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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 110009-EI
FLORIDA POWER & LIGHT COMPANY

MARCH 1, 2011

EXTENDED POWER UPRATES - 2010

TESTIMONY & EXHIBITS OF:

TERRY O. JONES

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF TERRY O. JONES

DOCKET NO. 110009-EI

MARCH 1, 2011

Q. Please state your name and business address.

A. My name is Terry O. Jones, and my business address is 700 Universe Boulevard, Juno Beach, FL 33408.

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

A. I am employed by Florida Power & Light Company (FPL) as Vice President, Nuclear Power Uprate.

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

A. In my current role, I report directly to the Chief Nuclear Officer. I am responsible for the management and execution of the Extended Power Uprate ("EPU" or "Uprate") Project.

Q. Please describe your educational background and professional experience.

A. I was appointed Vice President, Nuclear Power Uprate on August 1, 2009. In my current position I provide executive leadership, governance and oversight to ensure the safe and reliable implementation of the EPU Projects for the four FPL nuclear units.

I joined FPL in 1987 in the Nuclear Operations Department at Turkey Point. Since then, my positions at FPL have included Vice President, Operations, Midwest Region; Vice President, Nuclear Plant Support; Vice President, Special Projects; Vice

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President, Turkey Point Nuclear Power Plant; Plant General Manager; Maintenance Manager; Operations Manager and Operations Supervisor. Prior to my employment at FPL, I worked for the Tennessee Valley Authority at the Browns Ferry Nuclear Plant and served in the US Nuclear Navy. I hold a Bachelors of Science degree and an MBA from the University of Miami.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes, I am sponsoring the following exhibits which are incorporated herein by reference:

- Exhibit TOJ-12, AE Schedules, 2010 EPU Construction Costs, containing schedules AE-1 through AE-7B. Page 2 of Exhibit TOJ-12 contains a table of contents listing the schedules that are sponsored and co-sponsored by FPL Witness Powers and myself.
- Exhibit TOJ-13, T-Schedules, 2010 EPU Construction Costs, containing schedules T-1 through T-7B. Page 2 of Exhibit TOJ-13 contains a table of contents listing the schedules that are sponsored and co-sponsored by FPL Witness Powers and myself.
- Exhibit TOJ-14, 2010 Extended Power Uprate Project Instructions (EPPI) Index as of December 31, 2010
- Exhibit TOJ-15, 2010 Extended Power Uprate Project Site Centered Organization Chart
- Exhibit TOJ-16, Extended Power Uprate Project Reports - 2010
- Exhibit TOJ-17 Plant Change Modification (PCM) Status as of December 31, 2010
- Exhibit TOJ-18, Extended Power Uprate Equipment List as of December 31, 2010
- Exhibit TOJ-19, Extended Power Uprate Project Schedule as of December 31, 2010

- Exhibit TOJ-20, Summary of 2010 Extended Power Uprate Construction Costs

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present and explain the EPU project, key management decisions and Uprate project activities that occurred in 2010, FPL's 2010 Uprate construction expenditures, and the procedures, processes and controls that ensure that those expenditures are reasonable and the result of prudent decision making. My testimony also explains the careful engineering-based process employed by FPL to ensure that it is including only nuclear uprate costs that are "separate and apart" from other costs, such as those for base rate nuclear operations and maintenance or capital projects that are unrelated to the nuclear Uprates.

Q. Please summarize your testimony.

A. The EPU project is a complex undertaking to safely increase the capacity of FPL's four existing nuclear units – St. Lucie (PSL) Units 1 & 2 and Turkey Point (PTN) Units 3 & 4 – which will provide significant and quantifiable benefits for customers without expanding the footprint of FPL's existing nuclear power plant sites. Upon completion, FPL estimates that approximately 450 megawatts electric power (MWe) of baseload, non-greenhouse gas emitting generation will be provided by the EPU project for FPL's customers, and that customers will realize significant fuel cost savings as a result.

The project team is in the process of performing design engineering, procuring long lead equipment and materials, obtaining regulatory approvals, and implementing plant modifications to support the uprate conditions in multiple refueling outages for each of the nuclear units. This process is supported by robust and overlapping project schedule and cost controls, along with rigorous risk management. Additionally, the EPU team manages the Uprate work in a manner that ensures that only the costs necessary for the Uprates are expended and included in the Nuclear Cost Recovery process.

Progress in 2010 included the following: the successful completion of the first of two EPU outages at St. Lucie Unit 1 and Turkey Point Unit 3; continuance of the LAR engineering evaluations along with the submittal of two EPU LARs and a Spent Fuel Criticality LAR for Turkey Point; EPC vendor work towards completing the engineering design of approximately 207 plant design modification packages; continued scheduling and planning for implementation of the modifications in proper sequence; and a decision to revise the planned outage durations. FPL prudently incurred approximately $319 million of EPU costs during 2010, as compared to the May 2, 2010 actual/estimated amount of approximately $321 million.

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

A. My testimony includes the following sections:

1. 2010 Project Summary
2. Project Management Internal Controls
3. Procurement Processes and Controls
4. Internal/External Audits and Reviews
5. "Separate and Apart" Considerations
6. 2010 Project Activities
7. 2010 Construction Costs
8. Conclusion

2010 PROJECT SUMMARY

Q. What is the EPU Project?

A. The EPU project will increase FPL's nuclear generating capacity from its four existing nuclear units by fitting the units with higher capacity and more efficient turbines and other necessary equipment to accommodate increased steam flow that will result from loading fuel with increased reactivity into each reactor. This involves the modification or outright replacement of a large number of components and support structures within FPL's operating nuclear power plants. Each modification/replacement is considered a project in and of itself. In the case of some major modifications, some permanent plant equipment will have to be removed and then reinstalled as part of the construction process.

Because the project will modify FPL's operating nuclear plants, it is a much different construction project than constructing a new combined cycle generating unit at a greenfield site. FPL plans to perform the modifications during the units' pre-planned refueling outages. Performing the Uprate work during the refueling outages minimizes the amount of time that these low fuel-cost generators are off line.

Upon completion, the Uprates will produce a minimum of 399 MWe and could produce a theoretical maximum of up to 463 MWe for FPL's customers. The minimum reflects FPL's need determination assumption (414 MWe), less the St. Lucie

Unit 2 co-owners' share of the output. The maximum reflects the turbine vendor's estimate of the turbine generator's performance (approximately 500 MWe) if the "best case scenario" of plant parameters are achieved, less the co-owners' share of PSL Unit 2 and increased plant electrical requirements. Taking into account the current uncertainty of whether "best case" plant parameters will be achieved, FPL's current estimate is that a total of about 450 MWe will be produced by the uprated units for FPL's customers.

Q. How will customers benefit from the EPU project?

A. Among other benefits, this increase in nuclear power will: (i) enhance system reliability and integrity by diversifying FPL's fuel mix; (ii) provide energy and baseload capacity to FPL's customers with zero greenhouse gas emissions; and (iii) provide significant fuel cost and environmental compliance cost savings. Some of these benefits will be realized as early as 2011, when the replacement of a low pressure turbine generator at St. Lucie Unit 2 with a more efficient low pressure turbine generator will result in a projected total increased electrical power output of approximately 20 MWe and FPL's customers are projected to receive approximately 17 MWe of this increased output. Quantification of these types of benefits will be provided along with an updated project feasibility analysis in FPL's May 2011 testimony.

Q. Please describe the general approach to the EPU project.

A. In 2007, FPL prepared an initial conceptual engineering study for performing an EPU at St. Lucie and Turkey Point which included a conceptual cost estimate based on a preliminary scope. This study provided the basis for FPL's request for a determination of need. In 2008, Shaw Stone & Webster (Shaw) performed a scoping study which included an order-of-magnitude estimate for part of the preliminary scope. The 2008 Shaw order-of-magnitude estimate was confirmatory of the 2007 FPL conceptual estimate.

The EPU project is currently being implemented in four overlapping phases.

1. In the Engineering Analysis Phase, the analyses that support the LAR are performed. During this phase, the major modifications required to implement the EPU are identified and confirmed, the LARs are prepared and submitted to the NRC for review, the NRC approves a license amendment for each plant (or unit, as applicable), and the conceptual scope is better defined.
2. In the Long Lead Equipment Procurement Phase, the major long lead equipment is procured. During this phase, purchase specifications are developed, vendor quotes are requested, vendor proposals are received and evaluated, contracts are awarded, and the cost of long lead equipment is better defined.
3. In the Engineering Design Modification Phase, the detailed modification packages are prepared. During this phase, calculations are prepared, construction drawings are issued, some equipment and materials are procured, general installation instructions are provided, and high level testing requirements are identified. These activities provide the basis for preparing detailed estimates of the implementation costs.
4. The final Implementation Phase consists of two major parts. The first is planning and scheduling. Planning is the process to convert the design packages into

detailed work orders for implementation. During this part of the implementation, revisions to the design may be warranted based on constructability. Scheduling is the process that takes the detailed work orders and converts them into a detailed integrated implementation schedule which ultimately is the point at which the final outage durations are determined. The second part of the final implementation is actual execution of the physical work in the plant including extensive testing and systematic turnover to operations.

