UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION

In the Matter of	)	
	)	Docket Nos. 52-040
Florida Power & Light Co.	)	52-041
Turkey Point Units 6 & 7	)	
	)	May 22, 2017
Combined Construction and License	)	
Application	)	
_____	)	

PETITIONERS' REPLY TO NRC STAFF AND FPL'S ANSWERS TO PETITION FOR LEAVE TO INTERVENE IN A HEARING ON FLORIDA POWER & LIGHT COMPANY'S COMBINED CONSTRUCTION AND OPERATING LICENSE APPLICATION FOR TURKEY POINT UNITS 6 & 7 AND FILE A NEW CONTENTION

I. INTRODUCTION

In response to the Petition, NRC Staff ("Staff") and Florida Power & Light Company ("FPL") generally assert that the Proposed Contention does not raise a material issue of law or fact pertinent to a finding that the NRC must make to support the licensing action. But, to clarify the Petitioner's position, the information that FPL provided in its application to fulfil the financial qualifications requirement is *no longer* sufficient to provide the required "reasonable assurance" that FPL will be able to obtain necessary funding to construct the new nuclear reactors at issue. Petitioners do not assert that the information provided was inadequate at the time, or that Staff failed to properly analyze that information then. Rather, Petitioners assert based on the recent Westinghouse bankruptcy, which has brought to Petitioners' attention the mounting difficulties that FPL now faces with the construction of the new reactors—both in terms of costs and the related practicality of obtaining a company to build the reactors, that the information FPL provided with its application is no longer current.

Although FPL and Staff take issue with the Petitioners' assertions that FPL cannot provide reasonable assurance that it will be able to recover construction costs from the advanced nuclear cost recovery process before the Florida Public Service Commission ("FPSC"), FPL's application made clear that such recovery was the *only* source of construction costs for the project. As such, the ability or inability of FPL to recover construction costs through that process is essential to any proper analysis of whether FPL has provided the reasonable assurance of financial qualifications required for licensure before the NRC.

II. DISCUSSION[1]

A. THE CONTENTION IS TIMELY

The Staff concedes that the Petition is timely. FPL, however, challenges the timeliness of the Petition.[2] FPL asserts that the Petition is untimely because Petitioners are too late to challenge the types or scope of information provided by FPL to satisfy the financial qualification requirement in the application, and that the Westinghouse bankruptcy has not provided any materially different information that would justify intervention now. Petitioners are not challenging the information provided by FPL at the time of its application, or the Staff's assessment of the information. Rather, Petitioners assert that the bankruptcy has altered events such that the information originally supplied is no longer sufficient to provide the reasonable assurance required under the law.

As will be explained in greater detail below in addressing the merits of the admissibility of the Proposed Contention, the Petition is premised on FPL's

[1] Neither FPL nor the Staff challenge Petitioners' standing to intervene. As such, Petitioners rely on the arguments asserted in the Petition on this point.

[2] FPL Answer at 13-17.

representation that it will recover the cost of constructing the facility pursuant to Florida's advanced nuclear cost recovery scheme. Historically in relation to this project, FPL has recovered such funds each year from its ratepayers after approval before the FPSC. So far, FPL has recovered more than $280 million dollars from its ratepayers under this process—money that can never be recuperated by the ratepayers, whether the project is ultimately constructed or not. As part of FPL's annual petition before the FPSC, FPL is required to establish that the project remains feasible and that the costs of the project will be reasonable.[3] For years, FPL has been basing its representations to the FPSC to establish these two facts on the progress of construction on like-designed AP1000 nuclear reactors in Georgia and South Carolina.[4] The Westinghouse bankruptcy was precipitated by enormous cost overruns on those projects, which had been hidden from the public and Westinghouse's shareholders. Those cost overruns are estimated at over $6 billion, combined between the two projects.[5]

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[3] § 366.93(e), Fla. Stat.

[4] *See In Re: Nuclear Power Plant Cost Recovery for the Year Ending December 2016*, Docket No. 150009-EI (Fla. Public Service Commission 2015), Testimony & Exhibit of Steven D. Scroggs (hereinafter, "Exhibit 1") at 27 (explaining that the cost range estimate for Units 6 & 7 provided to the FPSC is reasonable because of the comparison costs provided by the lead projects in the United States).

[5] Bruce Henderson, *Utilities hope to finish SC nuclear plant despite Westinghouse bankruptcy*, Charlotte Observer (Mar. 29, 2017), http://www.charlotteobserver.com/news/local/article141524724.html (hereinafter, "Exhibit 2") (Summer plant is $3 billion over budget and years behind schedule); Russell Graham, Georgia Power reaches tentative deal to take over Vogtle work, The Atlanta Journal-Constitution (May 12, 2017) http://www.ajc.com/business/georgia-power-reaches-tentative-deal-take-over-plant-vogtle-work/hM4YJABYA4RLgNXL2V212O/ (hereinafter, "Exhibit 3") (Vogtle project is well over $3 billion over budget).

Given the bankruptcy, the completion date and actual cost of the sister projects in Georgia and South Carolina are now uncertain.[6] As such, FPL cannot rely on the progress of those projects as assurance that its project to construct the new reactors remains feasible, and, more so, that the cost of building the planned reactors remains reasonable. FPL failed to submit the required filings to establish feasibility and reasonableness before the FPSC during the 2016 docket. Instead, FPL asked for a deferral until this year's docket.[7] Now, in the face of the uncertainty created by the Westinghouse bankruptcy, FPL has again failed to file the required proof of feasibility and reasonableness. Instead, FPL has asked for an indefinite deferral of its advanced nuclear cost recovery for this project.[8] Because FPL's application for its combined operating license was premised on recovery of the cost of construction under Florida's advanced nuclear cost recovery scheme, the bankruptcy has eliminated any prior reasonable assurances of covering those costs that FPL had provided to the NRC.

For these reasons, the Proposed Contention, based on Westinghouse's bankruptcy filing, is timely.

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[6] *See* Diane Cardwell and Jonathan Soble, *Westinghouse Files for Bankruptcy, in Blow to Nuclear Power*, N.Y. Times (Mar, 29, 2017), https://www.nytimes.com/2017/03/29/business/westinghouse-toshiba-nuclear-bankruptcy.html?mcubz=0&_r=0 (hereinafter, "Exhibit 4") (discussing uncertainty of path forward for lead AP1000 projects in the United States).

[7] *See In Re: Nuclear Power Plant Cost Recovery for the Year Ending December 2017*, Docket No. 160009-EI (Fla. Public Service Commission 2016), Florida Power & Light Company's Motion to Defer Consideration of Issues and Cost Recovery (hereinafter, "Exhibit 5").

[8] *See In Re: Nuclear Power Plant Cost Recovery for the Year Ending December 2018*, Docket No. 170009-EI (Fla. Public Service Commission 2017), Florida Power & Light Company's Petition for Approval of 2018 Nuclear Power plant Cost Recovery Amount Reflecting Final 2015 and 2016 True-Ups and Approval to Defer Recovery Costs Beginning in 2017 (hereinafter, "Exhibit 6"), at 4-7.

B. THE CONTENTION MEETS THE STANDARDS FOR ADMISSIBILITY

Both the Staff and FPL assert that the Proposed Contention fails to meet the standards for admissibility, asserting that: (1) Petitioners have not provided support for their speculative assertion that the FPSC would deny FPL advanced nuclear cost recovery based on the recent Westinghouse bankruptcy; (2) there is no nexus between the Westinghouse bankruptcy and FPL's financial qualifications, because FPL has identified additional sources of funding for the project; and (3) a determination of whether the FPSC would award advanced nuclear cost recovery based on the project's continued "feasibility" is outside the scope of this licensing proceeding. Each of these points will be addressed below.

1. Westinghouse's bankruptcy impacts FPL's financial qualifications, because FPL only identified advanced nuclear cost recovery as the source of construction funds for the project in its application.

Both Staff and FPL assert that there is no nexus between the Westinghouse bankruptcy and FPL's financial qualifications. FPL asserts that it has identified other sources of funding for the project—FPL's internally generated operating cash flows, commercial paper and bank facilities, and long-term debt and equity capital markets.[9] Staff asserts simply that the bankruptcy has no bearing on FPL's general financial qualifications, and, as such, does not impact its required analysis.[10] But, as FPL recognizes in its response, 10 C.F.R. § 52.97 requires that "[t]he applicant is technically and financially qualified to engage in the activities authorized."[11]

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[9] FPL Answer at 23.

[10] Staff Answer at 17.

[11] 10 C.F.R. § 52.97(a)(1)(iv).

Specifically, FPL is required to provide information that "demonstrates that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs."[12] Here, FPL stated in its application that:

> FPL will recover the cost of constructing the facility in accordance with Florida Statute 366.93, Cost recovery for the siting, design, licensing, and construction of nuclear and integrated gasification combined cycle power plants (Reference 1), and Florida Administrative Code R.25-6.0423, Nuclear or Integrated Gasification Combined Cycle Power Plant Cost Recovery (Reference 2).
>
> The sources of long-term construction funding for Units 6 & 7 will be a mixture of internally generated cash and external funding. The external funding will come from a mix of debt and equity capital. FPL currently uses first mortgage bonds and equity contributions from NextEra Energy, Inc. to finance long-term utility assets.[13]

In response to these assertions, Staff stated in the Final Safety Evaluation Report ("FSER") that:

> According to the COL application, FPL expects to recover the cost of constructing the facility in accordance with Florida Statute 366.93, "Cost Recovery for the Siting, Design, Licensing, and Construction of Nuclear and Integrated Gasification Combined Cycle Power Plants," and Florida Administrative Code R.25-6.0423, "Nuclear or Integrated Gasification Combined Cycle Power Plant Cost Recovery." FPL expects to finance this project through a mixture of internally generated cash and external funding.[14]

Although FPL asserts that the FSER "did not rely on cost recovery" in its analysis that FPL is financially qualified,[15] that is simply inaccurate. Both the application and the FSER make clear that, although other aspects of financing may be achieved "through a

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[12] 10 C.F.R. § 50.33.

[13] Combined Operating License Application for Turkey Points Unit 6 & 7, Revision 8, General and Financial Information, at 5 (hereinafter, "Exhibit 7").

[14] FSER at 1-38.

[15] FPL Answer at 22-23.

mixture of internally generated cash and external funding," "FPL expects the recover the cost of constructing the facility" under the advanced nuclear cost recovery process before the FPSC. Therefore, the only source of funding for the construction of the new reactors here is advanced nuclear cost recovery before the FPSC. The ability of FPL to recover those costs before the FPSC is a critical assumption supporting its assertion, and Staff's correlating conclusion, that FPL has provided reasonable assurances of its financial qualifications. There is a nexus between Westinghouse's bankruptcy and FPL's financial qualifications, because the bankruptcy and its precipitating events, completely change the landscape of FPL's ability to recover before the FPSC.[16] And it is FPL's burden, in light of these changed circumstances, to provide the NRC with reasonable assurances that it will still be able to recover the costs of constructing the new reactors through the advanced nuclear cost recovery process, as asserted in its application.[17]

2. Petitioners are not asserting that the NRC must undertake the review required by the FPSC for advanced nuclear cost recovery, but rather, that FPL must provide reasonable assurances that it can continue to recover advanced nuclear cost recovery dollars in order to satisfy the financial qualifications requirement before the NRC

FPL argues that predicting the outcome of the proceedings before the FPSC is "outside the scope" of these proceedings, asserting that the primary purpose of the NRC proceedings to conduct a safety review of the application.[18] This assertion simply

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[16] *See* Affidavit of Mark W. Crisp, P.E. (hereinafter, "Exhibit 8)", at ¶ 16.

[17] Even if FPL now asserts that its financial qualifications were not premised on recovering the entire cost of construction through advanced nuclear cost recovery, FPL would still be obliged to provide the NRC with reasonable assurance that it could cover the costs of construction through other financing methods, given the impact of the Westinghouse bankruptcy on the future construction of AP1000 units.

[18] FPL Answer at 19-21.

confuses the purpose of the NRC license application review, generally, with the specific financial qualification requirement in the statutory scheme, as described above. FPL's Answer makes much of the history of the financial qualification requirement, and of its lack of relation to the NRC's primary task—ensuring safety.[19] But even if the financial qualification provisions are entirely unrelated to the NRC's primary purpose in reviewing an application, as FPL admits, "the financial qualification regulation remains in place."[20] Given that fact, FPL is required to satisfy the regulation, and the NRC is obligated to guarantee that FPL has done so prior to issuing its license.

As noted in the prior section, FPL has made its application contingent on its ability to recover the costs of construction from the FPSC, because the application makes clear that those costs will be recovered only through advanced nuclear cost recovery. Petitioners are not asking that the NRC undertake the review that would normally be relegated to the FPSC in order to consider the Proposed Contention. Rather, Petitioners are simply asking, in light of the changed circumstances related to costs and construction timeframes presented because of the Westinghouse bankruptcy, that FPL provide reasonable assurances to the NRC that it will still be able to recover the cost of construction of the two new reactors through advanced nuclear cost recovery. Petitioners assert that this must be done *prior* to the issuance of any license by the NRC.

It is not Petitioners' burden to prove that FPL will not be able to recover from the FPSC, but, rather, FPL's burden under existing regulations and based on the information provided in its application to provide reasonable assurance to this body that it will be able to recover the costs of construction through advanced nuclear cost recovery before the

[19] FPL Answer at 9-13.

[20] FPL Answer at 13.

FPSC. And it is Petitioners' assertion, based on the status of proceedings before the FPSC, that FPL cannot provide any such reasonable assurance at this time.

3. It is not speculative, based on the status of proceedings before the FPSC, that the FPSC will not be awarding advanced nuclear cost recovery dollars to FPL for the new reactors anytime soon, and that any such recovery past that time will be impacted by the Westinghouse bankruptcy

Both FPL and Staff generally assert that Petitioners' claims that the Westinghouse bankruptcy will impact FPL's ability to recover advanced nuclear cost recovery dollars before the FPSC are speculative, or built upon "bald assertions" or "generalized suspicions."[21] Petitioners' assertion, however, is based on the present course of the proceedings before the FPSC, and the representations that FPL has made in various filings before that body. A review of those circumstances can only lead to the irrefutable conclusion that: (1) FPL cannot collect, and has no intention of collecting, advanced nuclear cost recovery dollars for the new reactors anytime soon; (2) the ability of FPL to recover any such funds in the future will be greatly dependent on the outcome of the Westinghouse bankruptcy proceedings.

To begin with, it is not speculative that FPL will not be collecting any advanced nuclear cost recovery dollars from the FPSC in the near future—FPL has said so in their own filings. On May 1, 2017, FPL submitted its 2017 petition for advanced nuclear cost recovery before the FPSC.[22] In that petition, FPL represents that it "will limit its activities over the next several years to completing licenses, maintaining compliance with approvals received, keeping those approvals current, and continuing to monitor the first

[21] FPL Answer at 17-19; Staff Answer at 12.

[22] *See* Exhibit 6.

wave of new nuclear construction projects."[23] FPL expresses concern over the need to "learn from the first wave of nuclear construction projects currently underway in Georgia and South Carolina."[24] Ostensibly for these reasons, FPL requests a deferral of all nuclear cost recovery costs beginning with those incurred in 2017 until such time as FPL makes a decision regarding initiation of preconstruction work."[25] Even if FPL's petition is granted as written, FPL will not be receiving any advanced nuclear cost recovery dollars from the FPSC anytime in the near future. But a deeper look at some of FPL's other filings before the FPSC, and the statutory requirements for recovery under that process, show that FPL's ability to recover any such funds in the future will be greatly dependent on the outcome of the Westinghouse bankruptcy proceedings.

FPL has made a number of filings before the FPSC that show that its future ability to recover advanced nuclear cost recovery dollars is dependent on the outcome of the Westinghouse bankruptcy proceedings. Under Florida's advanced nuclear cost recovery statutory scheme, a party petitioning for advanced nuclear cost recovery dollars before the FPSC must file an annual long-term feasibility study.[26] The pertinent regulation states:

> Along with the filings required by this paragraph, each year a utility shall submit for Commission review and approval a detailed analysis of the long-term feasibility of completing the power plant. Such analysis shall include evidence that the utility intends to construct the nuclear or integrated gasification combined cycle power plant by showing that it has

[23] *Id*. at 2.

[24] *Id*. at 5.

[25] *Id*. at 7-8.

[26] Fla. Admin. Code Ann. r. 25-6.0423(6).

> committed sufficient, meaningful, and available resources to enable the project to be completed and that its intent is realistic and practical.[27]

This study is necessary to the FPSC's execution of its statutory duties with respect to preconstruction costs. In regards to that duty, the statutory scheme provides that:

> A utility must petition the commission for approval before beginning the construction phase.
>
> 1. The only costs that a utility that has obtained commission approval may recover before beginning construction work are those that are previously approved or necessary to maintain the license or certification.
> 2. In order for the commission to approve proceeding with construction on a plant, it must determine that:
>
> a. The plant remains feasible; and
> b. The projected costs for the plant are reasonable.[28]

The two required findings by the FPSC each year in order to approve advanced nuclear cost recovery for preconstruction activities are that the plant remains feasible and projected costs are reasonable.[29] The feasibility study allows the FPSC to conduct that assessment. Notably, FPL has not filed a feasibility study with the FPSC for the past two years. And the last time FPL filed a feasibility study, in 2015, that study and its accompanying testimony heavily relied on the progress of the construction of the other AP1000 nuclear reactors by Westinghouse in Georgia and South Carolina as supportive of the feasibility of its planned reactors. For example, the 2015 filed testimony of Steven D. Scroggs indicates that "progress in other nuclear industry milestones (i.e., AP1000 U.S. construction) continues to provide positive indicators for the long term feasibility of

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[27] Fla. Admin. Code Ann. r. 25-6.0423(6).

