

BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 110009-EI

In the Matter of:

NUCLEAR COST RECOVERY CLAUSE.

VOLUME 2

Pages 135 through 289

PROCEEDINGS: HEARING

COMMISSIONERS  
PARTICIPATING:

CHAIRMAN ART GRAHAM  
COMMISSIONER LISA POLAK EDGAR  
COMMISSIONER RONALD A. BRISÉ  
COMMISSIONER EDUARDO E. BALBIS  
COMMISSIONER JULIE I. BROWN

DATE: Wednesday, August 10, 2011

TIME: Commenced at 12:25 p.m.  
Concluded at 1:09 p.m.

PLACE: Betty Easley Conference Center  
Room 148  
4075 Esplanade Way  
Tallahassee, Florida

REPORTED BY: LINDA BOLES, RPR, CRR  
Official FPSC Reporter  
(850) 413-6734

APPEARANCES: (As heretofore noted.)

DOCUMENT NUMBER-DATE

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## I N D E X

## WITNESSES

NAME:	PAGE NO.
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## EXHIBITS

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NUMBER:

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194

Scroggs' prior year's rebuttal  
testimony

286

## P R O C E E D I N G S

1  
2 (Transcript continues in sequence from Volume  
3 1.)

4 **CHAIRMAN GRAHAM:** All right. Now am I  
5 swearing in witnesses?

6 **MR. YOUNG:** Yes, sir.

7 **CHAIRMAN GRAHAM:** Okay. Your witnesses, are  
8 they here? If I can just get the witnesses to stand and  
9 to raise your right hand.

10 (Witnesses collectively sworn.)

11 **MR. YOUNG:** Mr. Chairman?

12 **CHAIRMAN GRAHAM:** Yes.

13 **MR. YOUNG:** Staff would note, per the  
14 Prehearing Officer's ruling, witness summaries shall not  
15 exceed five minutes per witness for each petition.

16 **CHAIRMAN GRAHAM:** Yep. I got that.

17 **MR. YOUNG:** Staff witnesses in this, in this  
18 portion of the docket will be testifying as a panel, and  
19 the witness, witness summaries for that will not exceed  
20 five minutes.

21 **CHAIRMAN GRAHAM:** I also want to remind the  
22 parties that we're not going to have testimony that's  
23 duplicative, repetitive, and there is no friendly cross  
24 allowed. I'm sure the Staff has already told you that,  
25 but I just want to let you know.

1                   Okay. Mr. Anderson, first witness.

2                   **MR. ANDERSON:** I'll introduce my colleague  
3 Jessica Cano, who will present FPL's first witness,  
4 Steven Scroggs.

5                   **MS. CANO:** Thank you.

6                                   **STEVEN D. SCROGGS**  
7 was called as a witness on behalf of Florida Power &  
8 Light Company and, having been duly sworn, testified as  
9 follows:

10                                   **DIRECT EXAMINATION**

11 **BY MS. CANO:**

12                   **Q** Mr. Scroggs, were you just sworn?

13                   **A** Yes.

14                   **Q** Would you please state your name and business  
15 address for the record?

16                   **A** My name is Steve Scroggs. I am the Senior  
17 Director of Development for Florida Power & Light  
18 Company.

19                   **Q** Thank you. Have you prepared and caused to be  
20 filed 73 pages of prefiled direct testimony on  
21 March 1st, 2011?

22                   **A** Yes, I have.

23                   **Q** And did you also prepare and cause to be filed  
24 42 pages of prefiled direct testimony in this proceeding  
25 on May 2nd, 2011?

1           A     Yes, I have.

2           Q     Did you also cause to be filed one page of  
3 errata and updates on August 4th, 2011?

4           A     Yes, I have.

5           Q     Do you have any other changes or revisions to  
6 make to your prefiled testimony?

7           A     No, I do not.

8           **MR. ANDERSON:** We've been asked to have people  
9 speak up a little more clearly.

10           **CHAIRMAN GRAHAM:** I think we can -- can we  
11 control that mic? Thank you.

12           **BY MS. CANO:**

13           Q     If I were to ask you the same questions today  
14 that are contained in your prefiled testimony, would  
15 your answers be the same?

16           A     Yes, they would.

17           **MS. CANO:** Mr. Chairman, I ask that the  
18 prefiled direct testimony of Steven Scroggs be entered  
19 into the record as though read.

20           **CHAIRMAN GRAHAM:** Let's enter that prefiled  
21 testimony into the record as though read.

22           **BY MS. CANO:**

23           Q     Did you also sponsor or cosponsor exhibits to  
24 your testimony?

25           A     Yes, I did.

1           Q     And do those consist of Exhibits SDS-1 through  
2           SDS-20?

3           A     Yes, I did.

4           **MS. CANO:** Mr. Chairman, I would note that  
5           these have been premarked for identification on Staff's  
6           exhibit list as Exhibits 2 through 21.

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BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

In re: Nuclear Power Plant )  
Cost Recovery Clause )

DOCKET NO. 110009-EI  
FILED: August 4, 2011

TESTIMONY OF STEVEN D. SCROGGS, MARCH 1, 2011

ERRATA

<u>PAGE #</u>	<u>LINE #</u>	
8	7	Change "SDS - 11" to "SDS - 7"

UPDATES

<u>PAGE #</u>	<u>LINE #</u>	
54	9-11	On July 20, 2011 the Ninth Revised Schedule for the Turkey Point 6 & 7 Site Certification Application (SCA) was approved. The effect of this revision extends the SCA schedule by approximately six weeks from the Eighth Revised Schedule.

TESTIMONY OF STEVEN D. SCROGGS, MAY 2, 2011

ERRATA

<u>PAGE #</u>	<u>LINE #</u>	
28	9	Change "June 15, 2011" to "July 15, 2011"

UPDATES

<u>PAGE #</u>	<u>LINE #</u>	
28	9	On July 14, 2011, FPL and Westinghouse agreed to extend the Forging Reservation Agreement. The current extension expires September 16, 2011.



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.**

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.  
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#### HIGH LEVEL PROJECT SUMMARY & ISSUES

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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.

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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.

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The economic slowdown has reduced the growth of demand for electricity on the FPL system, thus reducing the need for new capacity. Additionally, the

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economic downturn has reduced consumption in a number of sectors.

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Reduced natural gas demand coupled with incremental supply being identified in central U.S. shale deposits has reduced the near term -price of natural gas.

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The economic impact of these factors on the project feasibility is reviewed annually. Results to date maintain that the project remains feasible and in the

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best interests of FPL customers.

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

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the time frame identified in preceding projects, resulting in a Combined License decision by the end of 2013. Through 2009 and 2010, NRC reviews

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remained on pace while the State Site Certification process took a more protracted pace. The results of the license and permit review processes will

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define the final project features and conditions of certification. The NRC license process remains the critical path, or most influential sequence of

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events, to maintaining the current project schedule.

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Negotiations with the WS consortium in 2008 and 2009 resulted in indicative pricing for an EP scope that was used to revise the cost estimate range for the

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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  
3 established the New Nuclear Project team within Engineering, Construction &  
4 Corporate Services Division (ECCS) to manage the complex and specialized  
5 nature of the Combined Operating License Application (COLA) process and  
6 the engineering, procurement and construction activities. This team is  
7 managed by William Maher, Director of Licensing – New Nuclear Projects.  
8 The New Nuclear Project team has direct responsibility for the production and  
9 management of the COLA as well as the engineering, procurement, site  
10 preparation, construction and start-up aspects of the project. The New  
11 Nuclear Project team will adjust staffing as the project evolves, ensuring  
12 access to the necessary skill sets are maintained to accomplish project  
13 objectives in the most cost-effective manner.

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

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



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

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

12 A. As described above, FPL has robust project planning, management, and  
13 execution processes in place to manage the Turkey Point 6 & 7 project. These  
14 efforts are led by personnel with significant experience in project management  
15 and development supported by project management professionals trained in  
16 the deliberate execution of critical infrastructure projects through a  
17 comprehensive set of internal controls. Additionally, FPL is able to capitalize  
18 on the experience of its other power generation development projects by  
19 implementing lessons learned by those project teams. Finally, FPL  
20 implements an ongoing internal auditing and quality assurance process to  
21 continuously monitor compliance with the controls discussed above. In  
22 summary, FPL has the right people with the right tools and oversight making  
23 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

**INTERNAL/EXTERNAL AUDITS AND REVIEWS**

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**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 31<sup>st</sup>, 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.

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

13 A. Overall, FPL spent \$5,164,519 less than planned in 2009. This variance is the  
14 result of lower than planned NRC fees, Bechtel COLA contract support,  
15 transmission line permitting, SCA support, New Nuclear Project staffing, and  
16 unused contingency. The NRC fees were \$1,368,129 less than expected due  
17 to a lag in receiving the NRC review schedule and subsequent required  
18 reviews shifted into 2010; the Bechtel COLA contract support was \$1,267,765  
19 less than expected primarily attributable to the change in application filing  
20 dates shifting a portion of planned support for RAIs into 2010; Power Systems  
21 costs were \$819,896 less than expected primarily due to lower than  
22 anticipated costs associated with environmental studies supporting the  
23 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 The Prevention of Significant Deterioration (PSD) air permit was issued by  
3 the FDEP on May 28, 2010. This permit addresses air discharges, primarily  
4 related to the operation of the forced draft cooling towers for the project.

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

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

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

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

20

21 Significant fill will be required to establish the base for the plant site. FPL has  
22 investigated options to self-provide the fill, utilize regional commercial rock  
23 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 **Q. What were the key matters addressed by FPL project management in**  
4 **2010?**

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

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

14 A. Beginning in late 2009, FPL began a review of the developments of the past  
15 year to determine the best path forward for the project. The original schedule,  
16 with in-service dates of 2018 and 2020, required activities in the Preparation  
17 phase (detailed engineering, long lead procurement and construction planning)  
18 to be initiated by 2010, in parallel with the Licensing phase. This earliest  
19 practicable schedule assumed national level issues (energy policy, NRC  
20 design certification, NRC license review, economic and market behavior),  
21 state level issues (load growth, economic health), as well as project specific  
22 issues (pace of application reviews, commercial contracts) would have  
23 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.**

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                   **MAY 2, 2011**

6

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

8    A.    My name is Steven D. Scroggs. My business address is 700 Universe  
9           Boulevard, Juno Beach, Florida 33408.

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

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

15 **Q.    Have you previously provided testimony in this docket?**

16 A.    Yes.

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

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

- 19           •    Exhibit SDS-15, a graphic depiction of the four phase new nuclear  
20                deployment process and project schedule.
- 21           •    Exhibit SDS-16, Turkey Point 6 & 7 Preconstruction Nuclear Filing  
22                Requirement Schedules (NFRs) consists of 2011 P Schedules and  
23                2011 True-up to Original (TOR) Schedules. The NFR Schedules

1 contain a table of contents listing the schedules sponsored and co-  
2 sponsored by FPL Witness Powers and me, respectively. FPL has  
3 included the 2011 P Schedules as they are the basis for determining the  
4 reasonableness of the true-up of FPL's 2011 AE Schedules. The 2011  
5 TOR Schedules present a summary of costs that are the basis for the  
6 revenue requirements being recovered in 2011.

7 • Exhibit SDS-17, Turkey Point 6 & 7 Site Selection NFRs consists of  
8 2011 P Schedules and 2011 TOR Schedules. The NFR Schedules  
9 contain a table of contents listing the schedules sponsored and co-  
10 sponsored by FPL Witness Powers and me, respectively. FPL has  
11 included the 2011 P Schedules as they are the basis for determining the  
12 reasonableness of the true-up of FPL's 2011 AE Schedules. The 2011  
13 TOR Schedules present a summary of costs that are the basis for the  
14 revenue requirements being recovered in 2011.

15 • Exhibit SDS-18, Turkey Point 6 & 7 Preconstruction NFRs consists of  
16 2011 AE Schedules, 2012 P Schedules, and 2012 TOR Schedules. The  
17 NFR Schedules contain a table of contents listing the schedules  
18 sponsored and co-sponsored by FPL Witness Powers and me,  
19 respectively.

