

RECEIVED-FPSC

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION 11 MAR -1 PH 3: 15

COMMISSION
CLERK

DOCKET NO. 110009-EI
FLORIDA POWER & LIGHT COMPANY

MARCH 1, 2011

TURKEY POINT 6&7 - 2009 & 2010

TESTIMONY & EXHIBITS OF:

STEVEN D. SCROGGS

COM	5
APA	1
ECR	6
GCL	1
RAD	1
SSC	—
ADM	—
OPC	—
CLK	CELEBR

DOCUMENT NUMBER-DATE
01392 MAR-1 =
FPSC-COMMISSION CLERK

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF STEVEN D. SCROGGS**

4 **DOCKET NO. 110009-EI**

5 **MARCH 1, 2011**

6

7

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

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

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

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

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

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

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

DOCUMENT NUMBER-DATE

01392 MAR-1 =

FPSC-COMMISSION CLERK

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

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

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

- 11 • SDS-1, consisting of schedules T-1 through T-7 covering the 2009 actual
12 period for Turkey Point 6 & 7 Pre-Construction costs. Page 2 of SDS-1
13 contains a table of contents listing the T schedules sponsored and co-
14 sponsored by FPL Witness Powers and by me, respectively.
- 15 • SDS-2, consisting of schedules A/E-1 through A/E-7 the 2010
16 actual/estimated period for Turkey Point 6 & 7 Pre-Construction costs.
17 Page 2 of SDS-2 contains a table of contents listing the A/E schedules
18 sponsored and co-sponsored by FPL Witness Powers and by me,
19 respectively.
- 20 • SDS-3, consisting of schedules T-1 through T-7 covering the 2010 actual
21 period for Turkey Point 6 & 7 Pre-Construction costs. Page 2 contains a
22 table of contents listing the T schedules sponsored and co-sponsored by
23 FPL Witness Powers and by me, respectively.

- 1 • SDS-4, consisting of schedules T-1 through T-7 covering the 2009 actual
2 period for Turkey Point 6 & 7 Site Selection costs. Page 2 of SDS-4
3 contains a table of contents listing the T schedules sponsored and co-
4 sponsored by FPL Witness Powers and by me, respectively.
- 5 • SDS-5, consisting of schedules A/E-1 through A/E-7 covering the 2010
6 actual/estimated period for Turkey Point 6 & 7 Site Selection costs. Page
7 2 of SDS-5 contains a table of contents listing the A/E schedules
8 sponsored and co-sponsored by FPL Witness Powers and by me,
9 respectively.
- 10 • SDS-6, consisting of schedules T-1 through T-7 covering the 2010 actual
11 period for Turkey Point 6 & 7 Site Selection costs. Page 2 contains a table
12 of contents listing the T schedules sponsored and co-sponsored by FPL
13 Witness Powers and by me, respectively.
- 14 • SDS-7, consisting of a table providing a listing of all licenses, permits and
15 approvals FPL is preparing to support the Turkey Point 6 & 7 project.
- 16 • SDS-8, consisting of a comprehensive list of procedures and work
17 instructions that govern the internal controls processes.
- 18 • SDS-9, providing a list describing various project reports, their periodicity
19 and target audience.
- 20 • SDS-10, providing a comprehensive list of project instructions and forms.
- 21 • SDS-11, providing Project Memoranda generated in 2009 and 2010.
- 22 • SDS-12, providing summary tables of the 2009 expenditures.
- 23 • SDS-13, providing a summary of the 2010 cost estimate review.

1 • SDS-14, providing summary tables of the 2010 expenditures.

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

3 A. The purpose of my testimony is to describe the activities involved in the
4 Turkey Point 6 & 7 project throughout 2009 and 2010. Specifically, my
5 testimony will describe the deliberate, stepwise process FPL is employing to
6 create an option to provide new nuclear generation for our customers and how
7 that process is being managed and controlled to ensure prudent expenditures
8 and the best outcome possible. I will include a discussion of project internal
9 controls and how those controls, supported by internal and external oversight,
10 provide for diligent and professional project execution. I will discuss key
11 issues the project has faced in 2009 and 2010 and how those issues were
12 evaluated and appropriate actions determined. Further, my testimony will
13 discuss the actual expenditures made related to the project and compare those
14 expenditures to the actual/estimated values provided in May 2009 and May
15 2010. Collectively, my testimony will provide the information necessary to
16 demonstrate that FPL's management decisions with respect to the Turkey
17 Point 6 & 7 project are the product of properly qualified, well-informed FPL
18 management following appropriate procedures and internal controls, and the
19 costs for the project are reasonable and were prudently incurred.

20 **Q. Please describe how your testimony is organized.**

21 A. My testimony includes the following sections:

- 22 1. High Level Project Summary and Issues
- 23 2. Project Management Internal Controls

- 1 3. Procurement Processes and Controls
- 2 4. Internal/External Audits and Reviews
- 3 5. 2009 Project Activities and Results
- 4 6. 2009 Key Management Decisions
- 5 7. 2009 Preconstruction Costs
- 6 8. 2009 Project Site Selection Costs
- 7 9. 2010 Project Activities and Results
- 8 10. 2010 Key Management Decisions
- 9 11. 2010 Preconstruction Costs
- 10 12. 2010 Project Site Selection Costs
- 11 13. Conclusion

12 **Q. Please summarize your testimony.**

13 A. My testimony describes the activities accomplished in 2009 and 2010. During
14 2009, the project completed the studies and analyses supporting applications
15 to federal, state and local entities for required licenses, certifications and
16 permits to construct and operate the project. These applications describe the
17 project's technical and environmental aspects and are now the focus of
18 extensive agency review and deliberation that will continue through the next
19 several years. Additionally, 2009 was a year of negotiation, analysis and
20 review to determine how and when to take additional steps beyond the
21 licensing activity in preparation for project construction.

22

1 Early in 2010 the results of 2009 were evaluated to revise the project capital
2 cost estimate range and the project schedule. The review indicated that key
3 project issues had not matured to the stage that warranted pursuing pre-
4 construction activities in parallel with licensing activities. The project
5 schedule was revised to initiate pre-construction activities following licensing,
6 as opposed to conducting some pre-construction activities in parallel with
7 licensing, resulting in new projected commercial operating dates of 2022 and
8 2023 for Unit 6 & 7, respectively. Through the balance of 2010, a robust
9 dialogue was maintained with federal, state and local government agencies
10 and stakeholders in support of the project application reviews. Careful and
11 deliberate progress was made, achieving a higher level of mutual
12 understanding and project detail. Key approvals and agreements were
13 obtained.

14
15 My testimony demonstrates that the Turkey Point 6 & 7 project struck an
16 appropriate balance to maintain progress towards the necessary approvals,
17 creating the option for new nuclear generation, but has managed commitments
18 in recognition of developing regulatory schedules, economic factors and
19 significant stakeholder interest. My testimony also demonstrates that the
20 project management process is being conducted in a well-informed,
21 transparent and organized manner enabling executive oversight and
22 facilitating reviews by internal and external parties. This disciplined

1 application of process by well-qualified FPL employees and contractors
2 results in prudent decisions with respect to project activities and expenditures.

3

4

HIGH LEVEL PROJECT SUMMARY & ISSUES

5

6 **Q. Please summarize the Turkey Point 6 & 7 project in 2009.**

7 A. During 2009, the Turkey Point 6 & 7 Project progressed on schedule with
8 licensing and permitting activities, and maintained costs well within budget.
9 As a result of commercial negotiations and engineering planning analysis,
10 several key decisions were made that accepted an increase in risk to
11 maintaining the project construction schedule of early 2009. These decisions
12 included deferral of the Engineering and Procurement (EP) or Engineering,
13 Procurement and Construction (EPC) contract, deferral of Long Lead material
14 procurement and withdrawal of the Limited Work Authorization (LWA)
15 request. The Forging Reservation Agreement, providing for manufacturing
16 slots to support the then current project schedule, was extended into 2010.
17 The project completed 2009 with total expenditures of \$37.7 million dollars as
18 compared to the May 1, 2009 filing projection of \$45.6 million. The variance
19 for 2009 is related to work scope deferred into the future. The specific
20 variances and explanations are provided later in this testimony.

21

22 The primary activities (and majority of expenditures) in 2009 were related to
23 finalizing the license and permit applications required to facilitate federal,

1 state and local reviews of the project. All applications were filed June 30,
2 2009, with the exception of the application for the Underground Injection
3 Control (UIC) Exploratory Well which was filed January 20, 2009. Both
4 before and after submittal of all applications, FPL conducted a coordinated
5 agency outreach and engagement effort to ensure the applications would be
6 complete, sufficient and fully understood by the reviewing agencies. A listing
7 of these approvals is provided as Exhibit SDS-11. Additionally, FPL
8 conducted extensive project education and interactive dialogue with
9 community and governmental stakeholders throughout the year. These efforts
10 took the form of bi-lateral and multi-party meetings, websites, customer
11 correspondence, site tours and presentations to civic groups, governmental
12 bodies and non-governmental organizations.

13
14 Along with the intensive licensing and permitting activity, FPL continued
15 important steps to obtain additional approvals, agreements and transactions to
16 support the project. These include: 1) the EP or EPC agreement with
17 Westinghouse/Shaw (WS), 2) supporting federal legislation to support a land
18 exchange with Everglades National Park, 3) commercial sources of fill for
19 future construction, 4) Comprehensive Development Master Plan (CDMP)
20 Amendments for a lake excavation and roadway improvements, and 5) a Joint
21 Participation Agreement to facilitate delivery of reclaimed water from Miami-
22 Dade County.

23 **Q. Please summarize the Turkey Point 6 & 7 project in 2010.**

1 A. During 2010, the Turkey Point 6 & 7 Project continued with the review of
2 project license and permit applications, and maintained costs well within
3 budget. The project completed 2010 with total expenditures of \$25.6 million
4 dollars as compared to the May 1, 2010 filing projection of \$42.6 million.
5 Primarily, the variance is related to work scope deferred into the future. The
6 specific variances and explanations are provided later in this testimony.

7

8 FPL conducted a review of project cost and schedule in early 2010 that
9 resulted in a revised project schedule and a check of the non-binding capital
10 cost estimate range. The review concluded that it was premature to initiate
11 those activities associated with the Preparation phase, and revised the project
12 schedule to remove the overlap between Licensing phase and Preparation
13 phase activities. The revised schedule targeted commercial operation dates
14 (COD) of 2022 and 2023 for Units 6 & 7, respectively. The Forging
15 Reservation Agreement was extended to March 15, 2011 to allow additional
16 time for negotiation and resolution following the schedule change. The cost
17 estimate check reviewed the project cost estimate using the most current
18 information available at the line item level. The revised cost estimate
19 confirmed that project overnight capital costs are consistent with the high end
20 of the original cost estimate range. Although this estimate is not supported by
21 firm contracts, it is consistent with what is known of cost estimates for other
22 ongoing AP1000 projects in the Southeast U.S.

23

1 The primary activities in 2010 were related to the ongoing review of license
2 and permit applications for the project. The Nuclear Regulatory Commission
3 (NRC) Combined License schedule included a public meeting on the project
4 and a pre-hearing conference convened by the Licensing Board in November.
5 The Site Certification application went through multiple rounds of
6 completeness review. In December, the transmission portion of the
7 application was determined to be complete.

8
9 FPL continued important development steps to obtain additional approvals,
10 agreements and transactions to support the project. These include
11 negotiations for: 1) activities to complete steps supporting a land exchange
12 with Everglades National Park, 2) approval of a CDMP Amendment for
13 roadway improvements needed for construction of the plant, and 3) approval
14 and execution of a Joint Participation Agreement to provide reclaimed water
15 from Miami-Dade County for project cooling needs.

16 **Q. What are the customer benefits that justify the continued pursuit of new**
17 **nuclear generation?**

18 A. The benefits to FPL customers offered by additional nuclear generation are
19 numerous and wholly consistent with the requirements of the Need
20 Determination Rule (25-22.080 F.A.C.). The key benefits relate to our core
21 mission of providing reliable electric service at reasonable rates. The fuel
22 required for nuclear generation is not dependent on natural gas pipelines,
23 railroad or maritime distribution systems or volatile energy markets.

1 Therefore, nuclear generation greatly adds to the reliability of a system by
2 increasing fuel diversity, fuel supply reliability and energy security. The
3 historic pricing of nuclear fuel provides a stable cost input reducing the impact
4 to monthly customer bills that result from fuel price volatility. The feasibility
5 analyses approved by the Commission in 2008 and 2009, and performed again
6 in 2010, demonstrate the robust cost-effective nature of nuclear generation
7 when compared to other baseload alternatives. Finally, nuclear is recognized
8 as an important component of meeting the state and national energy goals in
9 addressing greenhouse gas reduction. By employing an approach that
10 maintains progress, even through dynamic and demanding times, FPL is
11 creating the option of delivering those benefits on the most practicable
12 schedule.

13 **Q. Please expand on the value of “creating the option” for new nuclear**
14 **generation.**

15 A. Without the approvals, licenses and permits needed to construct and operate a
16 new nuclear facility, the opportunity to benefit from this valuable generation
17 source is remote and uncertain. By taking the steps to obtain the licenses and
18 approvals, further defining the specific project, FPL is accomplishing several
19 key objectives. First, the uncertainties around the approval process and the
20 final definition of the project are significantly reduced. Second, the market
21 for providing the equipment and services needed to construct the project is
22 allowed to more fully mature, leveraging observations from first wave
23 projects. Lastly, a shorter time span between the decision to construct and the

1 commercial operation dates will reduce uncertainties in the underlying
2 feasibility analysis and provide the best decision basis available.

3 **Q. What national level issues are being monitored for the potential impact to**
4 **cost and schedule of the Turkey Point 6 & 7 project?**

5 A. Developments in 1) the economy, 2) energy policy (at national and regional
6 levels) and 3) the progress of international and domestic projects have the
7 potential to affect the project.

8

9 The recent recession and subsequent prolonged recovery has impacted many
10 facets of the project, including: access to and cost of financing, material and
11 labor cost indices, and the development of national and international supply
12 chains for new nuclear projects. The annual feasibility analyses address these
13 issues in a disciplined and consistent manner each year.

14

15 National energy policy, as proposed by the current administration, is
16 supportive of nuclear energy in general, and new nuclear energy development
17 specifically. In a town hall meeting in New Hampshire on February 2, 2010
18 President Obama stated "...if you're serious about dealing with climate
19 change, then you've got to take a serious look at the nuclear industry." This
20 practical statement has been followed with steps to address the Department of
21 Energy's (DOE) responsibility to provide a final disposition of used fuel and
22 proposing an increase in the funding for DOE Loan Guarantees for new
23 reactors.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

The progress of domestic and international nuclear projects is also instructive to FPL's management decision-making. Internationally, the most relevant projects are two AP1000 projects in China; Sanmen and Haiyang. These projects are the first AP1000 design projects and will identify multiple important lessons for future projects. Currently these projects are on schedule, anticipating operation in 2013 and 2015, respectively. Southern's Vogtle project in Georgia and the SCE&G V.C. Summer project in South Carolina are the leading U.S. projects. FPL monitors information shared by Westinghouse – Shaw, publicly available reports and industry groups and journals to stay up to date on these projects. The most significant regulatory activity being monitored is the Nuclear Regulatory Commission's consideration of final reviews to the AP1000 Design Certification Document and the Vogtle Combined License application. Timely progress on these two proceedings is necessary to maintain the current Turkey Point 6 & 7 project schedule.

Q. What project specific issues are being monitored for the potential impact to cost and schedule of the Turkey Point 6 & 7 project?

A. Project specific issues include 1) FPL system and regional economic developments influencing the annual feasibility analysis, 2) the pace and outcome of permit and license application reviews, 3) and the development of commercial agreements supporting the Preparation and Construction phases of the project.

1

2

The economic slowdown has reduced the growth of demand for electricity on

3

the FPL system, thus reducing the need for new capacity. Additionally, the

4

economic downturn has reduced consumption in a number of sectors.

5

Reduced natural gas demand coupled with incremental supply being identified

6

in central U.S. shale deposits has reduced the near term -price of natural gas.

7

The economic impact of these factors on the project feasibility is reviewed

8

annually. Results to date maintain that the project remains feasible and in the

9

best interests of FPL customers.

10

11

On May 28, 2010 the NRC published a review schedule that is consistent with

12

the time frame identified in preceding projects, resulting in a Combined

13

License decision by the end of 2013. Through 2009 and 2010, NRC reviews

14

remained on pace while the State Site Certification process took a more

15

protracted pace. The results of the license and permit review processes will

16

define the final project features and conditions of certification. The NRC

17

license process remains the critical path, or most influential sequence of

18

events, to maintaining the current project schedule.

19

20

Negotiations with the WS consortium in 2008 and 2009 resulted in indicative

21

pricing for an EP scope that was used to revise the cost estimate range for the

22

project. The indicative pricing, while informative, is not conclusive

1 recognizing that terms, conditions and a specific project milestone schedule
2 has not been developed in tandem.

3

4

PROJECT MANAGEMENT INTERNAL CONTROLS

5

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

8 A. The management structure for Turkey Point 6 & 7 reflects the dual nature of
9 the project relying on a working combination of two key groups: Project
10 Development and New Nuclear Projects. The organization of the project into
11 these two key groups helps maintain a consistent management and reporting
12 structure with specific focus and areas of responsibility, while allowing the
13 project the flexibility to grow and adapt over time. The overall project
14 management structure has remained unchanged since initial formation.

15

16 Project Development, which I lead, has the primary responsibility for the
17 execution of development and licensing activities not within the purview of
18 the NRC, as well as all project communication activities and Florida Public
19 Service Commission (FPSC) interface. Similar to the way other generation
20 development projects are executed within FPL, Project Development utilizes
21 matrix relationships with key business units in the Company to provide
22 essential support. For example, legal and environmental services are provided
23 by those business units through assigned personnel.