[28] § 366.93(e), Fla. Stat.

[29] *Id*.

new nuclear plant development."[30] In asserting that the cost estimate range for the project continued to be reasonable, Scroggs stated:

> The FPL cost estimate range continues to be reasonable based on the annual review of the Turkey Point 6 & 7 capital cost estimate, a comparison to other U.S. AP1000 project progress reports, and Concentric Energy Advisors' review of U.S. AP 1000 project overnight and total estimated costs.
>
> The comparison to other U.S. AP1000 projects provides confidence due to the advanced nature of the projects being reviewed. The costs being experienced by the lead projects at Vogtle and Summer are informed by committed contracts, are well into the construction cycle, and include significant equipment and material purchases. Therefore, the total project costs estimated for the projects in construction are more certain.[31]

The Westinghouse bankruptcy has revealed that the "costs being experienced by the lead projects at Vogtle and Summer" had been entirely misrepresented by Westinghouse, and that the projects were far over budget to the tune of $6 billion.[32] Further, as much as FPL makes light of the fact that Westinghouse will likely no longer be able to build its two new reactors, whether Westinghouse emerges from bankruptcy able to build the reactors or FPL is able to find another contractor to build the reactors,[33] the costs associated with building FPL's two new reactors under either scenario will be impacted by the

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[30] Ex. 1 at 3.

[31] *Id*. at 27.

[32] Ex. 2; Ex. 3 ($3 billion cost overruns for each U.S. plant in progress).

[33] *See In Re: Nuclear Power Plant Cost Recovery for the Year Ending December 2018*, Docket No. 170009-EI (Fla. Public Service Commission 2017), FPL's Response to COM's First Set of Interrogatories, Interrogatory No. 4 (attached hereto as "Exhibit 9") (FPL admits that it has not initialed any discussions with potential companies to build Units 6 & 7 because "[s]uch activity would be pre-construction activity, and would occur following approval of a petition by the FPSC to move forward with pre-construction work on the project," and that a date for such activities does not exist).

bankruptcy.[34] FPL's cost projections for the two nuclear reactors were already on the "high end" for what would be considered reasonable, not accounting for the massive cost overruns at the "lead projects" that have recently come to light. The potential impacts to those costs that a change to a different contractor or even sticking with Westinghouse post-bankruptcy, if possible, would have must be properly analyzed before the FPSC will approve any further advanced nuclear cost recovery for this project. And until FPL can establish that the project is still feasible considering these changed circumstances, FPL cannot be said to have provided reasonable assurance to the NRC of its financial qualification with regard to the costs of construction.

III. CONCLUSION

For the foregoing reasons, Petitioners should be granted leave to intervene as a full party and be granted a hearing on their contention. Further, Petitioners request that the NRC condition the issuance of the license at issue on FPL's demonstrated ability to collect advanced nuclear cost recovery dollars under proceedings before the FPSC, such that these proceedings should take a correlating "pause" to the one taken by FPL in the FPSC proceedings, prior to license issuance here.[35]

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[34] Ex. 8 at ¶¶26-27 ("[t]he entire nuclear horizon has been shaken by the bankruptcy. . . It should be easily understood that schedules, costs, and commitments established in the 2010 timeframe have no basis or worth at this point in time."); Ex. 8 at ¶15 (describing a similar situation with the Vogtle 1 & 2 units, in which the power company took over management of construction of the units, which "resulted in significant cost overruns, delays and ultimately the disallowance of millions of dollars at the Georgia Public Service Commission.").

[35] *See In Re: Nuclear Power Plant Cost Recovery for the Year Ending December 2018*, Docket No. 170009-EI (Fla. Public Service Commission 2017), FPL's Response to COM's First Set of Interrogatories, Interrogatory No. 12 (attached hereto as "Exhibit 10") (FPL admits that it is possible for FPL to request a similar pause in the licensure proceedings before the NRC).

Respectfully submitted this 22nd day of May, 2017.

Signed electronically by: *<u>/s/ Kerri L. McNulty</u>*
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CERTIFICATE OF SERVICE

I hereby certify that on May 22, 2017, I electronically filed the foregoing petition with the electronic filing system of the U.S. Nuclear Regulatory Commission and that persons and parties of record were electronically served.

Signed electronically by: *<u>/s/ Kerri L. McNulty</u>*

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Exhibit 1

FILED MAY 01, 2015
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FPSC - COMMISSION CLERK

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 150009-EI
FLORIDA POWER & LIGHT COMPANY

MAY 1, 2015

IN RE: NUCLEAR POWER PLANT COST RECOVERY FOR THE YEAR ENDING DECEMBER 2016

TESTIMONY & EXHIBITS OF:

STEVEN D. SCROGGS

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF STEVEN D. SCROGGS

DOCKET NO. 150009-EI

May 1, 2015

Q. Please state your name and business address.

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

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

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

Q. Have you previously provided testimony in this docket?

A. Yes.

Q. Are you sponsoring or co-sponsoring any exhibits in this case?

A. Yes. I am sponsoring or co-sponsoring the following exhibits:

- Exhibit SDS-8, Turkey Point 6 & 7 Site Selection and Pre-construction Nuclear Filing Requirement (NFR) Schedules consisting of the 2015 Actual/Estimated (AE) Schedules, the 2016 Projection (P) Schedules and the 2016 True-up to Original (TOR) Schedules. The NFR

Schedules contain a table of contents listing the schedules sponsored and co-sponsored by FPL Witness Grant-Keene and me, respectively.

- Exhibit SDS-9, consisting of summary tables presenting the 2015 Actual/Estimated and 2016 Projected Pre-construction costs for the Turkey Point 6 & 7 project.
- Exhibit SDS-10, Turkey Point 6 & 7 Project Benefits at a Glance
- Exhibit SDS-11, Turkey Point 6 & 7 Customer Savings from Nuclear Cost Recovery Law
- Exhibit SDS-12, Remaining Steps in Turkey Point 6 & 7 Licensing

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide a description of how the Turkey Point 6 & 7 project is being managed and controlled. The project undertakes the steps necessary to license, construct, and operate two Westinghouse designed AP1000 nuclear reactors (AP1000) and associated transmission and ancillary facilities at the Turkey Point site near the existing Turkey Point 3 & 4 nuclear units in southern Miami-Dade County. My testimony provides insight into how project activities are managed given the near term focus on obtaining all licenses, permits, and approvals and the factors influencing key decisions affecting the nature, cost, and pace of that effort. I will also describe the projected expenditures for 2015 and 2016 allowing FPL to support and defend the required licenses, permits and approvals, and to maintain those that have been obtained. FPL's 2015 and 2016 cost recovery

requests, as in past years, include only amounts that are associated with the Licensing Phase currently underway.

Q. Please summarize your testimony.

A. FPL continues to carefully and methodically create the opportunity for additional reliable, cost-effective and fuel diverse nuclear generation to benefit FPL's customers. The approach applied to the management of the Turkey Point 6 & 7 project provides control of cost risks while maintaining progress through the intensive licensing period. The unique qualitative benefits of fuel diversity, energy security and zero greenhouse gas emissions offered by nuclear generation are unchanged from the origin of the project. Quantitative benefits estimated for the project have decreased slightly with improving economic factors, which on balance are beneficial for FPL's customers. Notably, progress in other nuclear industry milestones (i.e., AP1000 U.S. construction) continues to provide positive indicators for the long term feasibility of new nuclear plant deployment.

In 2015 and 2016 FPL will continue its progress on the project primarily by defending an appeal of the state Site Certification Final Order and moving to the final stages of the Nuclear Regulatory Commission's (NRC) Combined License Application (COLA) review process.

The results of the annual feasibility analysis continue to support disciplined pursuit of the project, and reaffirm that the project can provide unique

quantitative and qualitative benefits to FPL customers. FPL's stepwise approach continues to provide FPL customers with the best opportunity to make steady progress on the project. My testimony provides the Florida Public Service Commission (FPSC) with the information necessary to conclude that FPL's 2015 and 2016 project activities are reasonable and in the interests of FPL customers and Floridians, in general.

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

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

- Provide estimated fuel cost savings for FPL's customers of approximately $570 million (nominal) in the first full year of operation based on a Medium Fuel Cost forecast;
- Provide estimated fuel cost savings for FPL's customers of approximately $47 billion (nominal) over a 40 year operating life, and approximately $101 billion (nominal) over a 60 year operating life, based on a Medium Fuel Cost forecast;
- Diversify FPL's fuel sources by decreasing reliance on natural gas by approximately 13% beginning in the first full year of two unit operation;
- Reduce annual fossil fuel usage by the equivalent of 29 million barrels of oil or 184 million MMBTU of natural gas; and

- Reduce CO_2 emissions by an estimated 290 million tons over a 40 year operating life, which is the equivalent of operating FPL's entire generating system with zero CO_2 emissions for 7.2 years. Over a 60 year operating life, CO_2 emissions would be reduced by an estimated 481 million tons, the equivalent of operating FPL's entire generating system with zero CO_2 emissions for 11.8 years.

These quantifications are based on the May 2015 project feasibility analysis set forth in FPL Witness Brown's testimony and Exhibit ROB-1. The Turkey Point 6 & 7 project benefits are also reflected in my Exhibit SDS-10.

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

A. My testimony includes the following sections:

1. Policy Considerations
2. Project Approach
3. Process and Risk Management
4. Issues Potentially Affecting the Project
5. Key Decisions and Milestones
6. Project Cost and Feasibility
7. 2015 & 2016 Project Costs

POLICY CONSIDERATIONS

Q. Please provide background on Florida's Nuclear Cost Recovery statute.

1 A. Several key developments led to the establishment of the Nuclear Cost
2 Recovery statute as a means of resolving persistent issues in meeting the need
3 for stable and reasonably priced, reliable electricity for the state of Florida – in
4 a term "fuel diversity". Primarily, the state's reliance on natural gas-fueled
5 generation to meet the growing electricity needs of Floridians, highlighted by
6 volatile fossil fuel prices and supply reliability issues, created concern that
7 insufficient fuel diversity threatened the long term economic stability of the
8 state. These concerns were reinforced in 2005 by hurricanes Katrina and Rita,
9 which impacted natural gas production in the Gulf of Mexico, threatened
10 FPL's fuel supply reliability, drove up natural gas prices and placed financial
11 strain on FPL customers. Florida's significant and growing reliance on
12 natural gas fueled generation is a result of the difficulty in being able to
13 deploy non-gas baseload alternatives; most commonly fossil fuels (coal or oil
14 fueled generation) or nuclear generation. For example, FPL's proposal in
15 2006 to build a clean coal power plant was denied by the FPSC. Nuclear Cost
16 Recovery was initiated to directly address some of the challenges associated
17 with deployment of nuclear generation to help improve fuel diversity and has
18 been successful for FPL customers, as more than 520 MW of new nuclear
19 capacity was successfully added to the system in 2013.
20 **Q. How did Florida's reliance on natural gas develop?**
21 A. Throughout the last several decades, significant political, economic and
22 technology changes occurred to reshape the state's generation portfolio away
23 from a dependence on foreign oil in the 1970s as existing plants were replaced

by plants operating on other fuel sources. During this period the nuclear industry was dealing with significant regulatory, cost and schedule challenges in deploying new nuclear units – essentially keeping new nuclear capacity from being an option in the late 1980s and 1990s. The other traditional baseload alternative, coal, had only been developed in limited amounts in Florida because of the significant logistical challenges and expense in delivering large quantities of coal from supply regions located in the country's interior and concerns related to emissions. These factors opened the door for a new baseload technology. Deregulation of natural gas as a fuel for electric generation and the introduction and continued improvement of large scale combined cycle gas turbine technology evolved to provide a cost-effective, efficient and low emissions alternative. As a result, combined cycle gas turbine plants have been the technology of choice for most generation additions in the state from the 1990s to today. While customers have benefited from these choices, particularly the affordability and lower emissions of domestic natural gas, recurrence of high and volatile fossil fuel prices or supply reliability issues have impacted customers and the Florida economy in the past and, unaddressed, could impact the state again in the future.

Q. What recent developments occurred to enable new nuclear generation as a deployable alternative?

A. In the late 1990s, the NRC instituted a refined regulatory framework for the licensing of new nuclear generating units. This revised process places a high

1 focus on the rigor and detail applied during the licensing process, reducing the
2 opportunity for regulatory delays during construction or prior to operation;
3 complications that severely impacted the prior generation of nuclear power
4 plants. In this way, if regulatory delays occur they do so prior to significant
5 investment reducing the financial risk in the process. Also during the 1980s
6 and 1990s, a new generation of nuclear power plants were developed and
7 poised for U.S. and international deployment. The federal Energy Policy Act
8 of 2005 provided incentives and assurances that further motivated renewed
9 interest in nuclear generation. Consortiums were formed between potential
10 owners and manufacturers that furthered several key projects validating that
11 the new designs and licensing processes would be successful. By 2006, a host
12 of new nuclear projects had been proposed in the U.S. With the passage of
13 the Florida Energy Act of 2006 and the FPSC's adoption of the Nuclear Cost
14 Recovery rule, deployment of new nuclear capacity in Florida to address fuel
15 diversity concerns became a realistic option.

16 **Q. What specific considerations are included in the Nuclear Cost Recovery**
17 **rule as implemented by the FPSC?**

18 A. A core principle of the Nuclear Cost Recovery rule is that of transparency. In
19 order to satisfy that principle, applicants for cost recovery must satisfy a
20 number of extensive reviews. In order to enter the annual cost recovery
21 process, an applicant must first obtain an affirmative need determination
22 verifying that the proposed generation is required to provide cost-effective and
23 reliable electric generation. Annually, within the cost recovery process, the

applicant must provide a full accounting for all factors of the project, including cost, schedule, decisions, and ongoing feasibility. This transparency allows the FPSC to conduct in-depth oversight of the utility's actions in real time – as the project proceeds, rather than in hindsight years after decisions are made and money is spent. The FPSC then makes a "reasonableness" determination as to costs projected for the project (prior to any recovery of those costs), and reviews historical costs for "prudence". Amendments to the Nuclear Cost Recovery statute in 2013 provide for additional interim review steps as the projects proceed from licensing to preparation and subsequently, construction.

Q. How does the existence of the Nuclear Cost Recovery process assist FPL in bringing forward nuclear generation projects?

A. The statute and associated rule provide the requisite regulatory certainty necessary for FPL to undertake the complex and challenging task of adding new nuclear capacity to its system. The process allows FPL to take the long-lead steps of licensing and pre-construction and pays off interest costs during construction, reducing costs to FPL's customers. Additionally, it enables FPL to go to the financial markets and obtain competitive financing rates for the large amount of capital required to fund the construction of the project.

Q. Does the implementation of Nuclear Cost Recovery provide savings for FPL customers?

A. Yes. Nuclear Cost Recovery enables customers to avoid paying for compounded interest during the approximately nine year construction period

and reduces the overall amount that would be recovered from customers under normal rate base treatment by billions of dollars. As shown on Exhibit SDS-11, the Nuclear Cost Recovery framework is projected to save FPL customers about $12.3 billion over the life of the Turkey Point 6 & 7 units.

PROJECT APPROACH

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

A. FPL continues to develop Turkey Point 6 & 7 through a deliberate and careful process navigating through the four phases of project development: Exploratory, Licensing, Preparation, and Construction. The project is currently focused on the Licensing phase which allows FPL to make progress on obtaining licenses and approvals without taking on the risks and expenditures that would result from committing to a specific construction schedule. For example, through 2016, FPL estimates it will have spent approximately 1% of the high end of the estimated project cost range ($20.0 billion).

A project of this complexity, particularly in the early stages, is subject to external factors that are not under FPL's control. Therefore, FPL's approach has been developed as a step-wise process. Routine monitoring of a wide range of factors and events is accomplished to help increase certainty and predictability, informing each subsequent step.

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

A. The project team monitors issues at local, state, and federal levels and across technical, commercial, economic, and regulatory areas of interest. The impact on cost, schedule, and quality are routinely assessed through a set of tools and reviews. If review indicates the potential for a considerable cost or schedule impact, mitigation actions are identified and are designed to eliminate, reduce, or defer the impact. If the magnitude of the impact materially affects cost or schedule, or changes the feasibility of the project, a decision is made as to whether such impact is acceptable in light of all current information. Alternative courses of action include continuing with a modified budget and schedule along with available mitigation actions, or halting a portion of the project temporarily while the issue is further assessed or resolved. The alternative of slowing or halting a portion of the project in response to significant events or uncertainties offers a high level of risk control for FPL and its customers.

Recent schedule modifications to accommodate the effects of the revised NRC COLA review schedule, and to incorporate the impacts of the 2013 Nuclear Cost Recovery statutory amendments, demonstrates the implementation of the stepwise approach. The new information was reviewed, and a revised project schedule was developed and vetted.

PROCESS AND RISK MANAGEMENT

Q. How is the Turkey Point 6 & 7 project management organized to maintain an ongoing risk management focus?

A. The Turkey Point 6 & 7 project requires a wide range of skilled team members with experience in the development, design, construction and licensing of nuclear generation. The project management structure of the Turkey Point 6 & 7 project provides for dedicated teams with the requisite subject matter expertise coordinated to meet project objectives. This is accomplished through a project organization and reporting structure that effectively identifies and applies resources to issues while maintaining transparent and open communications.

