 & 7 sought input from the NuStart consortium and other new nuclear developers. Concurrently, ISC sought to determine the universe of potential vendors who might be interested in receiving the RFP. This process identified two potential vendors, Bechtel and Black & Veatch, and an RFP was issued to these companies on July 13, 2007. Two addendums to this RFP were issued to each company on July 13, and July 25, 2007. These amendments narrowed FPL’s choice of reactor technology to the Westinghouse AP 1000 and the GE ESBWR, provided additional clarifying information and delayed the deadline for the submission of bids from August 3,

2007 to August 17, 2007. Each vendor was then given an opportunity to submit clarifying questions. The answers to these questions were provided to both vendors to ensure that a level playing field was maintained.

Responses to the RFP were obtained from both vendors on August 17, 2007, and ISC assembled a team of subject matter experts who were responsible for objectively evaluating the proposals based on the PTN 6 & 7 Project's needs and the vendors' capabilities. This process was conducted using a "scorecard" that listed the criteria used to rank the proposals, including the quality of the response, the vendor's qualifications, proposed subcontractors and pricing. FPL then entered into negotiations with both companies and ultimately awarded the contract to Bechtel in November 2007.

The PTN 6 & 7 Project has occasionally used sole and single source procurement strategies. In these instances, FPL's corporate policies require the preparation of a sole or single source justification memorandum. These memoranda must provide a compelling business reason for not pursuing a competitive solicitation. Acceptable reasons for this might include that the Company recently conducted a competitive solicitation for a similar good or service, where only one vendor is capable of providing the good or service, or where use of a particular vendor provides a distinct strategic advantage.<sup>15</sup>

The PTN 6 & 7 Project recently used a single source procurement strategy when it chose BVZ to provide certain engineering services on behalf of the Company. This procurement strategy was selected in order to enhance the number of potential construction vendors which are familiar with the AP 1000 design. As noted previously, FPL has identified the potential to save millions of dollars for its customers by competitively bidding the construction of the PTN 6 & 7 Project. In order to foster this opportunity it is important to make certain that the market includes a number of capable construction vendors which are familiar with the design of the AP 1000 reactor. As discussed in the Single Source Justification Memorandum for this procurement, there are currently three capable construction firms, Shaw, Bechtel and BVZ, aligned with various reactor vendors. Two of the three firms, Bechtel and Shaw, have prior experience with the AP 1000 and the PTN 6 & 7 Project. BVZ, however, is currently aligned with the URS – Washington Group and the GE ESBWR reactor design. By single sourcing the procurement of engineering services from BVZ, this vendor will gain experience with the AP 1000 reactor and the PTN 6 & 7 Project and FPL will increase the competitive environment for construction services for the AP 1000.

In Docket No. 080008-EI, the FPSC noted concerns related to the Company's single and sole source justifications memoranda. Specifically, the FPSC was concerned with the level of detailed provided in these documents. Following the FPSC's order the, PTN 6 & 7 Project team has responded to the Commission's concern by ensuring all sole or single source justification memoranda that are issued on a going forward basis include additional detail to assist non-project personnel in understanding the compelling business reason for this procurement strategy. This process was achieved by conducting training to heighten the PTN 6 & 7 Project team's awareness of the issue.

The PTN 6 & 7 Project has noted that it anticipates the proportion of goods and services procured on a single or sole source basis will grow until construction of the PTN 6 & 7 Project begins. This

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<sup>15</sup> Florida Power & Light Company, NP-1100



results from the fact that many of the goods and services that must be procured prior to construction relate to proprietary information that is specific to a single reactor design. Thus, it will often be impossible to locate another vendor that is capable of providing these goods or.

In order to ensure that the Company and its customers receive the full value of the goods and services that are procured, the PTN 6 & 7 Project team includes a Project Controls Manager. This Project Controls Manager is responsible for reviewing the invoices received from each vendor and ensures that the vendors are complying with the terms and conditions of their contracts. As the Project Controls Manager receives the invoices from each vendor, an Invoice Review and Verification Form that details who is responsible for reviewing each section of the invoice is attached to the invoice. The Project Controls Manager is similarly responsible for reviewing the invoice in its entirety before it is submitted for approval. The Invoice Review and Verification Form also notes the level of financial approval authority for each individual required to approve the invoice. This form is sent to each reviewer, who must verify that the appropriate charges are included in the bill and that the work product meets the PTN 6 & 7 project's needs prior to payment.