20 • Exhibit SDS-19, Turkey Point 6 & 7 Site Selection NFRs consists of  
21 2011 AE Schedules, 2012 P Schedules, and 2012 TOR Schedules. The  
22 NFR Schedules contain a table of contents listing the schedules

1 sponsored and co-sponsored by FPL Witness Powers and me,  
2 respectively.

- 3 • Exhibit SDS-20, consisting of summary tables presenting the 2011  
4 actual/estimated and 2012 projected preconstruction costs for the  
5 Turkey Point 6 & 7 project.

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

7 A. The purpose of my testimony is to provide a description of how the Turkey  
8 Point 6 & 7 project is being developed, managed and controlled to create the  
9 option for more reliable, cost-effective and fuel diverse nuclear generation to  
10 benefit FPL customers under the earliest practicable deployment schedule.  
11 The project undertakes the steps necessary to license, construct and operate  
12 two Westinghouse designed AP1000 nuclear reactors and associated  
13 transmission and ancillary facilities at the Turkey Point site near the existing  
14 Turkey Point 3 & 4 nuclear power plants in southern Miami-Dade County.  
15 My testimony will provide insight into how project activities are managed  
16 given the near term focus on obtaining all licenses, authorizations and  
17 approvals needed and the factors influencing key decisions affecting the  
18 nature, cost and pace of that effort. I will also describe the projected  
19 expenditures for 2011 and 2012 allowing FPL to support and defend the  
20 applications submitted in 2009 requesting the required licenses and permits.

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

22 A. My testimony includes the following sections:

- 23 1. Project Approach

- 1           2.     Process and Risk Management
- 2           3.     Procurement
- 3           4.     Issues Potentially Affecting Project
- 4           5.     Key Decisions & Milestones
- 5           6.     Preconstruction Cost Request
- 6           7.     Project Cost and Feasibility

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

8     A.    The primary focus of the current phase of the project has been, and remains,  
9           obtaining the necessary federal, state and local approvals that will define the  
10          project and enable construction and operation of the Turkey Point 6 & 7  
11          project. In doing so FPL is creating a valuable option that can be exercised at  
12          the most opportune time for the benefit of FPL customers. My testimony  
13          describes the project milestones expected to be achieved in 2011 and 2012,  
14          and the factors affecting the pace and execution of the Licensing phase of the  
15          project. The Licensing phase is the second step in a four step process, depicted  
16          in Exhibit SDS-15.

17

18          Key decisions control the pace of the project to maintain progress without  
19          incurring unnecessary cost or schedule risks. FPL has made decisions in past  
20          years to defer planned expenditures in long lead procurement, design  
21          engineering and the initiation of prime contracts (early stage Preparation  
22          phase activities) awaiting higher predictability in project schedule and cost.  
23          The projected in-service dates of 2022 and 2023 are based on the premise that

1 predictability will be developed to begin Preparation phase activities in late  
2 2012 and early 2013. Recognizing that this needed clarity and clear path to  
3 construction has not sufficiently developed, expenditures in 2011 and 2012  
4 are limited to those required to obtain the needed licenses, permits and  
5 approvals for operation and construction of the project. FPL will be  
6 monitoring several major milestones expected to occur in 2011 and 2012 that  
7 will have influence on the predictability of the Turkey Point 6 & 7 project cost  
8 and schedule. The unfolding industry and regulatory response to the recent  
9 events in Japan are anticipated to be a significant influence. FPL Witness  
10 Diaz provides a comprehensive perspective on the events and the potential  
11 influence on U.S. nuclear programs.

12  
13 My testimony discusses the content of the \$38.0 million of actual/estimated  
14 Pre-construction costs planned in 2011 and the \$31.4 million of projected Pre-  
15 construction costs planned for 2012, and why they are reasonable. Moreover,  
16 I will discuss the rationale for these expenditures and how they will be  
17 managed going forward to meet project objectives. These amounts contribute  
18 to a total company request to recover approximately \$196 million in 2012, as  
19 described by FPL Witness Powers. This equates to a residential customer  
20 monthly bill impact of \$2.09 per 1,000 kWh. The testimony also addresses  
21 the economic and fundamental feasibility of the project, concluding the  
22 project remains feasible with the capability to deliver the cost-effective,  
23 reliable, fuel diverse baseload generation needed in our future without

1 greenhouse gas emissions as envisioned in the Florida Public Service  
2 Commission (Commission) 2008 Need Order authorizing the project.

3 **Q. Would you please provide an overview of the expected benefits of the**  
4 **Turkey Point 6 & 7 project for FPL customers?**

5 A. Yes. Taking into account the updated project information related in this  
6 testimony, FPL expects that the Turkey Point 6 & 7 project will:

- 7 • Provide estimated fuel cost savings for FPL's customers of  
8 approximately \$1.1 billion (nominal) in the first full year of operation;
- 9 • Provide estimated fuel cost savings for FPL's customers over the life  
10 of the project of approximately \$75 billion (nominal);
- 11 • Diversify FPL's fuel sources by decreasing reliance on natural gas by  
12 approximately 13% beginning in the first full year of operation;
- 13 • Reduce annual fossil fuel usage by the equivalent of 177 million  
14 barrels of oil or 28 million mmbTU of natural gas; and
- 15 • Reduce CO2 emissions by an estimated 287 million tons over the life  
16 of the project, which is the equivalent of operating FPL's entire  
17 generating system with zero CO2 emissions for 7 years.

18 These quantifications are set forth in FPL Witness Dr. Sim's testimony and  
19 Exhibit SRS-1.

20

21

## PROJECT APPROACH

22

23 **Q. What is FPL's overall approach to developing Turkey Point 6 & 7?**

1 A. FPL continues to develop Turkey Point 6 & 7 through a deliberate process  
2 navigating the project through the four phases of project development:  
3 Exploratory, Licensing, Preparation, and Construction. The project has  
4 completed the Exploratory phase, and is currently focused on the Licensing  
5 phase prior to initiating Preparation phase activities. The approach allows  
6 FPL to make necessary progress without taking on the risks of committing to  
7 a specific construction schedule and the associated expenditures.

8

9 Therefore, FPL's approach has been developed as a step-wise process.  
10 Continuous monitoring of a wide range of factors and events is accomplished  
11 to help resolve uncertainty and increase predictability, informing each  
12 subsequent step.

13 **Q. Please expand on the concept of the step-wise process and how the risks  
14 related to the Turkey Point 6 & 7 project are controlled by key decisions.**

15 A. The project team monitors a host of issues at local, state and federal levels and  
16 across technical, commercial, economic and regulatory areas of interest. The  
17 impact on cost, schedule and quality are constantly being assessed through a  
18 set of routine tools and reviews. If review indicates the potential for a  
19 considerable cost or schedule impact, mitigation actions are identified and are  
20 designed to eliminate, reduce, defer or otherwise manage the impact. If the  
21 magnitude of the impact materially affects cost or schedule, or changes the  
22 feasibility of the project, a decision will be made as to whether such impact is  
23 acceptable in light of all current information. Annually the Commission will



1 review the results of these changes. Options available include continuing with  
2 a modified budget and schedule along with available mitigation actions, or  
3 halting a portion of the project temporarily while the issue is further assessed  
4 or resolved. The option of slowing or halting a portion of the project in  
5 response to significant events or uncertainties offers a high level of risk  
6 control for FPL and its customers.

7 **Q. How has this project approach specifically been applied to the activities**  
8 **planned for the Turkey Point 6 & 7 project in 2011 and 2012?**

9 A. In 2011 and 2012, FPL maintains the course developed in early 2010 when the  
10 project schedule was revised to remove the overlap between Licensing and  
11 Preparation phase activities. The 2010 review indicated that it was prudent to  
12 continue licensing efforts, but any expenditures committing to a specific  
13 construction schedule (such as long lead procurement) or conducting initial  
14 site engineering would be premature.

15

16 For example, the unanticipated events in Japan will likely impact the project  
17 schedule. FPL's approach has limited the impact of this unforeseen  
18 occurrence by not embarking on Preparation phase activities that may now be  
19 delayed. Maintaining the balance between making progress and managing  
20 expenditures will be reinforced as the industry and regulators respond to the  
21 events in Japan of March 2011.

22

1 FPL's resulting plan for 2011 and 2012 focuses on activities supporting the  
2 review of federal, state and local license and permit applications. The  
3 stepwise approach suggests that the best course of action in the next two years  
4 is to continue progress on obtaining all approvals while observing the  
5 application review processes underway, the developing commercial market  
6 for construction and equipment services, national and regional energy policy,  
7 and the actual experience of preceding U.S. and International projects.  
8 Information from these events will provide a better basis to develop a project  
9 execution plan that reduces risk to expenditures.

#### 11 PROCESS AND RISK MANAGEMENT

12  
13 **Q. How is the Turkey Point 6 & 7 project management organized to**  
14 **maintain an on-going risk management focus?**

15 **A.** The Turkey Point 6 & 7 project requires a wide range of specific experience in  
16 the development, design, construction and licensing of nuclear generation.  
17 There is also a significant volume of information generated as issues unique to  
18 new nuclear generation deployment are identified and evaluated. The project  
19 management structure of the Turkey Point 6 & 7 project provides for  
20 dedicated teams with the requisite subject matter expertise to be coordinated  
21 at all levels. This is accomplished through a project organization and  
22 reporting structure and a deliberate contracting structure applying the best  
23 resources to each issue while maintaining transparent and open

1 communications. The project organization relies on two principal  
2 organizations jointly responsible for the integrated execution of the project.  
3 William Maher manages the New Nuclear Plant (NNP) organization with  
4 responsibility for Nuclear Regulatory Commission (NRC) licensing and  
5 project engineering and construction. I lead the FPL Development  
6 organization for all other facets of project development, such as state Site  
7 Certification, local zoning approvals, public relations and Commission  
8 regulatory issues. Each organization is supported by FPL business units with  
9 specific, recent success in the certification, NRC re-licensing and permitting  
10 of twelve power generation units in Florida in the past eight years and is  
11 complemented by our national operating experience with renewable, natural  
12 gas and nuclear generation assets.

13  
14 FPL also gives careful consideration to how it contracts for support of the  
15 many license and permit applications. A combination of competitive bidding  
16 and single/sole source procurement is used, in compliance with FPL policies,  
17 to manage augmentation of FPL staff with qualified and experienced specialty  
18 contractors and service providers.

19 **Q. What process and risk management tools does FPL apply to obtain cost,  
20 risk and schedule objectives?**

21 **A.** FPL uses industry accepted project controls, systems and practices to obtain a  
22 high level of confidence in the expenditures incurred and projected for all  
23 projects. The primary means of control are 1) the project budgeting and

1 reporting process, 2) project schedule and activity reporting processes, 3) the  
2 contract management process for external service providers, and 4) internal  
3 and external oversight processes. These processes were fully described in my  
4 direct testimony provided in the March 1, 2011 True-up filing and continue to  
5 be utilized in the oversight of the project.

6 **Q. How are these tools reviewed over time and what new tools are being**  
7 **employed as a result of these reviews?**

8 A. Effectiveness measures are included within some mechanisms and provided  
9 by external review processes for all. As an example, the Engineering &  
10 Construction Division Project Dashboard presents issues and the current  
11 trends for those issues. Over time, if a problematic issue continues to trend  
12 down or remains neutral, the effectiveness of the project management controls  
13 are investigated to determine if modifications are needed to effect  
14 improvement. This tool has been revised recently to more specifically address  
15 the unique aspects of the Turkey Point 6 & 7 licensing project. Effectiveness  
16 of project control processes is also reviewed as a part of the project  
17 management reviews and audits.

18  
19 Project Memoranda, describing the background and analysis considered in  
20 project decisions are an example of a tool developed to ensure a higher level  
21 of documentation and transparency in the management of the project. These  
22 memoranda have documented decisions made with respect to project features,  
23 contracts, cost estimates and schedules.