As described in my March 2, 2015 testimony, the project organization relies on two principal groups jointly responsible for the integrated execution of the project. William Maher, Senior Director of New Nuclear Projects, manages the New Nuclear Plant (NNP) organization with responsibility for NRC licensing. Steve Reuwer, Director of Construction manages project engineering and construction within the NNP organization. I lead all other facets of project development, such as state Site Certification, local zoning approvals, public relations, and FPSC regulatory issues. Messrs. Maher, Reuwer and I report to Mano Nazar, President of Nuclear and Chief Nuclear Officer. Each organization is supported by FPL business units with specific,

recent success in the certification, NRC re-licensing, and permitting of multiple power generation units in Florida and is complemented by our national operating experience with renewable, natural gas, and nuclear generation assets.

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

Q. What process and risk management tools does FPL apply to manage cost, risk, and schedule objectives?

A. FPL uses industry accepted project controls, systems, and practices to obtain a high level of control over the expenditures incurred and projected for all projects. The primary means of control are 1) the project budgeting and reporting process, 2) project schedule and activity reporting processes, 3) the contract management process for external service providers, and 4) internal and external oversight processes. These processes were fully described in my March 2, 2015 testimony and continue to be utilized in the oversight of the project.

Q. Please provide examples of specific tools used to manage the project.

A. The PTN 6 & 7 Licensing Project Dashboard presents issues and the current trends for those issues. Over time, if a problematic issue continues to trend

down or remains neutral, the effectiveness of the project management controls are investigated to determine if changes in approach can create improvement, or if mitigation measures are adequate. Additionally, a quarterly risk summary tracks the assessment of project risks over time. This summary qualitatively gauges the probability of occurrence and impacts to implementation, cost, and schedule aspects of the project.

Q. What activities are undertaken by the project to address industry issues affecting the long term success and execution of the project?

A. FPL is involved in a number of areas to address issues relevant to new nuclear deployment. FPL participates in three specific groups comprised of new nuclear industry owners and design vendor(s). These include the Design Centered Working Group (DCWG), the AP1000 Owners Group (APOG), and the Advanced Nuclear Technology group. The collective purpose of these groups is to identify and resolve issues potentially affecting the licensing, design, construction, operation, and maintenance of the AP1000 design. Individually, each group provides a collaborative forum for owners to work with each other, the design vendor and the NRC to achieve standardized solutions to the issues facing all owners. This enables the industry to maintain a high level of standardization from the earliest stages of new nuclear deployment. Standardization of designs and processes provides benefits to FPL customers in terms of efficiency and cost control.

ISSUES POTENTIALLY AFFECTING THE PROJECT

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

A. FPL monitors issues that can affect the overall timeline or feasibility of the project. Several of these factors, directly or indirectly, influence the scope and pace of regulatory reviews. For example, the NRC's response to the March 2011 Japanese earthquake and tsunami has indirectly resulted in added scope to the safety review of FPL's Turkey Point 6 & 7 COLA and impacted the NRC resources available to conduct that review. Other factors relate to updated information that must be incorporated into FPL's decision making process and feasibility analysis. This information includes the lessons being gathered at the two U.S. AP1000 construction sites, as well as the most current economic forecasts for input into the project planning and analyses processes.

Q. What factors in the federal license and permit review processes may affect the overall timeline of the project?

A. The federal processes include the safety and environmental reviews that inform the NRC COLA process, as well as additional reviews conducted by the Army Corps of Engineers (USACE) in support of the Section 404(b) wetland permit applications. Looking forward, several factors are being monitored for potential impact.

For example, as discussed in my March 2, 2015 testimony, the NRC provided an updated Review schedule for both safety and environmental aspects of the Turkey Point 6 & 7 COLA in 2014. This revised schedule has provided increased certainty regarding the timeline to complete the licensing phase, and has allowed FPL to better estimate the earliest practicable project schedule. NRC progress consistent with this new schedule will be closely tracked.

Additionally, the Atomic Safety and Licensing Board (ASLB) has reviewed contentions to the Turkey Point 6 & 7 COLA over the past several years. All contentions offered by opponents have been dismissed with the exception of one related to certain constituents within waste water from the plant. FPL has conducted additional analyses and will seek to have that contention dismissed. If successful, the Turkey Point 6 & 7 COLA would not require a contested hearing, reducing the time required to obtain a COL.

Q. What factors at the state and local levels may affect the pace of the state Site Certification process?

A. Following the Siting Board Final Order in May 2014, four parties filed an appeal in the Third District Court of Appeals. The appellate process will involve briefing and ultimately a hearing before the tribunal. The timing of the process is dependent on several administrative steps and the court's calendar. It is anticipated that the Appellate court will rule within the next 12 months.

1 **Q. Does FPL monitor the progress of other U. S. new nuclear energy**
2 **projects?**
3 A. Yes. The new nuclear construction projects at Southern Company's
4 (Southern) Vogtle Electric Generating Plant (Vogtle) in Georgia and SCANA
5 Corporation's (SCANA) Summer AP1000 projects in South Carolina continue
6 to make progress but have experienced delays, primarily related to the
7 fabrication and delivery of modules. In 2014 both projects made progress
8 with the initial safety related construction. The advanced status of these
9 projects serves as a reference for FPL's cost estimates and post-licensing
10 schedule. In general, the status of these projects continues to demonstrate that
11 substantial and consistent progress is being made on deploying the next
12 generation of nuclear projects.
13 **Q. What is the status of a Department of Energy (DOE) Loan Guarantee for**
14 **the Vogtle and Summer projects?**
15 A. Georgia Power has entered into an agreement for a $3.46 billion loan
16 guarantee for the company's 45.7% interest in the Vogtle 3 & 4 project.
17 Oglethorpe Power, owner of a 30% stake in the Vogtle project, also closed on
18 a $3.06 billion loan guarantee. Municipal Electric Authority of Georgia is
19 pursuing finalization of a $1.8 billion loan guarantee for its minority interest
20 in the Vogtle project. SCANA continues to discuss loan guarantees for the
21 Summer project, but has yet to commit to obtaining the guarantees.
22 **Q. What would be required to obtain a DOE Loan Guarantee for the**
23 **Turkey Point 6 & 7 project?**

1 A. Essentially, a new solicitation issued by the DOE Loan Guarantee Office
2 would be required. The solicitation would define the eligibility requirements
3 and terms of application which would guide FPL's actions. Upon submission
4 of an application, the Turkey Point 6 & 7 project would be evaluated for
5 eligibility and specific discussions defining the terms and conditions of a loan
6 guarantee would be initiated. FPL is prepared to pursue such a guarantee
7 should one be offered, and should FPL determine that participation would
8 benefit its customers.

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

12 A. The supply and demand balance in the natural gas industry has created a near
13 term reduction in natural gas prices and has maintained long range forecasts
14 for price at historically low levels. FPL Witness Brown addresses the effect
15 of changes in FPL demand forecasts and natural gas price forecasts on the
16 economic feasibility of Turkey Point 6 & 7.

17 **Q. What do recent developments related to national and regional energy**
18 **policy indicate with respect to the continued pursuit of the Turkey Point**
19 **6 & 7 project?**

20 A. National energy policy remains supportive of nuclear energy in general, and
21 new nuclear energy development in specific. Challenges to existing nuclear
22 generators in certain markets has become a focus of the administration as
23 these generators greatly assist in attaining emission reduction goals set by the

federal government. Further, the closing of the loan guarantees for Vogtle in 2014 underscores the desire of the federal government to promote generation technologies that reduce or eliminate greenhouse gas emissions, maintaining progress towards meeting policy goals. In general, while cautious, policymakers continue to recognize the long term benefits of and need for existing and new nuclear generation capacity.

Regionally, the legislature amended the Nuclear Cost Recovery statute in 2013. Notably, the amendments resulted in maintaining cost recovery as originally envisioned, with added opportunities for the FPSC to review the project prior to initiating major milestones. However, the additional reviews required by the amended statute affect the project schedule and estimated total project cost. Reliability, cost-effectiveness, fuel diversity, fuel supply reliability, and price stability are still benefits to be delivered by increasing nuclear generation capacity and are still needed by FPL's customers. A future plan that does not include new nuclear capacity increases and prolongs reliance on fossil fuels, increases exposure to fuel supply reliability and price volatility, and is not as effective at reducing system emissions, including greenhouse gas emissions, when compared to a plan that does include new nuclear generation capacity.

KEY DECISIONS AND MILESTONES

Q. What will be the focus of the project in 2015 and 2016?

A. The focus will remain on defending the state Site Certification in the appellate process and obtaining the federal licenses and permits necessary to construct and operate the Turkey Point 6 & 7 project. The milestones required to obtain these goals are discussed below and summarized in Exhibit SDS-12.

Q. What specific milestones are expected in relation to completing the NRC licensing process?

A. The Draft Environmental Impact Statement (EIS) was published on February 27, 2015 and public comment sessions were held on April 22, and 23, 2015. The comment period closes on May 22, 2015. The NRC staff and Army Corps will address the comments received, and estimates publication of the Final EIS in February 2016. Using these dates, and assuming the contention stands, FPL estimates that the ASLB would hold a contested hearing in the latter part of 2016.

The NRC staff estimates that the Advanced Final Safety Evaluation Report (SER) will be published in January 2016. A review by the Advisory Committee on Reactor Safeguards (ACRS) will be conducted in May 2016 followed by the Final Safety Analysis Report published in October 2016. With completion of the FSER and the ASLB hearing, the NRC would be able to make a decision on the Turkey Point Unit 6 & 7 COL by March 2017.

1 **Q. Are there assumptions included in these estimates that may change, and**
2 **therefore affect the schedule?**
3 A. Yes. The NRC assumes that they will be provided the necessary resources to
4 execute the estimated plan. The NRC is addressing competing priorities to
5 resolve the NRC's response to Fukushima for the existing nuclear plants and
6 demands on resources necessary to complete the safety review. The
7 availability of NRC resources to complete the Turkey Point Unit 6 & 7 COLA
8 review will be impacted by the progress made in this important area, and other
9 potential developments.
10
11 At a project level, there are two specific assumptions that may offer an
12 opportunity to better the current milestone estimates. The SER timeline
13 assumes timely resolution of two additional rounds of Requests for Additional
14 Information of six months each, where only one round may be necessary.
15 Additionally, the overall timeline assumes the need for the ASLB (contested)
16 hearing. As discussed previously, if the last contention is dismissed, the
17 contested hearing would not be required and the overall schedule may gain six
18 months.
19 **Q. Did FPL anticipate that the NRC regulatory process could be extended?**
20 A. Yes. The potential for this schedule change was foreseen and this type of
21 change is at the core of how FPL has chosen to proceed on this important
22 project. As I indicated in 2013, "Things that are not under FPL's control are
23 federal budget issues, sequestration, and other items that affect the NRC's

resource and their resource allocation." (See Transcript Docket 130009-EI, page 609, lines 12-15). The NRC gives priority to emerging issues that affect the existing nuclear fleet. FPL is making every prudent effort to deliver the benefits of the project on the earliest practicable schedule, while being mindful of the potential for and impact of delays. In fact, this has been FPL's position throughout this project.

Q. What specific milestones are expected related to the USACE Section 404(b) process?

A. As described in prior sections, the USACE will utilize the NRC EIS as its Record of Decision for the Section 404(b) permits. Thus, the timing of these permit activities closely follow the NRC process up to the point of the Final EIS. When the Draft EIS was published for comment, the USACE published a notice of the permit application. In parallel to the National Environmental Policy Act based EIS process, the USACE will similarly complete a review under the Clean Water Act to determine the Least Environmentally Damaging Practicable Alternative. This will include a wildlife consultation with the U.S. Fish & Wildlife Service. It is expected that the Section 404(b) permits could be issued within four to six months following completion of the Final EIS in 2016.

Q. What specific milestones are expected related to the state Site Certification process in 2015 and 2016?

1 A. As discussed earlier, the Third District Court of Appeals is expected to
2 address the appeal within the next 12 months. Also, FPL will take necessary
3 actions required by Conditions of Certification (CoC) to maintain compliance.
4 **Q. What type of activities are required by the CoC, and what is the timing**
5 **associated with these activities?**
6 A. The CoC identify specific activities (such as monitoring plans or reports,
7 management plans and wildlife surveys) necessary to demonstrate compliance
8 with the CoC and applicable regulatory requirements. The time requirements
9 for these activities vary based on the activity in question. Some are required
10 within a specified period of time following an event, such as Certification or
11 completion of construction. Some precede an event, such as commencement
12 of construction or commencement of operation. FPL will undertake those
13 activities necessary to maintain compliance with the terms and conditions of
14 the Certification.
15 **Q. Please provide an example of results associated with the state Site**
16 **Certification process that may affect the project cost or schedule.**
17 A. A monitoring program associated with the Radial Collector Well (RCW)
18 system was included as a CoC that will require significant groundwater and
19 ecological monitoring before, during, and after construction of the RCW
20 system. This is an example of the type of activity that could not be
21 specifically estimated prior to the Certification.
22 **Q. What specific milestones are expected for the Everglades National Park**
23 **Land Exchange process in 2015?**

1 A. The Draft EIS was published in January 2014 and comments were accepted
2 from the public through March 18, 2014. The U.S. National Park Service will
3 address the comments received and is expected to produce a Final EIS in
4 2015. Any agreement resulting in the land exchange would occur following
5 the Final EIS, and will likely include terms and conditions as established by
6 the Secretary of Interior.

7 **Q. Are there other specific milestones in the 2015-2016 timeframe that are**
8 **expected to enable FPL to proceed with pre-construction work after**
9 **receipt of the COL?**

10 A. Yes. FPL's current project schedule includes filing a request in 2016 to begin
11 pre-construction work, so that it can immediately begin such work upon
12 receipt of the COL. If FPL's request is made concurrent with its ordinary
13 May 2016 NCR filing, it would be considered by the FPSC in the fall and a
14 final order would likely be issued by the end of 2016. This timing aligns well
15 with the current NRC schedule discussed above, which assumes receipt of the
16 COL in the first part of 2017.

17 **Q. What work is FPL performing to obtain this necessary approval?**

18 A. FPL is conducting a number of initial assessments to inform a decision to
19 proceed to begin preconstruction work, as that term is used in Section 366.93,
20 Florida Statutes, and to support the related regulatory approval of such a
21 decision. These initial assessments are a collection of studies that are
22 necessary to compile a coordinated recommendation to continue to pre-
23 construction. These include engineering analyses that will help better define

the project schedule and construction scope, enhancing the accuracy of the cost and schedule estimate to be used for the feasibility analysis that would be presented in support of a decision to proceed to pre-construction. Due to the nature of these initial assessments, some are required to be initiated up to many months in advance of the decision to begin preconstruction. Accordingly, it is reasonable that FPL undertake these activities in 2015 and 2016. FPL has chosen to defer requesting contemporaneous recovery of the costs expended for these initial assessments until they are included in the request for approval to proceed with pre-construction work.

Q. Is there any pre-construction work anticipated in 2015 and 2016?

A. No. Only activities that are related to obtaining or maintaining the necessary licenses, permits or approvals, as discussed above, are planned to be undertaken in 2015 and 2016.

PROJECT COST AND FEASIBILITY

Q. What is the current non-binding cost estimate range for the project?

A. The overnight capital cost estimate range is $3,844/kW to $5,589/kW. When time-related costs such as inflation and carrying costs are included, and CODs of 2027 and 2028 are assumed, the total project cost ranges from $13.7 to $20.0 billion for the 2,200 MW project.

Q. Please explain how the overnight cost estimate is constructed and how it is used to help evaluate the feasibility of the project each year.

A. An overnight cost is developed using the most current information available. An overnight cost provides an estimate of the total project costs assuming all costs occur at one point in time ("overnight") and time-related costs (escalation, interest during construction) are not included. Further, recognizing many things could influence the overnight cost, additional analysis is conducted on each component of the overnight cost to explore how much it could vary, resulting in a cost estimate range. The overnight cost provides an indication of the cost per kilowatt ($/kW) for the project in a given year reference. The 2014 cost estimate range was $3,750/kW to $5,453/kW in 2014 dollars. Updating the cost estimate range provides a cost estimate range of $3,844/kW to $5,589/kW in 2015 dollars. The cost estimate range has been adjusted to current year dollars by assuming a 2.5% escalation over the years between 2007 and present. While the actual escalation experienced has been generally lower, retaining this simple assumption is conservative and consistent with past year evaluations.

A breakeven cost analysis is developed by FPL's Resource Assessment and Planning Department, and is further discussed by FPL Witness Brown. This breakeven cost is provided as an overnight cost and is directly compared to the cost estimate range to assess the economic feasibility of the project.

Q. Have there been any revisions to project features or design or any industry-wide developments in the past year that suggest a revision to the overnight capital cost estimate range?

1 A. No. A review was conducted to capture any potential changes and estimate
2 the potential cost impact. No significant changes or developments have
3 occurred in the past year indicating any revisions are necessary to the project
4 cost estimate range. In general, the Final Order resulting from the SCA
5 preserved the project and ancillary features as proposed by FPL, and is
6 therefore consistent with the project as envisioned in the current cost estimate
7 range.