1

2

Recognizing the need for specific nuclear-based skills and experience, FPL established the New Nuclear Project team within Engineering, Construction & Corporate Services Division (ECCS) to manage the complex and specialized nature of the Combined Operating License Application (COLA) process and the engineering, procurement and construction activities. This team is managed by William Maher, Director of Licensing – New Nuclear Projects.

3

4

5

6

7

8

9

10

11

12

13

The New Nuclear Project team has direct responsibility for the production and management of the COLA as well as the engineering, procurement, site preparation, construction and start-up aspects of the project. The New Nuclear Project team will adjust staffing as the project evolves, ensuring access to the necessary skill sets are maintained to accomplish project objectives in the most cost-effective manner.

14

Q. Please describe the project management and staffing approach employed on the Turkey Point 6 & 7 project.

15

16

A. The project is staffed by a combination of employees fully dedicated to the project, employees from FPL business units who devote a portion of their time to the project and a select group of contractors and subcontractors whose subject matter expertise and skills are required to complete the considerable tasks related to this undertaking. Leading the staff is a project management team charged with monitoring the day-to-day execution and strategic direction of the project. The project management team provides routine, dedicated oversight of the project including a determination of the timing and content of

17

18

19

20

21

22

23

1 external reviews. The project management team is supported by project
2 controls professionals that execute the day-to-day project activities and
3 provide direct oversight of procedural compliance. The project also benefits
4 from routine review, supervision and direction provided by FPL executive
5 management.

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

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

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

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

17

18 FPL utilizes SAP software as a part of its financial recording system and a
19 Financial Management Information Process (FMIP) for project report
20 generation. ECCS also utilizes an Electronic Approval Database (EAD)
21 system to initiate and record the management approval process for the
22 commitment of project funds.

23

1 Exhibit SDS-8 provides a list of procedures and work instructions that govern
2 the internal controls processes and expectations. These procedures and work
3 instructions are employed by dedicated and experienced project controls
4 personnel who functionally report through ECCS Project Controls and provide
5 project oversight and analysis. The internal controls organization helps to
6 ensure appropriate management decisions are made based upon assessment of
7 available information leading to reasonable costs. Accountability is clear and
8 understood throughout the controls organization and is a cornerstone of the
9 services they provide.

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

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

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

18 A. The internal controls staffing for the project is comprised of four personnel.
19 A Project Controls Director provides functional leadership, governance and
20 oversight. A Lead Project Controls professional provides cost and schedule
21 direction and analysis, coordinates internal and external audit requests, holds
22 meetings with project management to review cost and schedule performance,
23 and reviews all cost, scope changes, schedules and performance indicators. A

1 Cost Analyst provides bi-monthly reviews of all project expenditures,
2 maintains cost templates, supports the production of documents and responses
3 to information requests, and meets monthly or as required with department
4 heads on forecasting and commitments. A Construction Capital Cost
5 Estimator manages the master schedule and maintains the master project
6 estimate template.

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

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

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

18 A. In the course of project development, FPL identified a need to develop some
19 business processes unique to new nuclear deployment. These processes
20 generally involve conducting business in compliance with FPL General
21 Operating procedures, but also recognize project-specific requirements. For
22 example, specific instructions are needed to ensure compliance with additional
23 NRC requirements for quality control and document retention. Direction for

1 such specific areas of focus is provided to project staff through a set of FPL's
2 New Nuclear Project - Project Instructions (NNP-PI). These project
3 instructions establish a standard for the project team which provides guidance,
4 sets expectations and drives consistency. Exhibit SDS-10 provides FPL's
5 comprehensive list of project instructions and forms.

6 **Q. What processes are used to manage project risk?**

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

19
20 Each week the project team holds multiple status meetings. These meetings,
21 held by teams within the project, track project activities at a level that allows
22 most issues to be identified, discussed and resolved at the working team level.
23 Examples include the COLA team, Site Certification Application (SCA) team

1 consisting of plant and transmission subteams, among others. For those issues
2 that cannot be resolved at the working team level, project management has
3 provided a multi-step process to elevate the issue to the appropriate level for
4 resolution. Contractor performance is also tracked on a weekly basis.
5 Schedule and cost metrics are monitored and reported in standard format
6 reports to allow close monitoring of contractor performance.

7
8 The project team meets monthly to review project schedule, budget
9 performance and key project issues. Project risk is specifically tracked and
10 reviewed. The project made significant improvements to this tool in 2010,
11 and will complete that work in 2011. The monthly Cost Report meeting
12 provides an opportunity to drill down on project cost issues and expectations.
13 Project management also provides a routine update to FPL executive
14 management. Normally once per month, this update provides the opportunity
15 for robust dialogue between the project management team, Business Unit
16 leaders and executive management. While the executive team is always
17 available for consultation on developing issues and opportunities, the routine
18 meetings ensure a broad range of topics are regularly reviewed and discussed.

19
20 In 2010, the project has developed and implemented a quarterly risk assessment
21 tool to identify, characterize and track project risks. Six areas are assessed to
22 identify key issues, estimate probability or likelihood of occurrence (high,
23 medium and low), and the magnitude of potential consequences (high, medium,

1 and low). Further, mitigation actions or strategies to be employed to manage
2 the risk are described. The development of this assessment was the result of a
3 recommendation during a project controls review conducted in 2009. In 2011,
4 this tool will be further developed to replace the monthly Project Dashboard with
5 a more project specific review.

6 **Q. What other periodic reviews are conducted to ensure the project is**
7 **appropriately reviewed and analyzed?**

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

14
15 The project is reviewed annually to determine its continued economic
16 feasibility. This analysis is conducted in the same framework as the analysis
17 accepted during the Need Determination proceeding, but is updated to reflect
18 what is currently known regarding project cost, project schedule, and the cost
19 and viability of alternative generation technologies. The analyses presented in
20 the May 2008, May 2009, and May 2010 Nuclear Cost Recovery (NCR)
21 filings demonstrate the project remains feasible. An updated feasibility study
22 will be filed on May 2, 2011.

1 **Q. What other activities has FPL undertaken to ensure its decision processes**
2 **are informed by the most current national and international industry**
3 **information?**

4 A. FPL is an industry leader in nuclear generation, and as such, has the
5 experience, contacts, and industry presence to engage in many forums for
6 exploration of nuclear industry issues. Nonetheless, the specific challenges of
7 new nuclear deployment have created focus areas requiring additional
8 coordination between entities involved in new plant licensing, construction,
9 and operation. FPL participates in four key industry groups providing value
10 to the Turkey Point 6 & 7 project. The NuStart Consortium provides FPL
11 access to the reference COLA (Southern Nuclear Company's Vogtle Plant)
12 and associated information developed by other AP-1000 applicants necessary
13 to maintain the Turkey Point 6 & 7 COLA. NuStart is also responsible for
14 supporting the design finalization of the AP-1000 technology. This
15 involvement is necessary to support the federal licensing process. In addition,
16 the Design Centered Working Group was formed to provide coordination
17 among owners, vendors, and the NRC related to design modifications of the
18 AP-1000. This critical activity is necessary to ensure design changes for the
19 AP-1000 are made through a consensus process with the involvement of the
20 NRC to preserve standardization of design, a cornerstone of new nuclear
21 development. FPL also is a member of APOG (a consortium of owners of the
22 AP-1000 design) and of the Advanced Nuclear Technology group organized
23 by the Electric Power Research Institute (EPRI). These groups are primarily

1 forums to identify and resolve issues that are of primary interest to owners,
2 such as staffing, training and maintenance activities. For example, programs
3 such as Procurement Specification Development, Equipment and Nuclear Fuel
4 Reliability improvements, Advancing Welding Practices, and Modular
5 Equipment Testing and Benchmarking allow FPL increased efficiency in
6 program development and implementation resulting in future cost savings.
7 The principle of standardization through operations and maintenance requires
8 this level of industry coordination and dialogue. These different groups have
9 unique and important roles in the successful execution of new nuclear
10 deployment in the United States. Achieving the goal of industry
11 standardization and realizing the associated economic and operational
12 efficiencies mandates the need for active participation by industry participants
13 in these venues.

14 **Q. What steps are taken to ensure project expenditures are properly**
15 **authorized?**

16 A. Non-Legal project expenditures \$5,000 or greater must be formally input and
17 approved in the ECCS EAD. The EAD request serves as documented
18 communication between the Turkey Point 6 & 7 project and the Integrated
19 Supply Chain (ISC) identifying the need to contract for goods and services.
20 The database is used by the Turkey Point 6 & 7 project team to document and
21 record procurement activities and to obtain the appropriate level of
22 management authorization. Legal expenditures are independently tracked
23 through the Law Department controls.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

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

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

A. As described above, FPL has robust project planning, management, and execution processes in place to manage the Turkey Point 6 & 7 project. These efforts are led by personnel with significant experience in project management and development supported by project management professionals trained in the deliberate execution of critical infrastructure projects through a comprehensive set of internal controls. Additionally, FPL is able to capitalize on the experience of its other power generation development projects by implementing lessons learned by those project teams. Finally, FPL implements an ongoing internal auditing and quality assurance process to continuously monitor compliance with the controls discussed above. In summary, FPL has the right people with the right tools and oversight making decisions with the best available information. For all of these reasons, FPL is

1 confident that its Turkey Point 6 & 7 management decisions are well-founded
2 and reasonable. Further, FPL recognizes the unique nature of new nuclear
3 deployment demanding a continuous watch be maintained to monitor
4 developments in policy, regulatory and economic arenas. An ongoing
5 analysis and incorporation of these events is necessary to ensure the
6 appropriate actions are taken at the right time to create the option for new
7 nuclear generation. The application of sound project management
8 fundamentals and critical questioning provides the best results.

9

10 **PROCUREMENT PROCESSES AND CONTROLS**

11

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

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

21

22 However, in certain situations the use of single or sole source procurement is
23 in the best interest of the company and its customers. In some cases there is a

1 limited pool of qualified entities to perform specific services or provide
2 certain goods and materials. In other cases a service provider is engaged to
3 conduct a specific scope of work based on a competitive bid or other analysis
4 and additional scope is identified that the vendor can efficiently provide.
5 Circumstances such as the above examples are common in the nuclear
6 industry, and especially on complex long-term projects such as the Turkey
7 Point 6 & 7 project.

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

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

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

1 A. General Operations (GO) Procedure 705.3 requires proper documentation and
2 senior-level approval of single or sole source procurement. The procedure
3 calls for a review of the business interests associated with recommending a
4 single or sole source procurement contract and a validation that the costs are
5 reasonable. During 2008 and 2009, the process by which FPL documented
6 compliance with GO 705.3 was reviewed. Opportunities for improvement
7 were identified and documented. Training was conducted to ensure project
8 staff had a working understanding of the required documentation and analysis
9 necessary to support a sole or single source request. Throughout 2009 and
10 2010, FPL maintained its vigilance in creating adequate single or sole source
11 documentation.

12 **Q. What is a Pre-Determined Source (PDS) and how has FPL used this type**
13 **of source to ensure procurement decisions are prudent and costs are**
14 **reasonable.**

15 A. A PDS is a source that has demonstrated through a competitive evaluation
16 and/or other documented economic analysis to be the preferred source for
17 particular goods or services. A PDS is designated by the FPL ISC in
18 accordance with the Predetermined Sources section of the FPL Procurement
19 Process Manual. The New Nuclear Project sourcing team determined PDS
20 designations would be appropriate for certain project sources, primarily to
21 streamline the process being used for CCOs. Previously, all CCOs were
22 handled as single or sole source justifications, even if the underlying initial

1 commitment was competitively bid. Such procurement management is a
2 standard trade practice used to increase procurement efficiency.

3

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

9

10 Currently, FPL has six vendors under PDS status for the New Nuclear Project.
11 Bechtel, Westinghouse, Black & Veatch/Zachry (BVZ), Environmental and
12 Consulting Technology, Inc. (ECT), Golder Associates, Inc., and McNabb
13 Hydrogeologic Consulting, Inc. provide specific scope services to the project.
14 Because of their specific expertise and the evolving nature of the services
15 provided, these vendors remain good candidates for PDS selection.

16 **Q. What were the major contracting activities for the project during 2009?**

17 A. The major activities related to 1) licensing and permitting, 2) engineering
18 studies, and 3) the Forging Reservation Agreement. Negotiations with the
19 WS consortium were held during 2009, the results of which are discussed later
20 in this testimony. Upon completion of the work scope to develop the
21 licensing and permitting applications in June 2009, additional contracts were
22 executed to engage the principal consultants for support of the application
23 review and subsequent studies that will be required by reviewing agencies.

1 The prior arrangement, wherein Bechtel Engineering Corporation managed
2 the subcontractors, was no longer required for consistency and control of
3 information and was therefore not used in the post-submittal stage of the
4 project. Each principal consultant is now engaged by FPL directly. BVZ
5 completed a work scope including engineering logistics planning within the
6 year. As described in my May 1, 2009 testimony, the results of 2009 were
7 expected to lead to key project reviews in 2010. Therefore, the Forging
8 Reservation Agreement was extended six months (from December 31, 2009 to
9 June 30, 2010) to allow for 2010 planning processes to be completed prior to
10 determining the appropriate next step.

11 **Q. What were the major contracting activities for the project during 2010?**

12 A. The major activities related to licensing and permitting reviews and an
13 extension of the Forging Reservation Agreement. Upon completion of the
14 work scope to develop the licensing and permitting applications, additional
15 contracts were executed to engage the principal consultants for support of the
16 application review and subsequent studies that will be required by reviewing
17 agencies. These contracts were managed in 2010 through change orders to
18 reflect the actual pace of the project and timing of required support. The
19 Forging Reservation Agreement was scheduled to terminate on June 30, 2010.
20 Westinghouse and FPL mutually agreed to extend the terms of the agreement
21 to March 15, 2011 to allow for current market information to be incorporated
22 into a decision on the next appropriate step.

23

24

1 **INTERNAL/EXTERNAL AUDITS AND REVIEWS**

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

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

A. Several audits have been conducted to ensure FPL’s standards for project internal controls and cost reasonableness have been demonstrated. Annual FPL internal audits focus on the project financials and related controls.

The 2009 internal audit focused on whether costs charged to the project are actually for New Nuclear related activities and are recorded in accordance with Rule 25-6.0423. Independent testing of expenses (\$42.7M) charged to the New Nuclear project for the period January 1, 2009 to December 31, 2009 was conducted. The results of this audit revealed that the costs charged in accordance with the Nuclear Cost Recovery Rule are appropriate and controls over the New Nuclear project are good. A similar audit is underway to review the New Nuclear project for the period January 1, 2010 to December 31, 2010.

Turkey Point 6 & 7 project personnel are made aware of process improvements by attending training sessions as well as being provided required reading. All action items are provided scheduled completion dates and are tracked to ensure completion. On-going recommendations are routinely reviewed.

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

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

11 A. Concentric Energy Advisors (Concentric) has been engaged to conduct a
12 review of the project internal controls, with a focus on management processes.
13 The 2009 review revealed that FPL has continued on its stepwise approach to
14 managing the deployment of two new nuclear units by appropriately
15 evaluating the Turkey Point 6 & 7 reports and processes in response to
16 Concentric's observations in 2009 and March 2010. Concentric performed a
17 similar review on 2010 project management and internal controls.
18 Concentric's 2009 and 2010 review is discussed by FPL Witness Reed.

19
20 The FPSC Staff conducted four audits in 2009 and 2010. For each year, these
21 audits included a financial audit of the project ledger and accounts, and an
22 internal controls audit. The results of the FPSC Staff audits conducted during
23 the 2010 NCR process (Docket No. 100009) validated FPL's findings.

1 Specifically, the FPSC audit staff had no findings related to the project. The
2 audits of the 2010 financials and controls are currently underway.

3

4

2009 PROJECT ACTIVITIES AND RESULTS

5

6 **Q. What were the major activities for the Turkey Point 6 & 7 project during**
7 **2009?**

8 A. The major activities for the project in 2009 were associated with 1) the
9 completion and support of project license and permit applications at the
10 federal, state and local level, 2) additional activities focused on other
11 transactions and agreements necessary to support the project, and 3) internal
12 planning studies and commercial negotiations for specific scopes of supply.

13 **Q. What were the specific activities and results associated with federal**
14 **licensing of the Turkey Point 6 & 7 project in 2009?**

15 A. On June 30, 2009, FPL filed a COLA and request for LWA with the NRC.
16 The NRC conducted a review resulting in a determination the application is
17 sufficient. The application was docketed by the NRC on September 4, 2009.
18 Along with the sufficiency review, the NRC provided Requests for Additional
19 Information (RAIs) seeking further information related to the application.
20 FPL provided responses to these RAIs on November 11, 2009. At that time,
21 FPL notified the NRC it was withdrawing the LWA due to changed
22 circumstances, recognizing that the anticipated time saving value offered by
23 the LWA would not materialize or would be significantly reduced. Exhibit

1 SDS-11, Project Memoranda, includes Project Memorandum 09-001
2 providing a discussion of this decision process.

3

4 FPL also submitted an application to the United States Army Corps of
5 Engineers (USACE) for Section 404 and Section 10 permits on June 30, 2009
6 related to wetlands impacted by the project. The NRC and USACE have a
7 memorandum of understanding delineating the process by which the USACE
8 will utilize the EIS generated by the NRC as part of the COLA review as its
9 record of decision. Therefore the USACE process will follow the NRC time
10 schedule up to the publication of the Final EIS.

11

12 Other federal agency reviews (e.g., US Fish and Wildlife Service, National
13 Marine Fisheries Service, US Coast Guard, etc.) will be conducted in
14 consultation with the NRC.