1

2           Additionally, a high level risk summary has been developed to record the  
3           assessment of project risks over time. This summary qualitatively gauges the  
4           probability of occurrence and impacts to implementation, cost and schedule  
5           aspects of the project. This tool was developed in response to a comment  
6           during a project management review.

7   **Q.    What audit and review activities are planned and what are the objectives**  
8           **of these audits?**

9   A.    FPL employs a comprehensive suite of audit activities to evaluate and  
10       document the conduct of project activities. Standard annual financial audits  
11       provide full review of project expenditures to support prudence determination  
12       in the subsequent years. Annual internal controls reviews and financial audits  
13       are conducted to ensure FPL is appropriately applying all project controls and  
14       is adopting the appropriate techniques and tools learned from other projects in  
15       the industry. Topical audits are developed as necessary to complement  
16       specific areas of key interest at each stage of the project. Examples of topical  
17       audits would include quality control audits focusing on specific processes and  
18       training audits to verify personnel are receiving required instruction.

19   **Q.    What other activities are employed by the project to address industry**  
20       **issues affecting the long term success and execution of the project?**

21   A.    FPL is involved in a number of areas to address issues relevant to new nuclear  
22       deployment. The company works with the U.S. Department of Energy (DOE)

1 and members of Congress on energy policy matters related to nuclear  
2 development.

3  
4 FPL also participates in four specific groups comprised of new nuclear  
5 industry owners and design vendor(s). These include the Design Centered  
6 Working Group (DCWG), the AP1000 Owners Group (APOG), Advanced  
7 Nuclear Technology group and the NuStart Consortium. The collective  
8 purpose of these groups is to identify and resolve issues potentially affecting  
9 the licensing, design, construction, operation and maintenance of the AP1000  
10 design. Individually, each group provides a collaborative forum for owners  
11 to work with each other, the design vendor and the NRC to achieve  
12 standardized solutions to the issues facing all owners. This enables the  
13 industry to maintain a high level of standardization from the earliest stages of  
14 new nuclear deployment. Standardization of designs and processes will  
15 provide benefits to FPL customers in terms of efficiency and cost control.

16

17

## PROCUREMENT

18

19 **Q. Please summarize the results of the procurement activities supporting**  
20 **Turkey Point 6 & 7 project to date.**

21 A. The bulk of project activities and expenditures are related to the development  
22 of the detailed studies and analyses required to initiate, sustain and facilitate  
23 federal, state and local reviews of the proposed project. FPL has used

1 competitive bidding for the majority of total project expenditures and used  
2 single or sole source procurement when appropriate or where no alternative  
3 exists.

4 **Q. What key procurement activities are being addressed by the project in**  
5 **2011 and 2012?**

6 A. Procurement activities in 2011 and 2012 generally focus on the licensing and  
7 permitting process required to support and advance the federal, state and local  
8 approval processes. Professional services will be required from technical and  
9 environmental consultants, legal service firms and subject matter experts to  
10 respond to the inquiries of the public and the reviewing agencies during the  
11 application review process or the subsequent hearings. Additionally, the  
12 current project schedule calls for Preparation phase activities, such as clearing  
13 and grading at the site, in mid-2013. In order to prepare for those activities  
14 FPL would need to hire additional staff for its Construction team, conduct  
15 engineering reviews and planning, and develop bid packages for the work in  
16 2012. FPL has not included these costs in the projected 2012 request based on  
17 the need to observe significant events in 2011 and early 2012 prior to  
18 authorizing such expenditures. As more information is developed in 2011 and  
19 2012, FPL will make a decision to move forward on the current schedule or  
20 make appropriate revisions.

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**ISSUES POTENTIALLY AFFECTING PROJECT**

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**Q. What are the international, national and regional indicators being monitored for their effect on the Turkey Point 6 & 7 project?**

A. These can be generally grouped into four areas. First, the events surrounding the Japanese nuclear industry in the wake of the March 2011 earthquakes and tsunami are as significant as any that have faced the nuclear industry in recent years. The impacts of these events will likely have operational, regulatory and political ramifications for the U.S. nuclear industry. Second, progress of international and domestic new nuclear projects, specifically in the wake of the Japanese events, will be important inputs to inform management decision-making for the Turkey Point 6 & 7 project. Third, developments in the regional and national economy and energy policy have potential to affect the project. Finally, there are several project specific issues that may impact the project.

**Q. Please describe how the events in Japan's nuclear industry may impact the Turkey Point 6 & 7 project.**

A. There are likely to be indirect and direct impacts. A tremendous amount of information is generated and studied following major events to determine if changes to existing designs, regulations, operating or maintenance procedures are required. At the same time there will be significant political and regulatory interest in determining what actions are warranted based on these



1 analyses. Time will be needed to judge the cost or schedule impacts that may  
2 result from the implementation of actions related to the events in Japan.

3

4 Indirectly, many of the industry and regulatory resources that have been  
5 working on new nuclear generation may be tasked with assisting in any  
6 required actions determined for existing reactors impacting resources  
7 available for new application reviews. Directly, the results of these reviews  
8 could change the AP1000 design, or establish new standards to which the  
9 AP1000 must demonstrate its compliance impacting the AP1000 Design  
10 Certification (DC) Amendment or the Southern Vogtle Reference Combined  
11 License application (R-COLA). The potential impacts to cost and schedule  
12 cannot be estimated at this early time, but will be monitored during 2011 and  
13 2012.

14 **Q. What do recent developments related to the progress of international and**  
15 **domestic new nuclear energy projects indicate with respect to the**  
16 **continued pursuit of the Turkey Point 6 & 7 project?**

17 A. FPL is monitoring several AP1000 projects to capture issues and challenges  
18 and to learn from the experiences of these projects. Internationally, FPL is  
19 monitoring progress on the Sanmen 1 & 2 (China, AP1000) and Haiyang 1 &  
20 2 (China, AP1000) projects. The Sanmen and Haiyang projects represent the  
21 lead AP1000 technology plants. These projects have completed site  
22 preparation and the initial concrete pour for unit foundations and have started

1 module assembly and placement. At present, they appear to be on schedule  
2 and within the original cost estimate.

3  
4 In the United States, multiple projects are underway. The NRC is currently  
5 reviewing several AP1000 projects, including FPL's Turkey Point 6 & 7.  
6 Three of these projects (Southern Vogtle, South Carolina Electric & Gas  
7 Summer and Progress Levy) are well into the review process and are  
8 considered the first wave of AP1000 projects. Scheduled delivery has not  
9 changed from inception for the Vogtle and Summer projects, but has moved  
10 back two years for the Progress Levy project. In 2010 Duke Energy's Lee  
11 project moved its project dates back by approximately four years based on  
12 reduced demand in their service areas.

13  
14 The collective status of international and domestic projects demonstrates  
15 substantial progress is being made on the next generation of nuclear projects.  
16 Time will be required to gather lessons learned and strategies that would best  
17 apply to Turkey Point 6 & 7 project. In general, the pace of these projects are  
18 positive, but the milestones to be achieved in the next two years affirms FPL's  
19 choice to defer Preparation phase activities as a way to control  
20 implementation risks and identify efficiencies.

21 **Q. What are the specific federal licensing milestones FPL will monitor in**  
22 **2011 and 2012?**

1 A. Three areas are of specific interest to FPL. First, the continued progress of the  
2 DC Amendment for the AP1000 design is critical to project success. The DC  
3 Amendment has completed technical reviews and has moved to rulemaking in  
4 2011. The completion of rulemaking is necessary before COLAs based on the  
5 DC can be issued. The second track involves the progress of the Southern  
6 Vogtle COLA. This is the reference COLA for the AP1000 and is reflected in  
7 FPL's COLA. Lastly, the Progress Levy COLA includes many technical  
8 (geologic and seismologic) similarities to the Turkey Point COLA, and will  
9 provide significant feedback to inform the support of FPL's COLA.

10 **Q. What do recent developments related to the national and regional**  
11 **economy indicate with respect to the continued pursuit of the Turkey**  
12 **Point 6 & 7 project?**

13 A. The economic downturn has affected forward expectations for demand growth  
14 across the nation. The reduced growth rate has been cited as a reason for  
15 deferring in-service dates for some nuclear projects, but has not been a reason  
16 to cancel any projects. FPL Witness Sim addresses the impact of changes in  
17 FPL demand forecasts on the economic feasibility of Turkey Point 6 & 7,  
18 particularly in regard to projections of FPL's resource needs.

19  
20 The downturn has also had an effect on the cost and availability of capital,  
21 particularly in the consumer and small business markets. These observations  
22 lead FPL to conclude that no fundamental economic shift has occurred  
23 affecting FPL's near term pursuit of the Turkey Point 6 & 7 project.

1           However, this is an area requiring continuous monitoring to determine the  
2           availability and cost of capital to fund the project at the point when  
3           considerable spending is initiated associated with the Preparation and  
4           Construction phases of the project. Additionally, the recession will have  
5           potential effects on the financial health of contractors, vendors and other firms  
6           FPL will rely upon to execute the Preparation and Construction phases of the  
7           project and will be a factor in forming the project execution team.

8   **Q.    What do recent developments related to national and regional energy**  
9           **policy indicate with respect to the continued pursuit of the Turkey Point 6**  
10          **& 7 project?**

11   A.    National energy policy, as proposed by the current administration, is  
12          supportive of nuclear energy in general, and new nuclear energy development  
13          in specific. Recently, Energy Secretary Steven Chu asked Congress to  
14          consider nuclear generation as a part of any "Clean Energy" standard or  
15          policy. This practical statement has been preceded by steps to address the  
16          DOE responsibility to provide a final disposition of used fuel and proposing a  
17          three-fold increase in the funding for DOE Loan Guarantees for new reactors.  
18          The administration has reaffirmed its support for new nuclear power following  
19          the recent events at the Daiichi plant in Japan.

20  
21          The administration's renewed commitment to the DOE Loan Guarantee  
22          program is supportive of an overall energy policy seeking to increase energy  
23          security and reduce greenhouse gas emissions. As FPL has stated before, we

1 will consider all opportunities that may provide demonstrable benefits to our  
2 customers. During the first solicitation (2007 and 2008) the DOE Loan  
3 Guarantee program had a small allocation for a large number of perceived  
4 potential applicants, was undefined in cost, benefit and structure, and would  
5 have required a truncation of FPL's deliberate technology selection process in  
6 order to meet the December 2008 COLA filing eligibility requirement. For  
7 those reasons, FPL chose not to apply at that time. FPL is monitoring the  
8 implementation of first round Loan Guarantees. Should the proposed  
9 increased funding be made available, modifications to the DOE Loan  
10 Guarantee program qualification criteria instituted and a new solicitation  
11 opened, FPL will consider applying.

12  
13 Regionally, the legislature continues to address questions related to Florida's  
14 energy mix, affirming many of the policies implemented in the Florida Energy  
15 Act of 2006. Issues cited as important in the Commission's Need Order of  
16 April 2008 have not changed. Reliability, cost-effectiveness, fuel diversity,  
17 fuel supply reliability and price stability are still benefits to be delivered by  
18 increasing nuclear generation capacity and are still needed by FPL's  
19 customers. A future plan not including new nuclear capacity prolongs  
20 reliance on fossil fuels, maintains exposure to fuel supply reliability and price  
21 volatility, and is not as effective at reducing system emissions, including  
22 greenhouse gas emissions, as a plan including new nuclear generation  
23 capacity.

1 **Q. What project specific issues does FPL monitor that may affect objectives**  
2 **for 2011 and 2012?**

3 A. In addition to the national and industry developments discussed in the  
4 preceding section, FPL also monitors a variety of issues more specific to FPL  
5 and the Turkey Point 6 & 7 project. These issues include economic  
6 developments influencing the FPL system, the annual feasibility analysis, the  
7 pace of permit and license application reviews, and the development of  
8 information supporting the decision to initiate the Preparation phase of the  
9 project.