#### *Concentric Observations*

Each invoice received by the PTN 6 & 7 Project team is reviewed by subject matter experts to ensure the invoice costs are reasonable and are being billed to the correct project. The FPL Internal Audit organization serves as a backstop to make certain inappropriate costs are corrected. Internal Audit last reviewed the PTN 6 & 7 Project in the summer of 2008 and is expected to perform a similar review during 2009.

Concentric is making two recommendations related to the PTN 6 & 7 project's procurement and contract administration processes. These recommendations include developing a process that documents why a change in a contract price is or is not the result of change in the original contract scope and an annual review process to make certain that Bechtel is billing the PTN 6 & 7 project for subcontractors in accordance with its contract.

## **F. External Oversight Processes**

The PTN 6 & 7 Project teams have relied on a number of external reviews to ensure that the project is making decisions based on the best information that is available at the time of those decisions. In 2008, FPL retained MPR Associates, a nationally recognized engineering firm, to review the Company's reactor technology selection process. Similarly, FPL has retained Concentric to provide a review of the Company's system of internal control.

Finally, FPL maintains memberships in both the NuStart Consortium and APOG. While neither organization provides oversight to the PTN 6 & 7 Project, these organizations do give FPL access to the lessons learned by other developers of new nuclear facilities.

#### *Concentric Observations*

Concentric has noted that FPL has undertaken a concerted effort to receive the benefits of outside expertise. This expertise will allow the Company to incorporate the lessons learned from other new nuclear projects being developed around the country.

## V. CONCLUSION

### A. EPU Conclusions

As a general matter, the EPU Project team and its supporting organizations within FPL are adhering to FPL's system of internal control. This has been accomplished through a set of detailed, written procedures and instructions, robust project team organization, a procurement strategy that seeks to protect the Company and its customers, and adequately and timely reporting to each level of the EPU Project team including the FPL's senior leadership.

Based on our review, Concentric is making several recommendations to enhance the EPU Project's system of internal control. These recommendations include the following:

- The Company should undertake a concerted effort to fill the vacant oversight positions, and produce a "Monthly Staffing Report" that identifies and explains the reasons for the vacant positions that have been open for more than 30 days.
- The number of planned construction projects could divert resources from the EPU Project. As a result, the Company should consider developing a workforce contingency plan.
- Concentric notes that "Key Decision Memoranda" which include a discussion of the information that was known at the time of the decision, what decision was made and the basis for this decision could facilitate upcoming prudence reviews before the FPSC.
- To make certain that costs for the work performed at the FPL Group's Point Beach, PSL 1 & 2 and PTN 3 & 4 are kept separate, Concentric recommends the Company undertake an annual process to notify these vendors of the need to accurately bill time and expenses to the appropriate project. The further advanced schedule of the extended power uprate at the Point Beach site should help mitigate this risk.
- Concentric recommends that the EPU Project include a concise explanation for contract deviations in the EPU Project's Contract Deviation Log.

Finally, Concentric believes the EPU Project has taken adequate steps to address the FPSC's single and sole source procurement concerns. These steps included further training, standardized templates and additional project team reviews.