15 **Q. What were the specific activities and results associated with state
16 certification and permitting of the Turkey Point 6 & 7 project in 2009?**

17 A. Recognizing the long permitting timeframe associated with a UIC well, FPL
18 submitted the UIC Exploratory Well permit on January 20, 2009 to the Florida
19 Department of Environmental Protection (FDEP). The permit was processed,
20 culminating in a public meeting held December 14, 2009. A permit to
21 construct the wells was issued in 2010 and preparations are being made to
22 initiate construction in 2011. This process will develop the necessary
23 information from actual well installation and testing to confirm the suitability

1 of the UIC well process for the project, and is therefore necessary to obtain
2 final approvals.

3

4 A SCA was submitted to the FDEP Siting Coordination Office on June 30,
5 2009 to provide the procedural consolidation of state and local government
6 reviews necessary for the construction and operation of a power plant in the
7 state of Florida. This process begins with a completeness review by multiple
8 agencies and governments. The application is managed in two parts; one part
9 related to the plant and non-transmission facilities and the other part related to
10 transmission facilities. Completeness questions are posed by agencies and
11 local governments that have substantive requirements related to the
12 construction and operation of the proposed facility and the applicant responds
13 to those questions.

14 **Q. What were the specific activities and results associated with obtaining
15 local approvals supporting the Turkey Point 6 & 7 project in 2009?**

16 A. A CDMP Amendment was submitted to Miami-Dade County in October 2008
17 to support land use approvals for the FPL-owned fill source. Following the
18 change to project schedule, this CDMP Amendment was subsequently
19 withdrawn to allow for alternative fill supply options to be investigated.

20

21 A second CDMP Amendment was filed in April 2009 to support temporary
22 roadway improvements needed to support safe project access during
23 construction. The amendment was transmitted to the Department of

1 Community Affairs (DCA) in December 2009 and was considered for
2 adoption by the Miami-Dade Board of County Commissioners in the Spring
3 of 2010. The results of that activity are discussed later in this testimony.

4 **Q. What were the specific activities and results associated with transactions
5 and agreements supporting the Turkey Point 6 & 7 project in 2009?**

6 A. FPL continued negotiations with Miami-Dade County Water and Sewer
7 Department (WASD) to develop a Joint Participation Agreement defining the
8 roles and responsibilities for development of a reclaimed water pipeline and
9 contains a form of Reclaimed Water Service Agreement that is expected to
10 govern the commercial and operational relationship for water supply to the
11 project. The negotiations yielded a draft agreement that was considered for
12 execution by the Miami-Dade Board of County Commissioners in the summer
13 of 2010. The results of that activity are discussed later in this testimony.

14
15 FPL also continued pursuit of a land exchange with Everglades National Park
16 (ENP) to facilitate the preferred Transmission Corridor in western Miami-
17 Dade County. Multiple agencies are involved in the land exchange to resolve
18 a property issue that was created by the expansion of the national park in the
19 early 1980s without cost to taxpayers. Federal legislation authorizing the
20 exchange was enacted in early 2009 and subsequent due diligence activities
21 have been underway to support the transaction.

1 **Q. What were the specific activities and results associated with internal**
2 **studies and commercial negotiations related to the Turkey Point 6 & 7**
3 **project in 2009?**

4 A. BVZ was engaged to conduct an engineering and logistics planning review to
5 assess the specific site preparation and pre-construction activities necessary
6 given the project design specifications contained in the license and permit
7 applications. The review resulted in an assessment of integrated activity
8 sequences and durations. The results of this review informed FPL's project
9 schedule review, conducted in early 2010, that resulted in revising the project
10 schedule.

11

12 FPL also conducted investigations of other sources of fill for the project
13 beyond the FPL-owned fill source proposed in the applications. Additional
14 fill will be required beyond what the FPL-owned fill source is estimated to
15 yield, so regional commercial sources are being evaluated for supply.

16

17 Commercial negotiations with WS continued in 2009 to define the terms,
18 scope, schedule and price for project management, engineering, and
19 procurement services needed to support the next phase of the project. As of
20 December 31st, 2009, the negotiations had not yielded a consolidated proposal
21 FPL judged as suitable in price, risk sharing, and schedule certainty. Further,
22 FPL has not made a commitment to whether an integrated EPC or an EP and
23 C form of contracting offers the best cost, risk, and schedule management.

1 Accordingly the Forging Reservation Agreement, then due to expire at the end
2 of 2009, was extended to June 2010 at no cost and with no other changes to
3 allow for these reviews.

4 **Q. Please describe the results of the 2009 annual feasibility analysis.**

5 A. A complete feasibility analysis was conducted to review the economic basis
6 for the project given updated assumptions for system demand, alternative fuel
7 forecasts and revised alternative generation costs. The analysis is a two step
8 process, consistent with the original analysis leading to the 2008 Need Order.
9 The first step takes the form of developing a system analysis based “break-
10 even” cost to determine what the nuclear project could cost and remain
11 economically competitive with alternative baseload generation sources. That
12 “break-even” cost is compared to the high end of the project cost estimate
13 range. The results of the analysis confirmed that the estimated project costs
14 are below the “break-even” costs, and therefore the new nuclear project
15 remains the best economic alternative for our customers.

16

17 **2009 KEY MANAGEMENT DECISIONS**

18

19 **Q. What were the key matters addressed by FPL project management in**
20 **2009?**

21 A. FPL management made the following key decisions during 2009: 1) decision
22 to defer purchase of \$63.5 million in previously identified long lead materials
23 and engineering design activities; 2) decision to defer execution of either an

1 EP contract or an EPC contract for the project; 3) decision to extend the
2 Forging Reservation Agreement by six months; 4) decision on final design
3 features of the project for submittal in federal and state applications; and 5)
4 withdrawal of the LWA request from the NRC COLA.

5 **Q. Why was it determined to defer purchase of long lead materials and**
6 **specific engineering design activities and what are the impacts of this**
7 **decision?**

8 A. In early 2008 FPL, in consultation with WS, identified a set of long lead
9 materials and the specific engineering design activities necessary to
10 confidently meet the project schedule. Specifically, these materials are
11 forgings and components for Reactor Coolant Pumps, tubing for the Steam
12 Generators, secondary components for Steam Generator fabrication and
13 Containment Vessel materials. This was included in FPL's NCR filing and
14 subsequently approved for 2009 cost recovery. As 2009 unfolded, it became
15 evident to FPL an agreement on an EP or EPC contract may not be in the best
16 interest of FPL customers in 2009, and therefore associated expenses
17 stemming from such an agreement would not be appropriate. Therefore, FPL
18 chose to defer those costs into 2010 or later.

19 **Q. Why was it determined to defer execution of an EP or EPC contract and**
20 **what are the impacts of this decision?**

21 A. FPL and WS conducted negotiations through 2008 and 2009. FPL's desire to
22 preserve the option for creating competition for the Construction component
23 of work by developing an EP contract challenged the vendor's original

1 business model. WS was responsive to FPL's request and provided an
2 indicative price estimate for EP scope. However, FPL and WS were not able
3 to come to a set of acceptable terms, conditions and associated execution
4 schedule meeting FPL's needs. Given the number of political, regulatory, and
5 commercial developments ongoing in 2009 and into 2010, deferral of contract
6 execution was determined to be the best course of action to protect the
7 interests of FPL's customers.

8

9 The decision to defer execution of a contract will be one of several factors that
10 impact the overall project cost and schedule, the magnitude and contribution
11 of which cannot be estimated at this stage. It is FPL's determination that the
12 decision favorably limits cost risk by not signing a contract under undesirable
13 or unacceptable terms at a time when firm schedules for the regulatory review
14 processes have not been established. Deferring the decision is expected to
15 allow FPL's customers to benefit from lessons learned in other AP-1000
16 projects in China and the US, and enter into a more favorable and certain
17 agreement at a later time.

18 **Q. Please describe the decision to extend the Forging Reservation Agreement**
19 **and related cost, risk or schedule impacts.**

20 A. Based on the decision to defer an EP or EPC contract, and given anticipated
21 developments in the review schedule of state and federal applications and the
22 pending project schedule reviews, it was mutually agreed to extend the terms
23 of the agreement, with no changes or added costs, by six months. This

1 allowed FPL to integrate the results of 2009 activities and the regulatory
2 review schedules pending in early 2010 into the overall project schedule
3 review prior to making a final disposition on the Forging Reservation
4 Agreement. No negative cost, risk, or schedule impacts were anticipated from
5 this decision, and the option to renegotiate the Forging Reservation
6 Agreement to favorable terms aligned with a refreshed schedule was
7 preserved.

8 **Q. Please describe the key decisions related to final design features of the**
9 **project for submittal in federal and state applications and the**
10 **implications of those decisions.**

11 A. Four key design decisions were finalized in preparation for the submittal of
12 license and permit applications. These decisions determined the specific
13 design parameters and location of equipment associated with 1) the water
14 resources plan, 2) the wastewater management plan, 3) the construction
15 roadway access plan and 4) the transmission preferred corridor selection.

16
17 Following extensive investigation of alternatives, it was determined the
18 benefits of using reclaimed water as a primary supply could be attained with a
19 proper backup supply to ensure supply reliability. Therefore the current
20 design of the water resources plan included a nine-mile delivery pipeline
21 connecting WASD's South District Wastewater Treatment Facility to the
22 Turkey Point Plant Site, a wastewater treatment facility to further treat the
23 delivered water to suitable condition for power plant use and a backup system

1 supplying saline water via radial collector wells located on Turkey Point, just
2 north and east of the project area. The backup system is necessary because it
3 is the most cost effective way to provide reliability of supply. Cooling towers,
4 reservoirs, and ancillary equipment were designed to accommodate the range
5 of differences between the two supply sources. This selection provides
6 environmentally sensitive water supply coupled with operational reliability at
7 reasonable costs.

8

9 The plant wastewater streams were determined best handled through an UIC
10 well system, similar to that used by WASD in the current disposition of
11 treated wastewater at the South District Wastewater Treatment Facility. Such
12 a system allows for disposal of non-hazardous waste streams (primarily
13 cooling tower blowdown mixed with other plant effluents) to the deep
14 Floridan Aquifer (also referred to as the Boulder Zone), a confined geologic
15 aquifer far below aquifers used for drinking water supply. The UIC option
16 avoids the need to discharge these effluents to surface water bodies and
17 handles the waste streams in a manner environmentally sound and proven
18 successful in South Florida. The selection of this means of disposal requires a
19 significant modeling and exploratory well program subsequently initiated in
20 early 2009.

21

22 Traffic studies indicated regional roadway networks were sufficient to support
23 the incremental 800 employees anticipated during operation, but were not

1 sufficient for safe and efficient access during the peak construction period
2 where up to 4000 additional trips per day will be made by construction
3 workers and material deliveries supporting Unit 6 & 7 construction. An
4 access plan was developed utilizing currently impacted rights-of-way and
5 roadways in the region to provide sufficient access to the site to support
6 construction and not interfere with the safe and efficient operation of the
7 existing five units on site.

8
9 The Power Plant Siting Act requires an applicant to select a preferred corridor
10 in its application for certification of transmission lines. FPL conducted
11 significant studies, agency workshops and community outreach over a period
12 of eighteen months to inform a selection process leading to a preferred
13 corridor for the transmission lines necessary to interconnect and integrate the
14 plant to the transmission grid. The culmination of this process was the
15 selection and delineation of specific corridors for certification where the
16 transmission lines would be sited. FPL was able to use existing transmission
17 line rights-of-way for much of the length of the corridors. Two areas required
18 new transmission corridors: a segment along the L-31N levee in western
19 Miami-Dade County and a segment along US-1 in eastern Miami-Dade
20 County.

21 **Q. Why was it determined to withdraw the LWA request and what are the**
22 **impacts of this decision?**

1 A. Preliminary planning and schedule work in 2007 and 2008 indicated that a
2 LWA could provide a potential schedule benefit by allowing the early
3 initiation of certain NRC jurisdictional construction activities. In short, the
4 LWA potentially provided FPL with an option to accomplish certain activities
5 early. However, through additional construction planning reviews conducted
6 in 2009, an increased understanding of the magnitude and duration of site
7 excavation and preparation activities that would precede the LWA activities
8 was obtained. These activities were more extensive than early estimates. This
9 reduced the value of the LWA, limiting the schedule acceleration offered by a
10 LWA. Further, monitoring of ongoing regulatory activity in other NRC
11 proceedings indicated processing of a LWA request could increase the total
12 amount of time required for the COLA review. Therefore, considering the
13 combined effect of reduced schedule benefit and increased risk to lengthening
14 the federal review schedule, it was determined the best course of action was to
15 withdraw the LWA request prior to the NRC establishing the milestone
16 review schedule for FPL's COLA submittal.

17

18 **2009 PRECONSTRUCTION COSTS**

19

20 **Q. Describe the preconstruction costs incurred for the Turkey Point 6 & 7**
21 **project in 2009.**

22 A. As represented in Exhibit SDS-12 and Exhibit SDS-1, Schedule T-6, FPL
23 incurred a total of \$37,731,525 in pre-construction costs. This is \$7,909,137

1 less than the May 1, 2009 Actual/Estimated costs of \$45,640,662. The costs
2 are broken down into the following categories: 1) Licensing \$30,271,612; 2)
3 Permitting \$991,090; 3) Engineering and Design \$6,445,161; 4) Long Lead
4 Procurement advanced payments \$0; and 5) Power Block Engineering and
5 Procurement \$23,662.

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

7 A. In 2009, Licensing costs were \$30,271,612 as shown in Exhibit SDS-12 Table
8 2 and Exhibit SDS-1, Schedule T-6, Line 3. Licensing costs consist primarily
9 of FPL employee, contractor labor and specialty consulting services necessary
10 to develop the federal COL application required for construction and
11 operation of the Turkey Point 6 & 7 project and the state SCA providing state
12 certification of the project.

13
14 The largest portion of these expenditures, \$15,868,758, was a result of costs
15 incurred supporting the COLA process. This value is a combination of COLA
16 Team Costs and Bechtel COLA contract payments. The permit and license
17 applications contain project specific information, assessments and studies
18 required by the NRC, FDEP and other federal, state and local entities to
19 support the reviews leading to decisions on the technical, environmental and
20 social acceptability of the project. Some activities are common between
21 applications, and therefore offer opportunities to coordinate efforts and
22 manage costs. However, each application analyzes each issue from a unique
23 perspective and may require differing levels of detail.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

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

Q. Please explain the reasons behind the variances between the actual Licensing costs and the costs projected in the 2009 Nuclear Cost Recovery filing in Docket No. 090009-EI.

A. Overall, FPL spent \$5,164,519 less than planned in 2009. This variance is the result of lower than planned NRC fees, Bechtel COLA contract support, transmission line permitting, SCA support, New Nuclear Project staffing, and unused contingency. The NRC fees were \$1,368,129 less than expected due to a lag in receiving the NRC review schedule and subsequent required reviews shifted into 2010; the Bechtel COLA contract support was \$1,267,765 less than expected primarily attributable to the change in application filing dates shifting a portion of planned support for RAIs into 2010; Power Systems costs were \$819,896 less than expected primarily due to lower than anticipated costs associated with environmental studies supporting the transmission line siting activity. SCA production costs were \$530,424 higher

1 than anticipated due to additional conceptual engineering and modeling
2 required to respond to agency requests. Costs for the New Nuclear Project
3 team were \$216,835 more than expected due to the staffing activities
4 associated with the COLA review prior to submittal. The contingency amount
5 of \$2,007,004 was not required.

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

7 A. In 2009, Permitting costs were \$991,090 as shown in Exhibit SDS-12 Table 3
8 and Exhibit SDS-1, Schedule T-6, Line 4. Permitting costs consist primarily
9 of FPL employees, communications and legal services necessary to support
10 the various license and permit applications required by the Turkey Point 6 & 7
11 project. Exhibit SDS-12, Table 3 provides a detailed breakdown of the
12 Permitting subcategory costs in 2009, including a description of items
13 included within each category.

14
15 The Marketing and Communications department supports the project by
16 ensuring project information is prepared, reviewed and available for
17 distribution to media, customers and key stakeholders. Expenses in this
18 category include personnel dedicated to supporting the many project outreach
19 activities, external contractors who provide specific services (e.g., graphic
20 arts, mass mailings), and printing of mailing and collateral materials.
21 Development costs in 2009 include three personnel: myself, a Project Director
22 and a Project Manager. Legal expenditures provide necessary support to
23 activities for all permitting and project interactions. Contingency is

1 established to provide for emerging issues, unanticipated required studies or
2 activities previously unknown.

3 **Q. Please explain any variance between the actual Permitting costs and the**
4 **costs provided in the 2009 Nuclear Cost Recovery filing.**

5 A. The project spent \$960,060 below plan in 2009 in the Permitting subcategory.
6 This variance is a result of the communications expenditures being under
7 budget by \$354,088, due in part to the change in application filing dates
8 shifting a portion of planned support into 2010. Legal costs were \$402,564
9 less than expected due primarily to a reclassification of \$280,261 in 2008 and
10 2009 costs. Taking these costs out of the project offset actual costs in this
11 area. Finally, \$204,122 of contingency was not required.

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

14 A. In 2009, Engineering and Design costs were \$6,445,161 as shown in Exhibit
15 SDS-12 Table 4 and Exhibit SDS-1, Schedule T-6, Line 5. Engineering and
16 Design costs consist primarily of FPL employee services and/or engineering
17 consulting services necessary to develop the construction execution plan for
18 the Turkey Point 6 & 7 project. Exhibit SDS-12 Table 4 provides a detailed
19 breakdown of the Engineering and Design subcategory costs in 2009,
20 including a description of items included within each category.