8 **Q. Does FPL's cost estimate range continue to be reasonable?**

9 A. Yes. The FPL cost estimate range continues to be reasonable based on the
10 annual review of the Turkey Point 6 & 7 capital cost estimate, a comparison to
11 other U.S. AP1000 project progress reports, and Concentric Energy Advisors'
12 review of U.S. AP1000 project overnight and total estimated costs.
13
14 The comparison to other U.S. AP1000 projects provides confidence due to the
15 advanced nature of the projects being reviewed. The costs being experienced
16 by the lead projects at Vogtle and Summer are informed by committed
17 contracts, are well into the construction cycle, and include significant
18 equipment and material purchases. Therefore, the total project costs estimated
19 for the projects in construction are more certain.

20 **Q. What future activities are anticipated that will provide information to**
21 **revise the overnight capital cost estimate range?**

22 A. Negotiations on the Engineering, Procurement and Construction contract will
23 provide more information including price, terms and schedules to support an

execution plan for project construction. That information will be integrated with continued observations of the progress of preceding U.S. projects to inform and revise the Turkey Point 6 & 7 non-binding cost estimate, as warranted.

Q. What factors may impact the overall project cost estimate, including time-related costs such as price escalation and carrying costs?

A. The primary factors affecting the total project cost will be the actual labor and materials costs experienced during the Preconstruction and Construction periods. The certainty around these costs will increase as preceding projects move through the stages of construction and as FPL negotiates the principal contracts for engineering, procurement, and construction of the project. The pace of expenditures is also a critical factor that will impact total project costs. Escalation of future costs and carrying costs on expended funds are time related factors.

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

A. As discussed by FPL Witness Brown, the most current feasibility analysis affirms the projected cost effectiveness and benefits associated with the Turkey Point 6 & 7 project using the same basic analytical approach applied in the Need Determination proceeding for the project and the six prior NCRC filings. The analysis calculated a projected "break-even" cost for new nuclear; a cost that results in the same life cycle costs (or cumulative present value of revenue requirements) as an alternative plan relying on natural gas

combined cycle units assuming a 40 year operating life. The analysis was conducted for seven scenarios comprised of combinations of three fuel and three emission cost forecasts. The projected break-even costs were higher than FPL's non-binding cost estimate range for its Turkey Point 6 & 7 project in two of seven scenarios, and within the cost estimate range for the other five scenarios. These results indicate that the Turkey Point 6 & 7 project is clearly quantitatively superior to the combined cycle gas alternative plan in two scenarios and within the non-binding cost estimate range in the other five scenarios. The comparison to a natural gas facility must also recognize the qualitative benefits offered only by a nuclear facility; fuel diversity, energy security and zero greenhouse gas emissions.

Q. Is a 40 year operating life assumption conservative?

A. Yes. The term of forty years was chosen as a conservative estimate of the operating life of the units based on the initial term of the NRC Combined License. Historically, the initial license terms have been renewed for an additional 20 years for many of the existing reactors in the U.S. today. FPL's Turkey Point Units 3 and 4 and St. Lucie 1 and 2 units have successfully extended the original license terms by 20 years. Therefore, it is reasonable to assume that a 20 year extension would be attainable for the Turkey Point Unit 6 & 7 project.

Q. How would the breakeven analysis results change if it is assumed that the operating life of Turkey Point Units 6 and 7 is actually 60 years?

1 A. The results indicate that the Turkey Point 6 & 7 project is quantitatively
2 superior to the combined cycle gas alternative plan in six scenarios, while one
3 scenario falls within the cost estimate range.

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 Brown discusses the economic factors and I discuss the
7 non-economic factors.

8 **Q. What non-economic factors affect the project's 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 a reasonable cost, and supportive state and federal energy policy.
12
13 Significant progress continues on the federal, state, and local approvals
14 required for the construction and operation of the project. During 2014, the
15 state certification process was completed, pending appeal. Similarly, the
16 federal licensing efforts are moving forward in 2015 and are estimated to be
17 complete by 2017 as discussed previously. While the review process has
18 taken longer than originally anticipated, the process is proceeding
19 substantively as expected.
20
21 Financing will be determined as the project proceeds through approvals to
22 construction. The lead projects, Vogtle and Summer, have successfully
23 obtained financing, and Vogtle has closed on a significant federal loan

guarantee. FPL will continue its dialogue with the financial community to help maintain FPL's capability to obtain financing with reasonable terms.

As discussed earlier in this testimony, state and federal energy policy continues to be generally supportive of new nuclear generation for a host of reasons. Recent legislative activity in Florida sought to revise some aspects of the Nuclear Cost Recovery statute, but preserve the opportunity it provides. The high reliability, low and stable cost, and zero greenhouse gas emission profile of nuclear generation technology remains highly compatible with key energy policy objectives.

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

A. Yes. The critical path to completing Turkey Point 6 & 7 requires obtaining the licenses and approvals necessary to construct and operate Turkey Point 6 & 7. Once the project is closer to obtaining the approvals, FPL will be able to refine the economic assumptions and incorporate the experience of other new nuclear projects as well as how state and federal energy policies have evolved. The FPSC will continue to have the opportunity to review FPL's plans through the NCRC process.

Q. Does FPL have sufficient, meaningful, and available resources dedicated to the Turkey Point 6 & 7 project?

A. Yes. As demonstrated throughout this testimony, FPL has in place an appropriate project management structure that relies on both dedicated and matrixed employees, the necessary contractors for specialized expertise, and a

robust system of project controls. These resources enable the project to progress through the current licensing phase.

2015 & 2016 PROJECT COSTS

Q. How are the 2015 Actual/Estimated costs and the 2016 Projected costs developed?

A. FPL has a disciplined ground-up process to develop project budgets. This process was used in the initial project budgeting activity and is routinely reviewed and evaluated for adequacy and accuracy as additional information becomes available. The estimates of the 2015 Actual/Estimated and 2016 Projected costs were completed in accordance with FPL's budget and accounting guidelines and policies. Where services are contracted, rates are provided by the contractor and reviewed to verify the charged rates are consistent with FPL's experience in the broader industry. The cost estimates were compared to other costs being incurred by the Company for similar activities and found to be reasonable.

Q. Please provide a high level summary of the 2015 Actual/Estimated and the 2016 Projected costs presented in this filing.

A. The costs associated with the Turkey Point 6 & 7 project in 2015 and 2016 are focused on supporting the licensing and permit application reviews underway, supporting compliance for permits and approvals obtained, and conducting the

1 necessary initial assessments to support decision making and necessary
2 approvals for proceeding to preconstruction work.

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

4 A. The pace and content of the application reviews may impact the actual costs in
5 2015 and 2016, however this is anticipated to be significantly less than
6 experienced in the past as the processes are coming to a close.

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

9 A. Schedule AE-6 of SDS-8 presents the 2015 Actual/Estimated costs in the
10 following categories: 1) Licensing $15,377,764; 2) Permitting $291,349;
11 3) Engineering and Design $4,026,573; 4) Long Lead Procurement advance
12 payments $0; 5) Power Block Engineering and Procurement $0; 6)
13 Transmission $0; and 7) Initial Assessments $1,842,105.. Schedule P-6 of
14 SDS-8 presents the 2016 Projected costs in the following categories: 1)
15 Licensing $17,047,175; 2) Permitting $520,642; 3) Engineering and Design
16 $4,684,208; 4) Long Lead Procurement $0; 5) Power Block Engineering and
17 Procurement $0; 6) Transmission $0; and 7) Initial Assessments $3,157,895.
18 Table 1 of Exhibit SDS-9 provides a summary of the Actual/Estimated 2015
19 and Projected 2016 Pre-construction costs. The descriptions in the Exhibit
20 SDS-9 tables are illustrative and do not provide full line item detail.

21 **Q. Please describe the activities included in the Licensing category for the**
22 **2015 Actual/Estimated costs and the 2016 Projected costs.**

A. For the period ending December 31, 2015, Licensing costs are estimated to be $15,377,764 as shown on Line 3 of Schedule AE-6 of SDS-8. For the period ending December 31, 2016, Licensing costs are projected to be $17,047,175 as shown on Line 3 of Schedule P-6 of SDS-8. Table 2 of Exhibit SDS-9 provides a detailed breakdown of the Licensing subcategory costs.

Licensing costs consist primarily of FPL employee and contractor labor and specialty consulting services necessary to support the various license and permit applications and maintain compliance with the conditions of the approvals and permits obtained for the Turkey Point 6 & 7 project. For example, upon receipt of a COL from the NRC, FPL will be required to have the necessary resources in place to support the license. This will include specialty software to maintain the required license documentation and the necessary qualified professionals to administer the processes. These expenditures result in an increase in NNP Team Costs in 2016 as compared to 2015.

In 2015 and 2016 Licensing costs are primarily related to the NRC COLA and USACE 404(b) permit processes. Licensing costs are developed in accordance with budget and accounting guidelines and policies. Further, these cost estimates were compared to FPL's extensive experience with the development and permitting of new generation projects in Florida and found to be reasonable.

Q. What are the major differences between the 2015 Actual/Estimated values and those projected in the May 1, 2014 filing for the Licensing category?

A. The Actual/Estimated values for the Licensing category in 2015 are $4,350,513 more than the amount projected for 2015 in 2014. The principal contributors to the increased requirements come from two areas. The new forecast includes an increase of approximately $3,200,000 in anticipated NRC fees and a corresponding increase in technical support of approximately $2,000,000, partially offset by reductions in other cost categories. Both expenditures are driven by the comprehensive review of seismic issues, as a part of an overall heightened industry review of seismic-related areas.

Q. Please describe the activities in the Permitting category for the 2015 Actual/Estimated costs and the 2016 Projected costs.

A. For the period ending December 31, 2015, Permitting costs are estimated to be $291,349 as shown on Line 4 of Schedule AE-6 of SDS-8. For the period ending December 31, 2016, Permitting costs are projected to be $520,642 as shown on Line 4 of Schedule P-6 of SDS-8. Table 3 of Exhibit SDS-9 provides a detailed breakdown of the Permitting subcategory costs, including a description of items included within each category. Permitting costs include costs for the Development team, in-house legal support, and resources to conduct necessary outreach educating stakeholders about the project.

Q. What are the major differences between the 2015 Actual/Estimated values and those projected in the May 1, 2014 filing for the Permitting category?

A. The Actual/Estimated values for the Permitting category in 2015 are $45,665 more than the amount projected for 2015 in 2014. The increased expenditures are for continuing external legal support for the Land Exchange and Development support beyond the time frame projected in the May 1, 2014 filing.

Q. Please describe the activities in the Engineering and Design category for the 2015 Actual/Estimated costs and the 2016 Projected costs.

A. The Engineering and Design activities performed in 2015 and 2016 are primarily related to participation in industry groups and engineering support for the COLA review. For the period ending December 31, 2015, Engineering and Design costs are estimated to be $4,026,573 as shown on Line 5 of Schedule AE-6 of SDS-8. For the period ending December 31, 2016, Engineering and Design costs associated with preliminary engineering activities are projected to be $4,684,208 as shown on Line 5 of Schedule P-6 of SDS-8. Table 4 of Exhibit SDS-8 provides a detailed breakdown of the Engineering and Design subcategory costs, including a description of items included within each category.

Costs for participation in industry groups include the Electric Power Research Institute Advanced Nuclear Technology working group (with annual fees of

$250,000 in 2015 and $275,000 in 2016) and the DCWG (no external charge to participate in this group). The fee for participation in APOG is expected to be $3,000,000 in 2015 and $3,000,000 in 2016. These costs are necessary to obtain the benefits of membership described earlier in this testimony.

Q. What are the major differences between the 2015 Actual/Estimated values and those projected in the May 1, 2014 filing for the Engineering and Design category?

A. The Actual/Estimated values for the Engineering and Design category in 2015 are $2,118,785 higher than the amount projected for 2015 in 2014. The principal cause of this increase is the increase in APOG membership contribution.

Q. Please describe the activities in the Long Lead Procurement category for the 2015 Actual/Estimated costs and the 2016 Projected costs.

A. For the period ending December 31, 2015 and December 31, 2016, Long Lead Procurement costs are projected to be $0 as shown on Line 6 of Schedule AE-6 of SDS-8 and line 6 of Schedule P-6 of SDS-8. Future Long Lead Procurement costs are anticipated to be included in the Power Block Engineering and Procurement cost category.

Q. Please describe the activities in the Power Block Engineering and Procurement category for the 2015 Actual/Estimated costs and the 2016 Projected costs.

A. For the period ending December 31, 2015 and, Power Block Engineering and Procurement costs are estimated to be $0 as shown on Line 7 of Schedule AE-

6 of SDS-8. For the period ending December 31, 2016, Power Block Engineering and Procurement costs are projected to be $0 as shown on Line 7 of Schedule P-6 of SDS-8.

Q. Please describe the activities in the Transmission category for the 2015 Actual/Estimated costs and the 2016 Projected costs.

A. For the period ending December 31, 2015, Transmission expenditures are estimated to be $0 as shown on Line 25 of Schedule AE-6 of SDS-78. For the period ending December 31, 2016, Transmission expenditures are projected to be $0 as shown on Line 25 of Schedule P-6 of SDS-8.

All 2015 and 2016 costs associated with Transmission planning are related to the licensing and permitting activities, and therefore are appropriately included in those categories, described above.

Q. Please describe the activities in the Initial Assessments category for the 2015 Actual/Estimated costs and the 2016 Projected costs.

A. For the period ending December 31, 2015, Initial Assessment expenditures are estimated to be $1,842,105 as shown on Line 8 of Schedule AE-6 of SDS-8. For the period ending December 31, 2016, Initial Assessment expenditures are projected to be $3,157,895 as shown on Line 8 of Schedule P-6 of SDS-8. These costs consist of studies required to further refine the revised schedule and substantiate assumptions supporting the feasibility analysis. As discussed previously, these costs are reasonable to support a decision to proceed to preconstruction and to support the filings FPL will make to seek approval to

1 begin preconstruction. Nonetheless, FPL is not seeking to recover these costs
2 as part of its 2016 NCR amount. Therefore, they have been adjusted out of
3 FPL's request, as shown on Line 14 of Schedule AE-6 and Line 14 of
4 Schedule P-6.

5 **Q. Are FPL's Actual/Estimated 2015 and Projected 2016 Turkey Point 6 & 7**
6 **costs reasonable?**

7 A. Yes. FPL's 2015 expenditures of $21,537,791 and 2016 expenditures of
8 $25,409,920 are reasonable and necessary to obtain the licenses, permits and
9 approvals which will allow FPL to carefully and methodically create the
10 opportunity for additional reliable, cost-effective and fuel diverse nuclear
11 generation to benefit FPL customers. FPL uses a robust system of project
12 controls, systems, and practices to obtain a high level of control over the
13 expenditures incurred and projected. Together, these support a finding that
14 FPL's Actual/Estimated 2015 and Projected 2016 expenditures are reasonable.

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

16 A. Yes.

SDS–8 is in the Nuclear Filing Requirements Book

Table 1. 2015 Preconstruction Costs

Category	2015 Actual/ Estimated Costs ($)	2016 Projected Costs ($)
Licensing	15,377,764	17,047,175
Permitting	291,349	520,642
Engineering & Design	4,026,573	4,684,208
Long Lead Procurement	-	-
Power Block Engineering & Procurement	-	-
Total Preconstruction Costs	**19,695,685**	**22,252,025**
Transmission	-	-
Total Preconstruction Costs & Transmission	**19,695,685**	**22,252,025**
Initial Assessments	1,842,105	3,157,895
Total Preconstruction Costs, Transmission & Initial Assessments	**21,537,791**	**25,409,920**

Note: Totals may not appear to add due to rounding.

Table 2. 2015 Licensing Costs

Category	2015 Actual/ Estimated Costs ($)	2016 Projected Costs ($)
NNP Team Costs - NNP FPL Payroll and Expenses, FPL Project Team Facilities, FPL Engineering, FPL Licensing	3,439,461	6,102,657
Application Production - COLA/SCA Contractor, Project Architecture & Engineering, NRC and Design Center Working Group fees	8,188,773	5,881,139
SCA Oversight	-	-
SCA Subcontractors:		
• Transmission	70,219	-
• Environmental	52,681	30,000
• Underground Injection	-	-
Total SCA	122,899	30,000
Environmental Services - FPL Payroll and Expenses, External Support Expenses	257,610	772,575
Power Systems - FPL Payroll and Expenses, System Studies, Licensing and Permitting Support and Design Activities	33,673	57,403
Licensing Legal - FPL Payroll and Expenses, External Legal Services, Expert Witnesses	1,069,688	1,267,019
• Regulatory Affairs	432,750	273,330
• New Nuclear Accounting	238,048	277,657
Total Regulatory Support	670,797	550,987
Licensing Contingency	1,594,863	2,385,395
Total Licensing	**15,377,764**	**17,047,175**

Note: Totals may not appear to add due to rounding.