Q. Are some activities being performed in parallel?

A. Yes. FPL is performing many activities in parallel in order to bring the benefits of additional nuclear power generation to its customers as soon as practical. The current project schedule is approximately 5 years long, and all necessary work is being performed prior to a particular unit's outage. On the other hand, if FPL had worked through each phase of the project in sequence (i.e., by performing all LAR analyses for all units first, then procuring all equipment for all units next, etc.) the EPU project would have taken many more years. Additionally, by performing EPU work in this manner, Floridians will receive the benefit of approximately 20 additional electrical megawatts of nuclear power from St. Lucie Unit 2 in 2011 – prior to the unit operating at its final uprated level – by virtue of the installation of a more efficient low pressure turbine generator. FPL's customers are projected to receive approximately 17 MWe of this increased output.

Q. Does FPL include industry best practices into the work being performed for the EPU project?

A. Yes. For example, the FPL project team members participate in nuclear industry working groups organized by the Institute of Nuclear Plant Operations (INPO) and the Nuclear Energy Institute (NEI) and benefit from lessons learned. This is supplemented with direct engagement with our industry peers through benchmarking trips to other nuclear sites which have performed similar scopes of work to incorporate best practices. These sources help ensure project decisions are supported by the best information currently available.

Q. Please briefly describe the status of the project in 2010.

A. Through 2010, the EPU project was nearing completion of the Engineering Analysis Phase, well into the Long Lead Procurement Phase, and progressing with the Engineering Design Modification and Implementation Phases in support of each outage. The project scope was not (and is not at the date of this testimony) fully defined and thus definitive cost estimates were not completed – nor were they expected to be completed. FPL developed a non-binding cost estimate range in 2010 that recognized the uncertainties of the early stage of the project and quantified the associated project risks based on known information.

Q. Will project scope continue to evolve as the project moves forward?

A. Yes. Even after completion of the engineering analyses required for the LAR submittal, the potential exists that additional scope will be required by the NRC. After the NRC approves the LARs, the project scope will be further defined and, commensurate with engineering design modification progress, the cost estimate range will be further adjusted. Once the modification packages are final and the work order planning is complete, the implementation scope will be fully defined allowing the final refinement of the detailed implementation cost estimates and schedule durations. These activities lead to increased cost certainty with the achievement of each milestone.

Q. Please provide a brief overview of 2010 activities and costs.

A. In 2010, FPL continued work on the overlapping phases of the project. Several of the key activities that occurred in 2010 include: (i) submittal of the St. Lucie Unit 1 EPU LAR, the Turkey Point Units 3 and 4 EPU LAR, and the Turkey Point Spent Fuel Criticality LAR to the NRC for review and approval of the engineering evaluation and analyses, and the progress of activities related to the St. Lucie Unit 2 EPU LAR; (ii) the progress of modification engineering for the St. Lucie and Turkey Point Units; (iii) the execution and quality inspections of the vendor contracts for long lead procurement equipment as well as inspection, receipt, and storage of long lead procurement items; (iv) continued vigilant oversight and management of vendors; (v) preparation for and successful execution of implementation activities during the St. Lucie Unit 1 spring outage and the Turkey Point Unit 3 fall outage; (vi) receipt of an independent third party estimate of implementation man-power requirements and costs; and (vii) continued forward-looking project management resulting in adjustments to outage durations, project plans and procedures. In total, FPL spent approximately $319 million in 2010 (as compared to the $321 million that was previously estimated) to carry out these key activities and proceed with the development of the uprate projects, all of which work was subject to the robust project planning, management, and cost control processes that FPL has in place and continuously works to improve.

FPL's EPU activities and expenditures, as well as its internal processes and controls, are described in more detail below.

PROJECT MANAGEMENT INTERNAL CONTROLS

Q. Please describe the EPU project management organization during 2010.

A. As described below, FPL has robust project planning, management, and execution processes in place. These efforts are spearheaded by personnel with significant experience in project management within the nuclear industry. Additionally, the EPU project uses guidelines and Project Instructions to assist project personnel in the performance of their assigned duties. Exhibit TOJ-14, Extended Power Uprate Project Instructions (EPPI) Index as of December 31, 2010 is provided to illustrate the types of instructions that were used.

FPL has a dedicated Nuclear Power Uprate team within the NextEra Energy, Inc. Nuclear Division that is responsible for monitoring and managing the uprate project, schedule, and costs. Exhibit TOJ-15, EPU Project Site Centered Organization, illustrates the organizational structure in place during 2010. In addition to some centralized project oversight, there is an EPU Site Director and an EPU organization at each site responsible for the efficient and effective engineering and implementation of the EPU project modifications. This decentralized management structure is appropriate as the EPU Project enters the implementation phases at each of the sites to better integrate EPU activities with plant operating activities.

There is also a separate Nuclear Business Operations (NBO) group that provides accounting and regulatory oversight for the EPU Project. This organization is independent of the EPU Project team and reports to the Nuclear Division Controller.

Q. Please describe the role of the NBO group in more detail.

A. As described in EPPI-150, NBO provides accounting and regulatory oversight for the EPU Project. It is independent of the EPU Project team and reports to the Nuclear Division Controller. NBO's primary responsibilities include:

- Review, approval, and recording of monthly accruals prepared by the Site Cost Engineers;
- Conducting monthly detail transaction reviews to ensure that labor costs recorded to the EPU Project are only for those FPL personnel authorized to charge time to the EPU Project;
- Conducting on-going analysis to evaluate project costs to ensure they are "separate and apart";
- Creating monthly variance reports that include cost figures used in the EPU Monthly Operating Performance Report;
- Performing analyses of the costs being incurred by the project to ensure that those costs are appropriately allocated to the correct Capital Expenditure Requisitions established for each nuclear unit's outages;
- Assisting in the classification of Property Retirement Units;
- Setting up and maintaining the EPU Project account coding structure;
- Providing accounting guidance and training to the EPU Team;

- Working closely with FPL's Accounting and Regulatory Accounting Departments to determine which costs related to the EPU Project are capital and which are O&M;
- Managing internal and external financial audit requests and ensuring that findings and recommendations are dispositioned, as appropriate; and
- Providing oversight and guidance to the EPU Project Team in developing and maintaining accounting-related project instructions to ensure compliance with corporate policies and procedures, and Sarbanes Oxley processes.

Q. What other schedule and cost monitoring controls were in place during 2010?

A. FPL utilizes a variety of mutually reinforcing schedule and cost controls and draws upon the expertise provided by employees within the project team, employees within the separate NBO group, and executive management. Within the organization of the Vice President, Nuclear Power Uprate is a Controls Group. The Controls Director provides functional leadership, governance and oversight. Each site has a dedicated EPU Project Controls group lead by a Project Controls Supervisor. The site Project Controls organization provides cost and schedule analysis and associated performance indicators on a routine and forward-looking basis thus allowing Project Management to make informed decisions. Exhibit TOJ-16 lists many of the reports that are a direct result of the information the Controls organization provides, analyzes and produces.

FPL's efforts to meet the desired completion date of each uprate is tracked through the use of Primavera P-6 scheduling software, enabling FPL to track the schedule daily and update the schedule weekly. This allows project management to monitor and report schedule status on a periodic basis. Updates to the schedule and scope of project are made as such changes are approved by management. FPL's use of this scheduling software system allows management to examine the project status at any time as well as request the development and generation of specialized reports to facilitate informed decision making. When FPL identifies a scheduled milestone date that may have a high probability of missing its schedule date, a mitigation plan is prepared, reviewed, approved, and implemented with increased management attention to restore the scheduled milestone date or mitigate any impact of missing the scheduled date.

As part of the site Project Controls Group, there are several highly experienced Cost Engineers assigned to monitor, analyze, and report project costs associated with the Uprate Projects. Governed by well established procedures and work instructions, the Cost Engineer receives contractor invoices and forwards them to technical representatives to ensure the scope of work has been completed and the deliverables have been accepted. For fixed-price contracts, the Cost Engineer matches the invoice amount to the correct amount and the deliverable work received from the subject matter expert, which is then sent to the appropriate personnel for approval and payment. The Cost Engineer also prepares accruals and reviews variance reports monthly for each of the sites, to monitor and document expenditures and commitments to the approved budget. The Project Controls organization operates in a transparent manner and its accountability is clear in providing sound analysis based on all available information at their disposal.

Q. What periodic reviews were conducted in 2010 to ensure that the project and key decisions were appropriately analyzed and vetted?

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

- Daily meetings to mutually share lessons learned information from each of the projects and to coordinate project activities;
- Weekly project management, project controls, and risk meetings to review the status of the schedules and project costs, and to identify areas needing attention;
- Biweekly meetings with the Chief Nuclear Officer; Vice President, Power Uprate; Implementation Owner South; and other project leaders to review project progress and work through any identified risks to schedules or costs;
- Routine, usually quarterly, FPL Executive Steering Committee meetings where project management presents the status of the project. Strategy discussions take place to help improve management of risk areas;
- Monthly Project Meetings involving FPL and individual major vendors during which the project schedules and challenges are discussed; and
- Quarterly Project Meetings involving FPL and its major vendors during which strategy discussions take place to help improve management of risk areas.

The EPU Project also produces several reports. Exhibit TOJ-16, Extended Power Uprate Project Reports, is a listing of reports generated by the project during 2010 with a brief description, the periodicity, and the intended audience of each report. Generally, the project reports provide a status of the project, scope changes, schedule and cost adherence/variance, safety, quality, risks, risk mitigation, and a path forward as appropriate. The information provided by these reports assists in the overall management of the EPU Project.