10 **Q. What were the economic developments impacting the FPL system and the**  
11 **project feasibility analysis?**

12 A. As observed last year, the economic slowdown has reduced demand for  
13 electricity on the FPL system, and reduced consumption in a number of  
14 sectors. As it pertains to the annual feasibility analysis, reduced natural gas  
15 demand coupled with incremental supply being identified in central U.S. shale  
16 deposits has depressed the price of natural gas. The impact of these issues is  
17 discussed later in this testimony and in the testimony of FPL Witness Sim.

18 **Q. Please describe the pace of the COL application review at the NRC and**  
19 **factors affecting the pace of the review.**

20 A. FPL submitted its COL application to the NRC on June 30, 2009. Following  
21 an acceptance review, the application was docketed on September 4, 2009.  
22 FPL received a review schedule in May of 2010 consistent with the duration  
23 of review received by other AP1000 COL applicants preceding FPL.

1           However, the NRC indicated in January 2011 that the NRC review schedule  
2           for FPL's Turkey Point 6 & 7 project is "under review".

3  
4           Federal budgeting and contracting issues impact the NRC's decisions  
5           regarding resource allocation to meet its agency objectives. Resource  
6           limitations may result in reduced review resources and a protracted review  
7           schedule. Currently the NRC is actively reviewing 12 COLAs (5 COL  
8           applicants have requested their reviews be suspended) and 5 DC Documents.  
9           Six of the COLAs in review are based on the AP1000 design, and 3 of the  
10          AP1000 COLAs have expected in-service dates before FPL's schedule of  
11          2022 and 2023. At the time of this filing, FPL has received no notification of  
12          any change to our existing schedule.

13  
14          Issuance of the U.S. Army Corps of Engineers (USACE) wetland permits are  
15          linked to the issuance of the Final Environmental Impact Statement (FEIS) in  
16          the NRC COLA process (currently scheduled in 2012), and therefore the  
17          actual review period for COLA will directly affect the timing of the USACE  
18          permits.

19       **Q.    Please describe the pace of the state Site Certification Application (SCA)**  
20       **review and factors affecting the pace of the review.**

21       A.    FPL submitted the SCA on June 30, 2009. Considerable interest has been  
22       expressed by multiple agencies related to the physical environment  
23       surrounding Turkey Point and the complexity of groundwater features in the

1 region. The result has been an unprecedented number of completeness  
2 inquiries from agencies requiring an extensive level of groundwater modeling.  
3 These inquiries are being actively addressed by the project team. Achieving  
4 completeness is critical to the success and validity of the Site Certification  
5 process. FPL will continue to work with all agencies to address the technical  
6 issues associated with SCA review to ensure all legitimate issues have been  
7 fully addressed prior to proceeding to the SCA Hearing (expected Summer  
8 2012) and subsequent decision by the Power Plant Siting Board (expected Fall  
9 2012).

10 **Q. When would it be necessary to revive commercial negotiations with the**  
11 **Westinghouse/ Shaw consortium?**

12 A. Negotiations with the Westinghouse/Shaw (WS) consortium have been on  
13 hold since 2009 recognizing FPL's choice to focus on the licensing aspects of  
14 the project and allow significant industry milestones to be achieved in other  
15 AP1000 projects. FPL estimates that it must make long lead procurement  
16 commitments by 2015 in order to continue to meet the projected 2022 in-  
17 service date for Unit 6. Assuming an 18 to 24 month period for negotiation of  
18 an appropriate contract, negotiations must be initiated in 2013. Therefore,  
19 negotiations with the WS consortium are not planned within the term of this  
20 docket request.

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**KEY DECISIONS AND MILESTONES**

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**Q. What will be the focus of the project in 2011 and 2012?**

A. During 2011 and 2012 the focus of the project will be to obtain the state Site Certification and respond to NRC staff as they develop the NRC FEIS and Final Safety Evaluation Report; two reports that will be the subject of the Atomic Safety Licensing Board hearings in 2013. The project will also be monitoring and participating in Everglades National Park's Environmental Impact Statement (ENP EIS) associated with the authorized land exchange along the western Preferred Corridor. As always, the project will continue to monitor industry milestones and events that could have an impact to the overall Turkey Point 6 & 7 project cost or schedule and provide indicators as to when Preparation phase activities are warranted.

**Q. Please provide examples of decisions that would be made associated with the State Site Certification process, and how those decisions may affect the project cost and schedule estimate.**

A. During the review of the SCA, agencies will assess the potential impacts and necessary mitigation associated with executing the proposed project. Through the course of that exchange, revisions or conditions of certification are often proposed that minimize impacts or assist project features to more closely conform to current regulatory policy. These revisions and conditions can impact the cost and schedule for project execution. In some instances, the revisions may result in considerable costs or execution risks to the project.

1 The project must make decisions regarding what level of revisions to make,  
2 what conditions can be accepted and assess the impact of these changes to  
3 project cost and schedule. Additionally, the project will be preparing to  
4 defend the applications at hearing and making decisions regarding the nature  
5 of that defense and the experts needed to support the case.

6 **Q. What milestones will be experienced related to the State Site Certification**  
7 **process in 2011 and 2012?**

8 A. Two significant milestones for 2011 include achieving completeness of the  
9 plant and non-transmission portion of the SCA and obtaining a Land Use  
10 consistency determination. In 2011 agencies will complete agency reports on  
11 the transmission portion of the SCA. Similarly, agencies will be expected to  
12 complete agency reviews on the plant and non-transmission portion in 2012.  
13 These reports set the stage for the SCA hearing in mid-2012.

14 **Q. What types of decisions will be made in support of the NRC staff**  
15 **reviews?**

16 A. The NRC staff may request additional analyses and studies to augment the  
17 initial submittal. These analyses can range from short topical studies to  
18 significant field studies and/or modeling. Project management will be making  
19 decisions on the necessity, scope and conduct of any additional work scope.  
20 Similarly, NRC staff review may highlight opportunities for revisions to the  
21 project and commitments the company may be asked to make regarding  
22 conditions of licensing. Revisions and commitments may result in additional  
23 project cost or schedule impact.

1 **Q. What milestones are expected in relation to the NRC licensing process in**  
2 **2011 and 2012?**

3 A. The results of the schedule review underway at the NRC will be a key  
4 milestone. As previously identified, the pace and outcome of AP1000 DC  
5 Amendment and R-COLA reviews will directly affect the project regulatory  
6 schedule. Finally, the response of the NRC to the events in Japan of March  
7 2011 will set the pace and standard for future licensing.

8 **Q. Will the project decisions regarding the ENP EIS and land exchange be**  
9 **similar to those made in the NRC and SCA processes?**

10 A. Yes. The EIS process will result in observations and recommendations. The  
11 Secretary of the Interior may choose to place conditions on the land exchange  
12 as a result of these observations and recommendations. FPL will be required  
13 to assess the nature of these conditions and determine the impact to project  
14 cost and schedule. It is expected that a public scoping meeting will be held in  
15 2011, followed by the development of a draft EIS. Comment will be collected  
16 on the draft EIS and a final EIS developed in 2012.

17 **Q. What decisions and milestones may be made related to project schedule?**

18 A. As previously stated, the project is focused on obtaining the licenses and  
19 approvals needed to create the option for new nuclear generation. However,  
20 FPL has maintained a schedule that provides an "earliest practicable in-service  
21 date" for planning purposes. This schedule allows the project to conduct the  
22 economic feasibility analysis required in this docket. The date assumes that  
23 needed predictability is achieved in regulatory, commercial and project

1 execution areas. If the project proceeds on its current scheduled pace and  
2 maintains its planning date of 2022 for Unit 6 in-service, early Preparation  
3 phase steps would need to begin in 2012 or 2013. These steps include hiring  
4 construction project staff and engaging in the preliminary engineering related  
5 to site clearing and access road construction. FPL has not included these costs  
6 in the projected 2012 request based on the need to observe significant events  
7 in 2011 and early 2012 prior to such expenditures. As more information is  
8 developed in 2011 and 2012, FPL will make a decision to move forward on  
9 the current schedule or make appropriate revisions.

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

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

17

18 FPL's decision to carefully manage the risk of inefficient expenditures will  
19 allow the project to better advance through the early uncertain periods,  
20 thereby enabling the project to proceed to a later stage where risks can be  
21 better identified, quantified and mitigated. Considering all project specific  
22 and industry factors, this is a responsible and prudent course of action to

1 continue progress in creating the option for new nuclear generation for our  
2 customers.

3 **Q. Are there other decisions that will be required in 2011 or 2012?**

4 A. Yes. FPL executed a Forging Reservation Agreement with Westinghouse in  
5 2008 to secure manufacturing capacity for ultra-heavy forgings needed to  
6 support the project's previous schedule. The agreement has been extended  
7 several times to allow FPL and Westinghouse to monitor industry  
8 developments and determine the best disposition of the existing reservation  
9 agreement. The current extension expires June 15, 2011. FPL intends to  
10 complete negotiations of a new agreement by that date.

11

12 **2011 & 2012 PRE-CONSTRUCTION COSTS**

13

14 **Q. How are the 2011 actual/estimated costs and the 2012 projected costs**  
15 **developed?**

16 A. As described earlier, FPL has a disciplined ground-up process to develop  
17 project budgets. This process was used in the initial project budgeting activity  
18 and is routinely reviewed and evaluated for adequacy and accuracy as  
19 additional information becomes available. The estimates of the 2011  
20 actual/estimated and 2012 projected costs were completed in accordance with  
21 FPL's budget and accounting guidelines and policies. Where services are  
22 contracted, rate sheets are provided by the contractor and reviewed to verify  
23 the charged rates are consistent with FPL's experience in the broader industry.

1 The cost estimates were compared to other costs being incurred by the  
2 company for similar activities and found to be reasonable.

3 **Q. Please provide a high level summary of the 2011 actual/estimated and the**  
4 **2012 projected costs presented in this filing.**

5 A. The \$38 million of expenditures estimated for 2011 are solely related to the  
6 pursuit of licenses and permits for the project. All 2011 costs provide for FPL  
7 staff and contractors necessary to support and advance the various  
8 applications throughout the review period with the participating agencies. As  
9 discussed earlier in this testimony, no engineering design or procurement  
10 activities are planned for 2011. Costs in the engineering and design category  
11 are related to the construction of an exploratory well necessary to complete  
12 the Underground Injection Control (UIC) permitting process.

13

14 In 2012, it is projected \$31.4 million of expenditures will be incurred to  
15 support the continued review of the project applications. Support costs for the  
16 licensing and permitting activities are expected to be lower in 2012 assuming  
17 the completion of the SCA reviews by mid-2012.

18 **Q. What changes may occur that could affect these cost projections?**

19 A. As discussed previously, the 2011 and 2012 budgets are based on estimates of  
20 the requirements to support the expected scope and schedule for application  
21 reviews and approvals. Licensing and permitting support will take the form of  
22 subject matter expertise, studies and analyses in response to agency requests.  
23 While FPL has submitted comprehensive applications meeting the respective

1 standards, additional information has been requested. Budgets reflect the  
2 information requested to date. Similarly, if significant intervention is  
3 registered against the applications, the cost of supporting the applications at  
4 hearing may increase. Current estimates assume some opposition is  
5 presented.

6

7 As we have seen, the pace of these projects can change. If conditions warrant,  
8 some Preparation phase activities may be advisable in the latter part of 2012.  
9 However, no expenditures for 2012 Preparation phase activities have been  
10 included in this request.

11 **Q. Please summarize the costs included in this filing for Turkey Point 6 & 7**  
12 **Pre-Construction activities.**

13 A. Schedule AE-6 of SDS-18 presents the 2011 actual/estimated costs in the  
14 following categories: 1) Licensing \$28,789,986, 2) Permitting \$2,416,877, 3)  
15 Engineering and Design \$6,748,673, 4) Long Lead Procurement advance  
16 payments \$0, 5) Power Block Engineering and Procurement \$0, and 6)  
17 Transmission Engineering \$0. Schedule P-6 of SDS-18 presents the 2012  
18 projected costs in the following categories: 1) Licensing \$27,362,894, 2)  
19 Permitting \$2,420,144, 3) Engineering and Design \$1,610,050, 4) Long Lead  
20 Procurement \$0, 5) Power Block Engineering and Procurement \$0, and 6)  
21 Transmission Engineering \$0. Table 1 of Exhibit SDS-20 provides a  
22 summary of the actual/estimated 2011 and projected 2012 Preconstruction

1 costs. The descriptions in Exhibit SDS-20 tables are illustrative and do not  
2 provide full line item detail.