21

22 In 2009, the majority of costs in the Engineering and Design subcategory were
23 split between staffing for the project construction staff and contracting with

1 BVZ to undertake the initial construction planning activities. Costs associated
2 with EPRI's Advanced Nuclear Technology working group and membership
3 in the APOG industry group are also included in this category.

4 **Q. Please explain any variance between the actual Engineering and Design**
5 **costs and the costs provided in the 2009 Nuclear Cost Recovery filing.**

6 A. Overall, the project incurred costs were \$1,786,327 below plan in 2009 in the
7 Engineering and Design subcategory. The variance of \$856,026 was
8 composed in part by cost deferrals resulting from reduced construction team
9 staffing relative to plan. This reduction was appropriate given deferral of
10 engineering design and EP or EPC contract engagement in 2009. The balance
11 of the variance of \$933,864 was a result of reducing the scope of the BVZ
12 activities in 2009, a decision made following interim analysis of the results of
13 BVZ's construction planning studies.

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

16 A. In 2009 there were no Long Lead Procurement costs, for the reasons described
17 previously in this testimony.

18 **Q. Please describe any variance between the actual Long Lead Procurement**
19 **costs and the costs provided in the 2009 Nuclear Cost Recovery filing.**

20 A. No variance exists in this category.

21 **Q. Please describe the costs incurred in the Power Block Engineering and**
22 **Procurement subcategory.**

- 1 A. In 2009, Power Block Engineering and Procurement costs were \$23,662 as
2 shown in Exhibit SDS-12 Table 5 and Exhibit SDS-1, Schedule T-6, Line 7.
3 Power Block Engineering and Procurement costs consist of FPL payroll and
4 expenses supporting negotiations with WS. Exhibit SDS-12 Table 5 provides
5 a detailed breakdown of the Power Block Engineering and Procurement
6 subcategory costs in 2009, including a description of items included within
7 each category.
- 8 **Q. Was there a variance between the actual Power Block Engineering and**
9 **Procurement costs and the costs provided in the 2009 Nuclear Cost**
10 **Recovery filing?**
- 11 A. Yes. The project incurred costs of \$1,769 above plan in 2009 in Power Block
12 Engineering and Procurement subcategory. The variance relates to legal
13 support for the reclaimed water activity and should be a part of the permitting
14 costs. A reclassification of these expenses was made.
- 15 **Q. Were any costs expended in the Transmission category prior to or during**
16 **2009?**
- 17 A. No. All costs associated with Transmission planning or engineering are
18 related to the licensing and permitting activities, and therefore are
19 appropriately included in those categories, described above. When activities
20 move from the licensing/permitting support phase to detailed engineering of
21 the transmission improvements, costs will then begin to be expended in these
22 categories.

1 **Q. Were the 2009 project activities prudent and were the related costs**
2 **reasonable?**

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

12

13 **2009 PROJECT SITE SELECTION COSTS**

14

15 **Q. Please describe the Site Selection costs incurred in 2009.**

16 A. FPL's Site Selection work completed in October 2007 with the filing of the
17 Need Petition. The costs of \$373,162 in this category relate to carrying
18 charges. FPL Witness Powers supports the calculation of carrying charges.

19

20 **2010 PROJECT ACTIVITIES AND RESULTS**

21

22 **Q. What were the major activities for the Turkey Point 6 & 7 project during**
23 **2010?**

1 A. Primarily, FPL maintained progress on the review of license and permit
2 applications and other activities initiated in 2009. The project completed a
3 combined schedule and cost estimate review of the project in the early part of
4 the year resulting in a change to the estimated operational dates for the
5 project. The schedule change was determined necessary to manage cost risk
6 to FPL customers, allowing for further development of commercial,
7 regulatory and execution planning information necessary to commit to a
8 construction schedule. The cost review brought the cost estimate up to date
9 with the project design selection and key project features reflected in the
10 applications under review. The results of the cost estimate check confirmed
11 that the cost estimate range remains valid for purposes of testing the feasibility
12 of the project.

13 **Q. What were the specific activities and results associated with federal
14 licensing of the Turkey Point 6 & 7 project in 2010?**

15 A. On May 28, 2010 the NRC issued a review schedule for the Turkey Point 6 &
16 7 Combined License application. This schedule describes the milestones to
17 complete reviews by the end of 2012 in support of an Atomic Safety
18 Licensing Board (ASLB) hearing in 2013. The NRC schedule is the critical
19 path to maintaining the overall project schedule, and is consistent with FPL's
20 assumptions included in the 2010 schedule analysis leading to revised COD
21 dates of 2022 and 2023 for Units 6 & 7 respectively.

22

1 During the year the NRC staff continued its substantive review of FPL's
2 application. This included visits to alternative site locations, and hosting a
3 multi-agency Environmental Audit (workshop) in Homestead, FL for two
4 days to identify and discuss issues of concern. The NRC also held two public
5 events during the year. The first was a public meeting held in July to obtain
6 input from the public on the scope of the Environmental Impact Statement
7 (EIS) for the project. In November an NRC Atomic Safety and Licensing
8 Board held a pre-hearing conference to address contentions proposed in two
9 petitions. Both events were noticed and held in the Homestead area. The
10 results of the pre-hearing conference will influence the scope of the NRC's
11 review, and is expected in early 2011.

12

13 The USACE also continued its review of the Environmental sections of the
14 COLA and participated in both the Environmental Audit and the public
15 scoping meeting for the NRC-led EIS. The USACE will continue to
16 participate in the federal review process in support of its own wetland
17 permitting decision.

18 **Q. What were the specific activities and results associated with state
19 certification and permitting of the Turkey Point 6 & 7 project in 2010?**

20 A. Agencies coordinated by the FDEP continued their review of the SCA
21 submitted on June 30, 2009. FDEP found the transmission portions of the
22 application to be complete on December 10, 2010. The plant and non-

1 transmission portions of the application are in the fourth round of
2 completeness responses, anticipating completeness resolution in 2011.

3

4 On October 25, 2010 the FDEP issued the seventh revised schedule for the
5 SCA review. This schedule resulted in projected Site Certification hearing
6 dates of January 31, 2012 to March 2, 2012 with the Siting Board hearing the
7 matter in mid-2012. Recognizing the current pace of completeness reviews
8 and the desire to address Land Use issues in advance of the Site Certification
9 Hearing, a draft eighth schedule for the SCA is being considered. The draft
10 eighth schedule, if accepted as currently proposed, would result in an
11 additional 4 months added to the SCA schedule. Project documents and
12 approved schedules are posted on the FDEP website at
13 <http://www.dep.state.fl.us/siting/apps.htm#ppn1>.

14

15 The permit to construct an exploratory well and dual-zone monitoring wells
16 under the UIC program was issued by FDEP on May 5, 2010. This
17 exploratory well permit is the first step in the process of permitting a deep
18 well injection system for disposal of project wastewater. Subsequent steps to
19 convert the exploratory well to an injection well will be taken as the FDEP
20 UIC process unfolds. In addition, a portion of the permitting process involves
21 test operation of the UIC wells after project completion. Construction of the
22 wells, planned to begin in 2010, was delayed by regulatory interpretations but
23 will be executed in 2011.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

The Prevention of Significant Deterioration (PSD) air permit was issued by the FDEP on May 28, 2010. This permit addresses air discharges, primarily related to the operation of the forced draft cooling towers for the project.

Q. What were the specific activities and results associated with obtaining local approvals supporting the Turkey Point 6 & 7 project in 2010?

A. The CDMP Amendment to support the temporary roads for construction of the facility was reviewed and adopted by Miami-Dade County, and subsequently approved by the Florida Department of Community Affairs. This ensures that the contemplated roads are consistent with the County land use plan, and allows for the permitting aspects to be considered in the SCA process.

Q. What were the specific activities and results associated with transactions and agreements supporting the Turkey Point 6 & 7 project in 2010?

A. FPL and Miami-Dade County entered into a Joint Participation Agreement that details the roles and responsibilities of the parties in developing a landmark reclaimed water project that will provide Turkey Point 6 & 7 with its primary supply of cooling water and allow Miami-Dade County to meet its regulatory obligations to substantially increase the use of reclaimed water.

Significant fill will be required to establish the base for the plant site. FPL has investigated options to self-provide the fill, utilize regional commercial rock quarries and other large regional infrastructure projects (such as the Port of

1 Miami Tunnel project and the proposed West Kendall Regional Park) that
2 may produce sizeable quantities of fill material. The selection of the final
3 sources for fill will likely be a combination of different sources and will be
4 dependent on how economic and regulatory factors develop.

5 **Q. What were the specific activities and results associated with internal**
6 **studies and commercial negotiations related to the Turkey Point 6 & 7**
7 **project in 2010?**

8 A. In 2009 the Reservation Forging Agreement was extended to June 2010 to
9 allow for the schedule review to be conducted. Following that review, FPL
10 and Westinghouse further extended the Reservation Forging Agreement to
11 March 15, 2011. This date coincides with the first action that Westinghouse
12 would be required to take under the current agreement. FPL has engaged
13 Westinghouse in negotiations with the objective of determining what course
14 of action related to the Reservation Forging Agreement is in the best interest
15 of FPL customers.

16
17 In 2010 FPL conducted a review of project schedule and cost that led to a
18 revised project schedule and a check of the non-binding capital cost estimate
19 range. The results of these studies are further discussed later in this
20 testimony.

21 **Q. Please describe the results of the 2010 annual feasibility analysis.**

22 A. The annual feasibility analysis was repeated in April 2010 following updates

1 to FPL's resource planning assumptions. The analysis was conducted in the
2 same manner as previous feasibility analyses. The results confirmed that the
3 Turkey Point 6 & 7 project, under the revised cost and schedule assumptions
4 of early 2010, was the most cost-effective baseload choice when compared to
5 a combined cycle natural gas turbine alternative. The primary economic
6 benefit comes from the avoided fuel costs. Additional benefits come from the
7 avoidance of greenhouse gas emissions, fuel diversity, energy security and
8 high reliability. Exhibit SDS-13 provides a description of the 2010 feasibility
9 analysis and results.

10 **Q. What non-economic factors affect the project's long term feasibility?**

11 A. Non-economic factors include the feasibility of obtaining all necessary
12 approvals (permits, licenses, etc.), the ability to obtain financing for the
13 project at reasonable cost and supportive state and federal energy policy.

14
15 Significant federal, state and local approvals are required to allow for the
16 construction and operation of the project. The intense review process
17 currently underway will result in each agency identifying its perspective on
18 the project and describing conditions upon which the project approvals may
19 be granted. While the review process has taken longer than originally
20 anticipated compared to our experience with Turkey Point Unit 5 and other
21 recent development activity, the process is proceeding substantively as
22 expected.

23

1 Financing will be determined as the project proceeds through approvals to
2 construction. Recent activity on predecessor projects shows a strong interest
3 in the investment community to participate in new nuclear financing. For
4 instance, Municipal Electric Authority of Georgia (MEAG) recently
5 conducted a successful solicitation for \$2.7 billion dollars of project bonds for
6 its share of the Vogtle Units 3 & 4 AP-1000 project. More interest was
7 displayed than was required for the solicitation and the net Build America
8 Bonds Rate for the three categories of bonds were 4.33%, 4.31% and 4.59%,
9 respectively.

10
11 As discussed earlier in this testimony, state and federal energy policy
12 continues to be supportive of new nuclear generation for a host of reasons.
13 The high reliability, low and stable energy costs, and zero greenhouse gas
14 emission profile of the technology is highly compatible with key energy
15 policy objectives.

16 **Q. How are the impacts to customers recognized and addressed in a decision**
17 **to continue or stop the project?**

18 A. Customer impacts resulting from project decisions are addressed inherently in
19 the initiating Need Order and the annual economic feasibility analysis
20 accomplished as a part of the Nuclear Cost Recovery Clause (NCRC) docket.
21 The initiating Need Order takes into account the need for electric system
22 reliability and integrity, the need for adequate electricity at a reasonable cost,
23 the need for fuel diversity and supply reliability, and whether the plant is the

1 most cost-effective alternative. Each year the feasibility analysis addresses
2 changes in system and project-related factors to determine if the project
3 remains economically viable. The analysis looks at a range of potential future
4 economic and regulatory scenarios to ensure the project viability is robustly
5 demonstrated.

6
7 Moreover, the management of project risk using a stepwise decision making
8 process inherently recognizes the impacts to customers in each decision. For
9 example, the decision to manage project risk by deferring design and
10 procurement activities recognizes an outcome of the decision is the
11 postponement of the benefits offered by new nuclear generation for some
12 undetermined amount of time. However, the long term incremental benefit is
13 weighed against the alternative of proceeding at this stage. Under the latter
14 strategy, to proceed with those activities now assumes cost and schedule risks
15 that could severely degrade or negate the incremental benefits of delivering
16 the project a year or two earlier. Further, assuming unmitigated cost and
17 schedule risk early in the project jeopardizes the project as a whole,
18 potentially precluding the delivery of any of the benefits of new nuclear
19 generation if the option is not created.

20
21
22
23

2010 KEY MANAGEMENT DECISIONS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

Q. What were the key matters addressed by FPL project management in 2010?

A. FPL management made the following key decisions during 2010: 1) decision to revise the project schedule to decouple licensing and pre-construction activities resulting in COD dates of 2022 and 2023; 2) review of the project cost estimate range to determine if the range remained achievable; 3) a decision to extend the Forging Reservation Agreement into March of 2011; 4) the decision to execute the Joint Participation Agreement for reclaimed water; and 5) a decision to continue pursuit of a radial collector well system as a backup cooling water supply for the project.

Q. What was the basis for the decision to revise the project schedule?

A. Beginning in late 2009, FPL began a review of the developments of the past year to determine the best path forward for the project. The original schedule, with in-service dates of 2018 and 2020, required activities in the Preparation phase (detailed engineering, long lead procurement and construction planning) to be initiated by 2010, in parallel with the Licensing phase. This earliest practicable schedule assumed national level issues (energy policy, NRC design certification, NRC license review, economic and market behavior), state level issues (load growth, economic health), as well as project specific issues (pace of application reviews, commercial contracts) would have developed further than they had leading into 2010. Because the anticipated

1 degree of development had not occurred, expenditures beyond those required
2 to obtain the necessary licenses, permits and approvals were judged to be
3 unwarranted. FPL therefore determined to continue to pursue Licensing phase
4 activities (supporting applications for needed approvals) and defer most
5 Preparation phase activities (detailed engineering, long lead procurement, and
6 construction planning) and associated expenditures. This pacing decision
7 allows for additional information to develop while positively and actively
8 managing risk exposure for non-licensing related expenses. FPL's assessment
9 of the status of these uncertainties indicates that initiation of the expenditures
10 in the Preparation phase would be premature.

11

12 By moving Preparation phase activities from 2010 to 2014, the commercial
13 operating dates estimated for the Turkey Point 6 & 7 project were necessarily
14 revised to 2022 and 2023, respectively. The basis for this project schedule
15 decision is captured in Project Memorandum 10-005, included in Exhibit
16 SDS-11.

17 **Q. Was the decision to change the planning schedule for the Turkey Point 6**
18 **& 7 project consistent with FPL's project management approach?**

19 **A.** Yes. The decision to manage cost risk by deferring expenditures, and
20 therefore revise the project schedule, is a proactive management decision
21 based on project-specific factors and industry developments. These factors
22 were originally identified in FPL's 2008 and 2009 NCRC filings. In fact, the
23 decision is a continuation of FPL's stepwise management approach for this

1 project reflected in choices to defer Preparation phase expenditures
2 (engineering design and long lead procurement) in 2008 and 2009. The
3 current decision is consistent with the process applied in these earlier actions.

4 **Q. Does FPL intend to pursue completion of the Turkey Point 6 & 7 project?**

5 A. Yes. The most important near term activity is creating the option by obtaining
6 the licenses and approvals necessary to construct and operate Turkey Point 6
7 & 7. Once approvals are obtained, FPL will be able to review the economics
8 and the experience of other new nuclear projects as well as how state and
9 federal energy policies have evolved. The Commission will continue to have
10 the opportunity to review FPL's plans through the NCRC process.

11

12 FPL's decision to carefully manage the risk of inefficient expenditures will
13 allow the project to better advance through the early uncertain periods,
14 thereby enabling the project to proceed to a later stage where risks can be
15 better identified, quantified and mitigated. Considering all project specific
16 and industry factors, this is a responsible and prudent course of action to
17 continue progress in creating the option for new nuclear generation for our
18 customers.

19 **Q. Please describe the decision made in 2010 regarding FPL's cost estimate
20 range for the project.**

21 A. FPL conducted a line item review of the cost estimate range to determine if
22 there had been material changes in the cost estimate. The approach for
23 conducting the cost estimate is described in Project Memorandum 10-003. In

1 summary, FPL captured several project feature modifications and estimated
2 the impact of recent economic factors on material costs. The result confirmed
3 that the current estimate for the overnight cost of the project is consistent with
4 the high end of the cost estimate range, approximately \$4,991/kW (in 2010 \$).
5 A comparative table is provided in Exhibit SDS-13. Further meaningful
6 refinement of the cost estimate will necessarily await development of more
7 predictability in the overall regulatory review schedule, conditions of
8 certification, as well as economic and commercial factors. A more complete
9 discussion of project cost and feasibility is included later in this testimony.

10 **Q. Was there another cost review conducted to determine if any further**
11 **revisions to the project design in 2010 affected project cost?**

12 Yes. During the course of 2010 project features were further refined as
13 feedback was received from regulators through the review process.
14 Improvements were made to limit perceived impacts and incorporate specific
15 requirements. Some of these refinements added cost, while some reduced
16 cost. For example, the original application included a dewatering method for
17 the construction period that was highly conservative. Following review, the
18 dewatering method was revised to significantly reduce the amount of
19 groundwater that would be pumped during the early phases of the construction
20 period. The new dewatering method added costs in some areas, but reduced
21 costs in other areas. Overall, the refinements incorporated into the project in
22 2010 result in no significant increase or decrease in costs to the project capital
23 cost estimate.