Finally, the project is annually reviewed to assess its continued economic feasibility. This analysis is conducted in a similar manner to the analysis that supported the affirmative need determination by the Commission, but it is updated to reflect engineering progress and what is currently known regarding project scope and project cost, project schedule, and the cost and viability of alternative generation technologies. The analyses submitted by FPL Witness Sim in 2010 demonstrated that the EPU project continued to present a significant economic advantage in a majority of fuel and environmental compliance cost scenarios. An updated feasibility analysis will be provided in May, 2011.

Q. Please describe the risk management process for the EPU project.

A. FPL's risk management process is governed by EPPI-340 and EPPI-345. FPL's risk management process is used to identify and manage potential risks associated with the uprates. A Project Risk Committee, consisting of site project directors and subject matter experts reviews and evaluates initial cost and schedule projections and any potential significant variances. This committee enables senior managers to critically assess and discuss risks faced by the EPU projects from different departmental perspectives. The committee also ensures that actions are taken to mitigate or eliminate identified risks. When an identified risk is evaluated as high, a risk mitigation action plan is prepared, approved, and executed. The high risk item is monitored through this process until it is reduced or eliminated. Additionally, an EPU

Project Risk Management report is presented at meetings with senior management, identifying potential risks by site, unit, priority, probability, cost impact, and the unit or persons responsible for mitigating or eliminating the risk. These steps ensure continuous, vigilant identification of and response to potential project risks that could pose an adverse impact on cost or schedule performance of the project.

Q. Please describe the risk management process as it applies to Operational risk.

A. EPU Project work will be performed during normal plant operations and during planned refueling outages. The amount of work that can be safely performed during these plant conditions is dependent upon the minimum required systems or components needed to support the plant operating condition. Extreme care in the planning, scheduling, and execution of the work activities is required to ensure the plant is operated in accordance with applicable NRC regulatory and plant technical specification requirements. This requires proper sequencing of work activities that can be safely performed during normal plant operations or those that must be performed during planned refueling outages, including work activities that can be safely performed in parallel and those that must be performed in series. This operational risk management accomplishes two major objectives: first is to ensure the equipment is in a state that makes it safe for workers to perform the work, and secondly that the plant systems and components are properly maintained to ensure public safety. This operational risk management through the careful planning, scheduling and execution of work activities, adds to the complexity of the implementation phase of the EPU project.

PROCUREMENT PROCESSES AND CONTROLS

Q. Please describe the contractor selection and contractor management procedures that applied to the EPU projects in 2010.

A. The contractor selection procedures applicable to the uprate project are found in General Operating Procedure 705 and Nuclear Fleet Guideline BO-AA-102-1008, Procurement Control. As explained in those procedures, the standard approach for the procurement of materials or services with a value in excess of $25,000 is to use competitive bidding. Excluding Original Equipment Manufacturer (OEM) work, the majority of the equipment and work contracts initiated for the EPU project in 2010 were competitively bid. However, the use of single source, sole source, and OEM providers is also necessary in certain situations. FPL's policies require proper documentation of justifications and senior-level management approval of single or sole source procurements.

In response to considerations raised by the Commission in the 2008 NCRC proceedings, FPL has maintained its focus on the process of documenting and approving single and sole source procurements, to ensure compliance with BO-AA-102-1008 and to facilitate review by third parties who are not directly involved in the nuclear procurement process. Training is provided to personnel responsible for having Single and Sole Source Justifications (SSJs) prepared, the SSJ expectations are included in appropriate project instructions, and all new applicable personnel assigned to the EPU Project are required to review and understand the SSJ expectations.

With respect to vendor management, the EPU Project Directors at each site assure vendor oversight is provided by the Site Senior Project Managers, Project Managers, the site Technical Representative, and Contract Coordinators. Together, these representatives provide management direction and coordinate vendor performance reviews while the vendors are on site. The Site Technical Representative verifies that the vendor has met all obligations and determines whether any outstanding deliverable issues exist using a Contract Compliance Matrix. In addition to assisting with the development and administration of contracts, Nuclear Sourcing and Integrated Supply Chain (ISC) groups complete updates as necessary to a Project Contract Log and report the status of contracts to project management. EPU management also holds quarterly vendor integration meetings as previously mentioned.

Q. What is FPL's approach to contracting for the EPU project?

A. FPL structures its contracts and purchase orders to include specific scope, deliverables, completion dates, terms of payment, commercial terms and conditions, reports from the vendor, and work quality specifications. Project Management has several types of contracts available depending on how well the scope of work and the risk associated with the work scope can be defined. Fixed price or lump sum contracts are used where practical. An example would be where project work scope is well-defined and risk is limited. Project Management will use a time and material contract where project work scope is not well-defined and where there is greater risk to completing the work scope. These and other contract provisions help ensure the contractors perform the right work at the right time for the right price, which benefits FPL's customers.

INTERNAL/EXTERNAL AUDITS AND REVIEWS

Q. Are FPL's financial controls and management controls audited?

A. Yes. Several audits have been conducted to ensure compliance with applicable project controls.

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

A. Jefferson Wells is in the process of performing an audit of 2010 expenses on behalf of the FPL Internal Audit Department. Specifically, the audit is focusing on whether costs charged to the project are actually for the EPU project and are recorded in accordance with FPSC Rule 25-6.0423. Independent testing of expenses charged to the EPU project for the period January 1, 2010 to December 31, 2010 is being conducted. The 2010 audit will be available for Commission review upon completion.

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

A. FPSC staff is conducting two audits related to 2010 – a financial audit and an internal controls audit. The 2010 FPSC staff financial and internal controls audits will be provided to the Commission when completed. FPL also engaged William Derrickson to conduct a review of project management in 2010 as the project entered the early stages of implementation. Witness Derrickson discusses his review in his testimony.

"SEPARATE AND APART" CONSIDERATIONS

Q. Would any of the EPU costs included in FPL's filing have been incurred if the FPL nuclear generating units were not being uprated?

A. No. The construction costs and associated carrying charges and recoverable Operations & Maintenance (O&M) expenses for which FPL is requesting recovery through the NCRC process were caused only by activities necessary for the Uprate projects, and would not have been incurred otherwise. I note that as explained in FPL Witness Powers' testimony and schedules, only carrying costs and recoverable O&M expenses are requested for recovery for the EPU Projects, consistent with the Commission's NCRC rule.

Q. Please explain the processes utilized by FPL to ensure that only those costs necessary for the implementation of the Uprates are included for NCRC purposes.

A. Consistent with EPPI-180, FPL conducted engineering analyses to identify major components that must be modified or replaced in order to enable the units to function safely and reliably in the uprated condition. However, as inspections, LAR engineering analyses, and design engineering modifications are performed, the need for additional modifications or replacements necessary for the Uprate may be identified. Likewise, it may be determined that certain modifications previously identified as necessary to the Uprate project are determined not to be necessary for the Uprate and can be removed from the scope.

Further, FPL considered whether any of the major component modifications or replacements required for the Uprates were already required as a condition of receiving its NRC license renewals. FPL reviewed the "License Renewal Action Items" issued by the NRC and compiled by FPL in conjunction with the approval of FPL's requested license renewals. In doing so, it verified that none of the major component modifications or replacements identified by FPL as necessary for the EPU project were duplicative of the activities required by the NRC for license renewal. FPL also confirmed that none of the EPU activities were previously planned as regular O&M or capital improvement. Additionally, when a scope change is required, a review of the NRC License Renewal Action Items and the seven year capital expenditure plan is conducted to ensure the proposed scope change is separate and apart. FPL's 2010 EPU activities, and their associated costs, were "separate and apart" as required by the NCRC process.

2010 PROJECT ACTIVITIES

Q. What key activities occurred in 2010 in execution of the EPU project?

A. Several key activities occurred in 2010, including: (i) submittal of the St. Lucie Unit 1 EPU LAR, the Turkey Point Units 3 and 4 EPU LAR, and the Turkey Point Spent Fuel Criticality LAR to the NRC for review and approval, and continued engineering analyses in support of submitting the St. Lucie Unit 2 EPU LAR; (ii) the execution of vendor contracts for long lead procurement equipment, as well as quality inspection, receipt, and storage of long lead procurement items; (iii) modification engineering for the St. Lucie and Turkey Point Units and continued management of the EPC vendor; (iv) receipt of independent third party estimate of implementation man-power requirements and costs; (v) preparation for, and successful execution of, implementation activities during the St. Lucie Unit 1 spring 2010 outage and the Turkey Point Unit 3 fall 2010 outage; and (vi) adoption of revisions to the planned future outage durations.

Q. Was the 2010 organizational structure appropriate for the project in 2010?

A. Yes. Exhibit TOJ-15, EPU Site Centered Organization, is a graphic representation of the 2010 EPU Project organizations for PSL and PTN, which continued to support authority and responsibility for the four overlapping phases of the project at the site organizations.