3 **Q. What major differences are noted for the 2011 and 2012 project budget**  
4 **when compared to FPL's prior filings?**

5 A. There is no significant difference in the project budget for 2011 and 2012  
6 when compared to FPL's prior filings. Some adjustments have been made to  
7 accommodate for shifts in project schedule from year to year. For example,  
8 development of the UIC wells will occur in 2011 and 2012, where previously  
9 budgeted for 2010 and 2011. Similarly, extensions of the SCA schedule  
10 deferred legal costs for hearings into 2011 and 2012. This results in  
11 increasing the 2011 actual/estimated expenditures approximately \$8.5 million  
12 more than projected in the May 2010 filing.

13 **Q. Please describe the activities included in the Licensing category for the**  
14 **2011 actual/estimated costs and the 2012 projected costs.**

15 A. For the period ending December 31, 2011, Licensing costs are projected to be  
16 \$28,789,986 as shown on Line 3 of Schedule AE-6 of SDS-18. For the period  
17 ending December 31, 2012, Licensing costs are projected to be \$27,362,894  
18 as shown on Line 3 of Schedule P-6 of SDS-18. Table 2 of Exhibit SDS-20  
19 provides a detailed breakdown of the Licensing subcategory costs.

20  
21 Licensing costs consist primarily of FPL employee and contractor labor and  
22 specialty consulting services necessary to support the various license and  
23 permit applications required by the Turkey Point 6 & 7 project. The majority



1 of the licensing expenditures are a result of the federal COLA process. This  
2 value is a combination of NNP team costs and Bechtel COLA team costs.  
3 The license and permit applications contain project specific information,  
4 assessments and studies required by various regulatory authorities to support  
5 the reviews leading to decisions on the technical, environmental and social  
6 acceptability of the project. Other licensing activities include costs associated  
7 with the SCA, USACE permits and delegated programs such as Prevention of  
8 Significant Deterioration and UIC. License and permitting costs are  
9 developed in accordance with budget and accounting guidelines and policies.  
10 Some activities are common between applications, and therefore offer  
11 opportunities to coordinate efforts and manage costs. Further, these cost  
12 estimates were compared to FPL's recent extensive experience with the  
13 development and permitting of new generation projects in Florida and found  
14 to be reasonable.

15 **Q. What are the major differences between the 2011 actual/estimated values**  
16 **and those projected in the May 2010 filing for the Licensing category?**

17 A. Differences are created by the shifting NRC COLA review schedule. Some  
18 activities scheduled for 2010 were deferred into 2011 and some 2011  
19 activities were moved into 2012.

20 **Q. Please describe the activities in the Permitting category for the 2011**  
21 **actual/estimated costs and the 2012 projected costs.**

22 A. For the period ending December 31, 2011, Permitting costs are projected to be  
23 \$2,416,877 as shown on Line 4 of Schedule AE-6 of SDS-18. For the period

1 ending December 31, 2012, Permitting costs are projected to be \$2,420,144 as  
2 shown on Line 4 of Schedule P-6 of SDS-18. Table 3 of Exhibit SDS-20  
3 provides a detailed breakdown of the Permitting subcategory costs, including  
4 a description of items included within each category.

5  
6 Permitting fees consist of expenditures for Project Development management,  
7 public outreach/education and environmental services. Outreach is a vital  
8 process to inform stakeholders of the project and educate the public with  
9 regard to the many processes where they can be involved. The outreach  
10 activity involves hosting informational events and providing information on  
11 the project through a variety of media platforms. FPL experience has  
12 demonstrated that a proactive outreach and education approach facilitates a  
13 sharing of concerns and perspectives improving the overall project.  
14 Development costs in 2011 include two personnel: myself and a Project  
15 Manager. Environmental services relate to costs associated with supporting  
16 the non-NRC applications. Legal expenditures provide necessary support to  
17 activities for all permitting and project interactions. Legal support  
18 expenditures are necessary to support the timely preparation, submission, and  
19 review of issues associated with the project at the local, state and federal  
20 agency levels.

21 **Q. Please describe the activities in the Engineering and Design category for**  
22 **the 2011 actual/estimated costs and the 2012 projected costs.**

1 A. The Engineering and Design activities performed in 2011 and 2012 are  
2 required to support the permitting effort for the UIC well system. For the  
3 period ending December 31, 2011, Engineering and Design costs are projected  
4 to be \$6,748,673 as shown on Line 5 of Schedule AE-6 of SDS-18. For the  
5 period ending December 31, 2012, Engineering and Design costs are projected  
6 to be \$1,610,050 as shown on Line 5 of Schedule P-6 of SDS-18. Table 4 of  
7 Exhibit SDS-20 provides a detailed breakdown of the Engineering and Design  
8 subcategory costs, including a description of items included within each  
9 category.

10

11 Engineering and Design costs consist primarily of contract engineering and  
12 construction services necessary to develop the UIC exploratory well. The  
13 well is necessary to collect further data confirming the geology and hydrology  
14 at the site to support a properly constructed UIC well system.

15

16 Costs for participation in industry groups include the EPRI Advanced Nuclear  
17 Technology working group (with annual fees of \$275,000) and the DCWG(no  
18 charge to participate in this group). The 2011 APOG fee was expensed in  
19 December 2010, and the 2012 APOG fee of \$980,000 is anticipated to be paid  
20 in early 2012. These costs are necessary to obtain the benefits of membership  
21 described earlier in this testimony.

22 **Q. Please describe the activities in the Long Lead Procurement category for**  
23 **the 2011 actual/estimated costs and the 2012 projected costs.**

1 A. For the period ending December 31, 2011, Long Lead Procurement costs are  
2 projected to be \$0 as shown on Line 6 of Schedule AE-6 of SDS-18. Future  
3 Long Lead Procurement costs are anticipated to be included in the Power  
4 Block Engineering and Design cost category.

5 **Q. Please describe the activities in the Power Block Engineering and**  
6 **Procurement category for the 2011 actual/estimated costs and the 2012**  
7 **projected costs.**

8 A. For the period ending December 31, 2011, Power Block Engineering and  
9 Procurement costs are projected to be \$0 as shown on Line 7 of Schedule AE-  
10 6 of SDS-18. For the period ending December 31, 2012, Power Block  
11 Engineering and Procurement costs are projected to be \$0 as shown on Line 7  
12 of Schedule P-6 of SDS-18.

13 **Q. Please describe the activities in the Transmission Engineering category**  
14 **for the 2011 actual/estimated costs and the 2012 projected costs.**

15 A. For the period ending December 31, 2011, Transmission Engineering  
16 expenditures are projected to be \$0 as shown on Line 25 of Schedule AE-6 of  
17 SDS-18. For the period ending December 31, 2012, Transmission  
18 Engineering expenditures are projected to be \$0 as shown on Line 25 of  
19 Schedule P-6 of SDS-18.

20

21 All 2011 and 2012 costs associated with Transmission planning are related to  
22 the licensing and permitting activities, and therefore are appropriately  
23 included in those categories, described above.

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## PROJECT COST AND FEASIBILITY

**Q. What is the basis and background of the non-binding cost estimate range used by the project?**

A. The project cost estimate range was initially developed in 2007 to support the Need Determination in 2008. The cost estimate was developed by reviewing the most comprehensive cost analysis available for a two unit, 1,370 MW U.S. new nuclear project and adjusting information for the Turkey Point project specific information available at the time. In 2007, FPL had not selected a specific technology nor had it completed any site specific project design or planning. Necessarily, the cost estimate range was broad and inclusive of a range of potential costs. The original cost estimate range was not based on firm contractual agreements, approved licenses and permits or a detailed project execution plan and schedule. In early 2010, FPL conducted a review of the cost estimate to reflect indicative pricing from Westinghouse/Shaw and updates to the overall project design. This review provided a revised estimate and reaffirmed that the existing cost estimate range remained valid. A table describing the results of the review is provided as Exhibit SDS-13 of my March 1, 2011 testimony in this proceeding.

**Q. Please review how the FPL cost estimate process is constructed and how it is used to help evaluate the feasibility of the project each year.**

1 A. An overnight cost is developed using the most current information available.  
2 An overnight cost provides an estimate of the total project costs assuming all  
3 costs occur at one point in time (“overnight”) and time-related costs  
4 (escalation, interest during construction) are not included. Further,  
5 recognizing many things could influence the overnight cost, additional  
6 analysis is conducted on each component of the overnight cost to explore how  
7 much it could vary, resulting in a cost estimate range. The overnight cost  
8 provides an indication of the cost per kilowatt (\$/kW) for the project in a  
9 given year reference. The 2010 cost estimate range was \$3,397/kW to  
10 \$4,940/kW in 2010 dollars. Updating the cost estimate range to 2011 dollars,  
11 using a net 2.5% escalation rate, results in a cost estimate range of \$3,482/kW  
12 to \$5,063/kW. A breakeven cost analysis is developed by FPL’s Resource  
13 Assessment and Planning department, and is further discussed by FPL  
14 Witness Sim. This breakeven cost is provided as an overnight cost and is  
15 directly compared to the cost estimate range to assess the economic feasibility  
16 of the project.

17 **Q. Have there been any revisions to project features or design in the past**  
18 **year that would suggest a need to revise the cost estimate range?**

19 A. No. A review was conducted to capture any potential changes and estimate  
20 the potential cost impact. No significant changes or developments have  
21 occurred in the past year that would indicate any revisions are necessary to the  
22 project cost estimate range.

1 **Q. What factors impact the overall project cost estimate when time-related**  
2 **costs such as price escalation and carrying costs are included?**

3 A. As one would expect, the actual cost escalation influencing the final cost of  
4 the project will be the result of macroeconomic and industry specific  
5 economic factors present during the Preparation and Construction periods.  
6 The pace of expenditure, escalation and carrying costs may be estimated to  
7 provide an understanding of their relative contribution to the overall project  
8 cost. The time-related factor most influential on the total project cost is  
9 expected to be the actual pace of expenditures experienced during the  
10 procurement and construction period. If the period is prolonged, these time-  
11 related costs will have a proportionally higher effect on the overall project  
12 cost. This is why it is critical to have a fully vetted project execution plan  
13 with high predictability in cost, schedule and project controls prior to  
14 initiating construction. A well-designed execution plan will stage major  
15 procurement expenditures to occur as late as possible without affecting the  
16 construction schedule in order to minimize carrying costs. Further, the  
17 optimal execution plan will provide for clockwork sequential execution of  
18 major project construction events to maximize efficiency of financial, material  
19 and labor resources.

20 **Q. What is the effect on the estimated total project costs if this scenario were**  
21 **the actual schedule?**

22 A. As described above, there are a number of assumptions made to arrive at this  
23 estimate. Under the current 2022/2023 in-service date schedule, and using the

1 2011 overnight cost estimate range, the total project cost range becomes \$12.8  
2 billion to \$18.7 billion for the 2,200 MW project. The increase to the  
3 estimated total project cost is solely a result of the effect the assumed cost  
4 escalation (2.5% per year) has on expenditures that will be made later than  
5 planned in the original schedule. The actual escalation may be higher or  
6 lower than the assumption.