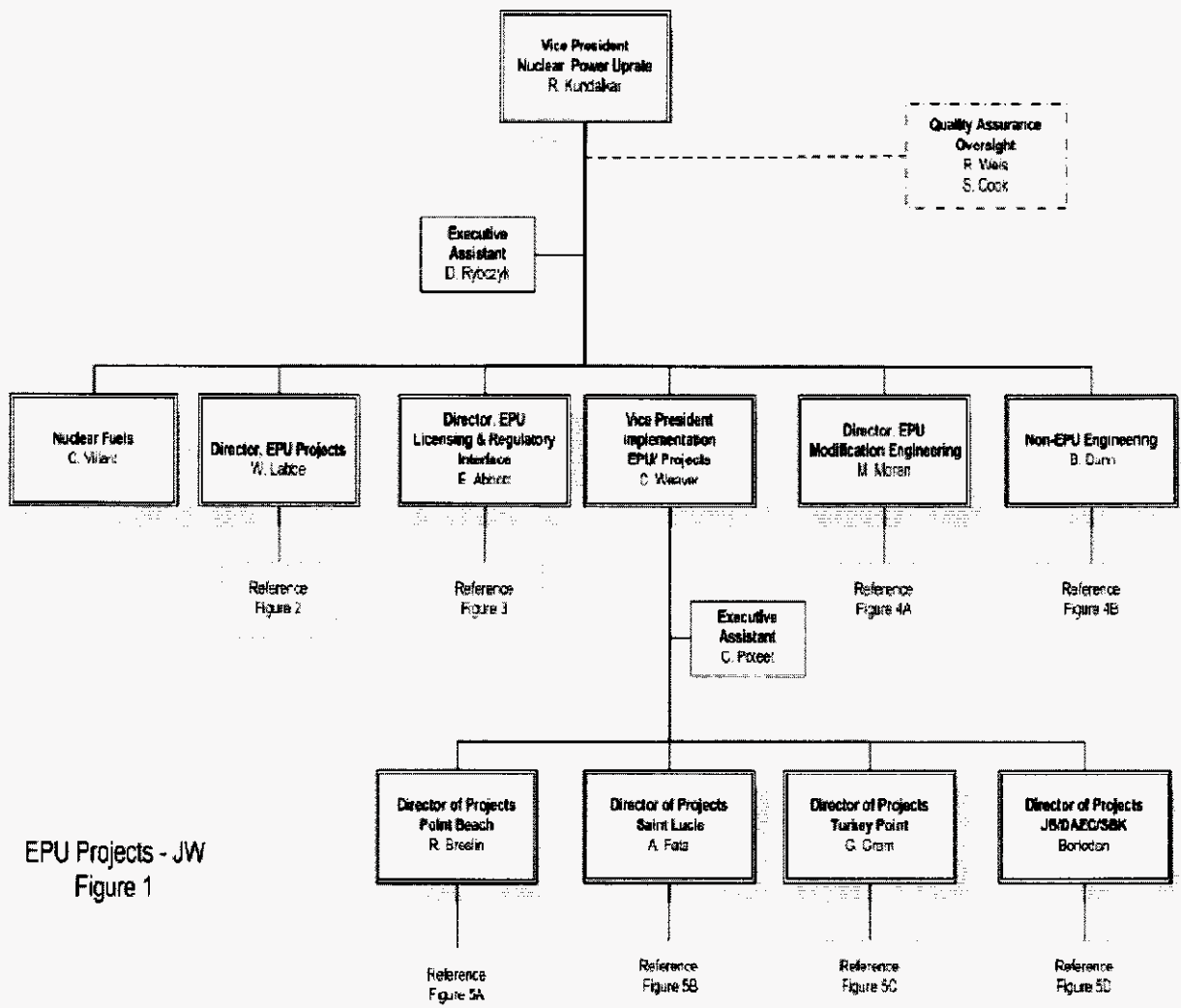
### B. PTN 6 & 7 Conclusions

Concentric has found that the PTN 6 & 7 Project team has complied with the Company's system of internal control. The PTN 6 & 7 Project team's actions were specifically designed to methodically preserve the option to pursue new nuclear generating capacity at the Company's Turkey Point site while delaying a commitment to build this capacity for as long as is reasonably feasible. By doing so, the Company is preserving its customers' ability to receive the substantial economic benefits of nuclear power at a future date while minimizing the near term expenditures required to maintain this option.

Concentric is proposing specific procedural recommendations to enhance the PTN 6 & 7 project's internal controls, including developing a process to identify and verify with subject matter experts why contract change orders do or do not exceed the original contract scope, developing a process to ensure that Bechtel is passing along sub-contractor costs without mark-up, and periodically updating certain project instructions.

Finally, Concentric notes that upcoming prudence reviews before the FPSC would be facilitated by the use of "Key Decision Memoranda" which include a discussion of the decision and basis for that decision.