1 **Q. Would you provide examples of items being monitored that may impact**
2 **project cost in the future?**

3 A. Yes. The final project cost will be subject to factors related to international
4 and national economic health as well as project specific design modifications.
5 A key result will be the final approved design for the AP1000, coupled with
6 early lessons learned from the first wave construction projects in China and
7 the U.S. Economic market factors affecting materials and labor indices will
8 certainly influence construction pricing. More specifically, throughout the
9 application review process alternative alignments, designs and locations are
10 explored for the project features to minimize environmental impact and
11 incorporate the best construction methods and information. For example, the
12 final site certification will specify the approved transmission line corridors,
13 mitigation plan and other conditions of certification that will result in cost
14 adjustments. The project continues to track these issues routinely.

15 **Q. What was the basis for extending the terms of the Forging Reservation**
16 **Agreement from June 2010 to March 2011?**

17 A. The Forging Reservation Agreement was developed and includes milestones
18 related to the original 2018 and 2020 project schedule. Necessarily the
19 agreement must be terminated or revised to adapt to the new project schedule.
20 In consultation with Westinghouse, the first commitments that would require
21 action to support the agreement occur in March of 2011. Therefore, both
22 parties agreed to extend the agreement to that point to allow for time to
23 negotiate the disposition of the agreement. Options include termination of the

1 agreement or development of a new agreement that would preserve value and
2 optionality for FPL's customers. Exhibit SDS-11 includes a project
3 memorandum summarizing the decision process behind extending the
4 agreement and the alternatives considered.

5 **Q. Why did FPL execute a Joint Participation Agreement with Miami-Dade**
6 **County related to the development of the reclaimed water project?**

7 A. The development of a reliable supply of reclaimed water to provide cooling
8 for the project offers benefits for FPL's customers, Miami-Dade County
9 citizens and the regional environment and is consistent with the planning
10 objectives of many federal, state and local agencies. It was determined that a
11 Joint Participation Agreement (JPA) would allow FPL and Miami-Dade to
12 outline the process by which the two will jointly conduct the activities that
13 will lead to execution of this transaction. Key components include outlining
14 contractual terms for the construction and operation of the system. Executing
15 this agreement gives reviewing agencies confidence that a key aspect for
16 project success has been negotiated and will be available as the project
17 proceeds through certification and license approval.

18 **Q. What assessment did FPL conduct regarding its proposed back up**
19 **cooling water supply?**

20 A. During the course of the application reviews, significant attention has been
21 directed to the potential impacts of the radial collector well system. This
22 system employs a unique process to draw water from beneath Biscayne Bay
23 (avoiding environmental impacts) and provide the project with a dependable

1 alternative supply in the event that reclaimed water is not available in
2 sufficient quantity or quality. To authorize such a system, considerable
3 groundwater modeling is required to assure all reviewers that the system can
4 be successfully designed and operated. FPL considered it prudent to revisit its
5 selection process and determine if its original choice was still merited given
6 the substantive exchange with reviewers that has occurred since the
7 application was submitted in June of 2009. In summary, the assessment
8 indicated that the radial collector wells offered the best combination of
9 environmental attributes as a backup source when compared to other sources.

10 **Q. Were the above described decisions prudent?**

11 A. Yes. The project management structure, project internal controls, staffing and
12 oversight processes ensure these decisions were made based upon
13 consideration of the best information currently available, and were also
14 properly vetted and considered at the highest levels of the organization and
15 resulted in prudently incurred costs.

16

17 **2010 PRECONSTRUCTION COSTS**

18

19 **Q. Describe the preconstruction costs incurred for the Turkey Point 6 & 7**
20 **project in 2010.**

21 A. As represented in Exhibit SDS-14 and Exhibit SDS-3, Schedule T-6, FPL
22 incurred a total of \$25,593,577 in pre-construction costs. This is \$17,036,078
23 less than the May 3, 2010 Actual/Estimated cost of \$42,629,655. The

1 \$25,593,577 in costs are broken down in the following categories: 1)
2 Licensing \$23,184,978, 2) Permitting \$1,223,203, 3) Engineering and Design
3 \$1,185,396, 4) Long Lead Procurement advance payments \$0, and 5) Power
4 Block Engineering and Procurement \$0.

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

6 A. Yes. The schedules presenting FPL's actual/estimated 2010 costs of
7 \$42,629,655 as of May 2010 are attached hereto in Exhibit SDS-2.

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

9 A. Yes. The actual/estimated costs reflected two months of actual costs (January
10 and February 2010), and an updated estimate for the remainder of the year.
11 All costs were incurred/estimated as a result of the deliberately managed
12 process at the direction of well-informed, properly qualified management. All
13 costs were reviewed and approved under the direction of the Turkey Point 6 &
14 7 management team and were made fully subject to project internal controls.
15 Costs were processed using FPL standard procurement procedures and
16 authorization processes, and were reasonable.

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

18 A. In 2010, Licensing costs were \$23,184,978 as shown in SDS-14 Table 2 and
19 Exhibit SDS-3, Schedule T-6, Line 3. Licensing costs consist primarily of
20 FPL employee, contractor labor, and specialty consulting services necessary
21 to develop the federal COL application required for construction and
22 operation of the Turkey Point 6 & 7 project and the state SCA providing state
23 certification of the project.

- 1 **Q. Please explain the reasons behind the variances between the actual**
2 **Licensing costs and the costs provided in the 2010 Nuclear Cost Recovery**
3 **filing in Docket No. 100009-EI.**
- 4 A. FPL spent \$11,148,208 less than planned in 2010. This variance is the result
5 of lower than planned NRC fees, Bechtel COLA contract support, New
6 Nuclear Project staffing, SCA support, Environmental Services support,
7 external legal services and unused contingency. The NRC fees were
8 \$1,114,755 less than expected due to a lag in receiving the NRC review
9 schedule and associated RAIs; the Bechtel COLA contract support was
10 \$1,168,818 less than expected primarily attributable to fewer than anticipated
11 RAIs in 2010; the New Nuclear Project staffing was \$1,214,038 less than
12 expected composed in part by cost deferrals resulting from reduced
13 construction team staffing relative to plan. SCA support was \$886,787 higher
14 than anticipated due to additional analysis and groundwater modeling required
15 to respond to agency requests; Environmental Services support was
16 \$2,495,714 less than anticipated primarily due to lower than anticipated costs
17 associated with the UIC exploratory well hearing not required and anticipated
18 expenses for Preparation phase activities being shifted into future years.
19 External legal services were \$1,671,453 less than anticipated primarily due to
20 delays in the SCA process. The contingency amount of \$3,758,929 was not
21 required.
- 22 **Q. Please describe the costs incurred in 2010 in the Permitting subcategory.**

1 A. In 2010, Permitting costs were \$1,223,203 as shown in Exhibit SDS-14 Table
2 3 and Exhibit SDS-3, Schedule T-6, Line 4. Permitting costs consist primarily
3 of FPL employees, communications and legal services necessary to support
4 the various license and permit applications associated with the Turkey Point 6
5 & 7 project. Exhibit 14, Table 3 provides a detailed breakdown of the
6 Permitting subcategory costs in 2010, including a description of items
7 included within each category.

8 **Q. Please explain any variance between the actual Permitting costs and the**
9 **costs provided in the 2010 Nuclear Cost Recovery filing.**

10 A. The project spent \$2,004,977 below plan in the Permitting subcategory. This
11 variance is the result of lower than planned communications expenses and
12 unused contingency. The communications expenses were \$214,500 less than
13 anticipated due the delay in hearings and associated stakeholder
14 communications required. The contingency amount of \$1,680,741 was not
15 required.

16 **Q. Please describe the costs incurred in the Engineering and Design**
17 **subcategory.**

18 A. In 2010, Engineering and Design cost were \$1,185,396 as shown in Exhibit
19 SDS-14 Table 4 and Exhibit SDS-3, Schedule T-6, Line 5. Engineering and
20 Design costs consist primarily of FPL employee services and/or engineering
21 consulting services necessary to explore Preparation phase activities for the
22 Turkey Point 6 & 7 project. Exhibit SDS-14 Table 4 provides a detailed

1 breakdown of the Engineering and Design subcategory costs in 2010,
2 including a description of items included within each category.

3 **Q. Please explain any variance between the actual Engineering and Design**
4 **costs and the costs provided in the 2010 Nuclear Cost Recovery filing.**

5 **A.** Overall, the project incurred costs were \$3,882,893 below plan in 2010 in the
6 Engineering and Design subcategory. The external engineering support was
7 \$4,161,406 lower than planned primarily due to the delay in starting the UIC
8 exploratory well. The Federal Emergency Management Fee was \$133,970
9 higher than anticipated due to an accounting correcting entry and APOG was
10 \$150,000 higher than anticipated due to the 2011 participation fee being
11 processed in December 2010.

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

14 **A.** In 2010, there were no Long Lead Procurement costs, for the reasons
15 described previously in this testimony.

16 **Q. Please describe any variance between the actual Long Lead Procurement**
17 **costs and the costs provided in the 2010 Nuclear Cost Recovery filing.**

18 **A.** No variances exist in this category.

19 **Q. Please describe the costs incurred in the Power Block Engineering and**
20 **Procurement subcategory.**

21 **A.** In 2010, there were no Power Block Engineering and Procurement costs as
22 shown in Exhibit SDS-14 Table 5 and Exhibit SDS-3, Schedule T-6, Line 7.

1 **Q. Were any costs expended in the Transmission category prior to or during**
2 **2010?**

3 A. No. All costs associated with Transmission planning or engineering are
4 related to the licensing and permitting activities, and therefore are
5 appropriately included in the categories described above.

6 **Q. Were the 2010 project activities prudent and were the related costs**
7 **reasonable?**

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

18

19 **2010 PROJECT SITE SELECTION COSTS**

20

21 **Q. Please describe the Site Selection costs incurred in 2010.**

1 A. FPL's Site Selection work completed in October 2007 with the filing of the
2 Need Petition. The costs of \$145,965 in this category relate to carrying
3 charges. FPL Witness Powers supports the calculation of carrying charges.

4

5

CONCLUSION

6

7 **Q. Please summarize your testimony.**

8 A. During 2009, the Turkey Point 6 & 7 project progressed on schedule with
9 licensing and permitting activities, and maintained costs well within budget.
10 As a result of commercial negotiations and engineering planning analysis,
11 several key decisions were made accepting risk to the project construction
12 schedule. These included deferral of the EP or EPC contract, deferral of Long
13 Lead material procurement and withdrawal of the LWA request. These
14 decisions were carefully analyzed and fully vetted, resulting in stepwise
15 management of the project maintaining important progress to create the option
16 of new nuclear generation without incurring unnecessary cost exposure.

17

18 In 2010, FPL continued a disciplined pursuit of the approvals and
19 authorizations necessary to create this important option for our customers.
20 FPL completed a project schedule and cost estimate review, as well as an
21 updated feasibility analysis which demonstrated that the project retains merits
22 that resulted in the original affirmative Need Order and subsequent cost
23 recovery approvals by the FPSC. In addition to lower expected fuel and

1 operating costs, these merits include avoidance of greenhouse gas emissions,
2 reduced reliance on oil and natural gas, as well as improvements in fuel
3 diversity, energy security, and electric system reliability. The project
4 execution has maintained FPL's commitment while displaying a willingness
5 to adapt the project timelines to ensure an inclusive and complete review.
6 Additionally, key project feature decisions are being reviewed given the most
7 current information to ensure the project results in the best attributes possible.
8 The results of these decisions continue to demonstrate progress, while
9 maintaining overall project expenditures significantly below budget.

10

11 The project is being managed by a professional team of engineers, analysts,
12 and managers to ensure process controls are maintained and activities are
13 compliant with applicable corporate procedures and project specific
14 instructions. The project management process is being conducted in a well-
15 informed, transparent and organized manner enabling executive oversight and
16 facilitating reviews by internal and external parties. The Turkey Point 6 & 7
17 project team has the skills, experience and executive oversight to guide the
18 project through critical decisions using the best available information. This
19 disciplined application of process by well-qualified FPL managers and their
20 staff, results in prudent decisions with respect to project activities and
21 expenditures.

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

23 **A. Yes.**

SDS-7

**Docket No. 110009-EI
TP 6&7 Licenses,
Permits and Approvals
Exhibit SDS-7, Page 1 of 7**

FEDERAL AUTHORIZATIONS

Jurisdictional Agency	Authority, Law, or Regulation	Description of Requirement	Activity Covered
NRC	10 CFR Part 30	By-Product License	Possession of fuel.
NRC	10 CFR Part 40	Source Material License	Possession of source material.
NRC	10 CFR Part 50	Licensing of nuclear power plant	Approval for construction of nuclear power plant.
NRC	10 CFR Part 51, 10 CFR Part 52	NRC approval of an Environmental Report	Evaluation of environmental impacts from construction and operation of a nuclear power plant.
NRC	10 CFR Part 52	COL	Safety review of the nuclear power plant site.
NRC	10 CFR Part 61	Licensing requirements for land disposal of radioactive wastes	Land disposal of radioactive waste that contains byproduct source and Special Nuclear Material (SNM).
NRC	10 CFR Part 70	Special Nuclear Material License	Possession of SNM.
NRC	10 CFR Part 71	Packaging and transportation of radioactive material	Packaging and transportation of licensed radioactive material.
DOE	Nuclear Waste Policy Act (42 U.S.C 10101 et seq.) and 10 CFR Part 961	Spent Fuel Contract	Disposal of spent nuclear fuel.
USACE	Clean Water Act of 1976 /33 U.S.C section 1344	Section 404 Permit	Discharge of dredge and fill materials into waters of the United States.
USACE	Rivers and Harbors Act of 1899/ 33 U.S.C. section 401 et. seq.	Section 10 - Rivers and Harbors Act Permit	Excavation or filling within navigable waters of the United States.
USFWS	16 U.S.C 1539(a)(1)(A); 50 CFR Parts 13, 17	Endangered species permit to take American crocodile during monitoring	Provides authorization to take (capture, examine, weigh, sex, collect tissue samples, mark, radio-tag, radio-track, relocate, release) endangered American crocodile individuals during population monitoring.
USFWS	16 U.S.C 703-712	Special purpose salvage permit, migratory birds	Provides authorization to: salvage dead migratory birds, abandoned nests, and addled eggs after nesting season; dead bald or golden eagles; and possess live migratory birds for transport to permitted rehabilitator.

**Docket No. 110009-EI
TP 6&7 Licenses,
Permits and Approvals
Exhibit SDS-7, Page 2 of 7**

Jurisdictional Agency	Authority, Law, or Regulation	Description of Requirement	Activity Covered
USFWS	16 U.S.C. 703-7121 50 CFR Part 13:50 CFR 21.41	Federal Fish and Wildlife Permit	Emergency relocation of active migratory bird nests when birds, nests, or eggs pose a direct threat to human health and safety or when the safety of the bird is at risk if the nest and/or birds are not removed.

**Docket No. 110009-EI
TP 6&7 Licenses,
Permits and Approvals
Exhibit SDS-7, Page 3 of 7**

STATE OF FLORIDA AUTHORIZATIONS

Jurisdictional Agency	Authority, Law, or Regulation	Description of Requirement	Activity Covered
FDEP, Siting Board	F.S. § 403.501-.518, F.S	Power Plant Site Certification *	Construction and operation of a power plant with more than 75 MW of steam generated power and associated facilities.
FDEP, USEPA Region IV review	F.A.C. 62-621	NPDES Storm water Operations Permit for Industrial Activities	Operation of an industrial facility.
FDEP	Chapter 403 F.S.	Exploratory Well Construction Permit	Allows for the construction of the exploratory well and dual-zone monitor well.
FDEP	Chapter 403 F.S.	UIC Well Construction Permit	Allows for the conversion of the exploratory well to an injection well and perform operational testing for up to 2 years.
FDEP	Chapter 403 F.S.	Class I Well Operation Permit	Allows for the operation of the injection wells. This permit must be renewed every 5 years.
FDEP, USEPA Region IV review	F.A.C. 62-621	Prevention of Significant Deterioration Construction Permit	Construction and operation of facilities that generate air emissions.
FDEP, USEPA Region IV review	403.0885 F.S.	Modification of Industrial Wastewater Treatment Facility (IWW) permit	Construction of Units 6 & 7 within the industrial wastewater facility.
FDEP/USEPA	F.A.C. 62-25, 62-40	NPDES Construction Storm water Permit	Construction of any facility that disturbs 1 acre or more.
Florida Fish and Wildlife Conservation Commission	F.A.C. 68A-9.002; 68A-25.002; 68A-27.003	Special purpose live-capture permit	Provides authorization for live-capture, insertion of data loggers in nests, and collection of samples, on FPL properties of American crocodiles for mark/recapture and scientific data collection; also provides for live-capture, relocation, and release of American alligators and Eastern indigo snakes and other endangered or threatened species or species of special concern.