7 **Q. What are the most current Turkey Point 6 & 7 economic feasibility**  
8 **analysis results?**

9 A. As discussed by FPL Witness Sim, the most current feasibility analysis  
10 affirms the cost effectiveness and benefits associated with the Turkey Point 6  
11 & 7 project using the same approach applied in the Need Determination  
12 Proceeding for the project and the two prior NCRC filings. The analysis  
13 calculated a projected "break-even" cost for new nuclear; a cost that would  
14 result in the same life cycle costs (or cumulative present value of revenue  
15 requirements) as an alternative plan relying on natural gas combined cycle  
16 units. The analysis was conducted for seven scenarios comprised of three fuel  
17 and three emission cost scenarios. The projected break-even costs were  
18 higher than FPL's non-binding cost estimate range in six of seven scenarios.  
19 The seventh scenario, which assumed low natural gas and low CO2 costs for  
20 approximately half a century: i.e., through the year 2010, indicates a  
21 breakeven cost that is economically comparable to the high end of the cost  
22 estimate range. Recognize that if the combined cycle option were selected  
23 over the Turkey Point 6 & 7 project based on equivalent economics, that



1 selection would not deliver the qualitative benefits of fuel diversity, energy  
2 security and zero green house gas emissions that are offered by new nuclear  
3 generation.

4 **Q. In February 2010, FPSC Staff provided a list of factors for consideration**  
5 **in the Feasibility Analysis. Have those factors been considered?**

6 A. Yes. FPL Witness Sim discusses the economic factors and I discuss the non-  
7 economic factors.

8 **Q. What non-economic factors affect the projects long term feasibility?**

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

12  
13 Significant federal, state and local approvals are required to allow for the  
14 construction and operation of the project. Due diligence activities and  
15 ongoing agency reviews continue to affirm the long-term feasibility of the  
16 project. The intense review process currently underway will result in each  
17 agency identifying its perspective on the project and describing conditions  
18 upon which the project approvals may be granted. While the review process  
19 has taken longer than originally anticipated compared to our experience with  
20 Turkey Point Unit 5 and other recent development activity, the process is  
21 proceeding substantively as expected.

22

1 Financing will be determined as the project proceeds through approvals to  
2 construction. Activity on other U.S. projects shows a strong interest in the  
3 investment community to participate in new nuclear financing. For instance,  
4 Municipal Electric Authority of Georgia conducted a successful solicitation  
5 for \$2.7 billion of project bonds for its share of the Vogtle Units 3 & 4  
6 AP1000 project. More interest was displayed than was required for the  
7 solicitation and the net Build America Bonds Rate for the three categories of  
8 bonds were 4.33%, 4.31% and 4.59%, respectively. However, the impacts of  
9 the nuclear events in Japan may influence the financial community's view on  
10 financing new nuclear projects.

11

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

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

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

1 reliability, and whether the plant is the most cost-effective alternative. Each  
2 year the feasibility analysis addresses changes in system and project-related  
3 factors to determine if the project remains cost-effective for customers. The  
4 analysis looks at a range of potential future economic and regulatory scenarios  
5 to ensure the project viability is robustly 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 **Q. Does this conclude your direct testimony?**

21 **A. Yes.**

1 BY MS. CANO:

2 Q Mr. Scroggs, would you please provide an oral  
3 summary of your testimony to the Commission.

4 A Yes.

5 Good afternoon, Chairman and Commissioners. I  
6 appreciate the opportunity to speak to you today.

7 The purpose of my testimony is to describe the  
8 activities associated with FPL's management of the  
9 Turkey Point 6 and 7 project from January 2009 to  
10 present, and the activities that are planned for the  
11 project through 2012.

12 The Turkey Point 6 and 7 project was developed  
13 in response to Federal Energy Policy and the Florida  
14 Energy Act of 2006, whose mutual objective was to  
15 promote utility investment in nuclear energy for the  
16 benefit of customers. FPL began the effort in 2006, and  
17 in 2008 received a need order from this Commission that  
18 authorized pursuit of the Turkey Point 6 and 7 project.

19 From the outset, FPL chose an approach that  
20 would adjust the actual development and construction  
21 path in light of additional information, knowing that  
22 each year the Commission will have the ability to review  
23 and evaluate the decisions contemporaneously. FPL has  
24 continuously worked with the NRC -- or the Commission  
25 Staff through the nuclear cost recovery clause to

1 routinely review the expenditures and decisions that  
2 comprise the initial licensing phase of the project.

3 The content of my testimony and the  
4 accompanying exhibits and nuclear filing requirements I  
5 sponsor once again provide the Commission with the  
6 information necessary to validate that FPL's actual  
7 costs through 2010 have been prudently incurred and that  
8 FPL's actual estimated costs for 2011 and projected  
9 costs for 2012 are reasonable.

10 Key decisions made in the past two years  
11 demonstrate how FPL is actively managing the project  
12 pace as the best means of managing risk. As  
13 foreshadowed in 2009, the level of predictability in  
14 scheduling costs necessary to maintain the original  
15 project schedule did not appear by 2010. In response to  
16 that, FPL chose to defer certain planned expenditures  
17 and extend the project schedule. FPL's commitment to  
18 new nuclear has not changed.

19 Simply put, the project adapts to the pace of  
20 regulatory and market changes to maintain progress and  
21 manage risk. FPL plans to proceed in this deliberate  
22 fashion because we know the clarity of schedule and  
23 predictability of costs can only come from continued  
24 diligent pursuit of this project.

25 My testimony also explains the nonbinding cost

1 estimate, then supports the conclusions of the annual  
2 feasibility analysis. That annual feasibility analysis  
3 identifies that the project continues to be  
4 cost-effective for customers and offers the benefits of  
5 fuel diversity and emission-free generation that led to  
6 the Commission's original affirmative need order.

7 The Turkey Point 6 and 7 project provides an  
8 extraordinary opportunity to address three critical  
9 issues: Supply reliability through fuel diversity;  
10 reasonableness of costs through low cost, stably priced  
11 generation; and meaningful greenhouse gas emission  
12 reductions through baseload generation with no  
13 emissions.

14 FPL's customers have enjoyed the benefits of  
15 nuclear power from decisions that were made over 40  
16 years ago. We expect that they will -- through  
17 continued application of the nuclear cost recovery  
18 clause they'll be able to enjoy increased amount of  
19 these benefits in the future.

20 That concludes my summary.

21 **CHAIRMAN GRAHAM:** Thank you, sir.

22 **MS. CANO:** Thank you. FPL tenders the witness  
23 for cross-examination.

24 **CHAIRMAN GRAHAM:** Okay. The witness is up for  
25 cross-exam. Who's going to be first?

1 MS. KAUFMAN: I think I've been designated.

2 CHAIRMAN GRAHAM: Now let me just make sure I  
3 understand. As we go through all these FPL witnesses,  
4 you will always be first and OPC will always be second?

5 MS. KAUFMAN: No. I think I'm going to be  
6 first on this, this witness, if that's all right.

7 CHAIRMAN GRAHAM: That's fine.

8 MS. KAUFMAN: I think Ms. Christensen was just  
9 going to -- wanted to make a comment.

10 MS. CHRISTENSEN: If you wanted to establish  
11 an order, that's fine.

12 CHAIRMAN GRAHAM: No. No. I was just trying  
13 to figure it out. I'll just look at you and you guys  
14 decide who's going next.

15 MS. CHRISTENSEN: Okay.

16 MS. KAUFMAN: Thank you.

17 MS. CHRISTENSEN: Thank you.

18 CROSS EXAMINATION

19 BY MS. KAUFMAN:

20 Q Goodness. Good afternoon, Mr. Scroggs. How  
21 are you?

22 A Good afternoon.

23 Q I'm Vicki Kaufman. I'm here on behalf of the  
24 Florida Industrial Power Users Group.

25 You are Senior Director of Project Development

1 at FPL; correct?

2 A That's correct.

3 Q And you're responsible for all power  
4 generation projects; is that right?

5 A I'm in the development business unit that is  
6 responsible for all power projects for the utility. My  
7 particular assignment is this project, the Turkey Point  
8 6 and 7 project.

9 Q And is it correct that you have been involved  
10 with the Turkey Point 6 and 7 project really since its  
11 inception?

12 A That's correct.

13 Q And you were a witness, weren't you, in the  
14 determination of need case before the Commission?

15 A That's correct. I was one of the witnesses.

16 Q Okay. If you would turn to your testimony, I  
17 think this is your March testimony, to page 12, please.

18 A I'm there.

19 Q Okay. And if you look at the question that  
20 begins on line 3, it says: "What national level issues  
21 are being monitored for the potential impact to cost and  
22 schedule of the Turkey Point 6 and 7 project?"

23 And then you have three different categories  
24 of issues that are being monitored. The first one that  
25 you've got there is the economy; correct?



1           A     That's correct.

2           Q     What kinds of issues are you looking at in the  
3 economy that might impact the costs and schedule of the  
4 units?

5           A     Particularly the economy affects the annual  
6 feasibility analysis, and the annual feasibility  
7 analysis is used to determine the feasibility of the  
8 project. The economic issues involved in that analysis  
9 are reviewed by the Commission through the Ten-Year Site  
10 Plan and again through this docket and are consistent  
11 with our long-term approach for planning generation  
12 assets for the, for the company.

13          Q     For example, is one of the issues that you  
14 look at on the national level, does it have to do with  
15 the cost of debt?

16          A     There's not a -- to my understanding, Witness  
17 Sim would be more appropriate to answer specific  
18 questions about the annual feasibility analysis.

19          Q     Well, when you told the Commission in this  
20 question and answer that you look at developments in the  
21 economy, were there specific items that you had in mind?

22          A     As -- yes. In the annual feasibility analysis  
23 we look at fuel forecasts, we look at demand forecasts,  
24 we look at the wide range of specific entries into that  
25 annual feasibility analysis.

1           Q     Do you look at, for -- I'm sorry. I didn't  
2 mean to interrupt you.

3           A     But that as an entity itself is not a specific  
4 input into the annual feasibility analysis.

5           Q     Well, when you're deciding on the feasibility  
6 of the project, and particularly its costs, do you look  
7 at, for example, the credit downgrade that the United  
8 States just experienced?

9           A     That's not a direct input, to my knowledge, to  
10 our annual feasibility analysis.

11          Q     So are you saying that you do not look at  
12 national economic conditions when you're considering the  
13 cost of feasibility of the project?

14          A     That's not what I said.

15          Q     Okay.

16          A     In answer to your question, do we look at the  
17 debt ratings of the United States as a specific input  
18 into our annual feasibility analysis, the answer is no.  
19 What we do look at is the overall business environment  
20 and the effect that has on commodity prices, demand, and  
21 our expectation for the need for the project. Those are  
22 all incorporated in the annual feasibility analysis as  
23 presented.

24          Q     Okay. Thank you for that clarification.

25                 Would you agree with me that developments in

1 the economy, particularly perhaps the developments that  
2 we've seen recently, have the potential to increase the  
3 costs of the project?

4 A Again, I'd not be the best witness to answer  
5 questions about, specifically about the annual  
6 feasibility analysis. I can tell you that we see  
7 variations in commodities and prices and, and economic  
8 behavior throughout the long history of this project,  
9 and that is why the Commission relies on a very  
10 long-term and vetted process for determining the annual  
11 feasibility.

12 Q Well, let me ask you this, Mr. Scroggs. Do  
13 you, do you think that the current economic climate has  
14 the potential to increase the cost of the project? If  
15 you don't have an opinion, you can say so.

16 A It would be too difficult for me to address  
17 all the various things that could happen from the  
18 current. We've seen, through the economic downturn  
19 we've seen commodity prices come down. We've seen labor  
20 prices come down. So there are opportunities for prices  
21 to moderate, as well as other prices or costs to  
22 increase.

23 Q There's also certainly potential for the costs  
24 of the project to increase; would you agree?

25 A There's potential for increase as well as

1 decrease.

2 Q The second item that you talk about that might  
3 impact the cost and the schedule is energy policy at a  
4 national, at national and regional levels. I guess  
5 let's start with the national level. What kind of  
6 national level issues are you monitoring related to  
7 energy policy?

8 A Well, certainly we look at the energy mix that  
9 the Federal Government is promoting through energy  
10 policy. Recent statements from the Administration have  
11 been very strong in support of continuing the support of  
12 nuclear energy as a vital component to make meaningful  
13 greenhouse gas reductions, as well as increase fuel  
14 diversity and energy security. So we look at, at those  
15 broad policy statements as well as individual programs,  
16 such as the Loan Guarantee Program that has been  
17 proposed to be, receive additional funding by the  
18 Administration this year, and we look to that as a  
19 potential opportunity to help our customers.