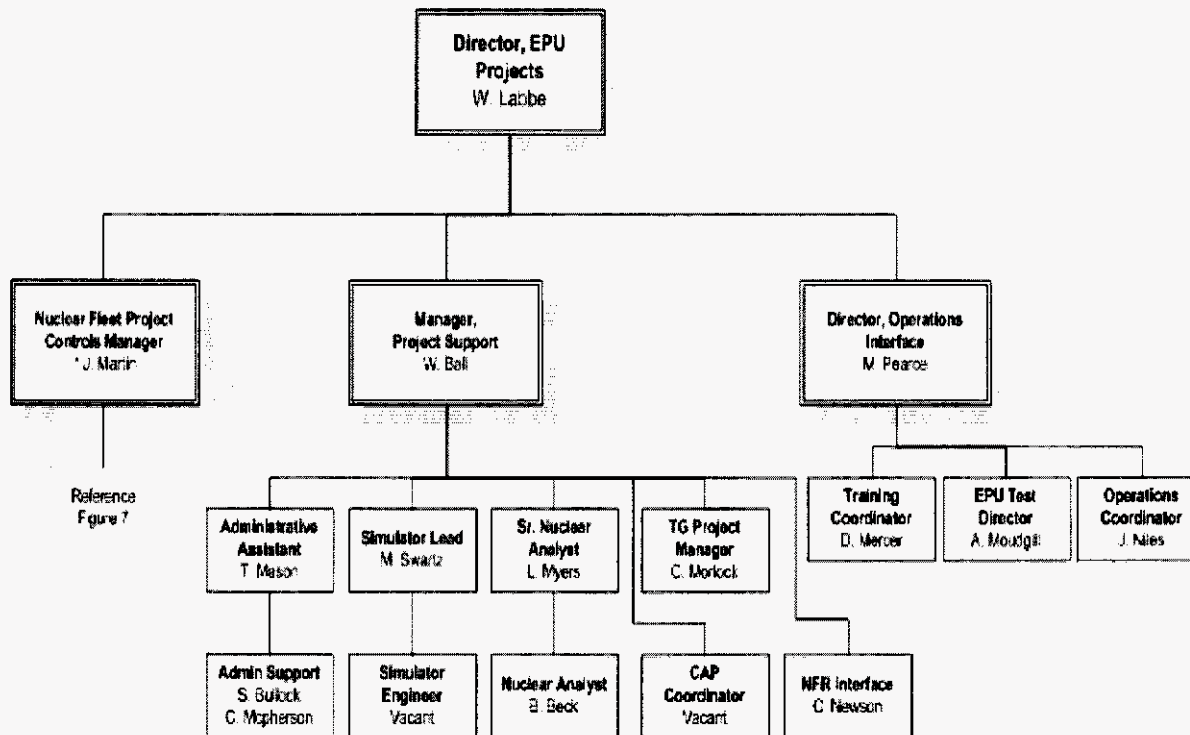
### Exhibit 1: EPU Project Organization Charts