Table 3. 2015 Permitting Costs

Category	2015 Actual/ Estimated Costs ($)	2016 Projected Costs ($)
Project Communication Support	37,133	58,527
Development - FPL Payroll and Expenses, Various Studies	148,421	287,953
Permitting - Legal Specialists Support	77,155	105,193
Permitting Contingency	28,639	68,969
Total Permitting	**291,349**	**520,642**

Table 4. 2015 Engineering and Design Costs

Category	2015 Actual/ Estimated Costs ($)	2016 Projected Costs ($)
Engineering and Construction Team - FPL Payroll and Expenses, Preconstruction Project Management	345,770	773,695
Pre-construction External Engineering - Construction Planning	20,000	-
APOG Membership Participation	3,000,000	3,000,000
EPRI Advanced Nuclear Technology	250,000	275,000
FEMA Fees	15,000	15,000
Engineering and Design Contingency	395,803	620,513
Total Engineering and Design	**4,026,573**	**4,684,208**

Table 5. 2015 Initial Assessment Costs

Category	2015 Actual/ Estimated Costs ($)	2016 Projected Costs ($)
Total Initial Assessments	**1,842,105**	**3,157,895**

Note: Totals may not appear to add due to rounding.

FPL

Turkey Point 6 & 7 Project Benefits at a Glance

Projected first year fossil fuel savings for customers

$570 million

Projected lifetime fossil fuel savings for customers

40 years:
$47 billion

60 years:
$101 billion

Enough energy to power
1,251,000 customer homes
without burning coal, natural gas or foreign oil

Fewer greenhouse gas emissions

CO_2 reduction of

40 years

U.S. EPA annual equivalent of removing more than

from the road

Decreased reliance on natural gas and foreign oil

Annual fossil fuel reduction of the equivalent of
29 million barrels of oil
or
184 million mmBTU of natural gas

FPL's reliance on natural gas reduced by
13%
beginning in the first full year of operation

Higher electric grid stability

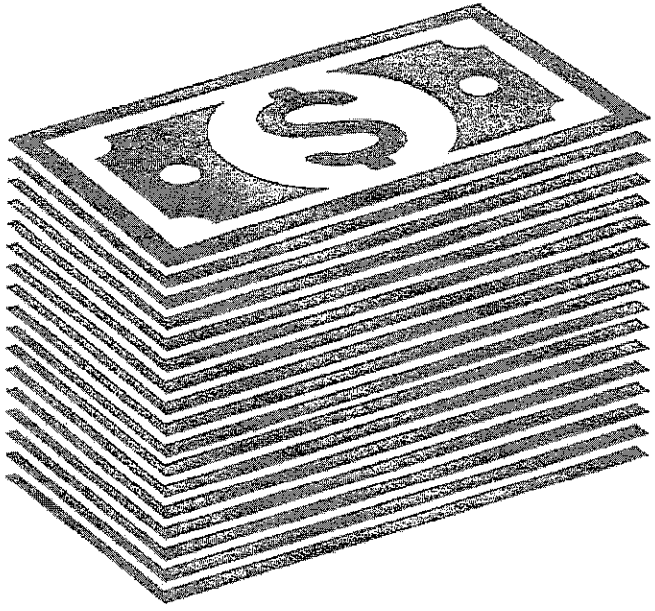
Turkey Point 6 & 7– more electricity where it is needed

The quantifications of these benefits are set forth in FPL Witness Brown's testimony and Exhibit ROB-1

FPL

Florida's Nuclear Cost Recovery Law Saves FPL Customers Money

Recovery of carrying costs through the Nuclear Cost Recovery Clause reduces rates for customers over the life of the Turkey Point 6 & 7 plant

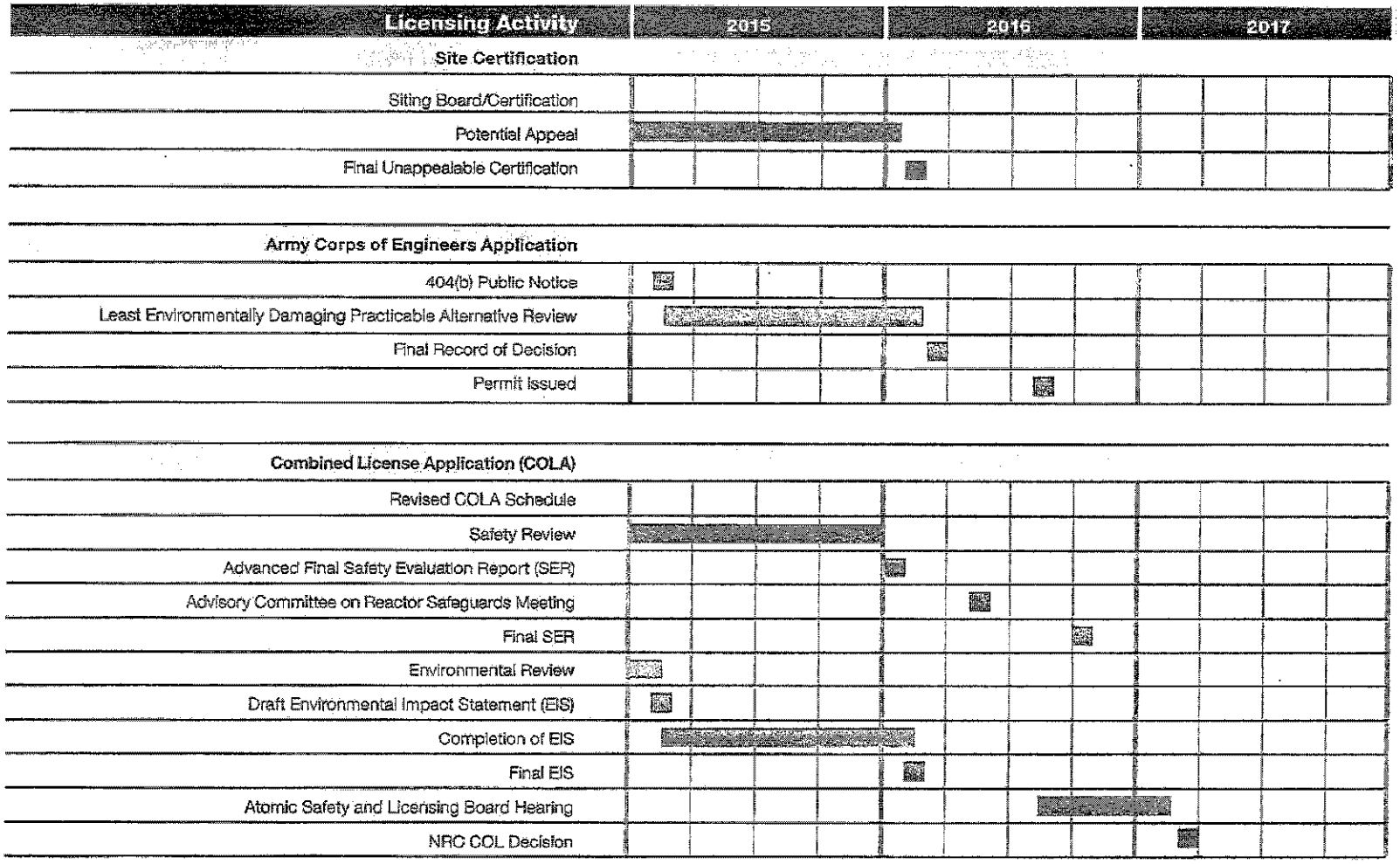


FPL customers save more than $12 billion* over the life of the plant

** Based on the high end of the non-binding cost estimate range and an assumed 40 year operating life*
** Net present value in 2015 dollars is more than $580 million*

FPL

Remaining Steps to Obtain Key State and Federal Licenses for Turkey Point 6 & 7



All dates are estimated based on recent state or federal communications

CERTIFICATE OF SERVICE
DOCKET NO. 150009-EI

I HEREBY CERTIFY that a true and correct copy of the foregoing testimony and exhibits was served by electronic mail this 1st day of May, 2015 to the following:

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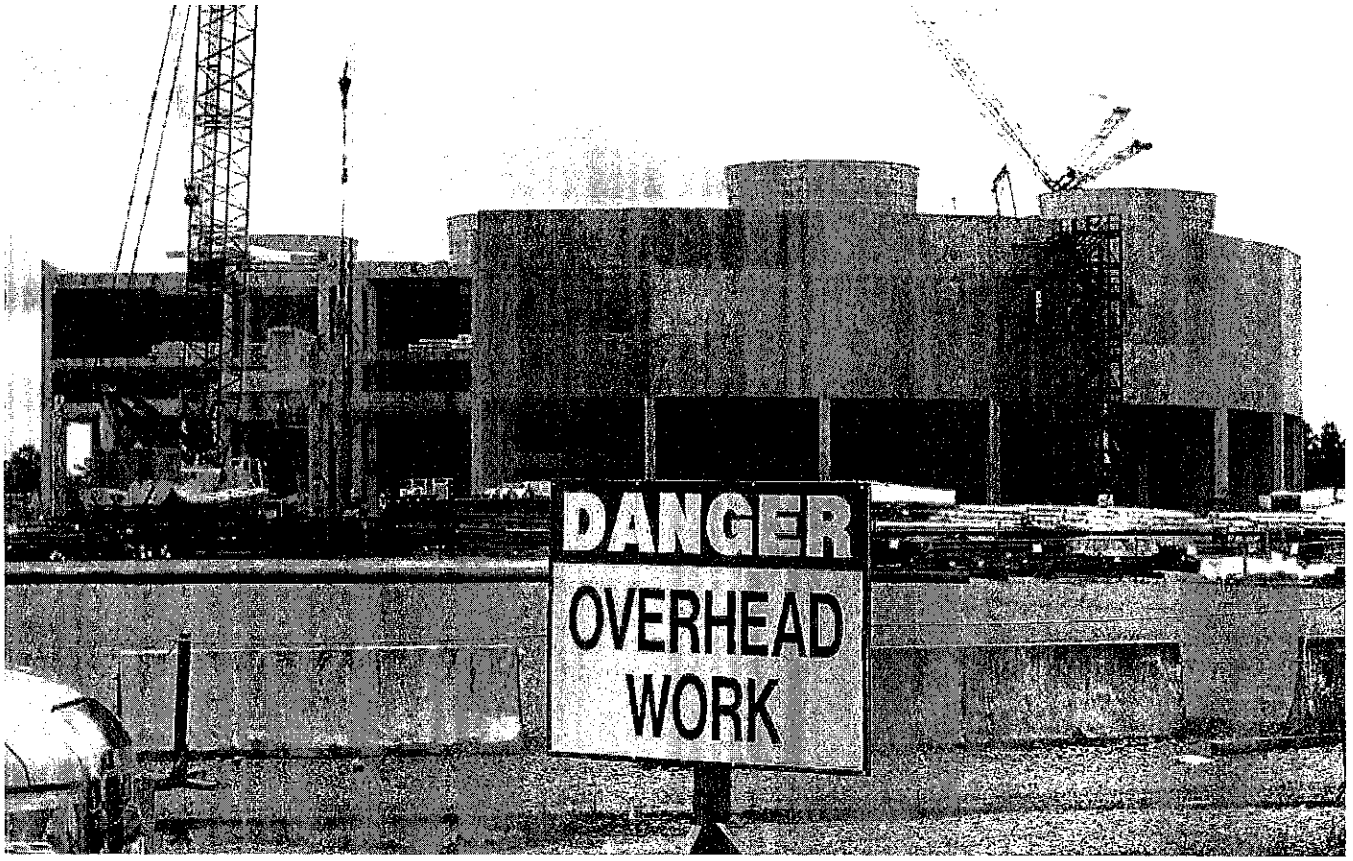
Exhibit 2



LOCAL

MARCH 29, 2017 4:51 PM

Utilities hope to finish SC nuclear plant despite Westinghouse bankruptcy

BY BRUCE HENDERSON
bhenderson@charlotteobserver.com

The utilities building a new nuclear power plant in South Carolina say they hope to complete the $14 billion project despite the bankruptcy Wednesday of contractor Westinghouse Electric Co.

SCANA has a 55 percent stake in the two nuclear reactors Westinghouse is in charge of building at the V.C. Summer power plant northwest of Columbia. State-owned Santee Cooper owns the other 45 percent.

The utilities said in a statement that, anticipating a bankruptcy, they have worked with Westinghouse on an agreement to continue work at Summer while the utilities decide how to move forward.

[READ MORE: Westinghouse files for bankruptcy]

[READ MORE: What the bankruptcy means to Charlotte]

"Our commitment is still to try to finish these plants; that would be my preferred option," SCANA Chairman and CEO Kevin Marsh told financial analysts Wednesday. He added: "It's early in the process (and) way too premature to say this is the option we're going to end up with."

If the plant is canceled, he said, the utility will still need the electricity the reactors would have generated.

The Summer plant is about $3 billion over budget and years behind schedule, Columbia's State newspaper reported.

Westinghouse, whose nuclear reactors are used worldwide, is also leading construction of two reactors at the Vogtle power plant in Georgia that is owned by Southern Co.

Both would use the new Westinghouse AP1000 reactor, which was touted as a safer, cheaper option to older designs. Duke Energy had also planned to use the AP1000 if it moves forward with the Lee nuclear plant in Cherokee County, S.C.

The industry had hoped the designs would usher in a nuclear renaissance to replace the aging U.S. fleet. Instead the Japanese company Toshiba Corp., which bought Westinghouse's nuclear business in 2006, has written off $6 billion in U.S. nuclear-related losses.

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Exhibit 3

Georgia Power reaches tentative deal to take over Plant Vogtle work

Russell Grantham - The Atlanta Journal-Constitution
11:40 p.m Friday, May 12, 2017 Filed in Business and Money news


Construction of Plant Vogtle's Unit 3 reactor. Photo: Georgia Power

Georgia Power and Westinghouse Electric said they reached a tentative agreement for the Atlanta utility and Southern Nuclear to take over management of the troubled Plant Vogtle project indefinitely from the bankrupt contractor.

The new agreement, announced Friday night, will take effect "once the current ... construction contract is rejected in Westinghouse's bankruptcy proceeding," the companies said.

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The two companies said an existing interim agreement, which was set to expire Friday, will be extended to June 3 to give the parties time to finalize the new deal and get required approvals, including from the bankruptcy court. Atlanta-based Southern Company is the parent of both Georgia Power and Southern Nuclear.

Georgia Power did not indicate in its terse statement what its long-term plans are for the nuclear expansion project.

"Georgia Power will continue work to complete its full-scale schedule and cost-to-complete analysis and work with the project co-owners (Oglethorpe Power, MEAG Power and Dalton Utilities) and the Georgia Public Service Commission to determine the best path forward for customers," the company said in a press release.

Since the late-March bankruptcy of Westinghouse, the project's key contractor, Georgia Power has been spending about $50 million a month under the extended contract to continue building two new nuclear reactors at the plant near Augusta.

Georgia Power and Southern told state regulators Thursday that they have been gathering information at the site and from Westinghouse to determine what to do in the wake of the bankruptcy filing.

Westinghouse, which is reorganizing under Chapter 11, provided the designs for the new reactors and had been overseeing construction.

Westinghouse is owned by Japanese conglomerate Toshiba. It is expected to seek to exit the Vogtle project as part of its bankruptcy reorganization. Georgia Power and Southern say they are looking at all options, including completing construction under different management, converting the project to another type of power plant, or abandoning it.

The project is well over $3 billion over budget and more than three years behind schedule.

About 6,000 employees and contractors are working at the site, with about 43 percent of the construction completed, utility executives told the Georgia Public Service Commission at a hearing Thursday.

Georgia Power officials said the project slipped at least four months farther behind schedule in the second half of 2016, and has fallen farther behind this year. They said they no longer expect the project to be finished by the end of 2020, the latest date the company had projected.

Georgia Power and its partners such as Oglethorpe Power and MEAG are bankrolling the project with more than $8 billion in federal loans and loan guarantees. Georgia Power has also collected nearly $2 billion paid through "financing" surcharges that add about $100 a year to residential customers' bills.

Critics say the $20 billion project isn't needed because demand for electricity has been largely flat in Georgia since the PSC approved it in 2009, even though the state's population has growth about 6 percent since then.

Experts says the slowed electricity usage has resulted partly from more efficient lights, appliances and heating and cooling systems, and partly from slower economic growth since the Great Recession.

VIEW COMMENTS 13

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Exhibit 4

The New York Times https://nyti.ms/2owRKs2

ENERGY & ENVIRONMENT

Westinghouse Files for Bankruptcy, in Blow to Nuclear Power

By DIANE CARDWELL and JONATHAN SOBLE MARCH 29, 2017

Westinghouse Electric Company, which helped drive the development of nuclear energy and the electric grid itself, filed for bankruptcy protection on Wednesday, casting a shadow over the global nuclear industry.

The filing comes as the company's corporate parent, Toshiba of Japan, scrambles to stanch huge losses stemming from Westinghouse's troubled nuclear construction projects in the American South. Now, the future of those projects, which once seemed to be on the leading edge of a renaissance for nuclear energy, is in doubt.

"This is a fairly big and consequential deal," said Richard Nephew, a senior research scholar at the Center on Global Energy Policy at Columbia University. "You've had some power companies and big utilities run into financial trouble, but this kind of thing hasn't happened."

Westinghouse, a once-proud name that in years past symbolized America's supremacy in nuclear power, now illustrates its problems.

Many of the company's injuries are self-inflicted, such as a disastrous deal for a construction business that was intended to control costs and instead precipitated the events that led to the filing on Wednesday. Over all, Toshiba has been widely criticized for overpaying for Westinghouse.

But some of what went wrong was beyond either company's control. Slowing demand for electricity and tumbling prices for natural gas have eroded the economic rationale for nuclear power, which is extremely costly and technically challenging to develop. Alternative-energy sources like wind and solar power are rapidly maturing and coming down in price. The 2011 earthquake in Japan that led to the nuclear disaster at the Fukushima Daiichi plant renewed worries about safety.