Docket No. 110009-EI
TP 6&7 Licenses,
Permits and Approvals
Exhibit SDS-7, Page 4 of 7

Jurisdictional Agency	Authority, Law, or Regulation	Description of Requirement	Activity Covered
FDEP	403.087, F.S. and F.A.C. 62-4, 62-520, 62-522, 62-528 62-550, 62-600, 62-601	Operation of Class V, Group 3 domestic wastewater injection (gravity flow) well	Operation of IW-1.
FDEP	403, F.S. and F.A.C. 62-600, 62-601, 62-602, 62-620, 62-640, 62-699	Operation of domestic wastewater treatment facility (WWTF)	Operation of Turkey Point Power Plant WWTF.
FDEP	F.A.C. 62-213	Title V Operations Permit	Operations of facilities that generate air emissions.
FEDP, South Florida Water Management District	F.A.C. 40B-3	Well Construction Permit	Construct, repair, modify, or abandon a well.
South Florida Water Management District	F.A.C. 40E-3	Well Abandonment Permit	Well abandonment permits.
State of Florida	F.A.C. 40E-3	Well Abandonment Permit	Application to construct, repair, modify, or abandon well.
FWCC	F.A.C. 68A-9.002, 68A-9.025, 68A-27	Carcass Salvage Permit	Salvage, mount, and display wildlife carcasses upon encounter for educational or scientific purposes.
FWCC	F.A.C. 68A-9.002, 68A-27.005	Removal of nests and ospreys	Removal and replacement of inactive nests of ospreys and other migratory birds.

*Pursuant to the Florida Electrical Power Plant Siting Act (PPSA) all state, regional and local permits, except for certain local land use and zoning approvals and certain state issued licenses required under federally delegated or approved permit programs, are covered under a single "Certification". Because the Certification is the sole license of the state and any agency required for construction and operation of the proposed electrical power plant, it is not necessary to apply for permits individually.

FOREIGN STATE AUTHORIZATIONS

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

Docket No. 110009-EI
TP 6&7 Licenses,
Permits and Approvals
Exhibit SDS-7, Page 6 of 7

LOCAL AUTHORIZATIONS

Jurisdictional Agency	Authority, Law, or Regulation	Description of Requirement	Activity Covered
Miami-Dade County	Chapter 163 F.S.; Miami-Dade County Comprehensive Plan and adopted regulations	Land use and zoning conditional approval (unusual use approval)	Unusual Use (zoning approval) to permit a nuclear power plant (atomic reactors) and ancillary structures and equipment.
Miami-Dade County	Chapter 163 F.S.; Miami-Dade County Comprehensive Plan (CDMP) and adopted regulations	CDMP text amendment	Excavation for fill source.
Miami-Dade County	Chapter 163 F.S.; Miami-Dade County Comprehensive Plan (CDMP) and adopted regulations	CDMP text amendment	Temporary Access roads.
Miami-Dade County	Miami-Dade County Ordinances	IW6 Permit (Industrial Well field) for site investigation	Land use - non-residential, within major well field protection areas not served by sanitary sewers.
Miami-Dade County Health Department	Chapter 373 F.S.	Water well construction permits	Well installation for hydrologic investigation.
Miami-Dade County	Miami-Dade County Code Chapter 24	Domestic wastewater annual operating permit	Stabilization treatment facility
Miami-Dade County	Miami-Dade County Code Chapter 24	Operation of pollution control facility permit	Operation of fleet vehicle maintenance facility that generates waste oil, coolant, and used batteries with a solvent wash tank and served by septic tank.
Miami-Dade County	Miami-Dade County Ordinances, Chapter 14	Burn Permit	Onsite combustion of construction debris. Annual permit issued.
Miami-Dade County	Miami-Dade County Ordinances, Section 24-35	IW5 Permit (or waiver)	Hazardous materials or hazardous waste – large user or generator. Hazardous waste permit issued 10/01/2008.
Miami-Dade County	Miami-Dade County Ordinances, Section 24	Stratospheric Ozone Protection Annual Operations Permit	Use of refrigerants R-12, R-22, R-502 for Robinair Recovery Units, Models 25200, 25200A, 25200B.
Miami-Dade County	Miami-Dade County Ordinances, Section 24	Industrial Waste Annual Operations Permit	Onsite disposal of Class III industrial solid waste consisting of earth and earth-like products, concrete, rock, bricks, and land clearing debris.
Miami-Dade County	Miami-Dade County Ordinances, 89-104	Marine Facilities Annual Operations Permit	Operation of 1 wet slip, 1 dry slip, 2 commercial vessels.

**Docket No. 110009-EI
TP 6&7 Licenses,
Permits and Approvals
Exhibit SDS-7, Page 7 of 7**

Jurisdictional Agency	Authority, Law, or Regulation	Description of Requirement	Activity Covered
South Florida Water Management District (SFWMD)	Chapter 373 F.S.	Water well construction permits	Pump test for test wells.

SDS-8

PROCEDURES and WORK INSTRUCTIONS

GO 2 NextEra Energy, Inc. Internal Control Policy
GO 7 FPL Documents - Monthly Closing Schedule
GO 300 Cash Disbursement
GO 354 Non-PO Invoice - General
GO 356 Creating an Account Assignment Model
GO 358 Framework PO Invoice - Entering an Invoice
GO 362 Entering a Framework PO Credit Memo
GO 606 Specific ER – General
GO 700 Integrated Supply Chain – Policy
GO 702 Utilization of Small Business Concerns
GO 705 Purchasing Goods and Services – Policies and Definitions
GO 705.1 Methods of Purchasing Goods and Services - Types of Goods and Services
GO 705.3 Purchasing Goods and Services – Using Purchase Orders and Contracts
GO 705.9 Purchasing Goods and Services - Procurement System Controls
GO 720.4 Purchase Order - Receipt of Materials and Services
GO 740 Transportation Freight Payments
QI4-NSC-1Rev9ProcurementControl
BO-AA-102-1008 r0 Procurement Control
Engineering &Construction Project Controls Process Overview 09-16-09
Engineering &Construction Accrual Process Narrative rev 12-31-10
Engineering &Construction Utility Fixed Assets Process narrative 12-31-10
Engineering &Construction Monthly Invoice Processing & Accrual Schedule 2010
Engineering &Construction Project Controls Monthly Deliverables 2010
Desktop online Authorization Procedure rev17 12 17 06
Contract Retention white paper rev 4-28-08
Electronic Invoice Scan Process
NPP-DESKTOP-GUIDE-012009
Updating Monthly Cost Report Process
Work Breakdown Structure -012009
Project Control Guidelines Memo 3-21-08
Rules of Engagement
Subject Matter Expert Process
Solar/New Nuclear Charging Guidelines 05-06-10

SDS-9

PROJECT REPORTS

REPORT	REPORT DESCRIPTION	PERIODICITY	AUDIENCE
6 Week Look-ahead Schedule, organized by resource*	All FPL activities scheduled within the next six weeks	Weekly	All project staff personnel, project management and project controls
Schedule Resource profiles*	Graphic profile of all FPL resources allocated to scheduled activities	Weekly	All staff on the project assigned as a resource and management
Performance Indicator Earned man hour burn rates*	Graphic comparison of earned to budgeted man hours	Weekly	Project Management
Performance Indicators Activity early finish variance*	Graphic comparison of original schedule finishes to current schedule finishes	Weekly	Project Management
Performance Indicators Activity total float variance*	Graphic comparison of float variances from previous week	Weekly	Project Management
Performance Indicators Scheduled starts and finishes from previous week variance*	Graphic comparison of scheduled starts and finishes to actual starts and finishes	Weekly	Project Management
FPL/Bechtel COL Weekly Status Updates	FPL/Bechtel COL Project action items, applicable schedules and RAI review table.	Weekly	All project staff personnel, project management and project controls
FPL COL Weekly Status Updates	FPL COL Project action items, applicable schedules, Action Request look ahead report, Bechtel RAI report and FPL status report	Weekly	All project staff personnel, project management and project controls

REPORT	REPORT DESCRIPTION	PERIODICITY	AUDIENCE
Project Dashboard (Cost)	Comprehensive report covering schedule, budget, costs, performance, permitting, safety, and risks	Monthly	Project Management
Corporate Variance (Cost)	Financial status compared to corporate budget including Current Month (CM), Quarter (QTR), Year-To-Date (YTD) and End-Of-Year (EOY) with variance explanations	Monthly	Executive Management
Nuclear Filing Requirement (NFR) Cost Summary	Compares filing projections by major category to actual/forecast with variance explanations	Monthly	Project Management
NFR Summary	Compares filing projections by department	Monthly	Project Management and department heads
NFR Variances Annual Forecast Analysis (Cost)	Compares filing projections by department projections to actual/forecast with variance explanations, compares year end forecast monthly with variance explanations and major milestone schedule dates	Monthly	Project Management and department heads

REPORT	REPORT DESCRIPTION	PERIODICITY	AUDIENCE
Project Cost Summary	Financial status by budget responsibility including CM, QTR, YTD, Period-To-Date (PTD) and EOY	Monthly	Project Management
Cost Recovery by Detail	Compares pre-construction NFR filing projection details to actual/forecast for CM, YTD and EOY	Monthly	Project Management
Pre-Construction Cumulative Spend Graph	Visually compares Corporate Budget, May 08 NFR Projection, May 09 NFR Projection to actual expense and forecast	Monthly	Project Management and department heads
Due Diligence Report	Project status and potential liabilities that may require disclosure in company financial reports	Quarterly	Executive Management
Quarterly Risk Assessment	Risk assessment focuses on the licensing, permitting and general development activities	Quarterly	Project Management

*Reports generated through June 30, 2009, the point of submittal of the Combined Operating License and the Site Certification Application.

SDS-10

NNP PROJECT INSTRUCTIONS & FORM LIST

Procedure Number	Title	Revision Number	Effective Date
NNP-PI-01	Request For Information (RFI) and RFI Response	2	09/15/2010
NNP-PI-02	Preparation, Revision, Review, and Approval Of New Nuclear Projects Project Instructions	2	09/15/2010
NNP-PI-03	NNP Project Document Retention	1	09/10/2010
NNP-PI-04	COLA Configuration Control and Responses to Requests for Additional Information for Project Applications	2	09/10/2010
NNP-PI-05	NNP Correspondence	1	09/10/2010
NNP-PI-06	NNP NRC Correspondence	2	09/15/2010
NNP-PI-07	NNP Department Training	2	08/16/2010
NNP-PI-08	NNP COLA Review & Approval Process	4	09/10/2010
NNP-PI-09	NNP COLA Submittal	1	06/23/2009
NNP-PI-10	NNP PTN COLA Related Project Management Briefs, Project Memoranda, and COLA Related Document Reviews	2	09/10/2010
NNP-PI-011	Change Control for COL Application Plant Specific Design Information	2	08/30/2010
NNP-PI-012	Visiting Dignitaries	0	08/17/2009
NNP-PI-013	Technical Review of Commercial Project Documents	1	08/20/2010
NNP-PI-14	Discovery Production Instructions Related to Turkey Point 6 & 7 Combined License Hearing	1	08/11/2010
NNP-PI-100	Project Schedule and Configuration Control	0	08/03/2009
Desk Top Instruction Number	Title	Revision Number	Effective Date
NNP-AA-01	NNP Regulatory Items & Commitments Data Control	1	05/30/2010
NNP Form Number	Title	Revision Number	Effective Date
NNP-PI-01-01	FPL NNP PTN 6&7 COLA RFI and RFI Response	0	01/31/2008
NNP-PI-02-01	Project Instruction Review and Approval Form	0	03/11/2008
NNP-PI-03	Not Used	NA	NA
NNP-PI-04	Not Used	NA	NA
NNP-PI-05	Not Used	NA	NA
NNP-PI-06-01	NNP Outgoing NRC Correspondence Review & Approval Sheet	1	06/03/2010
NNP-PI-07-01	NNP Training Attendance Form	0	03/19/2008

NNP PROJECT INSTRUCTIONS & FORM LIST

NNP Form Number	Title	Revision Number	Effective Date
NNP-PI-07-02	NNP Training Exemption Form	0	03/19/2008
NNP-PI-07-03	NNP Required Reading Form	4	8/30/2010
NNP-PI-08-01	Comment Resolution Acceptance Form	1	08/18/2008
NNP-PI-08-02	LRB MEETING SUMMARY FORM	1	09/08/2008
NNP-PI-09-01	CERTIFICATION REFERENCE FORM	0	10/03/2008
NNP-PI-10-01	NNP Document Review Comment Form	0	03/11/2008
NNP-PI-10-02	NNP Project Management Brief Review And Approval Form	1	01/25/2010
NNP-PI-11-01	Screen and Evaluation of COL Applicant Changes to a DCD	1	6/10/2009
NNP-PI-11-02	Guidance and Instructions for Completing Screens and Evaluations of Changes to DCDs	1	6/10/2009
NNP-PI-11-03	10 CFR Part 52 Screener Training and Qualification Form	1	6/10/2009
NNP-PI-11-04	Departure Screening/Evaluation Review and Approval Form	1	6/10/2009
NNP-PI-13-01	Review and Approval Form	0	3/17/2010
NNP-PI-13-02	Document Review Checklist	1	8/20/2010
NP-AA-01	Regulatory Items & Commitments	0	9/09/2008

SDS-11



PTN 6&7 Project Memorandum

Memo No. 2009 - 01

Date: 11/10/2009

From: Steven Scroggs

Subject: Decision to Withdraw Limited Work Authorization Request

Background

As a part of its June 30, 2009 Combined Operating and Construction License Application (COLA) to the Nuclear Regulatory Commission (NRC), FPL requested a Limited Work Authorization (LWA). It was expected that, if granted by the NRC, the LWA would provide FPL with approvals required to perform NRC jurisdictional construction activities at the Turkey Point 6 and 7 site in advance of issuance of the Combined License. For example, work such as certain foundation preparation activities in the vicinity of the nuclear reactor island are conducted under NRC jurisdiction and therefore would require advanced explicit approval in the form of an LWA.

During the early stages of the project in late 2007 and early 2008, FPL developed a preliminary project schedule including an assumed license review schedule, preliminary construction activities and other engineering activities. The preliminary project schedule recognized that start dates and durations of the many activities involved were estimated, and could reasonably vary depending on many factors.

FPL's preliminary project schedule work suggested that applying for and obtaining an LWA offered potential value to FPL customers by providing an opportunity to accomplish certain NRC jurisdictional activities in advance of the issuance of a Combined License. This would increase the likelihood of meeting the projected 2018 commercial operating date for Unit 6 or, in the event that the COLA is delayed the LWA could allow the opportunity for interim progress to be made reducing the impact of any delay in the NRC COLA review process. As demonstrated in the analysis for the Need Determination, and subsequently in annual feasibility analyses, all other things being equal, FPL customers benefit more from earlier delivery of the new nuclear capacity by beginning to realize fuel cost and emission compliance cost savings sooner.

It was therefore determined that an LWA request should be included in the COLA to provide FPL the option to pursue certain construction activities as early as possible.

Situational Analysis

Over the past 18 to 24 months, following the creation of the preliminary project schedule used in the development of the COLA, further refinement of the preliminary schedule has affected FPL's assessment of the value offered by an LWA. The information was developed as a result of further FPL work regarding the sequence of construction, an increased understanding of the magnitude and duration of the specific activities involved, and monitoring of ongoing regulatory processes.

Construction planning analysis of increasing detail provided a more complete picture of the specific undertakings required. The analyses indicated that new activities should be added and the durations of certain previously-recognized activities increased. While these more recent analyses support that the targeted date of 2018 for Unit 6 is still attainable, the site preparation activities (i.e., those activities needing to take place before NRC jurisdictional activities can commence) occupy a greater period of time than previously considered. The results of the refined analysis showed a greatly reduced potential window of time to accomplish LWA activities, defined as the time between completion of site preparation activities and issuance of a Combined License. Therefore the potential value of the LWA for the project is greatly diminished.

In FPL's assessments it is also mindful of the evolving regulatory environment. Based upon available information, FPL's current assessment is that continuing with the request for a LWA could have a material adverse impact to the schedule and sequence of review of the COLA. Accordingly, in addition to the diminished potential value of the LWA noted above, the risk of increasing the review time of the overall license must also now be considered.

Finally, the economic situation in Florida and the country has changed significantly since early 2008. As always, FPL must consider the dynamic economic situation as it plans its overall project schedule. Our deliberate stepwise process favors collecting as much information as possible, therefore reducing uncertainty prior to committing to significant project expenditures. Given the current economic situation, it is possible that FPL would not choose to undertake significant site preparation and LWA activities prior to Combined License issuance. This possibility must also be considered in FPL's decision making.

Cost and Schedule Impacts

FPL has two options with respect to its LWA request from this point forward. FPL could maintain its LWA request, and ask the NRC to review and adjudicate the request, or FPL could withdraw the LWA request.

If FPL were to maintain the LWA request, the result could be a longer than previously expected COLA review schedule resulting in an LWA that is now estimated to offer little value.

PTN 6&7 Project Memorandum 2009 – 001

11/10/2009

If FPL were to withdraw the LWA request, it would forego any minor value that might be available from an approved LWA but it would increase the likelihood of a more expeditious COLA review schedule. It should also be noted that the incremental cost necessary to develop the LWA was very small (under \$15,000), as the LWA request itself simply consists of several COLA sections that were already being developed for the main application.

Determination

FPL has determined, given due consideration of all factors described above, that the better course of action is to withdraw the LWA request. The withdrawal will be made by submitting written notification of the withdrawal in correspondence to the NRC.



PTN 6&7 Project Memorandum

Memo No. 2010 – 01

Date: 03/15/2010

From: H.M. Gurri M^eBee

Subject: CDMP Amendment for Temporary Road Improvements

Background

The development of the Turkey Point Units 6 and 7 (PTN 6&7) project was initiated in 2007. In December of that year, the Miami-Dade County (MDC) Board of County Commissioners approved the zoning of the new nuclear project. Following this general approval, conceptual design work was began, including an analysis of temporary roadway improvements needed to support the addition of 4,000 trips per day expected during the peak of construction. After consultation with the MDC Department of Planning and Zoning (DPZ), a CDMP Amendment was developed and filed in the April 2009 cycle describing these improvements and seeking appropriate text and map amendments to support such improvements. The MDC review process leading to transmittal resulted in the identification of an alternative roadway alignment for consideration. The additional alternative (MDC Option) was included by amendment. A depiction of the two alternatives is provided in Figure 1. In brief, the MDC Option would expand roadways along 344th, including a new roadway north of the Florida City Canal while the original alignment expands an existing FPL road on FPL property. The MDC Board of County Commissioners voted to transmit the CDMP Amendment application to the Department of Community Affairs (DCA) on November 4th, 2009 for state level review including both alternatives. The state level review, captured in DCA's Objections, Recommendations and Comments (ORC) report received March 5th, 2010 did not include any objections.