Q. Please describe the license amendment preparation and submittal activities in 2010.

A. FPL submitted two EPU LARs to the NRC in 2010, as well as one additional LAR – a Spent Fuel Criticality LAR for Turkey Point. The St. Lucie Unit 1 EPU LAR was submitted on April 16, 2010, and the Turkey Point Plant EPU LAR was submitted on October 21, 2010. Both EPU LARs were prepared and filed consistent with historical NRC expectations. Nonetheless, FPL had to withdraw and resubmit its St. Lucie Unit 1 EPU LAR in November 2010, as described below. The St. Lucie Unit 2 EPU LAR was planned for submittal to the NRC in February 2011; accordingly, FPL's efforts in 2010 included the continuing engineering analyses in support of that submittal. Additionally, the NRC continued its review of the Turkey Point AST LAR in 2010, which FPL submitted on June 16, 2009. FPL has responded to NRC requests for additional information in a timely manner. The NRC is expected to accept the Turkey Point EPU LAR for review once the Turkey Point AST LAR is approved. The NRC review and approval time for each EPU LAR is estimated to be approximately 14 months following LAR submittal for review.

Q. Please explain the status of the St. Lucie Unit 1 EPU LAR in 2010.

A. During the NRC acceptance review of the St. Lucie Unit 1 LAR, NRC staff changed its expectations for spent fuel storage pool criticality analyses, even though the methodology used by FPL was an NRC-approved design basis methodology. The NRC also required additional analyses in the areas of spent fuel criticality, a reactor control rod withdrawal event, and a station blackout event – each of which was outside the St. Lucie Unit 1 design basis and therefore exceeded the reasonably expected scope of a typical EPU LAR review.

On August 13, 2010, following meetings with the NRC, FPL management withdrew the St. Lucie Unit 1 LAR to ensure the new NRC expectations would be satisfied and incorporated into the LAR prior to the NRC's formal review. Choosing not to withdraw the LAR and work with the NRC likely would have delayed NRC approval substantially. After it had withdrawn the St. Lucie Unit 1 LAR, FPL met with the NRC on August 18, 2010 to discuss a path forward for the engineering analysis methodology the NRC decided it would now require for the spent fuel pool criticality analyses, as well as additional detail concerning the station blackout and control rod withdrawal scenarios. The St. Lucie Unit 1 LAR was re-submitted to the NRC on

November 22, 2010, reflecting the information learned from the NRC in the previous meetings.

Ultimately, FPL must comply with the NRC's expectations, whether it has advance notice of those expectations or not. These events provide a good example of the types of project activity risks and costs that are beyond FPL's control. FPL manages such emergent issues rigorously and prudently when they arise.

Q. Were any state regulatory approvals sought or obtained in 2010?

A. Yes. On March 23, 2010, FPL submitted a Substantial Revision Application for Increasing Discharge Temperature to the Florida Department of Environmental Protection (FDEP) for the St. Lucie Plant. FPL successfully obtained an amendment to the St. Lucie Industrial Wastewater Permit, issued on December 23, 2010, favorably resolving a risk that FPL might be prevented from operating the plant at full capacity during certain times of the year. The amendment requires FPL to perform additional ambient, thermal and pre- and post- EPU biological monitoring in the Atlantic Ocean.

Q. Please describe activities related to the Long Lead Procurement phase in 2010.

A. In 2010, FPL contracted for several major pieces of long lead equipment, including heat exchangers, generator stator core equipment, and main steam turbine controls.

Several long lead procurement items were received, inspected, and stored or prepared for installation at the St. Lucie and Turkey Point plants. These items include steam turbine and generator rotors, and feedwater heaters. FPL also conducted several quality assurance reviews at the equipment manufacturing or testing locations.

Q. Please describe the management of the EPC vendor and the progress in modification engineering made in 2010.

A. The EPC vendor continued its efforts to prepare the detailed modification packages in 2010. During this phase, calculations are prepared, construction drawings are issued, some equipment and materials are procured, general installation instructions are provided, and high level testing requirements are identified. These activities provide the basis for preparing detailed estimates of the implementation costs. By the end of 2010, 48 of approximately 207 packages were completed.

FPL continued to manage the EPC vendor to ensure the costs expended for the EPC work are reasonable and appropriate, including challenging estimates of future staffing requirements. For example, FPL conducted a senior-level management meeting in Frederick, Maryland at the vendor's headquarters to address then-current trends and metrics. The EPC vendor responded to that meeting with a formal proposal for managing trends and improving metrics in November, 2010. FPL also awarded scopes of EPC work at St. Lucie to another vendor, Day & Zimmermann NPS (DZNPS), which is FPL's on-site construction vendor. These assignments were made as part of FPL's continuing effort to control costs.

FPL also contracted with one of the cost estimating experts that was the subject of a blanket PO issued by EPU management in early 2009, and used the output of that estimating work product to continue to manage and challenge its EPC vendor on cost control.

Q. Please describe the use of a third party cost estimator in more detail.

A. Late in 2009, FPL contracted with a third party vendor, High Bridge Associates, with expertise in detailed estimating of nuclear project work, particularly with respect to the implementation of modifications. The Turkey Point Unit 3 EPU outage work was chosen for this estimating effort because more engineering design modification packages had been completed in preparation for the 2010 fall outage. High Bridge identified additional modifications that may be necessary as a result of those planned, and then quantified and priced all aspects of the project costs, such as equipment, shipping costs, and materials, as well as craft labor, supervisors, and overhead. This estimating effort was completed in June 2010. The results provided an independent implementation cost estimate that could be used by FPL to ensure the EPC vendor implementation man-power requirements and cost estimates were reasonable, and to use as a tool for continued EPC vendor management. Additionally, the independent implementation estimate provided additional information that could be used in considering the total EPU Project nonbinding cost estimate range.

Q. Did FPL adjust its non-binding cost estimate in 2010?

A. Yes. By early 2010, enough progress had been achieved (i.e., in terms of EPC vendor negotiations, LAR engineering analyses, and the beginning of modification engineering) that a revision to the non-binding cost estimate was warranted. However, because the project was still in the early stages of modification engineering and an expected level of uncertainty remained, it was appropriate to provide such a revision in terms of a non-binding cost estimate range, totaling $2,050 million to $2,300 million.

Q. What was the status of the Plant Change Modification packages as of December 31, 2010?

A. Exhibit TOJ-17, Plant Change Modification (PCM) Status as of December 31, 2010, is a chart that illustrates the number of identified engineering modifications as of December 31, 2010, the number of PCMs that have been initiated, and those that have reached 30%, 90%, and final completion. As can be seen in this exhibit, there were 207 PCMs identified of which 48 were finalized and approved for issuance. This exhibit demonstrates that the Project was still in the early stages of the implementation engineering.

Q. Please discuss the outage work that was successfully completed.

A. St. Lucie Unit 1 and Turkey Point Unit 3 successfully completed their first EPU outages in 2010. The activities at the units included instrumentation installations for baseline testing and future power uprate testing, feedwater heater inspections and modifications, upgrades to the St. Lucie Unit 1 Turbine Gantry Crane, and feedwater heater drain valve installations. During each unit outage transmission and substation upgrade work was performed in preparation for the increased electrical output from the power uprates. FPL completed all scheduled EPU work during the duration of these two outages as planned.

Q. Did FPL continue to adjust modification assignments in 2010?

A. Yes, but to a much lesser extent than occurred in 2009. FPL adjusted a few modifications out of the St. Lucie Unit 1 spring 2010 outage into the fall 2011 outage, and out of the Turkey Point Unit 3 fall 2010 outage into the spring 2012 outage.

Additionally, some transmission and substation work was moved to outages in 2011 and 2012.

Q. Did the adjustments to modification assignments affect the equipment placed in service in 2010?

A. Yes. FPL decided to perform a large amount of Turkey Point Unit 3 feedwater heater work during the unit's 2012 outage rather than the 2010 outage because the main stream line break analysis showed that NRC approval would first be required prior to operating the plant with the new feedwater heaters. Additionally, several other Turkey Point Unit 3 modifications were initiated during the 2010 outage, with other portions of the modifications planned for completion during the 2012 outage. The impact of these changes on base rate revenue requirements is discussed in Witness Powers' testimony.

Q. Were other project planning assumptions revised in 2010?

A. Yes. FPL determined in 2010 that the outage durations planned for 2011 and 2012 needed to be adjusted. The adjustments to the planned outage durations were necessary in order to accommodate the refined work scope assigned to each outage, which scope reflects the modifications previously made to outage assignments as well as increased project scope overall. FPL uses a variety of inputs to plan outages, including industry and fleet work experience from earlier outages where similar work activities were completed, refined engineering modifications scope and requirements, previous inspection results, and proper sequencing of the EPU modifications which must be coordinated with the NRC approval of the EPU LARs. As always, FPL must also factor into its planning and scheduling the safety of personnel performing work, e.g., securing system electrical, mechanical, and thermal energy sources, and ensuring that the plant is operated safely in accordance with the operating license issued by the NRC.

Q. As of December 31, 2010, what was the overall EPU project schedule?

A. Exhibit TOJ-19, Extended Power Uprate Project Schedule as of December 31, 2010, illustrates the LAR, long lead material, engineering design, and implementation schedule for the EPU Project. Underlying this high–level schedule are tens of thousands of individually-scheduled activities. FPL's overall project schedule reflected the following:

- The LAR analyses were scheduled to be completed and submitted to the NRC, but NRC review before the license amendment approval is needed by FPL to increase the power output at the completion of the second EPU outage for St. Lucie Unit 1 was challenged. Review and approval prior to completion of the second outage for the other units was still expected.
- Long lead material items were scheduled to arrive on site prior to the outage during which the equipment will be installed.
- PCM engineering design for each of the identified modifications was scheduled to be approved for implementation prior to the unit outage when each modification will be implemented.
- Implementation of the EPU modifications was scheduled to be completed during the revised durations of the scheduled refueling outages for each of the units.