Westinghouse's problems are already reducing Japan's footprint in nuclear power, an industry it has nurtured for decades in the name of energy security. Even before the filing, Toshiba had essentially retired Westinghouse from the business of building nuclear power plants. Executives said they would instead focus on maintaining existing reactors — a more stable and reliably profitable business — and developing reactor designs.

That has made the already small club of companies that take on the giant, expensive and complex task of nuclear-reactor building even smaller. General Electric, a pioneer in the field, has scaled back its nuclear operations, expressing doubt about their economic viability. Areva, the French builder, is mired in losses and undergoing a large-scale restructuring.

Among the winners could be China, which has ambitions to turn its growing nuclear technical abilities into a major export. That has raised security concerns in some countries.

The shrinking field is a challenge for the future of nuclear power, and for Toshiba's revival plans. Its executives have said they would like to sell all or part of Westinghouse to a competitor, but with a dwindling list of potential buyers — combined with Westinghouse's history of financial calamity — that has become a difficult task.

Toshiba still faces tough questions. The company is also divesting its profitable semiconductor business and plans to sell a stake to an outside investor to raise capital. Most of the companies seen as possible buyers are from outside Japan. Some Japanese business leaders have expressed fears that the sale will further erode Japan's place in an industry it once dominated.

After writing down Westinghouse's value, Toshiba said it expected to book a net loss of $9.9 billion for its current fiscal year, which ends on Friday.

"We have all but completely pulled out of the nuclear business overseas," Toshiba's president, Satoshi Tsunakawa, said at a news conference. Of the huge loss, he added, "I feel great responsibility."

Bankruptcy will make it harder for Westinghouse's business partners to collect money they are owed by the nuclear-plant maker. That mostly affects the American power companies for whom it is building reactors, analysts say. Now, it is unclear whether the company will be able to complete any of its projects, which in the United States are about three years late and billions over budget.

The power companies — Scana Energy in South Carolina and a consortium in Georgia led by Georgia Power, a unit of Southern Company — would face the possibility of new contract terms, long lawsuits and absorbing losses that Toshiba and Westinghouse could not cover, analysts say. The cost estimates are already running $1 billion to $1.3 billion higher than originally expected, according to a recent report from Morgan Stanley, and could eventually exceed $8 billion over all.

Dennis Pidherny, a managing director at Fitch Ratings who is sector head of the United States public power group, said that it was possible that the company's bankruptcy filing could terminate the contracts and that it could be difficult for the utilities to find another builder to take them over.

"There's still quite a bit of work that needs to be completed," he said. "The biggest challenge there is quite simply finding another suitable contractor who can complete the contract and have it completed at a quote-unquote reasonable cost."

That is, if they are constructed at all. Stan Wise, chairman of the Georgia Public Service Commission, said the utilities developing the Alvin W. Vogtle generating station in the state would have to evaluate whether it made sense to continue.

"It's a very serious issue for us and for the companies involved," Mr. Wise said. "If, in fact, the company comes back to the commission asking for recertification, and at what cost, clearly the commission evaluates that versus natural gas or renewables."

In a statement on Wednesday, Toshiba said Westinghouse and affiliated companies were "working cooperatively" with the owners to arrange for construction to continue. In recent days, the affected companies issued statements saying they were monitoring the situation and exploring their options, as did the Energy Department, which has authorized $8.3 billion in federal loan guarantees for the Georgia project.

"We are keenly interested in the bankruptcy proceedings and what they mean for taxpayers and the nation," said Lindsey Geisler, a Department of Energy spokeswoman. "Our position with all parties has been consistent and clear: We expect the parties to honor their commitments and reach an agreement that protects taxpayers, promotes economic growth, and strengthens our energy and national security."

Toshiba said Westinghouse had total debt of $9.8 billion. The Chapter 11 bankruptcy filing was made in federal bankruptcy court for the Southern District of New York.

A decade ago, Toshiba was dreaming of a big global expansion when it bought Westinghouse for a surprisingly high $5.4 billion and made plans to install 45 new reactors worldwide by 2030.

At the same time, Westinghouse was trying to install a novel reactor design, the AP1000. Using simplified structures and safety equipment, it was intended to be easier and less expensive to install, operate and maintain. Its design also improves the ability to withstand earthquakes and plane crashes and is less vulnerable to a cutoff of electricity, which is what set off the triple meltdown at Fukushima.

Nonetheless, it was inevitable that expansions at the Vogtle generating station in Georgia and the Virgil C. Summer plant in South Carolina would hit some bumps along the road to fruition, nuclear executives say. Not only was the design new, but, because nuclear construction had been dormant for so long, American companies also lacked the equipment and expertise needed to make some of the biggest components and construct the projects.

Indeed, that may ultimately have been at the root of the troubles. The contractor Westinghouse chose to complete the projects struggled to meet the strict demands of nuclear construction and was undergoing its own internal difficulties after a merger. As part of an effort to get the delays and escalating costs under control, Westinghouse acquired part of the construction company, which set off a series of still-unresolved disputes over who should absorb the cost overruns and how Westinghouse accounted for and reported values in the transaction.

In its bankruptcy filing, Westinghouse said that its top 30 unsecured creditors held over $508 million in claims. Among those creditors are big engineering and construction companies like Fluor and CB&I, and Nuclear Fuel Services, a fuel supplier.

To shepherd its case through Chapter 11, Westinghouse has hired a number of advisers, including the investment bank PJT Partners, the law firm Weil, Gotshal & Manges, and the consulting firm AlixPartners.

Westinghouse also said in its bankruptcy filing that it had taken out an $800 million loan from a group led by Citigroup to support itself through the bankruptcy process.

Diane Cardwell reported from New York, and Jonathan Soble from Tokyo. Michael J. de la Merced contributed reporting from New Orleans.

A version of this article appears in print on March 30, 2017, on Page B1 of the New York edition with the headline: Bankruptcy Rocks Nuclear Industry.

Exhibit 5

FILED JUN 17, 2016
DOCUMENT NO. 03821-16
FPSC - COMMISSION CLERK

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Nuclear Cost Recovery Clause)	Docket No. 160009-EI Filed: June 17, 2016

FLORIDA POWER & LIGHT COMPANY'S MOTION TO DEFER CONSIDERATION OF ISSUES AND COST RECOVERY

Florida Power & Light Company ("FPL"), pursuant to Rule 28-106.204, Florida Administrative Code, hereby moves the Florida Public Service Commission ("Commission") to defer consideration of all FPL issues in this docket to the 2017 Nuclear Cost Recovery ("NCR") docket and to allow FPL to defer recovery of its requested 2017 NCR amount. In support of this Motion FPL states as follows:

1. On April 27, 2016, FPL filed a Petition for Waiver of Rule 25-6.0423(6)(c)5, Florida Administrative Code ("Petition for Waiver"), which requires FPL to file an annual feasibility analysis on its Turkey Point 6 & 7 project in the NCR docket. On May 16, 2016, several parties filed comments in opposition to FPL's Petition for Waiver.

2. It is clear from the parties' comments in opposition to the Petition for Waiver that there is a wide difference of opinion between FPL and parties who oppose FPL's waiver request as to the need for and practical usefulness of a quantitative feasibility analysis at this time.

3. In light of such disagreement, FPL is willing to defer consideration of its cost recovery request. Accordingly, FPL requests deferral of its issues[1] to the 2017 NCR cycle. FPL also requests approval to defer recovery of its requested 2017 NCR amount of $22,081,049. FPL will seek to recover that amount, trued up for 2016 actual costs and trued up for 2017 actual/estimated costs, along with its allowance for funds used during construction, as part of the

[1] A final list of issues has not been determined for this year's hearing. FPL expects to discuss a new issues list with Staff and all parties as part of next year's NCR cycle.

2017 NCR docket. Upon approval of this motion, FPL will withdraw its Petition for Waiver and will plan to file a feasibility analysis in the ordinary course of the 2017 NCR cycle.

4. In accordance with Rule 28-106.204(3), Florida Administrative Code, FPL contacted counsel for each party in this docket to determine whether they object to this motion. FPL is authorized to represent that the Office of Public Counsel "does not object to deferring FPL issues including prudence review of these costs until the 2017 NCRC docket," the City of Miami and the Southern Alliance for Clean Energy do not object to this motion, PCS White Springs takes no position and does not object to this motion, and the Florida Retail Federation and Duke Energy Florida take no position on this motion. FPL was unable to reach the Florida Industrial Power Users Group before filing this motion.

WHEREFORE, FPL requests the Commission to approve its motion to defer consideration of FPL's issues to the 2017 NCR docket and to defer recovery of its 2017 NCR amount.

Respectfully submitted this 17th day of June, 2016.

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By: *s/ Jessica A. Cano*
Jessica A. Cano
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CERTIFICATE OF SERVICE
DOCKET NO. 160009-EI

I HEREBY CERTIFY that a true and correct copy of FPL's Motion to Defer Consideration of Issues and Cost Recovery was served electronically this 17th day of June, 2016, to the following:

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Exhibit 6

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Nuclear Cost)	Docket No. 170009-EI
Recovery Clause)	Filed: May 1, 2017

FLORIDA POWER & LIGHT COMPANY'S PETITION FOR APPROVAL OF 2018 NUCLEAR POWER PLANT COST RECOVERY AMOUNT REFLECTING FINAL 2015 AND 2016 TRUE-UPS AND APPROVAL TO DEFER RECOVERY OF COSTS BEGINNING IN 2017

Florida Power & Light Company ("FPL"), pursuant to Section 366.93, Florida Statutes,[1] and Rule 25-6.0423, Florida Administrative Code, hereby petitions the Florida Public Service Commission (the "Commission") for (i) approval to include a $7,305,202 over-recovery in the Capacity Cost Recovery Clause ("CCRC") during the period January – December 2018; (ii) a determination that it is reasonable and appropriate for FPL to take the final steps necessary to complete its licensing efforts for Turkey Point 6 & 7 ("the Project"); and (iii) approval to defer recovery of costs beginning with those incurred in 2017 and continuing through such time that FPL makes its decision regarding initiation of preconstruction work.

The Turkey Point 6 & 7 Project represents a valuable opportunity to significantly increase fuel diversity, reduce greenhouse gas emissions, and enhance reliability by helping to maintain a balance between generation and load in Southeastern Florida. FPL is nearing the completion of the licensing phase of this important Project, with the expectation that FPL will receive all federal licenses and approvals in 2017 or early 2018, and that FPL can resolve remaining state approvals within this same time frame. The cost to achieve such a significant milestone – the licensing of two new nuclear units – is comparatively modest, and annual costs associated with maintaining those approvals will decline over the next several years. Moreover,

1 All Florida statutory references are to the 2016 Florida Statutes.

a license in-hand will represent a 20-year (or longer) option to add this potentially vital resource for customers.

At the same time, FPL recognizes that there is uncertainty inherent in the path forward to the construction of two new nuclear units. As a result, and as discussed in the testimony filed earlier this year by FPL witness Steven Scroggs, FPL will not petition the Commission for approval to begin preconstruction work immediately upon receipt of its Combined Operating License ("COL") and other approvals.[2] Instead, FPL will limit its activities over the next several years to completing licensing, maintaining compliance with approvals received, keeping those approvals current, and continuing to monitor the first wave new nuclear construction projects. This period has been described as a Project "pause."

The $7.3 million over-recovery FPL seeks to return to customers through the CCRC in 2018 reflects the final true-up of licensing costs incurred in 2015 and 2016, as supported by the petition and testimony filed in this docket on March 1, 2017. However, given the near-term plan for a "pause," FPL is not petitioning for recovery of actual/estimated 2017 or projected 2018 costs at this time. Instead, FPL seeks approval to defer recovery of these costs and future Project costs until such time as a decision is made regarding proceeding with preconstruction work, thus suspending FPL's annual filing for cost recovery through the Nuclear Cost Recovery ("NCR") process. In support of this petition, FPL states as follows:

INTRODUCTION

1. FPL is an investor-owned utility with headquarters at 700 Universe Boulevard, Juno Beach, Florida 33408, operating under the jurisdiction of the Commission pursuant to the provisions of Chapter 366, Florida Statutes. FPL is a wholly-owned subsidiary of NextEra

2 *See* Section 366.93(3)(c), Fla. Stat., requiring that a utility petition the Commission for approval before proceeding with preconstruction work beyond those activities necessary to obtain or maintain a license.

Energy, Inc., a registered holding company under the Federal Public Utility Holding Company Act and related regulations. FPL provides generation, transmission, and distribution service to approximately 4.9 million retail customers.

2. Any pleading, motion, notice, order or other document required to be served upon FPL or filed by any party to this proceeding should be served upon the following individuals:

Kenneth A. Hoffman Vice President Regulatory Affairs Ken.Hoffman@fpl.com Florida Power & Light Company 215 S. Monroe Street, Ste 810 Tallahassee, FL 32301 850-521-3919 850-521-3939 (fax)	Jessica Cano Senior Attorney Jessica.Cano@fpl.com Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408 561-304-5226 561-691-7135 (fax)	Kevin I.C. Donaldson Senior Attorney Kevin.Donaldson@fpl.com Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408 561-304-5170 561-691-7135 (fax)

3. This Petition is being filed consistent with Rule 28-106.201, Florida Administrative Code. The agency affected is the Florida Public Service Commission, located at 2540 Shumard Oak Blvd, Tallahassee, FL 32399. This case does not involve reversal or modification of an agency decision or an agency's proposed action. Therefore, paragraph (c) and portions of paragraphs (e), (f) and (g) of subsection (2) of such rule are not applicable to this Petition. In compliance with paragraph (d), FPL states that it is not known which, if any, of the issues of material fact set forth in the body of this Petition, or the supporting testimony, exhibits and Nuclear Filing Requirements ("NFRs") filed herewith, may be disputed by others planning to participate in this proceeding.

2018 NCR REQUEST

4. The Florida Legislature adopted Section 366.93, Florida Statutes, in 2006 to promote utility investment in nuclear power plants. Rule 25-6.0423, Florida Administrative

Code ("the Rule"), implements this statute and provides for the annual review of expenditures and annual recovery of eligible costs through the CCRC. The Project qualifies for NCR treatment pursuant to Section 366.93(3), Florida Statutes.[3]

5. On March 1, 2017, FPL petitioned the Commission to approve an over-recovery of $1,306,211, reflecting the final true-up of 2015 costs, and an over-recovery of $5,998,991, reflecting the final-true-up of 2016 costs. If approved, these amounts would be returned to customers through the CCRC in 2018. FPL also sought a prudence determination on its 2015 and 2016 project activities and the resulting costs incurred. As discussed in FPL's March 1, 2017 testimony, FPL's project activities have focused on obtaining and maintaining the approvals that would be necessary for future construction of Turkey Point 6 & 7. FPL continues to seek Commission approval of these final costs and to reflect the total over-recovery amount of $7,305,202 in its 2018 CCRC factors.

REQUEST TO DEFER RECOVERY OF COSTS BEGINNING IN 2017

6. As summarized above, the addition of new nuclear generation has a range of potential benefits for FPL's customers. Nuclear generation greatly adds to the reliability of a system by increasing fuel diversity, fuel supply reliability and energy security. It also produces power around the clock with zero greenhouse gas emissions. In addition, the location of baseload generation in Miami-Dade County helps to maintain a balance between generation and load in Southeastern Florida.

7. As discussed by FPL witness Scroggs in the testimony that accompanies this petition, FPL is in the final steps of the licensing phase. For example, FPL currently expects to

3 By Order No. PSC-08-0237-FOF-EI, issued April 11, 2008, the Commission made an affirmative determination of need for Turkey Point 6 & 7.

receive the COL from the Nuclear Regulatory Commission in late 2017 or early 2018. Completing these final licensing steps is the right thing to do to preserve the potential for a wide range of customer benefits that could be provided by new nuclear generation in the future. In fact, the ability to deliver the potential benefits of the Turkey Point 6 & 7 project to FPL customers at any time over the next 20 years is an opportunity that is available *only if* FPL completes and maintains the licenses and approvals necessary for the Project.

8. While it is clearly appropriate to complete licensing, the appropriate timing of Project next steps is less clear. FPL has determined that upon receipt of the required Project approvals, it will enter a period of reduced project spending in which it maintains compliance with the approvals received and keeps those approvals current. FPL will also continue to monitor the new nuclear construction industry primarily by participating in new nuclear licensing and construction-related industry groups, which will enhance efficiencies in the processing of ongoing License Amendment Requests and allow FPL to gather lessons learned to support future Project decision-making. The decision to "pause" by limiting Project activities and costs in this manner, as opposed to proceeding directly into preconstruction work, reflects FPL's desire to learn from the first wave of new nuclear construction projects currently underway in Georgia and South Carolina. These activities, estimated to continue through 2021, and estimated costs are discussed by FPL witness Scroggs.

9. Consistent with the overall Project approach discussed above, FPL seeks Commission approval to defer the review and recovery of Project costs beginning with those incurred in 2017 through the time that FPL makes a decision concerning the initiation of preconstruction work. At that time, FPL would petition the Commission to review the costs

incurred in the interim for prudence and recovery. All parties to this proceeding would be entitled to challenge the prudence of costs incurred at that time.