EPU Projects - JW  
Figure 1

Docket No. 090009-EI  
 Internal Control Review  
 Exhibit JLR-1, Page 30 of 36

## EPU Project Director



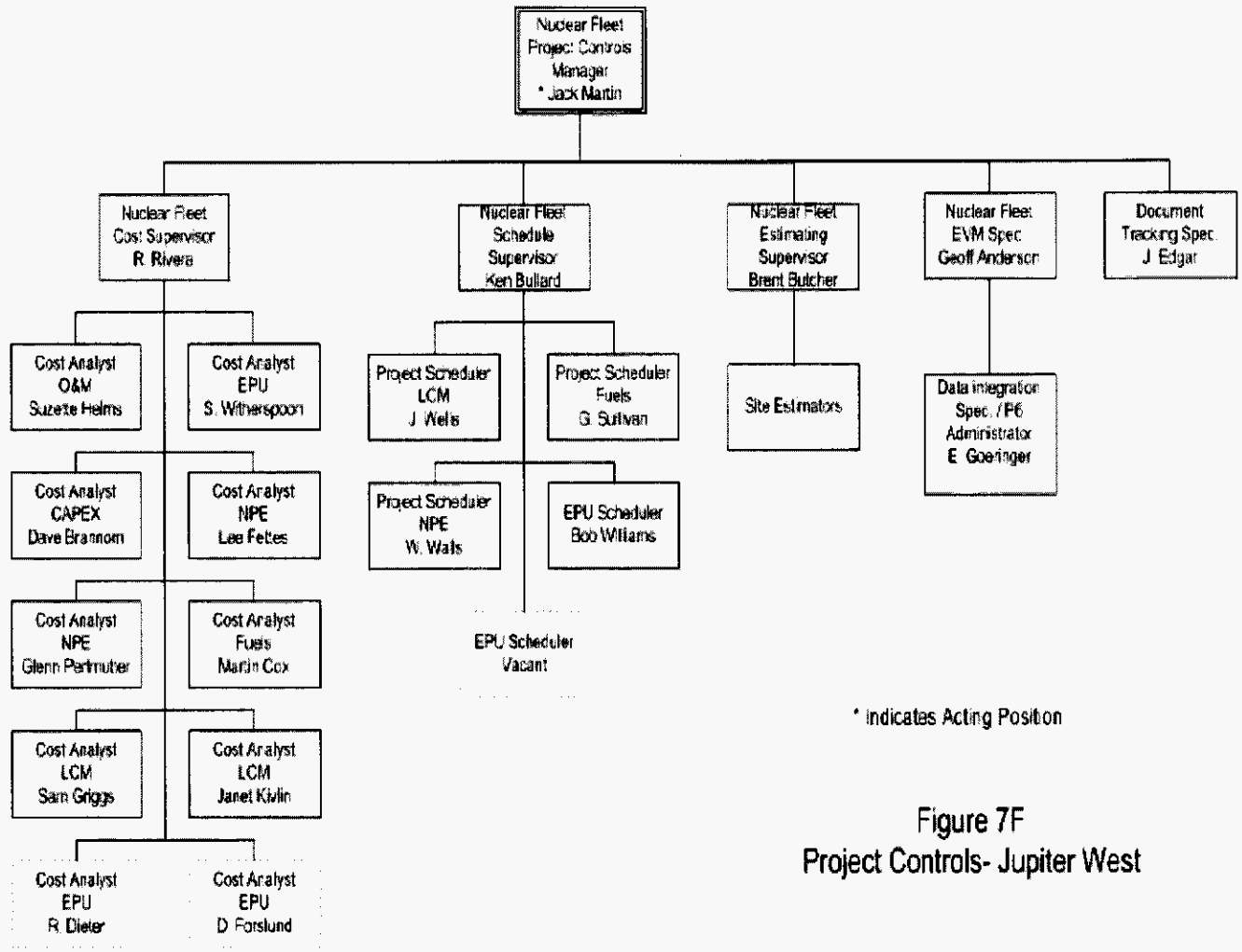
Reference Figure 7

EPU Project Director  
Figure 2

\* Indicates Acting Position

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 Internal Control Review  
 Exhibit JIR-1, Page 31 of 36