Q. Did FPL conduct a "feasibility analysis" of the EPU project in 2010?

A. Yes. FPL Witness Steve Sim conducted a feasibility analysis in 2010 using the high end of FPL's 2010 revised non-binding cost estimate range, which demonstrated that the EPU project was projected to be solidly cost-effective for FPL's customers. Specifically, a resource plan that included the EPU project was projected to cost less than a resource plan that did not include the EPU project in seven out of seven scenarios of fuels cost forecasts and environmental compliance cost forecasts. FPL also conducted 14 sensitivity analyses examining the effect of a higher cost of capital and/or lower than expected EPU electrical output, 13 of which continued to support the cost-effectiveness of the EPU project.

2010 CONSTRUCTION COSTS

Q. Did FPL perform a partial year true-up of 2010 costs in 2010?

A. Yes. The schedules presenting FPL's actual/estimated 2010 costs as of May 2010 are attached hereto as Exhibit TOJ-12. These schedules reflected actual costs through February 2010, and an estimate for the remainder of the year.

Q. Please describe how FPL developed its 2010 actual/estimated costs.

A. The 2010 projected costs were developed from Project Controls forecasts for all known project activities in 2010. Included in the forecasts are the vendor long-lead materials contracts that have scheduled milestone payments in 2010, which are cash flowed based upon the latest fabrication and delivery schedule information. Each major labor related services vendor forecast is based upon the most recent cumulative purchase order value, which would include the original awarded value and all approved changes. Added to this would be an estimate of any known pending changes to arrive at a best forecast at completion for each vendor. Owner engineering and project management support forecasts are derived from detailed staffing plans. Each approved position is cash flowed for the expected assignment duration and expected overtime, where applicable. The large construction related vendor forecasts are based upon previous experience, known scope(s) of work, productivity factors related to outage conditions and prevailing pertinent wage rates. Items identified in the Risk Register are cash flowed based upon anticipated engineering, material procurement and outage implementation time horizons.

Q. Were FPL's 2010 actual/estimated costs reasonable?

A. Yes. Careful vendor oversight, continued use of competitive bidding when appropriate, and the application of the robust internal schedule and cost controls and internal management processes all support a finding that FPL's actual/estimated 2010 expenditures were reasonable.

Q. What type of costs did FPL incur for the uprate projects in 2010?

A. As demonstrated in Exhibit TOJ-13, Schedule T-6 and T-4, and summarized on Exhibit TOJ-20, Tables 1 through 9 (all reflecting the true-up of actual 2010 costs), costs were incurred in the following categories: License Application; Engineering and Design; Permitting; Project Management; Power Block Engineering, Procurement, Etc.; Non Power Block Engineering, Procurement, Etc.; and Recoverable O&M. These costs were the direct result of the prudent project management, decision making, and actions described in detail above. Each category reflects some variance against what was originally estimated and budgeted, which is to be expected, particularly given the relatively early stage of the project. The overall variance in 2010 is driven primarily by the reduced payments for long lead equipment items, adjustments to engineering and EPC contractor resources, and adjustments to staff resources due to the EPU outage modification assignments made in 2009 and 2010. Exhibit TOJ-20, 2010 Extended Power Uprate Construction Costs contains summaries of the EPU expenditures in 2010 for each of the NFR schedule categories. Table 1 is a summary of each of the categories showing the actual expenditure amounts. The amounts shown in the exhibits are slightly different than the NFR schedules as footnoted on the exhibit.

Q. Please describe the costs incurred in the License Application category and the variance, if any, from the 2010 actual/estimated costs in this category.

A. 2010 Licensing Costs consist primarily of charges for consulting and contractor services rendered in support of preparing the NRC LARs. The primary contractors are Westinghouse, Areva and Shaw Stone & Webster. FPL incurred $26.3 million in this category in 2010, which was $3.1 million less than the actual/estimated amount. This variance was primarily attributable to fact that NRC review costs were less than expected. The costs associated with the additional NRC-required engineering analyses and evaluations for St. Lucie Unit 1 are also included in this category.

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

A. Engineering & Design Costs consist primarily of costs for FPL personnel and contractor personnel in the FPL engineering organizations at both sites and in the central organization. Some of these personnel provide management, oversight and review of the LAR activities, while others are oriented towards management, oversight and review of the detail design activities being performed by the EPC contractor. FPL incurred $19.8 million in this category in 2010, which is $7.8 million more than the actual/estimated amount. This was primarily attributable to LAR scope growth and the costs required to manage the EPC contractor's engineering and implementation efforts for the PSL Unit 1 and PTN Unit 3 2010 outages.

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

A. Permitting Costs reflect costs attributable to the State of Florida Site Certification Application for the St. Lucie and Turkey Point sites and the Substantial Revision Application for Increasing Discharge Temperature to the FDEP for the St. Lucie Plant. These costs consist primarily of consulting services related to environmental work for site certification, compliance certification, FDEP application preparation, and FPL employee support. FPL incurred $274,880 in this category in 2010, which was $98,818 more than the actual/estimated amount. This was primarily attributable to environmental work in the preparation of the Substantial Revision Application for Increasing Discharge Temperature to the FDEP for the St. Lucie Plant.

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

A. Project Management Costs relate to overall project oversight including project and construction management, and project controls and non-NRC regulatory compliance. These oversight activities are performed by personnel located at both sites, and by the

EPU central organization and by non-EPU organizations such as NBO, New Nuclear Accounting and Regulatory Affairs. FPL incurred $22.6 million in this category in 2010 which was $2.6 million more than the actual/estimated amount. This was primarily attributable to an increase in FPL project and construction management oversight of the EPC vendor.

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

A. The majority of the costs in this category reflect payments to the EPC vendor for the successful completion of the EPU outages at PSL Unit 1 and PTN Unit 3 in 2010, the continued engineering efforts to prepare for the 2011 and 2012 outages, payments to Siemens for turbines and generator rotors, and payments to TEI for feedwater heaters and moisture separator reheaters, main condensers, and increased capacity heat exchangers and pumps required to support the uprate conditions. This category also includes the cost to contract with High Bridge for the purpose of conducting a specific scope of project cost estimating, as described above.

Additionally, this category includes the cost to complete the modifications to the St. Lucie Unit 1 Turbine Gantry Crane in 2010. An engineering evaluation of each Turbine Gantry Crane was performed resulting in proposed modifications to each crane for increased efficiency and precision in removing and installing the many pieces of heavy equipment. The modifications to each Turbine Gantry Crane are performed during normal plant operation thus saving plant outage time. On October

7, 2010, FPL filed a petition with the Commission to include the costs of the St. Lucie Unit 1 Turbine Gantry Crane and other equipment placed into service in 2010 associated with the EPU Project in base rates, and on January 11, 2011, the FPSC voted to grant the base rate increase. The only salvageable equipment from the St. Lucie Unit 1 Turbine Gantry Crane was the trolley assembly. The salvage value of the trolley assembly was $13,010, and it was disposed of in July 2010 and was applied back to the EPU project appropriately.

FPL incurred $222.0 million in this category in 2010, which is $18.4 million less than the actual/estimated amount. The primary contributor to this variance was the adjusted outage modification assignments which moved some plant modifications between the outages, deferring some costs to a later year. This variance was partially offset by utilization of the EPC contractor due to work scope increase identified in the licensing and engineering design modification phases. Further outage modification adjustments will be necessary as the LAR reviews, design engineering, and implementation planning activities progress.

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

A. Non-Power Block Engineering Costs consist primarily of costs for facilities for engineering and project staff at site locations and the simulator upgrades required to reflect the uprate conditions. FPL incurred $6.2 million in this category in 2010. This represents $1.2 million less than the actual/estimated amount. The variance is primarily attributable to costs for the simulator modifications being moved to later than originally planned.

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

A. Recoverable O&M expenses in 2010 were $7.2 million. This represents a variance of $4.0 million more than the actual/estimated amount. Consistent with FPL's capitalization policy, the commodities that make up these expenditures consist of non-capitalizable computer hardware and software and office furniture and fixtures needed for new project-bound hires, all of which are segregated for EPU Project personnel use only, as well as incremental staff and augmented contract staff. Additionally, costs necessary to preserve adequate laydown space for the EPU project at Turkey Point were included in this category. Also, with the completion of the St. Lucie Unit 1 Turbine Gantry Crane modifications in late 2010, Recoverable O&M also includes the write-off of inventory rendered obsolete because of the modifications. Through 2010, $18,864 in inventory has been written off.

Q. Please describe the costs incurred in the Transmission category.

A. Transmission Costs were $14.6 million in 2010, which is $5.8 million more than the actual/estimated amount. The expenditures in the Transmission category include plant engineering, line engineering, substation engineering, and line construction. This variance is a result of the reclassification of the plant engineering for the procurement and installation of the new main transformer at PSL 2. Part of the substation construction originally scheduled for 2010 at Turkey Point was deferred to 2011 at the request of the Nuclear Security Department to give them additional time to review design changes they had requested. Additionally, favorable transmission line construction bids obtained for 2010 work resulted in overall costs lower than originally budgeted for the non-plant engineering Transmission work.