10. From time to time, a utility utilizing the NCR process has sought approval to defer the cost recovery it otherwise would be entitled to seek. *See, e.g., In re: Nuclear cost recovery clause,* Docket No. 150009-EI, Order No. PSC-16-0266-PCO-EI, p. 3 (approving FPL's motion to defer and noting that "neither Section 366.93 F.S., nor Rule 25-6.0423, F.A.C., require a utility to seek recovery of nuclear project costs in any given year"); *see also, In re: Nuclear cost recovery clause,* Docket No. 120009-EI, Order No. PSC-12-0650-FOF-EI, p. 5 (deferring consideration of Duke Energy Florida's CR3 Uprate long-term feasibility analysis and then-current year and projected year costs). These requests are generally consistent with the optional nature of the Nuclear Cost Recovery statute and rule. Section 366.93(3)(a) states that "...a utility may petition the commission for cost recovery as permitted by this section and commission rules." Similarly, Rule 25-6.0423(6) states that a utility "may" petition the Commission for recovery of pre-construction costs.

11. Consistent with its request for deferral, FPL has not included with this filing detailed actual/estimated 2017 Nuclear Filing Requirements ("NFRs") or projected 2018 NFRs, nor has FPL included a feasibility analysis. *See,* Rule 25-6.0423(6)(c)1.b, (6)(c)1.c, and (6)(c)5, Fla. Admin. Code. In fact, during the deferral period all related NCR filings would be suspended.[4] FPL would continue to capitalize its Project costs as incurred and accrue allowance for funds used during construction, and would record a return on the related deferred tax asset each year consistent with the manner in which Turkey Point 6 & 7 project costs have been recorded pursuant to Rule 25-6.0423, Fla. Admin. Code.

4 FPL would continue to make the annual filing required by Section 366.93(5), which appears to be independent of the cost recovery process.

12. In the event the Commission were to decline to grant this request for deferred cost recovery, FPL asks that the Commission defer all 2017 NCR docket issues related to 2017 and 2018 project activities and costs to the 2018 NCR docket. The prudence and final true-up of 2015 and 2016 costs should still be approved as filed in this docket.

CONCLUSION

13. FPL respectfully submits that it is appropriate and reasonable to complete licensing efforts to secure the potential to construct a clean and reliable source of baseload power in South Florida. Over the next few years, FPL plans to engage only in those activities necessary to maintain the approvals received and continue to monitor progress on other new nuclear construction projects in the U.S. FPL requests approval to defer the recovery of costs incurred (and future prudence reviews) in connection with these activities until such time as the Company makes a decision regarding petitioning for approval to begin "preconstruction work," pursuant to Section 366.93(3)(c), Fla. Stat. Consistent with this request being granted, FPL would suspend petitioning for CCRC recovery of Project costs during this period.

WHEREFORE, Florida Power & Light Company respectfully requests that the Commission enter an order (i) approving FPL's 2018 NCR over-recovery amount of $7,305,202, reflecting the final true-up of 2015 and 2016 Project costs; (ii) finding that FPL's decision to complete licensing is appropriate and reasonable; and (iii) approving the deferral of NCR costs

beginning with those incurred in 2017 until such time as FPL makes a decision regarding initiation of preconstruction work.

Respectfully submitted this 1st day of May, 2017.

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CERTIFICATE OF SERVICE
DOCKET NO. 170009-EI

I HEREBY CERTIFY that a true and correct copy of FPL's Petition for Approval of 2018 NCR Amount Reflecting Final 2015 and 2016 True-Ups and Approval to Defer Recovery of Costs Beginning in 2017 was served electronically this 1st day of May, 2017, to the following:

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Exhibit 7

PART 1

FPL

Florida Power & Light Company
Turkey Point Plant, Units 6 & 7
COL Application

COLA Table of Contents

Turkey Point Units 6 & 7

COL Application

Revision 8

Part 1

General and Financial Information

1.0 INTRODUCTION

This Combined License (COL) application is submitted by Florida Power & Light Company (FPL), for construction and operation of two nuclear power generating plants designated as Turkey Point Units 6 & 7. FPL is an investor-owned utility, primarily engaged in the generation, transmission, and distribution of electricity. In addition to seeking a COL to construct and operate Units 6 & 7, this application also seeks, through the inclusion of appropriate provisions in the COL, authorization to possess and use such quantities of source, byproduct, and special nuclear material as are needed to construct and operate the new units.

Units 6 & 7 are based on the Westinghouse AP1000 advanced light water reactor design. This application presents descriptions and analyses of the station design and incorporates by reference, Appendix D to 10 CFR Part 52 as required by Section III.B of that Appendix.

Units 6 & 7 will be located on the Turkey Point plant property, comprised of approximately 9400 acres in unincorporated southeast Miami-Dade County, Florida, east of Florida City and the City of Homestead and bordered by Biscayne Bay to the east. Currently located on the Turkey Point plant property are five FPL power plants: two natural gas/oil steam electric generating units (Units 1 & 2), two pressurized water reactor nuclear units (Units 3 & 4), and one natural gas combined cycle steam electric generating unit (Unit 5). The new units would be constructed on an approximately 218-acre area (the Units 6 & 7 plant area) south of Units 3 & 4.

The application contains the following parts:

Part 0	Cover letter, affidavits, etc.
Part 1	General and Financial Information
Part 2	Final Safety Analysis Report (FSAR)
Part 3	Environmental Report (ER)
Part 4	Technical Specifications
Part 5	Emergency Plan
Part 6	Limited Work Authorization (LWA)/Redress Plan — Not used
Part 7	Departures and Exemption Requests
Part 8	Physical Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan (provided under separate cover letter)
Part 9	Withheld Information
Part 10	License Conditions (including ITAAC)
Part 11	Enclosures

1.1 Purpose of the Combined License Application

The purpose of this COL application is to obtain Nuclear Regulatory Commission (NRC) approval to construct and operate two nuclear power generating plants, to be known as Turkey Point Units

6 & 7. FPL's purpose is to provide additional baseload generation to maintain system reliability, increase fuel diversity, and allow progress toward meaningful CO_2 emissions reductions.

In support of this objective, FPL requests the following license actions:

- A class 103 license, under 10 CFR Part 52, subpart C, authorizing FPL to construct, own, possess, use, and operate as a utilization facility Turkey Point Unit 6 for the generation of electric energy to be transmitted over the respective electric systems of FPL.

  In addition, this application is for the necessary licenses issued under 10 CFR Part 30, 10 CFR Part 40, and 10 CFR Part 70 to receive, possess, and use byproduct, source, and special nuclear material. Special nuclear material shall be in the form of reactor fuel and spent fuel, in accordance with limitations for storage and amounts required for reactor operation, as described in Part 2 of this application. Byproduct, source, and special nuclear material shall be in the form of sealed neutron sources for reactor startup and sealed sources for reactor instrumentation, radiation monitoring equipment, calibration, and fission detectors in amounts as required. In preparation for the initial fuel loading, limitations on byproduct material and Part 40 specifically licensed source material will be as described in this application. Following the 52.103(g) finding, byproduct, source, and special nuclear material in amounts as required, without restriction to chemical or physical form, shall be for sample analysis, instrument and equipment calibration, or associated with radioactive apparatus or components.

  It is requested that the term of the above licenses be for a period of 40 years from the date upon which the NRC makes a finding that acceptance criteria are met under 10 CFR 52.103(g).

- A class 103 license, under 10 CFR Part 52, subpart C, authorizing FPL to construct, own, possess, use, and operate as a utilization facility Turkey Point Unit 7 for the generation of electric energy to be transmitted over the respective electric systems of FPL.

  In addition, this application is for the necessary licenses issued under 10 CFR Part 30, 10 CFR Part 40, and 10 CFR Part 70 to receive, possess, and use byproduct, source, and special nuclear material. Special nuclear material shall be in the form of reactor fuel and spent fuel, in accordance with limitations for storage and amounts required for reactor operation, as described in Part 2 of this application. Byproduct, source, and special nuclear material shall be in the form of sealed neutron sources for reactor startup and sealed sources for reactor instrumentation, radiation monitoring equipment, calibration, and fission detectors in amounts as required. In preparation for the initial fuel loading, limitations on byproduct material and Part 40 specifically licensed source material will be as described in this application. Following the 52.103(g) finding, byproduct, source, and special nuclear material in amounts as required, without restriction to chemical or physical form, shall be for sample

analysis, instrument and equipment calibration, or associated with radioactive apparatus or components.

It is requested that the term of the above licenses be for a period of 40 years from the date upon which the NRC makes a finding that acceptance criteria are met under 10 CFR 52.103(g).

1.2 Combined License Application Format and Content

10 CFR 52.77 outlines the general information requirements for filing a COL application. An application must contain information required by 10 CFR 50.33, *Contents of Applications and General Information*, as it would apply to applicants for construction permits and operating licenses. This information is provided in Table 1 of this Part.

1.2.1 Format and Content

As specified by Appendix D to 10 CFR 52, IV.A.2.a, the plant-specific Final Safety Analysis Report (FSAR), has retained the organization and numbering of AP1000 Design Control Document (DCD), except where departures are taken and justified. Where departures are taken to section numbering to conform to RG 1.206 or the NRC's Standard Review Plan (SRP), a "roadmap" to the location of the descriptive material has been provided and left-hand margin notations are provided.

Throughout this application, the "referenced DCD" is the AP1000 DCD submitted by Westinghouse as Revision 19.

Financial information is provided consistent with the *Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance* (NUREG-1577, October 2003).

1.2.2 Labeling Conventions

Tables of data are identified by the section or subsection number followed by a sequential number. Tables are located at the end of a section immediately following the text. Drawings, pictures, sketches, curves, graphs, plots, and engineering diagrams are identified as figures and are numbered sequentially by section or subsection similar to tables, and follow at the end of the applicable section or subsection. Text pages are numbered sequentially within each section or subsection.

FSAR Table 1.1-202 describes the left margin annotations used in the FSAR to identify departures, supplementary information, COL items, and conceptual design information.

FSAR tables, figures, and references are numbered in the same manner as the DCD, but the first new FSAR item is numbered as 201, the second 202, the third 203, and consecutively thereafter.

When a table, figure, or reference in the DCD is changed, the change is appropriately left margin annotated as identified above.

When it provides greater contextual clarity, an existing DCD table or figure is revised by adding new information to the table or figure and replacing the DCD table or figure with a new one in the FSAR. In this instance, the revised table or figure clearly identifies the information being added, and retains the same numbering as in the DCD, but the table or figure number is revised to end with the designation "R" to indicate that the table or figure has been revised and replaced. For example, revised "Table 4.2-1" would become "Table 4.2-1R."

1.2.3 Restricted Data and Classified National Security Information

The combined license application for Units 6 & 7 does not contain any Restricted Data or other Classified National Security Information, nor does it result in any change in access to any Restricted Data or National Security Information. In addition, it is not expected that activities conducted in accordance with the proposed combined license will involve such information. However, in the event that such information does become involved, and in accordance with 10 CFR 50.37, "Agreement limiting access to Classified Information," FPL will not permit any individual to have access to, or any facility to possess, Restricted Data or National Security Information until the individual and/or facility has been approved for such access under the provisions of 10 CFR Part 25, "Access Authorization for Licensee Personnel," and/or 10 CFR Part 95, "Facility Security Clearance and Safeguarding of National Security Information and Restricted Data."

1.3 Financial Qualifications

Pursuant to the requirements of 10 CFR 50.33(f), an applicant for a COL is required to include information sufficient to demonstrate to the NRC the financial qualification of the applicant to carry out the construction and/or operation activities for which the application is sought. Entities that meet the definition of an "electric utility" in 10 CFR 50.2 are exempt from the requirement to demonstrate financial qualification to carry out operation activities and are required only to demonstrate financial qualification to carry out construction activities.

FPL is an electric utility as defined in 10 CFR 50.2. FPL generates and distributes electricity and recovers the cost of this electricity through cost-of-service based rates established by the Florida Public Service Commission and the Federal Energy Regulatory Commission (FERC). Thus, as addressed in 10 CFR 50.33(f), estimates of operating costs for the first five years of operation are not required to be submitted and FPL is required only to demonstrate financial qualification to carry out construction activities.

NextEra Energy, Inc. (which previously operated as FPL Group, Inc.) has two principal operating subsidiaries—FPL and NextEra Energy Resources. FPL is an investor-owned electric utility serving approximately 4.5 million customer accounts in the state of Florida. NextEra Energy Resources is

NextEra Energy, Inc's competitive energy subsidiary which produces the majority of its electricity from clean and renewable fuels.

FPL's common stock is held solely by NextEra Energy, Inc. NextEra Energy, Inc. (which previously operated as FPL Group, Inc.) is investor-owned, with 27,994 common stockholders on January 31, 2010.

FPL reports and filings to the Florida Public Service Commission and the U.S. Securities and Exchange Commission may be found at http://www.floridapsc.com/dockets/index.aspx and at http://www.sec.gov, respectively. NextEra Energy's 10-K Report (Reference 3) may be found at http://www.nexteraenergy.com to provide the information required by 10 CFR 50, Appendix C.

FPL will recover the cost of constructing the facility in accordance with Florida Statute 366.93, Cost recovery for the siting, design, licensing, and construction of nuclear and integrated gasification combined cycle power plants (Reference 1), and Florida Administrative Code R.25-6.0423, Nuclear or Integrated Gasification Combined Cycle Power Plant Cost Recovery (Reference 2).

The sources of long-term construction funding for Units 6 & 7 will be a mixture of internally generated cash and external funding. The external funding will come from a mix of debt and equity capital. FPL currently uses first mortgage bonds and equity contributions from NextEra Energy, Inc. to finance long-term utility assets.

In accordance with 10 CFR 50.33(f) and 10 CFR 50, Appendix C, the estimated total combined construction costs for Units 6 & 7 include plant costs ascribable to the nuclear plant itself, general and overhead plant costs (including any transmission and distribution costs ascribable to the plant), and nuclear fuel cost for the first core load. These costs are estimated in 2015 dollars. Licensing costs and preconstruction activities occur before actual construction and are included in the estimates. The breakdown of the estimated costs and their bases is described in Appendix 1A.

1.3.1 General Information

General information for the applicant is provided in Table 1. FPL is not a newly formed entity organized for the primary purpose of construction or operation of Units 6 & 7. FPL is not owned, controlled, or dominated by an alien, foreign corporation, or foreign government.

1.3.2 Decommissioning Costs and Financing

COL applicants are required to include, as part of their application, a report containing a certification that financial assurance for decommissioning will be provided in an amount that may be more, but not less, than the amount stated in the table in 10 CFR 50.75(a)(1).

1.3.2.1 Decommissioning Estimate

For Units 6 & 7, the calculation of the amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75 (c) is provided below.

Base amount for a pressurized water reactor greater than or equal to 3400 MWt:

1986 Base Cost = $105,000,000 (from 10 CFR 50.75(c)(1))

Estimated Cost (Year X) = (1986$ Base Cost) ($A\ L_x + B\ E_x + C\ B_x$)

= ($105,000,000) ((0.65 * 2.43) + (0.13 * 2.22) + (0.22 * 13.885))

= $517,000,000 per unit (Note 1)

Note 1: Total is rounded to millions of dollars

Where:

P = 3400 MWt (thermal power rating)

A = 0.65 Fraction of 1986 dollars attributable to labor, materials, and service (NUREG-1307, Rev. 15)

B = 0.13 Fraction of 1986 dollars attributable to energy and transportation (NUREG-1307, Rev. 15)

C = 0.22 Fraction of 1986 dollars attributable to waste burial (NUREG-1307, Rev. 15)

L_x = 2.43 Labor cost adjustment (Computed Below)

E_x = 2.22 Energy cost adjustment (Computed Below)

P_x = 1.88 U.S. Bureau of Labor Statistic's PPI of industrial electric power (Computed Below)

F_x = 2.70 U.S. Bureau of Labor Statistic's PPI of light fuel oils (Computed Below)

B_x = 13.885 LLW burial/disposition cost adjustment (NUREG-1307, Rev. 15)

L_x = Base 2005 L_x * 4th Quarter 2014 ECI/100 = 1.98 * 122.7/100 = 2.43

P_x = December 2014 industrial electric power PPI/January 1986 industrial electric power PPI = 214.7/114.2 = 1.88

F_x = December 2014 Light Fuel Oils PPI/January 1986 Light Fuel Oils PPI = 221.0/82 = 2.70

E_x = $0.58P_x + 0.42F_x$ = (0.58 * 1.88) + (0.42 * 2.70) = 1.09 + 1.13 = 2.22

1.3.2.2 Decommissioning Funding

Therefore, FPL certifies that financial assurance for decommissioning Units 6 & 7 will be provided in the amount of $517,000,000 per unit. An external sinking fund in the form of a trust is the method that will be used to provide reasonable assurance of the availability of funds to decommission the facility. The cost of decommissioning will be recovered through electric rates. Amounts collected will be periodically transferred to the external trust. Such deposits along with trust fund earnings will provide an amount at least equal to the formula-derived decommissioning cost for the facility.

1.4 Radiological Emergency Response Plans

Radiological emergency response plans of state and local government entities that are wholly or partially within the plume exposure pathway emergency planning zone (EPZ), as well as the plans of the state and local government entities wholly or partially within the ingestion pathway EPZ are included in COL application, Part 5 - Emergency Plan.

1.5 Other Licenses Applied for or Issued

Environmental Report Table 1.2-1 lists the licenses and authorizations required for construction and operation of Units 6 & 7.

1.6 References

1. Florida Statute 366.93 Cost recovery for the siting, design, licensing, and construction of nuclear and integrated gasification combined cycle power plants. Available at https:// www.leg.state.fl.us.