Situational Analysis

Following transmittal, FPL undertook the same rigorous due diligence review of the MDC Option as had been applied to the original (SCA/COLA Option). The analysis included a review of emergency evacuation requirements, traffic flow studies, engineering analysis, environmental analysis, land surveys, real estate reviews and regulatory comparisons. The results of the analysis allows for a comparison of the issues poised by each alternative are provided in Table 1, and summarized below.

Traffic engineering analysis indicates that each option can be designed to safely support the incremental trips anticipated during the construction period. The MDC Option results in higher congestion in the immediate vicinity of the plant entrance and would create some logistical impact to operations and/or construction activity.

Table 1. Comparison of Temporary Roadway Alignment Alternatives

ITEMS	PROJECT NEED/ CONSIDERATION	SCA/COLA OPTION	MDC OPTION
Technical: Traffic			
• Traffic Patterns	Allow construction traffic without impact to existing operations	Two ingress/egress options	Two ingress/egress options, impacts to construction
• Evacuation & Safety	Provide independent ingress/egress for existing and construction traffic	Meets project needs	Meets project needs
Technical: Environmental			
• Wetlands	Avoid and minimize impacts to wetlands, mitigate impacts	127 acres total wetland impacts (81 mitigation credits estimated)	126 acres total wetland impacts (69 mitigation credits estimate)
• Hydrology	Avoid/minimize adverse impacts to surface water flow across roadway.	Culverts can be added to maintain or improve hydrology	Culverts can be added to maintain or improve hydrology
• Listed Species	Avoid/minimize adverse impacts to listed species and habitats	No significant adverse impacts to listed species and habitats	No significant adverse impacts to listed species and habitats
Economic			
• Construction Cost	Minimize unnecessary expenditures	\$41.0 MM	\$50.3 MM (not including easement acquisition)
• Daycare Operation	Safe operation of existing Daycare	Does not impact existing Daycare operations	Daycare to be relocated (\$1.6MM additional cost)
• Construction Schedule Impact	Avoid/minimize impacts to project schedule	Conforms to baseline project construction schedule	16 months additional impact to construction schedule (\$30 MM)
• Acquisition of Property	Minimize unnecessary expenditures	Affects 8 parcels	Affects 27 parcels
Legal			
• Private Property Owners Affected	Avoid/minimize unnecessary impacts to neighbors	Affects 6 private property landowners	Affects 24 private property landowners
• Title	Clear title	No anticipated title concerns	Multiple title concerns

PTN 6&7 Project Memorandum 2010 – 001

03/11/2010

The environmental impacts of each option were evaluated using quantitative and qualitative methods. The quantitative analysis indicates that the wetland impacts would be similar. Qualitative analyses indicate that neither option would have negative impacts on hydrology or listed species. The SCA/COLA Option includes temporary expansion of an existing private drive along 359th street that includes culverts to address hydrologic issues.

The MDC Option requires incremental costs to construct and will present congestion challenges that are anticipated to result in delays. These costs and challenges are not inconsequential, however our analysis indicated that they are not insurmountable or an independent reason for disqualifying the MDC Option.

The ability to obtain the necessary rights-of-ways and minimize impacts to private landowners is most significant difference between the Options. FPL conducted detailed surveys and real estate reviews to assess the challenges associated with providing sufficient right-of-way for the North Canal Road in the MDC Option. FPL's assessment is that the additional impact to private land owners, additional cost to FPL customers and potential legal challenges associated with the MDC Option can be avoided by selection of the SCA/COLA Option.

Determination

Given due consideration to all factors listed above, the best course of action is to pursue the original roadway improvements described in the SCA/COLA Option. The results of our due diligence analysis indicated that the MDC Option is not viable primarily due to the insufficiency of right-of-way necessary to execute the needed improvements. Our assessment resulted in a determination that FPL would not be successful in obtaining sufficient right-of-way real estate for the temporary need to finalize all the needed temporary roadway improvements needed for the Turkey Point 6 & 7 project. The fact that FPL owns and controls the existing 359th right-of-way allows for minimizing the impact to private landowners, reduces risk of potential litigation and maintains control of real estate costs. Further, once the access is no longer required, FPL will have the sole ability to remove the improvements. In all other areas of our review, including environmental, FPL found our original proposal the SCA/COLA Option to be on par with the proposed MDC Option.

The CDMP Amendment application should be modified to eliminate the MDC Option in recognition of the above described analysis and findings.



Figure 1. Temporary Roadway Alignment Alternatives



PTN 6&7 Project Memorandum

Memo No. 2010 - 002

Date: March 23, 2010

From: Steven Scroggs

FPLMTF-10-0137

Subject: Reclaimed Water Joint Participation Agreement

Background

Miami-Dade County, location of the Turkey Point site, is a large metropolitan area currently producing and disposing of approximately 350 million gallons per day (MGD) of treated wastewater to ocean outfall or deep well injection. The PTN 6&7 project will require cooling water on the order of 60 MGD, and other on-site uses, such as cooling of the Unit 5 combined cycle facility, totaling 90 MGD.

FPL conducted a water resource alternatives analysis to determine the best plan for providing cooling water to the proposed Turkey Point 6&7 project. Based on that study, it was determined that the primary source of cooling water should be reclaimed water from Miami-Dade County Water and Sewer Department (MDC WASD). FPL and MDC WASD have developed a plan to supply reclaimed water to the proposed Turkey Point Units 6 & 7 project and retro-fit the Turkey Point Unit 5 project to utilize reclaimed water for cooling. The arrangement will enable Miami-Dade County ("County") to meet aggressive requirements to increase reclaimed water usage in the County and eliminate ocean outfall of treated wastewater. FPL's customers benefit from a stable cooling water source with low environmental impact.

A Joint Participation Agreement (JPA), including a form of Reclaimed Water Service Agreement (RWSA) as an exhibit, has been developed for approval by FPL and MDC Board of County Commissioners. The following describes the general arrangement between FPL and MDC and the determination by FPL to enter into the JPA.

Situational Analysis

A key factor in the successful development (siting, permitting, and operation) of power generation is the source of cooling water for the facility. In the siting analysis conducted leading to PTN 6&7, it was noted that the Turkey Point site offers a range of potential cooling water sources, including reclaimed water from Florida's largest metropolitan area. Additionally, it was noted that MDC has been challenged to find significant secondary uses for its treated wastewater. This has been noted in MDC's recent Consumptive Use Permit and newly enacted Ocean Outfall legislation. The combination of these factors created a natural synergy for the siting of the Turkey Point 6&7 project and a means to address MDC future obligations with respect to reuse of treated wastewater.

A series of reviews over the past two years were conducted to determine the project needs, best source(s), means of conveyance and commercial parameters associated with providing the new nuclear plant with reclaimed water from MDC. The results of these reviews are summarized below.

Project Needs:

Water quality required for use in a cooling tower must meet state standards and practical standards for nutrient and mineral content to allow for efficient use in a forced draft cooling tower. The water that would be provided by WASD will meet the state standards of High Level Disinfection standards, the water quality prescribed by F.A.C. Rule 62-610 for use in a cooling tower, and Rule 62-528 for non-hazardous wastewater in a Class I UIC well. Additionally, FPL will treat the reclaimed water to remove nutrient and mineral content.

Conceptual designs indicate that approximately 59 million gallons per day (MGD) of water are required for the PTN 6&7 project. Prior certification for the PTF-5 project requires that it will be considered for conversion to reclaimed water if feasible, adding an additional 15 MGD needed. The FPL reclaimed water treatment facility will require approximately 6 MGD for process uses. Finally, mitigation opportunities identify potential rehydration and landscaping uses of approximately 10 MGD. This results in a total average daily requirement of 90 MGD.

Source(s) and Conveyance:

In conjunction with MDC WASD, FPL conducted a review of the MDC WASD system to identify existing and future sources of treated wastewater. Three existing sources (North, Central and South District Waste Water Treatment Plants) and one future source (West District Water Reclamation Plant) were identified. Of these, the South District plant is closest to Turkey Point, approximately 9 miles north. The WASD collection system can be redesigned to direct sufficient flows to the SDWWTP to provide sufficient flows for FPL needs without inhibiting any other obligations MDC may have to provide reclaimed water to other regional projects.

A pipeline must be constructed to connect the SDWWTP and the Turkey Point site. Conceptual engineering studies were conducted to size the pipe and locate a suitable corridor for locating the underground pipe. Much of the right of way required can be co-located in a segment of the FPL transmission system running north of Turkey Point site. The pipeline was included within the Site Certification Application (SCA) for the project as an ancillary linear facility.

Commercial Terms:

The JPA provides for the roles and responsibilities of each party and establishes an Oversight Committee staffed by FPL and MDC management. An RWSA is provided as an exhibit to the JPA, and is envisioned to be executed upon receipt of the Site Certification. Conditions Precedent in the

RWSA include all regulatory approvals necessary for FPL to construct and operate the PTN 6&7 project, all regulatory approvals necessary for MDC to construct and operate the County Facilities, and FPL required management and Board of Directors approvals and consents. The following describes the commercial terms associated with the reclaimed water project.

The pipeline will be owned and operated by MDC. However, as an integral part of PTN 6&7, FPL will design, procure and manage the construction of the pipeline as an extension of the overall PTN 6&7 project. MDC will be responsible for materials and labor costs associated with the pipeline and FPL will be responsible for costs associated with design and project management. Additionally a cap on the pipeline materials and labor costs has been negotiated based on a current cost estimate and a 4% per year escalation factor. FPL pays material and labor costs above the cap amount.

FPL will also make monthly payments based on the following compensation components. A Repair and Replacement Fee (R&R Fee) will fund the long term capital maintenance of the pipeline and will be set based on the review of the Oversight Committee. FPL will also pay charges to cover routine O&M costs for the pipeline and customary WASD customer service and general and administrative charges. FPL will not pay a commodity charge for the reclaimed water. Rate revisions must be consistent with actual O&M costs experienced by MDC.

Determination

It is in the best interests of FPL customers to secure a reliable, permit-able and cost-effective primary source of cooling water for the PTN 6&7 project. Reclaimed water from MDC WASD provides an environmentally beneficial source of supply with high reliability and moderate costs. Further, FPL is in a unique position to provide value added construction management services, leverage the procurement power of the larger contract and mitigate potential execution risks for FPL and the County. The Joint Participation Agreement should be approved to set forth the development agreement between FPL and MDC to facilitate use of reclaimed water for the PTN 6&7 project.



PTN 6&7 Project Memorandum

Memo No. 2010 - 003

Date: March 23, 2010

From: Steven Scroggs

FPLMTF-10-0138

Subject: Capital Cost Estimate Revision Method and Results

Background

In the 2009 Nuclear Cost Recovery Order, it was ordered that "FPL shall file updated capital cost estimates in its next annual NCRC filing." FPL has reviewed the basis for its non-binding cost estimate range and opportunities for revising and updating its capital cost estimate. The following provides a description of what was considered in this review and the foundation for the method employed to update the capital cost estimate.

Situational Analysis

The original capital cost estimate for the PTN 6&7 project was developed in 2007. This cost estimate was presented in the Need Determination Filing and is the basis for the current non-binding capital cost estimate for the project. At the time this estimate was developed FPL did not have five key elements that are necessary to inform a cost estimate. These included:

- A specific technology (and therefore a capacity)
- A conceptual design of the project
- Commercial contracts for Engineering, Procurement or Construction
- Approvals with associated conditions of certification/approval
- A firm detailed project execution schedule

Information Available as of January 2010:

Since this time, FPL has continued to further define the project leading to completion and submission of permit and license applications. This process resulted in selection of a specific technology (Westinghouse AP-1000) and conceptual design of multiple project features. In parallel, FPL conducted negotiations with Westinghouse/Shaw regarding the scope, terms, conditions, schedule and pricing of an EP contract supporting the 2018/2020 COD schedule. However, no commercial contracts have been initiated, no approvals with or without conditions have been obtained, and accordingly no firm detailed project execution schedule has been developed.

Approach to Revising Capital Cost Estimate:

Based on the additional information developed since 2008, a cost estimate can be constructed to update the current estimate recognizing the selection of a specific technology (and corresponding capacity) and the conceptual definition of project features collectively captured in the June 2009 application submittals. Such an estimate will represent a more recent estimate of cost – but not necessarily a more accurate cost estimate range.

Determination

Fundamentally, sufficient actionable information cannot be developed at this stage of the project that would represent a truly meaningful refinement to the existing cost estimate range. However the most current information can be included to provide a comparison to the existing cost estimate range.

The following approach was determined to best represent the current status of the cost estimate given the best information available:

- The existing cost estimate range developed in the Need Determination will be retained as the underlying basis for the PTN 6&7 project non-binding cost estimate.
- The cost estimate range will be adjusted to specifically reflect the selection of the AP-1000 technology, adding \$47/kW to the original range, to reflect the 2,200 MW project capacity.
- The cost estimate range would be retained, but brought forward to 2010 to reflect the range in current (2010) dollars.
- A cost estimate will be developed using the updated specific information that is currently available, and that cost estimate will be compared to the updated cost estimate range.



PTN 6&7 Project Memorandum

Memo No. 2010 - 004 Date: March 26, 2010
From: Steven Scroggs FPLMTF-10-0139
Subject: Decision to Extend the Forging Reservation Agreement

Background

In 2008, FPL entered into a Forging Reservation Agreement with Westinghouse Corporation to reserve manufacturing space for certain Ultra Heavy Forgings necessary for a two unit AP-1000 project. The agreement called for initiation of a follow on agreement or termination by December 31, 2009. By mutual consent, the agreement was extended six months with no changes to the terms or conditions of the agreement. The extension was instituted recognizing that several key project reviews would be undertaken in early 2010, providing guidance for the appropriate final disposition of Forging Reservation Agreement.

Situational Analysis

As the project schedule review is concluding, it is evident that FPL will not initiate an EP or EPC form of contract in the next year. This milestone was envisioned as the terminating milestone for the original Forging Reservation Agreement. Further, market conditions have resulted in reduced demand for the manufacturing capability reserved by the agreement.

Looking to the future, the need for the manufacturing capability will still be required, but the dates associated with that need are yet to be determined.

Options for Consideration:

Alternatives available include 1) dissolve agreement and seek the maximum refund available, 2) renegotiate agreement to leverage invested funds for a different scope of work, or 3) renegotiate to extend the term of the agreement, preserve current reservations and minimize incremental cost.

Dissolution of the agreement carries with it risk to the recovery of a significant portion of the reservation fee. The terms of the agreement provide for an 85% refund under the condition that Westinghouse is able to remarket the manufacturing slots to another buyer. Given current market conditions and the reduced demand for ultra-heavy forgings in this time frame there is a possibility that the remarketing term would not be satisfied, resulting in little or no refund. Additionally, dissolution of the agreement does not address the eventual need for this manufacturing capability at some future point.

FPL currently compensates Westinghouse/Shaw for engineering support for the Combined License Application before the NRC. As the project moves into the engineering design, procurement and construction phases, FPL will continue to engage Westinghouse/Shaw on an increasing basis for these services. The value represented by the reservation fee might be converted into other services, after compensating Westinghouse for costs experienced to obtain and manage the reservation to date. While this alternative is plausible, lack of a firm schedule for delivery of substituted services adds complexity to a renegotiation. As with the dissolution option, the inevitable need for forging manufacturing capability is not addressed.

Extension of the current terms and conditions offers all the benefits of the current agreement and preserves the option to exercise the forging activity. Westinghouse would need to manage the forging slots into the future on behalf of FPL through coordination with Japan Steel Works. Market demand and scheduling would impact the availability of this option. Additionally, the lack of a firm schedule for delivery means that the length of time the reservation could be extended into the future is likely to be limited. Additionally, if the extension were to come at a cost, an evaluation of the incremental cost and benefit of the extended agreement would be required.

Determination

FPL has determined, given due consideration of all factors described above, that the better course of action is to extend the existing agreement one year, to March 2011 if such extension can be accomplished at no additional cost and all options currently in the agreement can be retained.



PTN 6&7 Project Memorandum

Memo No. 2010 - 005

Date: April 15, 2010

From: Steven Scroggs

FPLMTF-10-0140

Subject: 2010 Project Schedule Revision

Background

The PTN 6&7 project was developed to create the option for new nuclear generation so that FPL customers would benefit from unique economic, environmental, reliability, fuel diversity and energy security attributes offered by nuclear generation. The process required to develop, license, engineer, procure and construct a nuclear project is highly complex and lengthy. Moreover, the process has not been accomplished in the United States in over 30 years, and has never been accomplished using the currently in-place licensing and certification processes or the envisioned Generation III+ designs.

The project schedule for the PTN 6&7 project provided in the Need Determination filing in 2008, and pursued throughout the first two years of the project, was developed with four key phases; the Exploratory phase, the Licensing phase, the Preparation phase and the Construction phase. A key assumption to maintaining the pace set by that schedule was the overlap of some of the Licensing phase and Preparation phase activities. For example, long lead procurement activities were identified to begin as early as 2009 with detailed engineering and site preparation following in 2010 and 2011. At the beginning of the PTN 6&7 project, uncertainties associated with cost, schedule, and the regulatory review process were identified. The key risk management strategy determined to provide the best cost control was to actively manage the pace of project expenditures. It was recognized that these decisions might result in deferring the ultimate in-service dates of the proposed units.