CONCLUSION

Q. Were FPL's 2010 EPU expenditures prudently incurred?

A. Yes. FPL incurred costs of approximately $319 million in 2010. FPL's costs were less than its estimate for the reasons described above. All of FPL's expenditures were necessary so that the uprate work can be performed during the planned outages. Through experienced personnel's application of the robust internal schedule and cost controls, careful vendor oversight, and the ability to continuously adjust based on lessons learned and the project's evolving needs, FPL is confident that its EPU management decisions are well-founded and prudent. All costs incurred in 2010 were the product of such decisions, were reasonable and prudently incurred, and should be approved.

Q. Does this conclude your direct testimony?

A. Yes.

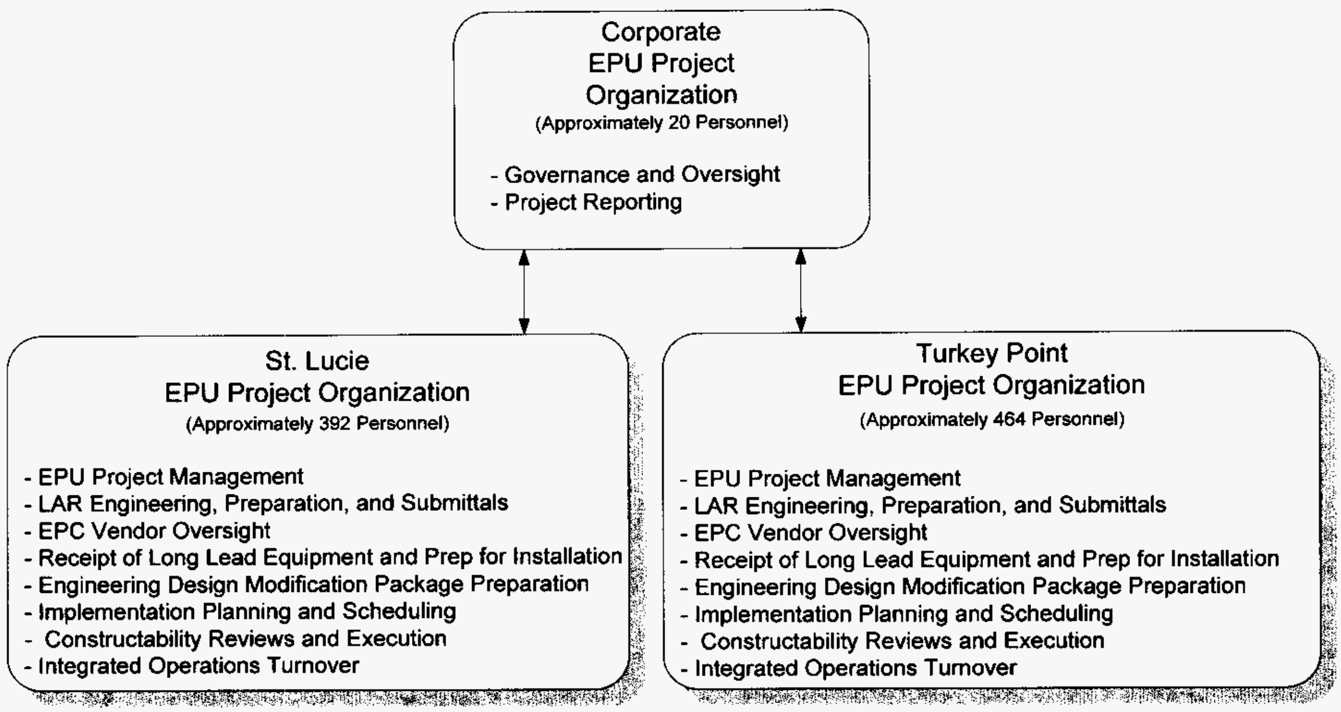
TOJ-14

Extended Power Uprate Project Instructions (EPPI) Index
As of December 31, 2010

Title	PI #	Revs	Issued
Project Administration	**100**		
Project Instruction Preparation, Revision, Cancellation	100	R3	8/27/2009
EPU Project Expectations & Conduct of Business	110	R20	10/19/2010
Roles & Responsibilities	140	R9	11/17/2009
EPU Project-Nuclear Business Ops Interface	150	R1	3/3/2010
EPU Project Formal Correspondence	160	R2	9/18/2009
Time and Expense Reporting to FPLE Support	170	R2	8/26/2010
EPU Nuclear Cost Recovery	180	R1	10/15/2010
Procurement	**200**		
PR and PO Funding Request and Single/Sole Source Justification	220	R4	11/11/2010
Project Invoice Process Instructions	230	R7	11/1/2010
EPU Contract Compliance Program	240	R3	1/28/2010
Project Controls	**300**		
Project Scope Control Process	300	R10	12/8/2010
Forecast Variance and Trends	301	R0	10/15/2010
Development, Maintenance, and Update of Schedules	310	R5	3/26/2010
Cost Estimating	320	R2	3/23/2010
EPU Project Risk Management Program	340	R3	10/15/2010
EPU LAR Engineering Risk Management	345	R0	4/28/2009
FPL Accrual Process	370	R3	3/3/2010
Project Self Assessment	380	R1	10/13/2009
Project Training	**500**		
EPU Project Personnel Training Requirements	520	R1	12/19/2008
EPU Project Qualification Guidelines	560	R3	4/12/2010
Quality, Engineering & Licensing	**600**		
EPU Uprate License Amendment Request	610	R2	5/26/2009
Point Beach Specific	**700**		
Fire, Weather, Medical, and Other Emergencies	710	R0	8/27/2008
Saint Lucie Specific	**800**		
St. Lucie EPU Project Severe Weather Preparation	810	R2	6/4/2010
EPU Project Environmental Control Program PSL	820	R0	11/12/2009
Turkey Point Specific	**900**		
Turkey Point EPU Project Severe Weather Preparations	910	R1	6/4/2010
EPU Project Environmental Control Program PTN	920	R0	11/12/2009

TOJ-15

EPU Project
Site Centered Organization
2009-2010



TOJ-16

Extended Power Uprate Project Reports - 2010

REPORT	REPORT DESCRIPTION	PERIODICITY	AUDIENCE
PSL, PTN Daily Report	Activities scheduled within the next six weeks	Daily	All project staff personnel, project management and project controls
Executive VP & Chief Nuclear Officer Summary	LAR Status, Engineering Status, Planning & Implementation, and Project Risks	Approx. Weekly	Executive Vice President & Chief Nuclear Officer and other invited guests
PSL, PTN, Accrual Report	Document accruals for each EPU Site, Vendor, Amount, Purchase Order, Remarks, References	Monthly	Nuclear Business Operations, Corporate Accounting, EPU Project Management
PSL, PTN Variance Report	Cost Actuals, Budgets and Forecasts for Operations and Maintenance and Capital Expenditures	Monthly	Nuclear Business Operations, Corporate Accounting, EPU Project Management
PSL, PTN, Monthly Operating Performance Report (MOPR)	Dashboard of EPU Project, Scope Definition, Execution Plan, Resources, Cost, Schedule, Quality, Safety, Environmental, Licensing, Regulatory	Monthly	Executive Management, EPU Project Management

Extended Power Uprate Project Reports - 2010

REPORT	REPORT DESCRIPTION	PERIODICITY	AUDIENCE
PSL, PTN Risk Matrix	Quantified Risks, Potential Cost Impact, Weighted Cost Impact, Probability of Occurrence, and Risks identified but not quantified	Weekly	Project Management, Input to Presentations
PSL, PTN LAR Schedules	Schedule for completing LAR	Weekly	Project Management, Input to Presentations
PSL, PTN Modification Schedules	Schedule for Completing Modifications	Weekly	Project Management, Input to Presentations
PSL, PTN, Monthly Cash Flow Charts	Project Annual Budget, Actuals to Date and Forecast	Monthly	Project Management
Executive Steering Committee Meeting Presentations	Project Status, Indicators, Forecast, Issues, Next Steps	Quarterly	Executive Management
Bechtel Status Report	Dashboard, Progress Indicators, Resources, Schedule, Costs	Weekly (PSL) Monthly (PTN)	Project Management
Vendor Integration Meeting Presentations	Vendors prepare status report	Quarterly	Executive and Project Management

TOJ-17

Plant Change Modification (PCM) Status as of December 31, 2010

Site	Currently Identified	Initiated	30%	90%	Final
St. Lucie	95	68	58	29	21
Turkey Point	112	99	41	29	27
Total	207	167	99	58	48
Percent Complete		81%	48%	28%	23%

- Initiated - Scope document issued
- 30% - Conceptual Design Package
- 90% - Implementation Review Package
- Final - Reviews completed and approved by Plant General Manager for issuance