2. Florida Administrative Code R.25-6.0423 Nuclear or Integrated Gasification Combined Cycle Power Plant Cost Recovery. Available at https://www.flrules.org.

3. FORM 10-K, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, for NextEra Energy, Inc. (which previously operated as FPL Group, Inc.) and Florida Power & Light Company. Available at http://www.nexteraenergy.com.

4. ABWR Cost/Schedule/COL Project at TVA's Bellefonte Site, DE-AI07-04ID14620, Tennessee Valley Authority, August 2005.

Table 1 (Sheet 1 of 3)
Applicant General Information

Name of Applicant	**Florida Power & Light Company**
Address	700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408
Description of Business	FPL is a public utility incorporated under the laws of the state of Florida, with its principal office located in Juno Beach, Florida. FPL is an investor-owned utility, primarily engaged in the generation, transmission, and distribution of electricity. The service territory covers the southern third and almost the entire eastern seaboard of the state of Florida. FPL supplies electric service to approximately 4.5 million customer accounts.
Principal business location	700 Universe Boulevard Juno Beach, Florida 33408

Names, addresses, and citizenship of directors:

Company	Name and Title	Address	Citizenship
FPL	Eric E. Silagy Director	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Moray P. Dewhurst Director	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	James L. Robo Director	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA

Names, addresses, and citizenship of principal officers:

Company	Name and Title	Address	Citizenship
FPL	James L. Robo Chairman of the Board	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Eric E. Silagy President and Chief Executive Officer	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA

Table 1 (Sheet 2 of 3)
Applicant General Information

Company	Name and Title	Address	Citizenship
FPL	William L. Yeager Executive Vice President, Engineering, Construction & Integrated Supply Chain	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Moray P. Dewhurst Executive Vice President, Finance and Chief Financial Officer	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Deborah H. Caplan Executive Vice President, Human Resources and Corporate Services	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Charles E. Sieving Executive Vice President	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Antonio Rodriguez Executive Vice President — Transition	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Manoochehr K. Nazar President, Nuclear Division & Chief Nuclear Officer	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA
FPL	Miguel Arechabata Executive Vice President, Power Generation Division	Florida Power & Light Company 700 Universe Boulevard Post Office Box 14000 Juno Beach, Florida 33408	USA

Table 1 (Sheet 3 of 3)
Applicant General Information

Regulatory Agencies with Jurisdiction over Rates and Services	Address of Regulatory Agency
The Florida Public Service Commission	2540 Shumard Oak Blvd., Tallahassee, FL 32399

Trade and News Publications to give reasonable notice of the application	Address of Publication
Miami-Dade and Broward Counties	
el Nuevo Herald	1 Herald Plaza Miami, Florida 33132
Miami Herald	1 Herald Plaza Miami, Florida 33132
South Florida Sun-Sentinel	200 E. Las Olas Blvd Fort Lauderdale, FL 33301
Palm Beach and Martin Counties	
Palm Beach Post	P.O. Box 24700 West Palm Beach, Florida 33416
Treasure Coast News (Scripps Treasure Coast Newspapers)	1939 S Federal Highway Stuart, Florida 34994

APPENDIX 1A ESTIMATED TOTAL CONSTRUCTION COST FOR TURKEY POINT UNITS 6 AND 7

Turkey Point Nuclear Units 6 & 7 Cost Estimate Range				
	Low Range		High Range	
	Total Dollars	Cost per kW	Total Dollars	Cost per kW
Power Plant Island and Supporting Construction	$6,679,486,952		$9,729,206,579	
Transmission and General Plant Costs	$1,739,757,497		$2,520,144,553	
Nuclear Fuel Inventory Cost for the First Core[(a)]	$39,598,094		$48,370,595	
Total Overnight Costs (2015$)	**$8,458,842,544**	**$3,845**	**$12,297,721,727**	**$5,590**
Escalation	$2,001,048,685		$2,952,018,796	
AFUDC	$3,240,607,690		$4,744,320,802	
Total Estimated Project Cost (Year Spent $)	**$13,700,498,919**	**$6,227**	**$19,994,061,325**	**$9,088**

(a) Leased fuel assumed.

The cost estimate has been developed over the course of the project. The estimate was initially developed by coupling information in the 2005 TVA Bellefonte Study (Reference 4) for the ABWR technology with FPL site-specific information. This produced an overnight capital cost estimate that was not technology-specific. Sensitivities were explored for labor, materials and scope to develop an overnight cost estimate range. The overnight cost estimate range was then combined with an assumed spend curve and assumptions for escalation and interest during construction to produce a total project cost estimate range. Following preliminary negotiations with the Westinghouse/Shaw consortium, a technology-specific cost estimate was developed in 2010 to reflect current pricing and project features. This cost estimate was consistent with, and at the high end of, the original cost estimate range, following adjustment for the specific reactor technology and annual escalation. Based on that validation, FPL has chosen to retain the original cost estimate range, as adjusted, as its best estimate. The cost estimate range remains consistent with the publicly available cost estimates of other U.S. AP1000 projects.

Exhibit 8

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION

In the Matter of	)	
	)	Docket Nos. 52-040
Florida Power & Light Co.	)	52-041
Turkey Point Units 6 & 7	)	
	)	
Combined Construction and License	)	May 22, 2017
Application	)	
	)	

AFFIDAVIT OF MARK W. CRISP, P.E.

1. I, Mark W. Crisp, hold engineering degrees in Civil and Electrical Engineering from the Georgia Institute of Technology (Ga. Tech). I am licensed as a Professional Engineer in Georgia and multiple states including Florida (FL-59683). My professional career has spanned 35 years plus years in the electric and water utility industries including employment (18 years and 3 years, respectively) with The Southern Company (Georgia Power and Southern Company Services) and Entergy-Arkansas Inc.

2. My private consulting career spans 15 years covering engagements in 30 states, and 12 international countries (CV Attached).

3. My involvement in the electric utility industry has included projects supporting and defining nuclear energy options, cost and scheduling, technology issues, licensing and compliance. My CV provides a list of nuclear generating plants I have provided consulting expertise on one or more of the topics listed above.

4. I am engaged by the City Attorney's office for the City of Miami to address issues with licensing of Florida Power & Lights ("FPL") Turkey Point Units 6 & 7. Previously, I have provided opinions and testimony on operating issues at Turkey Point including the salt water

intrusion into the groundwater and effectiveness of the cooling water system for Units 3&4. This Affidavit is based on my review of the filings submitted by Petitioners, the NRC Staff, and FPL, relevant portions of the Final Safety Evaluation Report, and other publicly available documents.

5. This Affidavit, herein, addresses ongoing issues with the plans to develop Units 6 & 7 at Turkey Point using the Westinghouse AP 1000 technology. These two units, if licensed and constructed, would be "sister" units to the Vogtle 3 & 4 units in Georgia and the Summer 2 & 3 Units in South Carolina.

6. The technology selected for deployment at Turkey Point is the Westinghouse AP 1000 Pressurized Water Reactor ("PWR") identical to that chosen for deployment at the Vogtle and V. C. Summer sites. I was the Lead Consultant of a Team of industry experts providing review and analysis of the Baseload Review Act requirements to support the South Carolina Public Service Commission's decision to approve the application of South Carolina Gas & Electric.

7. The AP 1000 technology owned by "Westinghouse" or "WEC," interchangeably is a passive design, to be built in a modular format with individual systems and components to be manufactured by vendors from within the USA and vendors located around the world.

8. The significance and attractiveness of the AP 1000 was the plan of Westinghouse and the utility buyers to enter into what is referred to as an EPC contract. EPC being an Engineering, Procurement, Construction contract that WEC would perform all of these duties (including subcontractors) and, in effect, turning over a completed and functional plant at the date specified in the EPC contract.

9. FPL's 2015 filings before the Florida Public Service Commission contemplated the negotiation of an EPC contract, or a variation thereof, with Westinghouse for the construction of Turkey Point Units 6 & 7.[1]

10. In order for the EPC contract to work in conjunction with all of the terms and conditions of a "turnkey" contract it was required to have several contracting mechanisms in place in the procurement chain for venders to deliver large pieces of equipment, large forging, modular units, etc., on time to be installed without delays. In addition to the overall EPC contract between Westinghouse and the Owner (FPL) there was another contracting mechanism put in place between WEC and FPL in order for WEC to negotiate and schedule long lead time forgings. This mechanism was called the "Reservation Agreement." Neither the EPC nor the Reservation Agreement are formal components of the Combined Operating License ("COL") issued by the Nuclear Regulatory Commission ("NRC") but they are critical to the successful deployment of the AP 1000 on schedule and within budget.

11. On March 29, 2017, WEC filed for Chapter 11 Bankruptcy due to cost overruns and construction difficulties experienced at the Vogtle AP 1000 and the Summer AP 1000 construction sites.

12. The WEC filing focuses attention on the future of the only two AP 1000 construction sites in the USA. As of the filing date of March 29, 2017, every contract and agreement established by WEC is either breached or at a minimum in a state of flux, depending on the exact language within in each contract.

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[1] *See* Testimony of Steven D. Scroggs, May 1, 2015, Document No. 02471-15, Docket No. 150009-EI at 28 (available at http://www.psc.state.fl.us/library/filings/15/02471-15/02471-15.pdf); Rebuttal Testimony of Steven D. Scroggs, July 7, 2015, Document No. 04173-15, Docket No. 150009-EI at 10 (available at http://www.psc.state.fl.us/library/filings/15/04173-15/04173-15.pdf).

13. The specific contract between the Owners (Southern Company and SCG&E) and WEC (Toshiba –owner of Westinghouse) is no longer in effect. Without this contract it is unclear how and who will direct construction to finish both sites construction.

14. WEC has formally rejected the existing construction contract in bankruptcy. This was a necessary step to enable the Southern Company to formally take over the construction of Vogtle Units 3 & 4. Southern announced on Friday, May 12, 2017, it would in fact take over the management of the construction with one provision and that is SCE&G must follow Southern' s decision to take over management of construction with their own announcement that they too will take of management of construction of the V. C. Summer Units.[2]

15. The assumption of the management role Vogtle 3 & 4 is eerily familiar to the construction of Vogtle 1 & 2 over 30 years ago. The Southern Company made the same decision and while they successfully completed the units and have operated them for over 30 years, the immediate outcome of the decision was not as successful as Southern had hoped. The result of Southern's management resulted in significant cost overruns, delays and ultimately the disallowance of millions of dollars at the Georgia Public Service Commission.

16. At this point in time there is insufficient information available to determine the effect of the bankruptcy filing on the continued construction, the cost to finish construction, final dollars to be included in rate base that will burden the FPL customers. Is also unclear how Southern Company will employ, transfer, renegotiate, or cancel and enter into new contracts for materials, equipment, and labor and if this will have a material effect on the FPL project.

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[2] Press Release, Georgia Power, New service agreement reached for Vogtle nuclear expansion (May 12, 2017), available at http://www.prnewswire.com/news-releases/new-service-agreement-reached-for-vogtle-nuclear-expansion-300457135.html.

17. The loss or cancellation of the Reservation Agreement, while not formally a part of the construction contract, is necessary for WEC to enter into contracts with material suppliers for long lead time equipment. This contract is now in question and the manufacturing position or que for long lead time equipment is certainly at risk.

18. In the instant bankruptcy filing of WEC the 30 highest unsecured claims amount to over $600 Million US that must be adjudicated in the bankruptcy case. These are simply the Top 30 highest unsecured claims. There are an untold number of lessor claims that add to the final dollar amount.

19. The NRC has argued in their filing, "NRC STAFF ANSWER TO PETITION FOR LEAVE TO INTERVENE AND NEW CONTENTION" (Dockets 52-040 & 52-041) dated May 15, 2017, that the City of Miami has not entered a new contention that questions the ability of FPL to fund or provide reasonable assurances FPL can fund the construction of Turkey Point Units 6 & 7. Therefore, the NRC Staff argues the FSER is not deficient and therefore, the City's Leave to Intervene should denied

20. Unfortunately, the position of the NRC Staff could not be further from the truth. At this point with the construction delays, the cost overruns, and the management difficulties of WEC that has led them to declare bankruptcy, there is clear and undeniable evidence there is every reason to withhold approval of the FSER at least and until the bankruptcy case has been adjudicated and the decisions of Southern Company and SCE&G have evolved to a point that there is evidence that construction can proceed to a successful conclusion. The construction schedule has been delayed over 5 years at a minimum for Vogtle and Summer, the final costs cannot even be estimated with any accuracy and are further dependent on the findings of the bankruptcy court, renegotiations of contracts, new agreements with vendors assuming they still

want to continue in light of their probable losses in bankruptcy, and the most significant issue, that of FPL's ability to secure funding for two new units in light of the effect of bankruptcy on Wall Street's confidence to provide debt funding.

21. To further compound the constructability issue and the funding issue one needs to explore the "ownership" of the Certified Design Basis for the AP 1000. This is a technology owned by Westinghouse. It was the original plan for WEC to design. procure, and construct these units for the utility owners. As has been publically stated to date it is WEC's position they will continue to own and market the AP 1000 design but will no longer be in the EPC business. However, this is not necessarily the final outcome from this bankruptcy case. Until there is final adjudication of the case no one can be certain just how the technology ownership and marketing will evolve.

22. FPL is the licensee for Turkey Point Units 6 & 7 referencing the AP 1000 design. During the licensing process FPL is required to submit financial information to the NRC that provides assurances that FPL is financially able to construct and operate the licensed project (10 CFR 50.33(f). The NRC also provides a further clarification that if the licensee meets the definition of an "electric utility" (10 CFR 50.2) then the licensee does not have to submit financial qualifications supporting its ability to carry out operations.

23. The Combined Operating License application requires FPL to submit estimates of costs for the AP 1000 units to be constructed at the Turkey Point site.

24. FPL's estimate of costs was developed in the 2008-2010 timeframe using a convoluted process of estimates from the TVA Bellefonte Plant Study and FPL site-specific information. Unfortunately the Bellefonte Plant is a totally dissimilar technology from the AP

1000 in that Bellefonte was to be a ABWR, Advanced Boiling Water Reactor design owned by General Electric-Hitachi. The AP 1000 units are Pressurized Water Reactors.

25. This difference is significant even though FPL claims they worked with WEC/Shaw to refine the cost estimate to be more technology specific. It is unfortunate for FPL that they chose this path to develop a cost estimate. At this same point in time both the Vogtle units and the Summer units were in process of hearings in their respective states by the Public Service Commissions and costs generated by WEC was a central discussion point. In other words the information on the costs of AP 1000 units was readily available and did not require this time consuming and convoluted approach taken by FPL. Certainly, the accuracy of the cost estimates for Vogtle and Summer would have provided a much more accurate picture of the financial requirements for proceeding (Reference Part 1 General and Financial Information, Appendix 1A, Estimated Total Cost for the Turkey Point Units 6 & 7 found in the FPL COL application to the NRC).

26. It is certainly questionable and worthy of a reopening of the FSER if not the COL itself to determine the escalated costs for the unfinished Vogtle and Summer units, the effect on rates, and most importantly, what is the financial markets appetite to fund bonds and at what interest rate to cover FPL's construction of Turkey Point Units 6 & 7.

27. The entire nuclear horizon has been shaken by the bankruptcy of WEC. It should be easily understood that schedules, costs, and commitments established in the 2010 timeframe have no basis or worth at this point in time. The "playing field" has been reoriented.

28. All of the forgoing information is crucial to Wall Street and the markets in their collective review of funding mechanisms available to FPL. Each of the points and issues sheds reasonable doubt on the funding ability to support the Turkey Point project. It is not one of the

financial ability of FPL to secure debt but one of reasonableness of Wall Street and the market to risk funding with some many unknown outcomes and the risk of failure to complete.

The above information is presented in this Affidavit is to provide reasonable and supportable documentation to show there is more than necessary cause supporting the position of the City of Miami.

I certify under penalty of law that the foregoing is true and correct.

Executed on this day: May 22, 2017

Mark W. Crisp

Mark W. Crisp, P.E.
Managing Consultant
Global Energy & Water Consulting, LLC
Florida PE – 59683

Exhibit 9

QUESTION:
Please refer to FPL's response to OPC's First Set of Interrogatories, Interrogatory No. 6. FPL stated that it has not initiated discussions on potential contracting arrangements for the construction of Turkey Point Units 6 & 7.

a. As of the date of this response, has FPL initiated discussions with potential companies to construct the Turkey Point Units 6 & 7?
   i. If yes, please identify the companies FPL has initiated discussions with?
   ii. If no, when does FPL intend to initiate discussions with potential companies to construct Turkey Point Units 6 & 7?

RESPONSE:
a. No.

i. N/A

ii. Such activity would be a pre-construction activity, and would occur following approval of a petition by the Florida Public Service Commission to move forward with pre-construction work on the project. No specific date exists, as this activity is dependent on multiple factors discussed in Witness Scroggs' March 1, 2017 and May 1, 2017 Testimony.

Exhibit 10

QUESTION:
Can FPL place the COL process for the AP 1000 nuclear design on hold?

a. If yes, is FPL planning on requesting such a pause in the COL process?

b. If no, please explain why FPL cannot request a pause in the COL process, including what impacts if any a pause on the COL process?

RESPONSE:
Yes. It is possible for an applicant to request suspension of work related to its application.

a. No. The COL process is nearing completion, with limited activities remaining. Suspension of work would jeopardize the anticipated issuance of the COL, nullifying the value of the option created by obtaining a COL and would not be in the best interest of FPL customers.

b. N/A.