The first key decision related to the overall project schedule was whether or not to initiate long lead procurement expenditures in 2009. Based on an assessment of the market for these procurement items and the issues that will be discussed in what follows, it was determined that those expenditures were not warranted and could be deferred without modifying the overall project schedule. The second key decision relates to the initiation of preparation phase activities (site specific detailed engineering design, detailed construction site preparation planning and creating a project team to initiate procurement and management activities in preparation for construction). In order to maintain the original schedule, the project would need to initiate these activities in 2010.

Situational Analysis

FPL has conducted a review of the issues influencing the overall pace and risks associated with the PTN 6&7 project. In order to create and preserve the option for new nuclear generation, the overall project must be executed while minimizing unwarranted expenditures. Issues that are unresolved, or otherwise introduce risk to the project schedule are identified and their impacts are considered in balance with other factors.

Industry Issues Considered in Project Schedule Revision:

Maturity of Federal Licensing Process – The federal licensing process under Part 52, USC, has not been fully demonstrated. In the next two years, two key events are scheduled to occur. First, the review of the design certification amendment for the AP-1000 will be completed in 2010, and the subsequent rulemaking will occur in 2011. This process has been slowed recently based on additional reviews of specific design features. Additionally, several of the leading U.S. projects will complete the technical and environmental reviews and begin the deliberations before the Atomic Safety Licensing Board. Timely completion of these complex tasks and legal/quasi-legal proceedings will be a key test for the new process.

Energy Policy Issues – Developments in national energy policy have produced negative and positive results as leading indicators for the success of new nuclear generation. Progress towards developing a national repository at Yucca Mountain for used nuclear fuel has been halted. DOE has initiated a new effort to address the issue, but the general assessment is that final resolution has been considerably delayed. However, in recognition of the economic stabilizing and environmentally beneficial attributes of nuclear generation, the Obama administration has undertaken what is judged to be a renewed and genuine interest in furthering development of new nuclear generation. Initial loan guarantees are in advanced stages of negotiation, and the 2010 budget proposes to expand the allocation available for further loan guarantees. Such developments are promising and confirm FPL's assessment of the value offered by new nuclear generation. State energy policy has likewise shown negative and positive activity over the past two years. Nuclear Cost Recovery has been challenged by proposed bills in the legislature and discussions continue with respect to recognition of the environmental benefits of nuclear energy in the states generation portfolio.

Development of Financial Issues – The economic slowdown has created pressures in a number of areas. Immediately, the impact to FPL's customers has reduced demand and demand growth on the system. In the broader capital market, the downturn has tightened the availability and increased the cost of capital for infrastructure investments. Directly, multiple factors could affect FPL's financial health and its ability to undertake large capital projects such as the PTN 6&7 project at competitive costs. Indirectly, the downturn and capital market constriction have impacts on the financial health of equipment vendors, constructors and the broader supply chain that is in the nascent stages of development as predecessor projects to PTN 6&7 move from licensing to construction. The extent of the recession, and the ultimate impact to FPL and other companies involved in new nuclear generation, has yet to be determined.

Lessons Learned from Predecessor Projects – FPL made a fundamental decision early on to position the project as an early, but not a “first wave” U.S. project. Additionally, relevant international projects were underway that would also be instructive. This decision was part of the overall risk management approach that allowed the project to benefit from information developed in these predecessor projects during licensing, commercial, construction and early operation periods. A review of international projects yields mixed results: Olkiluoto (Finland) and Flamanville (France) using the Areva EPR design are behind the initial schedule and over budget, while Chinese projects (Sanmen, Haiyang) using the Westinghouse AP-1000 design are essentially on schedule. Key U.S. developments have seen TVA Bellefonte, the leading AP-1000 project, relinquishing the reference COLA position to the Southern Vogtle project, as TVA responds to reduced economic growth in its service territory. Additionally, several U.S. COLA projects have been suspended or withdrawn due to a range of economic, regulatory or design issues.

Project Specific Issues Considered in Project Schedule Revision:

Pace of Licensing Phase – The Exploratory Phase was accomplished in keeping with the expected overall schedule. The early stages of the Licensing Phase, production and submittal of the federal and state license and permit applications, was accomplished on an aggressive schedule. The initial plan was to develop and submit the COLA and other applications within 15 months of the start of the process. The final timeline required 18 months, faster than any prior COLA effort, so as to include additional seismic and geologic information requested by the NRC in the Progress Levy project. By incorporating this information in the original submittal, it is believed that the COLA will not experience additional delays on these topics during the review process. These early stage activities were largely under the control of FPL and its contractors.

The review of the submitted applications is not directly under the control of FPL. For example, the statutory timeline anticipated in the state Site Certification process has been extended based on a significant number of additional information requests from participating agencies. It is currently anticipated that the Site Certification will not be resolved until late 2011. An initial step in the NRC review process is the publication of a Federal Register Notice and Estimated Review Schedule. In prior COLA submittals by other U.S. projects, this action was taken within the first six months following submittal. To date, FPL has not received an Estimated Review Schedule from the NRC.

Development of Project Specific Commercial Agreements – A key factor in creating a detailed and integrated execution plan for the project is the development of Engineering, Procurement and Construction (EP/C or EPC) contracts and agreements that define the roles, responsibilities, pricing, terms, conditions and schedule milestones of all parties associated with the Preparation and Construction phases of the project. Progress towards an agreement with Westinghouse/Shaw has been measured and has not resulted in a compelling offer that would induce FPL to initiate the considerable expenditures that would be associated with entering in to such an agreement. This is interrelated to the careful approach FPL has been exercising and the uncertainty with regard to the specific forward schedule. However, negotiations were fruitful enough to yield an indicative pricing estimate. Developments in predecessor projects over the next two years are expected to be

PTN 6&7 Project Memorandum 2010 – 005

04/15/2010

instructive regarding the alignment of interests and success of risk sharing mechanisms to manage contract costs.

FPL System Needs and Power Generation Economic Factors – The economic downturn beginning at the end of 2008 has had a profound effect on the forecasted demand and demand growth for the FPL system. Based on current projections, and assuming the completion of planned re-powering activities at Plant Canaveral and Plant Riviera, the next anticipated need for new generation capacity is in the summer of 2022. Additionally, developments in the fuels market have recognized a shift in the natural gas supply/demand balance based on new supplies coming to market from shale gas deposits in the south central U.S. This has reduced natural gas prices in the near term.

Alternative Paths and Analysis of Risk:

Alternative paths include 1) termination of the project, 2) continue licensing phase only, 3) continue licensing phase and initiate construction planning activities without entering into EP or EPC contract, 4) continue licensing phase, initiate construction planning and EP or EPC contract commitments without procurement actions, or 5) continue licensing phase, initiate construction planning and full EP or EPC contract commitments.

Risk can be assessed in qualitative and quantitative ways. As stated previously, the objectives of the project are to deliver the benefits of nuclear generation to our customers in a manner that manages risk. For the purposes of managing the PTN 6&7 project, the primary project risks being managed are 1) the risk to ultimately achieving the project objectives, and 2) the risk that expenditures are inefficient (i.e., do not achieve the objective at a reasonable cost and within a reasonable time). Accepting these functional definitions, the alternative paths can be compared and contrasted relative to their ability to address the primary risks.

Termination of the project prevents any further expenditure, and therefore no expenditure can then be inefficient. However this choice also precludes achieving the ultimate project objectives. If efficient expenditures can be made while maintaining a reasonable likelihood of achieving project objectives, then this course of action is not optimal.

Continuing the licensing phase with no other expenditures maintains progress toward the project objectives and focuses project resources economically on the near term goal of achieving necessary approvals to construct and operate the project. Because these approvals are valid for a considerable time after being granted (for all practical purposes COL approximately 20 years, SCA 15 years by statute) the expenditures are highly efficient because the value of the investment is preserved. Suspension of Preparation phase and Construction phase expenditures until higher predictability can be obtained in regulatory application reviews, project schedule, and commercial agreements eliminates inefficient expenditures; however it postpones delivery of the ultimate project objectives.

The history of generation II nuclear plant construction in the U.S. illustrates that the key factors to success include a high degree of schedule certainty, with a design that is stable (design highly complete, with minimal revisions during construction). Initiating Preparation or Construction phase expenditures in advance of addressing those success factors would accept a higher risk of inefficient expenditures.

PTN 6&7 Project Memorandum 2010 – 005

04/15/2010

Additional alternative paths essentially take graduated steps towards full project initiation and commitment. The current estimated project spend through 2011 is approximately \$176 million. The original estimate, maintaining pace for the 2018/2020 in service dates, was \$523 million through 2011. Discussions with Westinghouse indicated a spend curve that would have resulted in approximately \$1 billion in expenditures through 2011.

Expenditures necessary to support and defend project applications are essential to meeting the ultimate project objectives. However, considering the issues previously discussed, expenditures above what is necessary to maintain progress on licenses and permits in the next two years are premature and run a significant risk of being inefficient.

Determination

It is in the best interests of FPL customers to maintain progress towards obtaining all licenses, permits and approvals for construction and operation of the PTN 6&7 project. Once obtained, the licenses, permits and approvals must be maintained. However, Preparation and Construction phase expenditures should be suspended until the criteria identified above can be demonstrably satisfied.



PTN 6&7 Project Memorandum

Memo No. 2010 – 006

Date: October 22, 2010

From: Robert Regan

FPLMTF-10-0388

Subject: PTN 6 & 7 Western Corridor Valuation and Condemnation Defense

Background

The Everglades National Park Protection and Expansion Act of 1989, 16 U.S.C. § 410r-5 et seq., expanded the boundaries of Everglades National Park (“ENP”) to include FPL-owned property that is approximately 7.5 miles in length and part of a 40-mile contiguous transmission right-of-way (“FPL Property”). The FPL property was acquired in the 1960s and 1970s for the development of critical infrastructure necessary to supply citizens of South Florida with safe, reliable electrical power.

Following years of discussion since the expansion, FPL and the National Park Service (“NPS”) have identified approximately 260 acres of property and interests at the eastern edge of the ENP Expansion Area that, if exchanged pursuant to negotiated agreements and authorizing federal law, would provide a reasonably equivalent, but environmentally preferable, contiguous transmission right-of-way outside of ENP. The negotiated exchange is also the least cost practicable option for all parties.

Given the negotiated exchange with NPS along with specific authorizing federal law, FPL has included the lands it would receive from ENP as part of its “preferred corridor” in its state and federal license applications for the PTN 6 & 7 new nuclear project. The transmission lines associated with this corridor are critical elements of the project, necessary for delivering bulk power from the new generating units to FPL customers. The state and federal license applications for the PTN 6 & 7 project were submitted to the respective lead agencies in June 2009 and are currently under review.

Situational Analysis

ENP is in the process of conducting the analysis necessary to make a recommendation to the Department of Interior regarding whether or not to proceed with the legislatively authorized land exchange. In doing so, ENP considers what feasible alternatives there are to the proposed action. ENP has communicated to FPL that its “No Action Alternative” would exercise its power of eminent domain to condemn the FPL Property instead of exchanging parcels. If the federal condemnation of the FPL Property were to proceed as described in the “No-Action Alternative,” FPL would be denied its preferred and secondary western corridors for the PTN 6 & 7 project. This would impact both state and federal license applications currently under review, and could

significantly delay obtaining the final approvals of these applications needed to construct the project.

Determination

Given the threat of condemnation to the FPL Property and the resulting expected impacts to PTN 6 & 7 licensing, it is in the best interests of FPL customers to undertake the necessary analyses and legal reviews to develop a defense of the PTN 6 & 7 western corridors.

The costs associated with the analyses and legal reviews of issues related to the land exchange with ENP and corresponding defense of the PTN 6 & 7 western corridors are specifically necessary to support our federal and state applications associated with the PTN 6 & 7 project and resolve these issues to the benefit of FPL customers. These analyses and legal reviews are undertaken to mitigate the increased cost and schedule risk to the PTN 6 & 7 project. As such, these costs will be charged as preconstruction costs to the PTN 6 & 7 project.

SDS-12

Table 1. 2009 Preconstruction Costs

Category	2009 Actual Costs
Licensing	\$30,271,612
Permitting	\$991,090
Engineering & Design	\$6,445,161
Long Lead Procurement	\$0
Power Block Engineering & Procurement	\$23,662
Total Preconstruction Costs	\$37,731,525
Transmission	\$0
Total Preconstruction Costs & Transmission	\$37,731,525

Table 2. 2009 Licensing Costs

Category	2009 Actual Costs
NNP Team Costs – NNP FPL payroll and expenses, FPL Project Team Facilities, FPL Engineering, FPL Licensing	\$3,548,305
Application Production – COLA/SCA Contractor, Project A&E, NRC and DCWG fees;	\$15,868,758
SCA Oversight	\$1,576,206
SCA Subcontractors:	
● ECT – Transmission	\$1,044,370
● Golder – Environmental	\$1,408,663
● McNabb – Underground Injection	\$176,362
SCA Total	\$4,205,601
Environmental Services – FPL payroll and expenses, External support expenses	\$2,940,930
Power Systems – FPL payroll and expenses, System studies, licensing and permitting support and design activities	\$1,307,731
Licensing Legal – FPL payroll and expenses, External Legal Services, Expert Witnesses	\$1,782,393
● Regulatory Affairs	\$464,230
● Regulatory Accounting	\$153,664
Total Regulatory Support	\$617,894
Total Licensing	\$30,271,612

Table 3. 2009 Permitting Costs

Category	2009 Actual Costs
Marketing and Communications – FPL payroll and expenses, External Media Support, Surveys, and Outreach Support, Graphics and Collateral materials	\$251,071
Development – FPL payroll and expenses, various studies	\$749,960
Legal – FPL payroll and expenses, external support for permitting legal specialists	(\$9,941)
Total Permitting	\$991,090

Table 4. 2009 Engineering and Design Costs

Category	2009 Actual Costs
Engineering and Construction Team – FPL payroll and expenses, Preconstruction project management	\$2,089,344
Pre-construction External Engineering – construction planning	\$4,026,065
APOG Membership Participation	\$52,022
EPRI Advanced Nuclear Technology	\$277,730
Total Engineering and Design	\$6,445,161

Table 5. 2009 Power Block Engineering & Procurement Costs

Category	2009 Actual Costs
Power Block Engineering & Procurement Costs	\$23,662
Total Power Block Engineering & Procurement Costs	\$23,662

SDS-13

Docket No. 110009-EI
Comparison of 2008 Case C and
2010 Cost Estimate Revision
Exhibit SDS-13, Page 1 of 1

Comparison of 2008 Case C and 2010 Cost Estimate Revision

Category	2008 Cost Estimate (Case C; 2010\$, \$/kW)	% total	2010 Cost Estimate Check (2010\$, \$/kW)	% total	Difference between 2008 and 2010 Estimate
Standard Plant	\$2,180	44%	\$2,118	42%	-3%
Balance of Plant	\$146	3%	\$342	7%	134%
Site Development	\$111	2%	\$225	5%	103%
Const Labor	\$999	20%	\$951	19%	-5%
Owners Cost	\$432	9%	\$381	8%	-12%
Transmission	\$257	5%	\$322	6%	25%
Contingency	\$815	16%	\$651	13%	-20%
Total Overnight Cost	\$4,940		\$4,991		1%

Note: 2008 cost estimate is adjusted to appropriate capacity by addition of \$47/kW and then escalated to 2010 dollars using a 2.5 percent per year escalation factor.

SDS-14

Table 1. 2010 Preconstruction Costs

Category	2010 Actual Costs
Licensing	\$23,184,978
Permitting	\$1,223,203
Engineering & Design	\$1,185,396
Long Lead Procurement	\$0
Power Block Engineering & Procurement	\$0
Total Preconstruction Costs	\$25,593,577
Transmission	\$0
Total Preconstruction Costs & Transmission	\$25,593,577

Table 2. 2010 Licensing Costs

Category	2010 Actual Costs
NNP Team Costs – NNP FPL payroll and expenses, FPL Project Team Facilities, FPL Engineering, FPL Licensing	\$3,577,232
Application Production – COLA/SCA Contractor, Project A&E, NRC and DCWG fees;	\$11,430,703
SCA Oversight	\$1,699,842
SCA Subcontractors:	
• ECT – Transmission	\$726,228
• Golder – Environmental	\$770,669
• McNabb – Underground Injection	\$25,893
<hr/> SCA Total	<hr/> \$3,222,632
Environmental Services – FPL payroll and expenses, External support expenses	\$1,336,241
Power Systems – FPL payroll and expenses, System studies, licensing and permitting support and design activities	\$509,876
Licensing Legal – FPL payroll and expenses, External Legal Services, Expert Witnesses	\$2,215,746
• Regulatory Affairs	\$682,154
• Regulatory Accounting	\$210,394
<hr/> Total Regulatory Support	<hr/> \$892,548
 Total Licensing	 \$23,184,978

Table 3. 2010 Permitting Costs

Category	2010 Actual Costs
Marketing and Communications – FPL payroll and expenses, External Media Support, Surveys, and Outreach Support, Graphics and Collateral materials	\$209,225
Development – FPL payroll and expenses, various studies	\$683,570
Legal – FPL payroll and expenses, external support for permitting legal specialists	\$330,408
Total Permitting	\$1,223,203

Table 4. 2010 Engineering and Design Costs

Category	2010 Actual Costs
Engineering and Construction Team – FPL payroll and expenses, Preconstruction project management	(\$5,456)
Pre-construction External Engineering – construction planning	\$213,882
APOG Membership Participation	\$300,499
EPRI Advanced Nuclear Technology	\$275,000
FEMA Fees	\$401,471
Total Engineering and Design	\$1,185,396

Table 5. 2010 Power Block Engineering and Procurement

Category	2010 Actual Costs
No cost in 2010	\$0
Total Power Block Engineering and Procurement	\$0