TOJ-18

Extended Power Uprate Equipment List as of December 31, 2010			
St. Lucie Components	**Description**	**Contract**	**Scoping Document**
Main Steam Isolation Valve (MSIV) Upgrade	Larger operators on the MSIVs are required to operate against higher steam pressure	To Be Determined (TBD)	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Turbine Performance Test Points Installation and Monitoring	Installation and monitoring of test points in main steam system to acquire baseline data before and after the power uprate conditions.	Shelby Jones Co. PO-119443 Florida Fluid PO-122350	Siemens turbine engineering requirement
High Pressure (HP) Turbine	Larger HP rotor and inlet valves are required for increased steam flows in the uprate conditions	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Moisture Separator Reheater (MSR) Replacement	Larger capacity MSRs are required to heat and dry the steam flow in the uprate conditions.	TEI PO-118205	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Low Pressure (LP) Turbine Rotor	Larger LP turbine rotors are required for the increased steam flow in the uprate conditions	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Moisture Separator Drain Control Valves Replacement	Larger valves are needed for the increased condensed water flow in the uprate conditions	Fisher Controls SC2262201	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008

Extended Power Uprate Equipment List as of December 31, 2010

St. Lucie Components	Description	Contract	Scoping Document
Condenser Material Upgrade	Strengthening of the Main Condenser is needed with higher steam and condensate flows in the uprate conditions.	BPC PO-117820	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Condensate Pump Replacement	Larger condensate pumps are needed to pump the increased condensate flows in the uprate conditions.	Flowserve PO-130160	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Feedwater Heater Replacement (#5)	Larger feedwater heaters are needed to process the steam and feedwater flows in the uprate conditions.	TEI PO-118224	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Heater Drain Control Valves	Larger valves are needed to control the condensate flow in the uprate conditions	Fisher Controls SC2262201	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Feedwater Digital Modifications	Instrumentation to provide control the feedwater heater control and dump valves in the uprate conditions.	Feedforward SC2287468	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Heater Drain Pump and Motor Replacements	Larger pumps and motors are required to pump the increased heater drain flows in the uprate conditions.	Flowserve Corp. PO- 125454	St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008

Extended Power Uprate Equipment List as of December 31, 2010

St. Lucie Components	Description	Contract	Scoping Document
Main Feedwater Pump Replacement	Larger pumps are required to pump the increased feedwater flow required in the uprate conditions.	Flowserve PO-121985	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Leading Edge Flow Meter (LEFM) Measurement Uncertainty Recapture (MUR)	Precision flow measurement instrument and instrumentation provides for increased certainty of operating parameters supporting uprate conditions.	Cameron PO-116107	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Feedwater Regulating Valves Upgrade	Larger operating mechanisms are required to operate the feedwater regulating valves in the increased uprate conditions.	Fisher Controls SC2262515	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Control Element Drive Mechanism (CEDM) System Upgrades	Upgrade the CEDM system to recover operational and safety margins in the uprate conditions.	Westinghouse PO-118271	OEM Recommendation
Main Generator Rotor Replacement and Stator Rewind	Larger generator is needed to increase electrical output in the uprate conditions.	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Main Generator Hydrogen Coolers	Increased main generator cooling is required in the uprate conditions.	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008

Extended Power Uprate Equipment List as of December 31, 2010			
St. Lucie Components	**Description**	**Contract**	**Scoping Document**
Main Generator Hydrogen Seal Oil Pressure Increase	Increased hydrogen pressure for main generator cooling is required in the uprate conditions.	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Main Generator Exciter Coolers/Blower	Increased cooling of the main generator exciter is required in the power uprate conditions.	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Main Transformer Replacement	Larger main transformers are needed to handle the increase in the main generator electrical output.	Siemens PO-4500467077	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Main Transformer Cooler Upgrade	Increased cooling is needed to handle the increase in the main generator electrical output.	ABB PO-112255, 126248	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008, ABB Engineering Thermal Loading Design Study, FPL St. Lucie, ABB Project Number, FP13469-1, Rev.1, August 25, 2008
Turbine Cooling Water (TCW) Heat Exchanger Replacement	Larger heat exchangers are needed for increased cooling in the uprate conditions.	TEI PO-118278	St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008

Extended Power Uprate Equipment List as of December 31, 2010			
St. Lucie Components	**Description**	**Contract**	**Scoping Document**
Iso-Phase Bus Duct Cooling	Increased cooling is needed for the electrical connections from the main generator to the main transformer in the uprate conditions.	AZZ Calvert PO-120769	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Turbine Gantry Cranes Upgrade	Upgrades needed to more efficiently and precisely move heavy EPU equipment loads.	ACECO PO-117272 Sargent & Lundy PO-79551	Identified during scheduling and planning for EPU heavy equipment moves
Training Simulator Modifications	Upgrades needed to replicate the plant in the power uprate conditions.	Western Services Corp. PO-118627	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Digital Electro-Hydraulic (DEH) Computer System Upgrade	Upgrades needed for increased certainty of turbine operating parameters supporting uprate conditions.	Westinghouse Power PO-131940	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Main Generator Current Transformers (CT) and Bushing Replacement	Upgrades required due to the modifications to the generator rotor and stator for uprate conditions.	Siemens PO-116088	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Installation of Power System Stabilizer	Upgrades required due to the modifications to the generator rotor and stator for uprate conditions.	Siemens PO-116088	Facilities Study, FPL Extended Power Uprate project, St. Lucie 1&2, Q114 & Q115, March 2009

Extended Power Uprate Equipment List as of December 31, 2010			
St. Lucie Components	**Description**	**Contract**	**Scoping Document**
Electrical Bus Margin Upgrades	Required to restore margin on electrical busses as a result of uprate.	Bechtel PO-117820	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Secondary Plant Instrumentation	Setpoint and scaling of plant instrumentation for uprate conditions	Bechtel PO-117820	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Steam Bypass Upgrades	Upgrades required due to increased bypass flow to condenser from main steam, feed water and heater drains	Bechtel PO-117820	PSL License Amendment Request (LAR) Engineering
Containment Mini-Purge	Reduction of maximum allowed Containment pressure per NRC Plant Technical Specifications	Bechtel PO-117820	PSL LAR Engineering
Control Room Upgrades	Additional cooling and Alternate Source Term margin required for power uprate conditions.	Bechtel PO-117820	FPL Feasibility Study 2007, St. Lucie Nuclear Plant, Balance of Plant, Extended Power Uprate, Scoping Study, February 2008
Hot Leg Injection Flow Improvements	Increasing required flow under EPU and eliminating SPV with cross train power on in-series valves	Bechtel PO-117820	PSL LAR Engineering

Extended Power Uprate Equipment List as of December 31, 2010			
St. Lucie Components	**Description**	**Contract**	**Scoping Document**
Safety Injection Tank (SIT) Pressure Increase	Upgrade required to operate at higher pressure based on EPU conditions for small break Loss of Coolant Accident (LOCA) analysis	Bechtel PO-117820	PSL LAR Engineering

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Sump PH Control	Alternate Source Term method requires pH greater than 7.0. The current pH control system is not sufficient at uprate conditions.	S&L PO-79551	Alternate Source Term (AST) License Amendment Request (LAR) Engineering
Containment Cooling Modifications	Increased power production from the primary system requires additional cooling of the containment in the uprate conditions.	AAF McQuay PO-121869	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Main Steam Safety Valve / Piping Upgrades	Increased temperature and pressure require set point changes in the uprate conditions	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Main Steam Pipe Supports Replacement	Uprate conditions require additional piping supports and restraints.	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Turbine Performance Test Points Installation and Monitoring	Installation and monitoring of test points in main steam system to acquire baseline data before and after the power uprate conditions.	Proto Power PO-115488	Siemens turbine engineering requirement

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Flow Accelerated Corrosion (FAC) Identified Piping Replacement	Increased flows require replacement of piping affected by the flow accelerated corrosion in the uprate conditions.	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
High Pressure (HP) Turbine Upgrade	Larger inlet throttle valves and Turbine redesign are required for increased steam flows in the uprate conditions	Siemens PO-116090	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Turbine Electro-Hydraulic Controls (EHC)	Enhanced controls for the new turbines. Current design is not sufficient for the new turbine configuration in the uprate conditions.	Siemens PO-116090	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Moisture Separator Reheater (MSR) Replacement	Larger capacity MSRs are required to heat and dry the steam flow in the uprate conditions.	TEI PO-118206	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Main Condenser replacement	Increased turbine exhaust steam to the main condenser requires replacement of the main condenser to support uprate conditions.	TEI PO-118328	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Condenser Amertap Cleaning System Replacement	Replacement of the main condenser requires replacement of the condenser tube cleaning system to support the uprate conditions.	TEI PO- 118328	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Condensate Pump and Motor Replacement	Larger condensate pumps are needed to pump the increased condensate flows in the uprate conditions.	Flowserve PO-130612	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Feedwater Heaters (5,6)	Larger feedwater heaters are needed to process the steam and feedwater flows in the uprate conditions.	TEI PO-118241	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Heater Drain Valves	Larger valves are needed to control the condensate flow in the uprate conditions	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Feedwater Heater Drains Digital Upgrades	Instrumentation to provide control the feedwater heater control and dump valves in the uprate conditions.	Invensys PO -126227	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Feedwater Heater #5 Drain Piping Upgrade	Higher drain water flows require larger piping in the uprate conditions.	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Main Feed Pump Replacement	Rotating assemblies need redesign to pump the increased feedwater flow required in the uprate conditions.	Flowserve PO-130612	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Measurement Uncertainty recapture (MUR) LEFM	Precision flow measurement instrument and instrumentation provides for increased certainty of operating parameters supporting uprate conditions.	Cameron PO-116796	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Feedwater Regulating Valves Upgrade	Larger actuators and valve internals are required to operate the feedwater regulating valves in the increased uprate conditions.	SPX PO-115351	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Feedwater Isolation Valves Addition	Increased feedwater flow and pressure requires modifications to support uprate conditions.	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Auxiliary Feedwater (AFW) Modifications	Increased feedwater flows and pressure requires modifications to valve stops including rotating assemblies overhauls to support uprate conditions	Bechtel PO-117809	LAR Engineering