### Project Controls Jupiter West



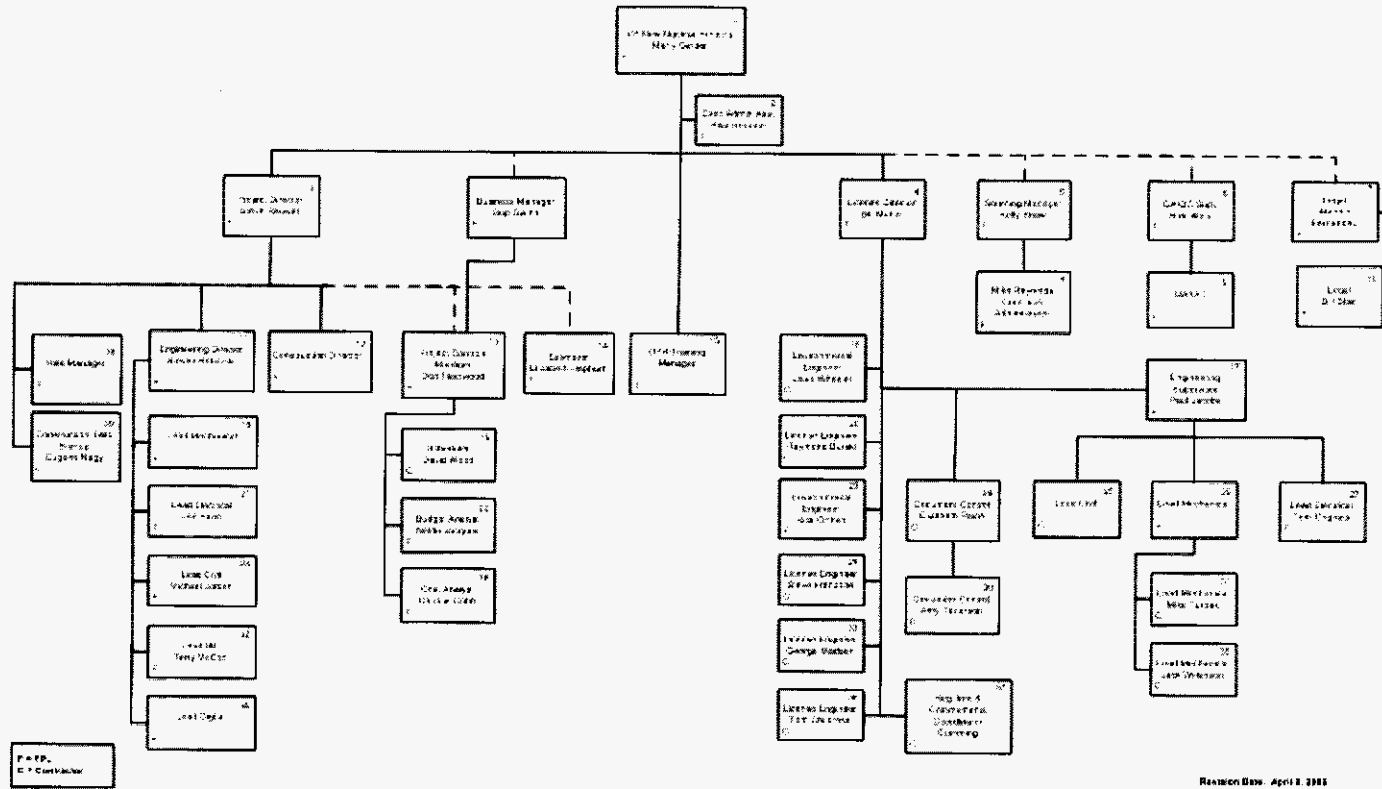
\* Indicates Acting Position

Figure 7F  
Project Controls- Jupiter West

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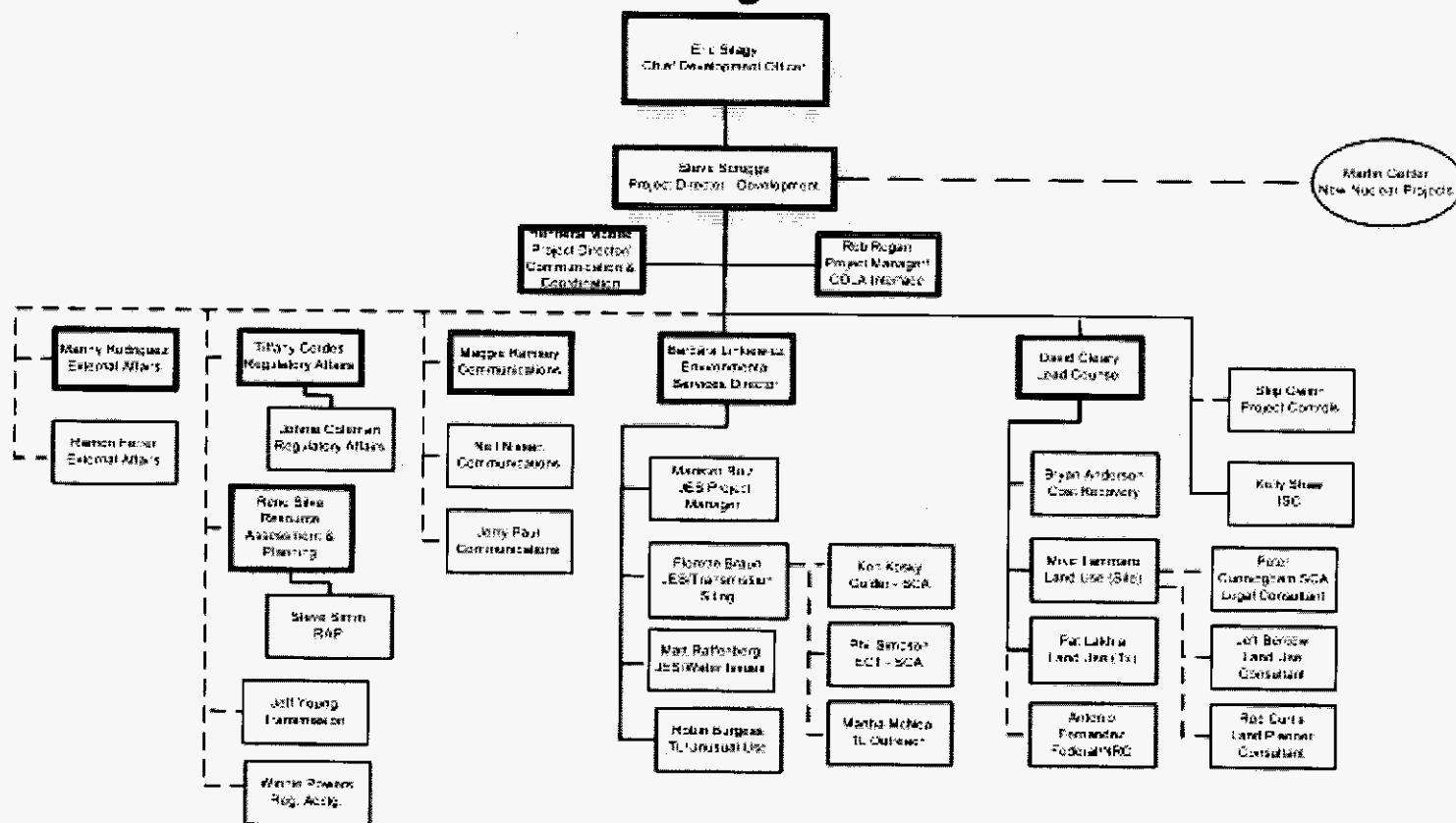
## Exhibit 2: PTN 6 & 7 Organizational Charts