20 Q When you talk about national energy policy,  
21 have you taken a look at the nuclear incident that  
22 occurred in Japan as to how that might impact national  
23 energy policy?

24 A Absolutely. That is a seminal event in the  
25 nuclear industry. It will certainly have an effect on

1 how the project and the energy policy of the nation goes  
2 forward. But, you know, the recent indications are that  
3 things remain on track. The Nuclear Regulatory  
4 Commission in the past week have continued the process  
5 for approving the AP1000 by issuing a final safety  
6 evaluation report, and similarly issued a final safety  
7 evaluation report for the Vogtle projects in Georgia,  
8 which are the reference COLA for this project.

9 Q Do you think that as the NRC and other  
10 national agencies continue to, to study the, the  
11 incident in Japan, that that has a potential to delay  
12 the project?

13 A There's a potential for that. And just like  
14 after 9/11, there will be lessons learned and we'll  
15 incorporate those lessons learned and we'll have a more  
16 robust process that follows.

17 Q Would you also agree that the continued  
18 analysis of the event in Japan have the potential to  
19 increase the costs of the project if additional  
20 requirements were put on the project, either at the  
21 federal or state level?

22 A Yes, that's possible.

23 Q Now you also talked about the progress of  
24 international and domestic projects, that they have the  
25 potential to affect the project. I think we've talked

1 about the Japan issue. Domestic projects, what does  
2 that refer to?

3 A Specifically we're looking at the Southern  
4 Vogtle project and the SCANA V.C. Summer projects, which  
5 are the lead AP1000 projects in the United States.

6 Q And as you take a look at those projects, to  
7 the extent they experience delays or cost increases, you  
8 would take that into account with the Turkey Point  
9 projects?

10 A That's correct. In fact, that's very  
11 specifically why we chose to be at the lead of the  
12 second wave of nuclear projects, so that we can observe  
13 and learn from the lead projects and incorporate those  
14 appropriately to have a less risky, more precise project  
15 when we choose to execute.

16 Q And you'd agree that the lessons that might be  
17 learned from those projects also have the potential to  
18 delay the start date of the Turkey Point projects?

19 A That's a possibility.

20 Q I'm sorry to jump around, but if you could  
21 turn to your May testimony, page 5.

22 A I'm there.

23 Q And actually this is part of your summary that  
24 begins on the prior page, but I want to talk to you  
25 about your testimony that begins on line 5. You say,

1 "FPL will be monitoring several major milestones  
2 expected to occur in 2011 and 2012 that will have  
3 influence on the predictability of the Turkey Point  
4 6 and 7 project cost and schedule." What milestones are  
5 you monitoring that you refer to on line 6?

6 A Specifically the milestones associated with  
7 the AP1000 certification and the Southern Vogtle  
8 reference COLA, two of which I mentioned earlier, the  
9 on-time publication of the final safety analysis or  
10 safety evaluation reports from the NRC.

11 Q So the major milestones you're referencing are  
12 what happens to those two projects?

13 A Correct.

14 Q And in line 8 you talk about "The unfolding  
15 industry and regulatory response to the events in  
16 Japan." So you would agree with me that, as we sit here  
17 today, we don't, we don't have certainty as to what  
18 additional requirements are going to be required as a  
19 result of the incident in Japan?

20 A Correct. We don't have certainty. But in the  
21 recent activities at the NRC, they've maintained the  
22 progress that they made on the AP1000 and Southern  
23 Vogtle projects, and are anticipating that those  
24 projects will complete on time by the end of this year  
25 or beginning of next year.

1           Q     But certainly you'd agree that the NRC and  
2 other regulatory agencies have not finished their review  
3 of what may be required in light of the Fukushima event.

4           A     That's correct. And Witness Diaz would be the  
5 proper witness to expound on what those actions might  
6 be.

7           Q     And you certainly would agree that the  
8 unfolding industry and regulatory response has the  
9 potential to delay the project and increase its costs.

10          A     That's a possibility.

11          Q     If you would turn to page 15, still in your  
12 May testimony.

13          A     I'm there.

14          Q     Okay. And, again, the question that begins at  
15 line 3 and continues, your answer continues about  
16 halfway done -- down, excuse me. You're talking about  
17 international, national, and regional indicators that  
18 you're monitoring for their effect on the project;  
19 correct?

20          A     That's correct.

21          Q     And we've already discussed some of those. If  
22 you would look at line 8, you say: "The impacts of  
23 these events," and you're referring to the event in  
24 Japan, "will likely have operational, regulatory and  
25 political ramifications for the U.S. nuclear industry."



1 Is that right?

2 A That's correct.

3 Q And, and would you guess that those  
4 ramifications would likely result in an increase in the  
5 project costs?

6 A I can't draw any conclusions at this stage.

7 Q Okay. Do you think they're going to result in  
8 a decrease?

9 A I can't draw a conclusion at this stage.

10 Q Wouldn't you think that the events in Japan  
11 would result in additional regulations and safety  
12 requirements on future nuclear projects?

13 A That's --

14 MS. CANO: Excuse me. I'm sorry, Mr.  
15 Chairman. I'm going to object at this point. That same  
16 question has been asked several times now, so it's  
17 getting a little repetitive.

18 CHAIRMAN GRAHAM: I agree with your objection.

19 BY MS. KAUFMAN:

20 Q Okay. I'll move on.

21 Let's talk about the in-service date,  
22 Mr. Scroggs. You said that you were a witness in the  
23 determination of need case?

24 A That's correct, ma'am.

25 Q What was the in-service date that the

1 Commission was told would, would be, would occur for  
2 this project in the determination of need case?

3 A Based on the assumptions and the time of the  
4 need determination, we projected 2018 for Unit 6 and  
5 2020 for Unit 7.

6 Q Okay. And you've revised that schedule, or  
7 FPL has revised that schedule; correct?

8 A That's correct.

9 Q Okay. And what does FPL now propose the  
10 in-service date to be for Unit 6?

11 A Unit 6 is estimated to be in service in 2022.

12 Q Okay. So, so four years beyond what the  
13 Commission was originally told; correct?

14 A That's correct.

15 Q And what about Unit 7?

16 A 2023.

17 Q Okay. So that's three years beyond what the  
18 Commission was told; correct?

19 A That's correct.

20 Q And certainly there's the potential for  
21 further delay; correct?

22 A That's correct.

23 Q Okay. And the last area I want to talk to you  
24 about, or maybe second to last, is the cost. In your  
25 May testimony at page 39, I think, if you want to turn

1 to there. At the top of the page, what have you told  
2 the Commission that the range, total range for this  
3 project is going to be, cost range?

4 A In this year's testimony, 12.8 billion to  
5 18.7.

6 Q Do you recall what costs FPL told the  
7 Commission the price range would be in the determination  
8 of need?

9 A Approximately 12 to 17.8 billion, subject to  
10 check.

11 Q Of course. I think we're going to flip back  
12 to your other testimony, your March testimony, on page  
13 62, line 4.

14 A I'm there.

15 Q And the question is: "Does FPL intend to  
16 pursue completion of the Turkey Point 6 and 7 project?"

17 And you say: "Yes. The most important near  
18 term activity is creating the option by obtaining  
19 licenses and approvals necessary to construct and  
20 operate." Do you see that?

21 A Yes.

22 Q Okay. As we sit here today, is it Florida  
23 Power & Light's intent to construct these units?

24 A Yes, it is.

25 Q When you use the term "option," what did you

1 mean by that, you were creating the option by obtaining  
2 these licenses?

3 A Well, at present time, the potential to build  
4 new nuclear units in Florida doesn't exist because we  
5 don't have the requisite licenses or approvals to do  
6 that. So the first thing we need to do is create that  
7 option. I think there's some misconception that option  
8 is a selection of whether or not to build. It's really  
9 about when to build. And when to build means when is it  
10 in the best interest of the customers.

11 Our belief is that by pursuing the option  
12 through getting the licenses, we define the project, we  
13 define the conditions of certification of the project,  
14 and we're much closer to the time that we would execute  
15 contracts to build that project. That allows us to  
16 learn from what's happened with the Southern project and  
17 the SCANA project and incorporate those into our  
18 decision-making.

19 So I think the option has been perhaps twisted  
20 to determine -- to make it sound as if we would or  
21 wouldn't choose to. We intend to. We wouldn't be  
22 engaged in the licensing process if we didn't intend to.  
23 And it's really a question about when is the appropriate  
24 time to initiate the construction expenditures.

25 Q So when you use the term "option," you're not

1 talking about whether or not you're going to do it, you  
2 just aren't able to tell us when you would actually  
3 complete the project?

4 A That's, that's correct.

5 Q Do you know if FPL has been engaged in  
6 attempting to secure any partners to participate in the  
7 project?

8 A Annually I meet with a group of municipals  
9 from OUC, FMPA, other interested utilities around the  
10 state, and bring them up to speed on where the project  
11 is. Because of where we are in the process, it wouldn't  
12 be the appropriate time to enter into any agreements, so  
13 our goal has been to continue to meet with these  
14 interested parties, understand their questions, answer  
15 their questions. This year we spoke a lot about the  
16 Fukushima incident and how we see the events unfolded  
17 from that, and help them understand, without a lot of  
18 their own nuclear experience, what we're seeing at  
19 Fukushima.

20 Q So could I -- can I take from your comments  
21 that you certainly don't have any commitments from  
22 anybody to participate in the project with you?

23 A Nor have we asked for any.

24 Q Let me just ask you this. You have a lot of  
25 experience in the utility industry. Have you ever seen

1 a nuclear project come in under budget?

2 A There hasn't been a new nuclear project in  
3 some years, so I wouldn't -- in my experience, there has  
4 not been a new nuclear project.

5 Q And how about a project coming on earlier than  
6 the utility had told regulators?

7 A I've seen many projects come in early and  
8 under budget.

9 Q Nuclear projects?

10 A No.

11 Q Okay. Have you ever --

12 A Again, within my experience in this industry,  
13 I haven't seen a new nuclear project initiated.

14 MS. KAUFMAN: Thank you, Mr. Scroggs.

15 Thank you, Chairman Graham.

16 MS. CHRISTENSEN: I just want to put in an  
17 appearance. Patty Christensen on behalf of the Office  
18 of Public Counsel. I think that was unfortunately  
19 overlooked when we were doing the initial appearances.

20 And, that said, we have no questions for this  
21 witness.

22 CHAIRMAN GRAHAM: Okay.

23 MR. WHITLOCK: Thank you, Mr. Chairman. Would  
24 you like me to proceed now?

25 CHAIRMAN GRAHAM: Yes.

1 MR. WHITLOCK: I'm prepared to.

2 CHAIRMAN GRAHAM: Yes.

3 MR. WHITLOCK: Thank you.

4 CROSS EXAMINATION

5 BY MR. WHITLOCK:

6 Q Good morning -- afternoon, Mr. Scroggs. I'm  
7 not sure exactly where we are. How are you this  
8 morning?

9 A Good afternoon.

10 Q If you would, turn to the beginning of your  
11 March 1st testimony for me, please, sir. Specifically  
12 page 4. And the question that was posed to you there at  
13 line 2 is what are the purpose -- "What is the purpose  
14 of your testimony?" Are you with me?

15 A I'm there.

16 Q Could you read the first two sentences,  
17 please, of your answer? Out loud, please.

18 A "The purpose of my testimony is to describe  
19 the activities involved in the Turkey Point 6 and  
20 7 project throughout 2009 and '10. Specifically, my  
21 testimony will describe the deliberate, stepwise process  
22 FPL is employing to create an option to provide new  
23 nuclear generation for our customers and how that  
24 process is being managed and controlled to ensure  
25 prudent expenditures and the best outcome possible."