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Main Generator Rotor Replacement	Larger generator and stator are needed to increase electrical output in the uprate conditions.	Siemens PO-116090	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Main Generator Hydrogen Coolers	Increased main generator cooling is required in the uprate conditions.	Siemens PO-116090	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Iso-Phase Bus Duct Modifications	Increased bus size is needed for the electrical connections from the main generator to the main transformer in the uprate conditions.	AZZ / Calvert PO-124436	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
1A Main Transformer Cooler Upgrade	Increased cooling is needed to handle the increase in the main generator electrical output.	Siemens PO-122154	T&D
Switchyard Upgrades	Increased electrical output requires modification to switchyard equipment to support the uprate conditions.	T & D	Generation Interconnection Service and Network Resource Interconnection Service System Impact Study. 11/25/08
ICW Turbine Plant Cooling Water (TPCW) Cooling Upgrade	Increased temperatures of components require additional cooling in the uprate conditions.	Joseph Oat Corp. PO-126453	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Plant Instrumentation Modifications	Increased pressures and flows require modifications and adjustments to process instrumentation in the uprate conditions.	Bechtel PO-117809	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
ECF Removal	Abandon containment filters from the containment to support the safety margin in the uprate conditions.	Bechtel PO-117809	FPL PTN Feasibility Study 2007
Control Room Habitability	Upgrade control room HVAC system to properly limit radiological exposure to the control room operators at uprate conditions.	Bechtel PO-117809	AST LAR Engineering
Turbine Gantry Crane Upgrades	Upgrades needed to more efficiently and precisely move heavy EPU equipment loads.	Bechtel PO-117809	Identified during scheduling and planning of moving EPU heavy equipment loads.
Alternate Spent Fuel Pool Cooling	Increased power from the fuel requires additional cooling of the fuel when it is placed into the spent fuel pool.	Joseph Oats PO-2259675	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Training Simulator Modifications	Upgrades needed to replicate the plant in the power uprate conditions.	Western Services PO-118844	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Turbine Digital Controls	Replace existing analog and mechanical system with a completely new digital system that will interface with the new EHC system	Invensys PO-129689	FPL PTN Feasibility Study 2007, Turkey Point Nuclear Plant Balance of Plant Extended Power Uprate Scoping Study, March 2008
Main Steam Isolation Valve Assembly Replacement	Satisfies new steam system pressures requirements at the high pressure turbine	Bechtel PO-117809	License Amendment Request (LAR) Engineering
Main Steam Flow Element Replacement	Satisfies new steam system pressures requirements at the high pressure turbine	Bechtel PO-117809	LAR Engineering
High Pressure Turbine Gland Seal Steam Upgrades	Upgrades needed for increased High Pressure Turbine exhaust pressures and spillover	Bechtel PO-117809	LAR Engineering
Steam Generator Blowdown Instrumentation	Upgrades needed to improve measurement accuracy of Steam Generator blowdown	Bechtel PO-117809	LAR Engineering
Compensatory Filter for Control Room Emergency Ventilation	Needed to supplement the emergency ventilation and manual dampers in the control room	Bechtel PO-117809	Alternative Source Term (AST) LAR Engineering

Extended Power Uprate Equipment List as of December 31, 2010			
Turkey Point Components	**Description**	**Contract**	**Scoping Document**
Condenser Basket Tips	Needed to determine the actual MWe increase by measuring pre and post EPU backpressure conditions	Siemens PO-2260460	LAR Engineering
CRDM Fan Motor and Cooling Coil Replacement	Increased heat load to CRDM due to EPU conditions	Bechtel PO-117809	LAR Engineering
Containment Aluminum Reduction	EPU increases containment sump temperature which accelerates aluminum degradation	TBD	LAR Engineering
Steam Jet Air Ejector Condenser Tube Bundle Replacement	Upgrade needed to SJAE condenser due to increased condensate system pressure resulting from uprate	Bechtel PO-117809	LAR Engineering

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Extended Power Uprate (EPU) Schedule as of December 31, 2010

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Extended Power Uprate (EPU) Schedule as of December 31, 2010
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Table 1. Summary of 2010 Extended Power Uprate Construction Costs

Category	Detail Table No.	2010 Actual Costs
Licensing	2	$ 26,332,425
Engineering & Design	3	$ 19,832,530
Permitting	4	$ 274,880
Project Management	5	$ 22,574,151
Power Block Engineering, Procurement, etc.	6	$222,010,932
Non-Power Block Engineering, Procurement, etc.	7	$ 6,212,567
Total EPU Construction Costs	**NA**	**$297,237,485**
EPU Recoverable O&M	8	$ 7,167,919
Transmission Capital and Recoverable O&M	9	$ 14,597,060
Total Construction Costs & Transmission	**NA**	**$319,002,464**

Tables include post in-service costs incurred in 2010.
NFR Schedule T-4, O&M, and T-6, Construction and Transmission costs, amount to $317,153,411, which excludes post in-service project costs incurred in 2010.

Table 2. 2010 Licensing Costs

Category	2010 Actual Costs
St. Lucie (PSL) License Amendment Request (LAR)	
Fuel Related Analyses	$2,511,887
NSSS Component Analyses	$59,100
Balance of Plant (BOP) Engineering	$5,168,653
Nuclear Steam Supply System (NSSS) and Fuel Analyses	$3,756,199
NRC Fees and Other Engineering	$2,828,049
Turkey Point (PTN) License Amendment Request (LAR)	
NSSS Component Analyses	$1,290,636
Balance of Plant (BOP) Engineering	$4,479,904
Nuclear Steam Supply System (NSSS) and Fuel Analyses	$4,166,010
NRC Fees and Other Engineering	$2,071,987
Total Licensing	**$26,332,425**

Table 3. 2010 Engineering and Design Costs

Category	2010 Actual Costs
St. Lucie (PSL)	
FPL and staff augmentation engineering	$7,424,062
Turkey Point (PTN)	
FPL and staff augmentation engineering	$12,408,468
Total Engineering and Design	**$19,832,530**

Table 4. 2010 Permitting Costs

Category	2010 Actual Costs
St. Lucie (PSL)	
Environmental engineering, vendors and FPL support	$157,805
Turkey Point (PTN)	
PTN engineering and Certification of Compliance, vendors and FPL support	$117,075
Total Permitting	**$274,880**

Table 5. 2010 Project Management Costs

Category	2010 Actual Costs
St. Lucie (PSL)	
FPL, staff augmentation, and regulatory accounting	$9,538,231
Turkey Point (PTN)	
FPL, staff augmentation, and regulatory accounting	$13,035,920
Total Project Management	**$22,574,151**

Table 6. 2010 Power Block Engineering, Procurement, Etc. Costs

Category	2010 Actual Costs
St. Lucie (PSL)	
Engineering, Procurement, and Construction (EPC)	$50,081,709
Turbine and Generator Labor	$3,069,779
Turbine and Generator Materials	$36,899,857
Long Materials and Equipment	$6,821,255
Turbine Gantry Crane Upgrades	$2,955,922
Outage Extension Costs	$294,438
Other Miscellaneous Indirect Costs	$6,016,040
Turkey Point (PTN)	
Engineering, Procurement, and Construction (EPC)	$78,591,659
Turbine and Generator Labor	$171,258
Turbine and Generator Materials	$10,206,701
Long Materials and Equipment	$17,086,769
Outage Extension Costs	$316,257
Other Miscellaneous Indirect Costs	$9,499,288
Total Power Block Engineering, Procurement, Etc.	**$222,010,932**

Table 7. 2010 Non-Power Block Engineering, Procurement, etc. Costs

Category	2010 Actual Costs
St. Lucie (PSL)	
Simulator modification support	$187,950
Other Miscellaneous Costs	$69,796
Turkey Point (PTN)	
Simulator modification support	$40,738
Warehouse	$1,611,912
Independent Spent Fuel Storage Installation Pad Relocation	$4,281,930
Other Miscellaneous Costs	$20,241
Total Non-Power Block Engineering, Procurement, etc.	**$6,212,567**

Table 8. 2010 Recoverable O&M Costs

Category	2010 Actual Costs
St. Lucie (PSL) and Turkey Point (PTN)	
Non capitalizable Feedwater Heater Inspections	$3,080,565
PTN Independent Spent Fuel Storage Installation (ISFSI) Pad Relocation	$3,474,583
Non capitalizable computer hardware and software, office furniture and fixtures for new project-bound hires, incremental staff and augmented contract staff.	$612,771
Total Recoverable O&M	**$7,167,919**

Table 9. 2010 Transmission Costs

Category	2010 Actual Costs
Plant Engineering	$9,081,833
Line Engineering	$187,452
Substation Engineering	$1,273,273
Line Construction	$1,244,455
Substation Construction	$2,807,114
Recoverable O&M	$2,933
Total Transmission	**$14,597,060**