### PTN 6&7 Project Organization New Nuclear Projects



Docket No. 090009-EI  
 Internal Control Review  
 Exhibit JIR-1, Page 33 of 36

# Turkey Point 6 & 7 Development Project Organization Licensing Phase



Updated March 26, 2008

Exhibit JPR-1, Page 34 of 36  
 Internal Control Review  
 Docket No. 090009-EI



**Exhibit 3: Index of EPPIs**

| <b>Title</b>   | <b>PI #</b> | <b>Revs</b> | <b>Issued</b> | <b>Status</b>        |
|--|-------------|-------------|---------------|----------------------|
| <b>Project Administration</b>                                    | <b>100</b>  |             |               |                      |
| Project Instruction Preparation, Revision, Cancellation          | 100         | R1          | 9/29/2008     |                      |
| EPU Project Expectations & Conduct of Business                   | 110         | R11         | 2/18/2009     |                      |
| 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         | R4          | 3/10/2009     |                      |
| Cost Estimating  | 320         |             | 3/26/2008     |                      |
| EPU Project Risk Management Program                              | 340         | R1          | 12/1/2008     |                      |
| Project Controls File Management                                 | 360         |             |               | On hold for J. Niles |
| 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         |             |               | Not Started          |
| 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      |                      |
| EPU Project Qualification Guidelines                             | 560         | R1          | 12/19/2008    |                      |
| <b>Quality, Engineering &amp; Licensing</b>                      | <b>600</b>  |             |               |                      |
| EPU Uprate License Amendment Request                             | 610         | R1          | 12/3/2008     |                      |
| QA Task Plan Implementation                                      | 620         |             |               |                      |
| Regulatory Communications Guideline                              | 630         |             | 11/20/2008    |                      |
| <b>Point Beach Specific</b>                                      | <b>700</b>  |             |               |                      |
| Fire, Weather, Medical, and Other Emergencies                    | 710         |             | 8/27/2008     |                      |
| <b>Saint Lucie Specific</b>                                      | <b>800</b>  |             |               |                      |
| St. Lucie EPU Project Severe Weather Preparation                 | 810         |             | 5/7/2008      |                      |
| <b>Turkey Point Specific</b>                                     | <b>900</b>  |             |               |                      |
| Turkey Point EPU Project Severe Weather Preparations             | 910         |             | 7/15/2008     |                      |

**Exhibit 4: 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.<br>* 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.<br>** 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<br>† Assumes 5 years from start of construction to commercial operation of first unit with the second unit following one year later.   |

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