1 Q Okay. And as we sit here today, that was the  
2 purpose of your March 1st testimony; correct?

3 A That's correct.

4 Q Okay. Is that the same testimony you filed in  
5 the docket last year?

6 A No, it is not.

7 Q It's not? Okay. Could you turn over to, now  
8 to your May 2nd testimony for me, please. And again at  
9 page 3 you're asked, at line 6, "What is the purpose of  
10 your testimony?" And if you'll just read the first  
11 sentence of your answer out loud, please, sir.

12 A "The purpose of my testimony is to provide a  
13 description of how the Turkey Point 6 and 7 project is  
14 being developed, managed and controlled to create the  
15 option for more reliable, cost-effective and fuel  
16 diverse nuclear generation to benefit FPL's customers  
17 under the earliest practical deployment schedule."

18 Q So as we, as we take both sets of your  
19 testimony here together, each time when asked what the  
20 purpose of your testimony was, you've made reference to  
21 creating the option for new nuclear generation; correct?

22 A That's correct. And for the earliest  
23 practical deployment schedule.

24 Q Okay. So you'd agree with me, you'd agree  
25 with me that that would be an accurate description of



1 Florida Power & Light's 2010 as well as the current  
2 activities as they relate to Turkey Point 6 and 7;  
3 correct?

4 A That's correct.

5 Q Okay. And, in fact, the Turkey Point 6 and 7  
6 project was originally developed to create an option for  
7 new nuclear generation; is that accurate?

8 A I'm not sure of your reference, but, as I  
9 explained in an earlier response, the option is about  
10 when we exercise our intent to construct. So I believe  
11 that's an accurate statement of our, our position.

12 Q Okay. If you would, back on your March  
13 testimony, if you could turn to Exhibit SDS-11, page 15  
14 of 21. That's a Turkey Point 6 and 7 project  
15 memorandum. The subject is the 2010 project schedule  
16 revision. Just let me know when you're there.

17 A I'm there.

18 Q Okay. You see the first section there,  
19 Background. Would you read that first sentence out loud  
20 for me, please, sir.

21 A "The Turkey Point 6 and 7 project was  
22 developed to create the option for new nuclear  
23 generation so that FPL customers would benefit from  
24 unique economic, environmental, reliability, fuel  
25 diversity and energy security attributes offered by

1 nuclear generation."

2 Q Now nowhere in these last three statements of  
3 purpose or in this statement in this memorandum do you  
4 talk about the issue being when the project is going to  
5 be constructed, do you?

6 A I believe in the May testimony statement it is  
7 clear that it's about the earliest practicable  
8 deployment schedule.

9 Q Okay. If you'll look back at your May 2nd  
10 testimony with me, at page 4.

11 A Page 4, you say?

12 Q Correct.

13 A Okay.

14 Q And if you would, starting on line 11, if you  
15 would just read the sentence following the sentence I  
16 just asked you to read, starting with "In doing."

17 A "In doing so, FPL is creating a valuable  
18 option that can be exercised at the most opportune time  
19 for the benefit of FPL customers."

20 Q And that says "that can be exercised."  
21 Correct?

22 A That's what it says.

23 Q It doesn't say that it will be exercised, does  
24 it?

25 A No. It says can.

1           Q     And you were, you were asked by your attorney  
2 when you entered your testimony in the record if you  
3 wanted to correct anything, and you said, you said that  
4 you didn't; correct?

5           A     That's correct.

6           Q     Okay. Do you recall submitting rebuttal  
7 testimony last year to the testimony of SACE witnesses  
8 Gundersen and Cooper?

9           A     I recall submitting rebuttal testimony. I  
10 don't know the status of that testimony.

11          Q     Okay.

12           **MS. CANO:** Excuse me. Again, I'm going to  
13 object as this being outside the scope of the witness's  
14 testimony. The rebuttal that he filed last year is not  
15 a part of this proceeding this year.

16           **CHAIRMAN GRAHAM:** Staff?

17           **MR. YOUNG:** They are correct. The rebuttal  
18 that he filed last year is not a part of the proceeding  
19 this year.

20           Also, I would remind SACE that the Prehearing  
21 Officer excluded Mr., Mr. Gundersen and Mr. Cooper's  
22 testimony, so any questions relating to that is not a  
23 part of this proceeding.

24           **CHAIRMAN GRAHAM:** I agree with the objection,  
25 and you heard what was said from the Prehearing Officer.

1           **MR. WHITLOCK:** Okay. And just to be clear,  
2 I'm not trying to somehow put the Gundersen or Cooper  
3 testimony into the record --

4           **CHAIRMAN GRAHAM:** That's fine.

5           **MR. WHITLOCK:** -- in, in contravention to the  
6 Prehearing Officer's order. I was just asking a  
7 question.

8           May I ask the witness a question about his  
9 rebuttal testimony? I'm prepared to show him the  
10 rebuttal testimony.

11          **CHAIRMAN GRAHAM:** I think you probably need to  
12 hand him the rebuttal testimony.

13          **MR. WHITLOCK:** Oh, absolutely. Thank you,  
14 Chairman.

15          **MR. YOUNG:** Mr. Chairman?

16          **CHAIRMAN GRAHAM:** Yes.

17          **MR. YOUNG:** Mr. Chairman, I just want to  
18 clarify.

19          Are you saying that you're going to ask him  
20 about the rebuttal testimony he filed last year?

21          **MR. WHITLOCK:** That's correct.

22          **MR. YOUNG:** Okay. I think that we have a  
23 standing objection from FPL that the rebuttal testimony,  
24 that the witness's rebuttal testimony from last year is  
25 not included in this year's prefiled direct testimony.

1 Therefore, it's outside the scope of the prefilled direct  
2 testimony, thus crossing, crossing the line on the  
3 questions.

4 **MR. WHITLOCK:** Mr. Chairman, with all due  
5 respect to Staff, I mean, this is Mr. Scroggs' testimony  
6 that was filed last year. I understand it's not a part  
7 of this year's docket. I'm attempting to cross-examine  
8 him based on his, his, what he said in this testimony.  
9 It's certainly relevant under the rules of evidence, and  
10 I can't think of any basis to keep it out.

11 **MR. YOUNG:** If he's offering it, if he's  
12 trying to use it for impeachment purposes, then Staff is  
13 comfortable with that because it's a prior sworn  
14 testimony that the witness has provided. But I would  
15 suggest that the counsel walk very, very lightly on  
16 terms of how he proceeds, because I think FPL would be  
17 willing to object.

18 **MS. CANO:** Excuse me. I'm sorry. FPL  
19 maintains its objection. I think Mr. Whitlock basically  
20 stated why, and that's that he intends to ask him about  
21 rebuttal testimony filed last year. And the purpose of  
22 this time is to cross-examine the witness on his direct  
23 testimony filed this year. So the questions are outside  
24 the scope of his testimony.

25 **CHAIRMAN GRAHAM:** I understand the objection

1 about it being outside the scope, and I guess I, I look  
2 towards our legal for direction more than anything else,  
3 that if it's to impeach something that's outside of the  
4 scope, is that still permissible?

5 **MS. HELTON:** Mr. Chairman, maybe if I can take  
6 a stab at it. If -- I agree with Mr. Young's suggestion  
7 to Mr. Whitlock that he needs to walk carefully here.  
8 However, if he is using his rebuttal testimony to  
9 impeach testimony he has filed in this record or to show  
10 some inconsistency or some credibility issues, I do  
11 believe that that's appropriate here. And I guess until  
12 we hear the question, we really don't know what train  
13 he's, he's going down, or what path he's going down.

14 So I would suggest that we let Mr. Whitlock  
15 ask his question. Before the witness answers, give  
16 Florida Power & Light an opportunity to object or not,  
17 then we can go from there.

18 **MR. YOUNG:** Mr. Chairman, also, I just want to  
19 note, I said prior sworn testimony. The witness's  
20 testimony yesterday -- last year was not entered into  
21 the record and it was not sworn. I just want to clarify  
22 that.

23 **CHAIRMAN GRAHAM:** One more time.

24 **MR. YOUNG:** I misspoke when I said prior sworn  
25 testimony. It was not prior sworn testimony, because

1 last year FPL's portion of the docket, no testimony was  
2 entered into the record. I just wanted to clarify the  
3 record on that.

4 **CHAIRMAN GRAHAM:** Okay.

5 **MR. WHITLOCK:** Mr. Chairman, if I could.  
6 Mr. Scroggs has testified in response to questions from  
7 Ms. Kaufman in regards to his opinion that this, that  
8 the Intervenors are somehow spinning his testimony of  
9 creating an option, and it's a question of when, not a  
10 question of if. And I think I'd like to be able to  
11 point to his, his rebuttal testimony as well as his  
12 testimony in this year's docket and see where he has  
13 stated that besides verbally today, just to give you an  
14 idea of what I'm getting at.

15 **CHAIRMAN GRAHAM:** Let's proceed.

16 **MR. WHITLOCK:** Thank you.

17 **CHAIRMAN GRAHAM:** Can we get someone from  
18 Staff to pass this stuff out?

19 **MS. HELTON:** Mr. Whitlock, were you planning  
20 on marking this for identification purposes for the  
21 record?

22 **MR. WHITLOCK:** I would like to. Thank you.

23 **CHAIRMAN GRAHAM:** Well, I guess the question I  
24 have is are we going to mark this for the record before  
25 we agree that we can even go down this path?

1           **MR. YOUNG:** It's for identification purposes  
2 only, as it, as it stands right now.

3           **CHAIRMAN GRAHAM:** Okay. So for identification  
4 purposes we mark this as Exhibit 194; is that correct?

5           **MR. YOUNG:** Yes, sir.

6           (Exhibit 194 marked for identification.)

7           **MR. WHITLOCK:** Thank you, Mr. Chairman.

8           Thank you, Staff.

9           May I proceed, Mr. Chairman?

10          **CHAIRMAN GRAHAM:** Yes, sir.

11          **MR. WHITLOCK:** Thank you.

12          **BY MR. WHITLOCK:**

13           **Q**     Mr. Scroggs, do you see on page 9, line 3, you  
14 were asked the question: "Do all of FPL's activities  
15 related to Turkey Point Units 6 and 7 for which NCRC  
16 cost recovery is sought qualify as the siting, design,  
17 licensing, and construction of a nuclear power plant as  
18 contemplated by Section 366.93, *Florida Statutes*?" Do  
19 you see that question?

20           **A**     I do.

21           **Q**     Okay. Could you read me your answer, please,  
22 sir.

23           **MR. WHITLOCK:** Mr. Chairman, I think it's  
24 clear when I ask the witness to read an answer that I'm  
25 asking him to read it out loud.



1           **MR. ANDERSON:** Let me speak to this. FPL  
2 maintains its objection. Reading this, this is not  
3 impeachment at all. This is entirely consistent  
4 testimony from the prior year, it is not part of this  
5 year's proceeding, and there should be no further  
6 questioning on, on a prior year docket of this type.

7           **MR. WHITLOCK:** Mr. Chairman, this is --

8           **CHAIRMAN GRAHAM:** Hold, hold it.

9           Staff?

10          **MS. HELTON:** Mr. Chairman, I do think it would  
11 be appropriate for Mr. Whitlock to respond at this time.

12          **MR. WHITLOCK:** Mr. Chairman, I just -- and FPL  
13 has articulated no reason why this evidence is not  
14 relevant for purposes of this year's proceeding.

15          **MR. ANDERSON:** It's outside the scope of the  
16 testimony.

17          **CHAIRMAN GRAHAM:** Staff?

18          **MR. WHITLOCK:** And I would also, if I could,  
19 just point out the question that I'm asking Mr. Scroggs  
20 about is, in fact, an issue in this year's docket.

21          **CHAIRMAN GRAHAM:** I tell you what, this sounds  
22 like a good, sounds like a good time to take a lunch  
23 break. So I'll give our legal Staff some time to mull  
24 over this stuff, and we will take a recess and we'll  
25 reconvene at -- how about 1:45.

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STATE OF FLORIDA     )  
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CERTIFICATE OF REPORTER

I, LINDA BOLES, RPR, CRR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 15<sup>th</sup> day of August, 2011.

  
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