1		BEFORE THE
2	FLORI	DA PUBLIC SERVICE COMMISSION
3		DOCKET NO. 110009-EI
4	In the Matter of	:
5	NUCLEAR COST RECO	OVERY CLAUSE.
6		/
7		VOLUME 8
8		Pages 1163 through 1323
9		
10	PROCEEDINGS:	HEARING
11	COMMISSIONERS PARTICIPATING:	CHAIRMAN ART GRAHAM
12	PARTICIPATING.	COMMISSIONER LISA POLAK EDGAR COMMISSIONER RONALD A. BRISÉ
13		COMMISSIONER RONALD A. BRISE COMMISSIONER EDUARDO E. BALBIS COMMISSIONER JULIE I. BROWN
14	DATE:	Thursday, August 11, 2011
15	TIME:	Commenced at 11:38 a.m.
16	11112.	Concluded at 1:18 p.m.
17	PLACE:	Betty Easley Conference Center Room 148
18		4075 Esplanade Way Tallahassee, Florida
19	REPORTED BY:	LINDA BOLES, RPR, CRR
20		Official FPSC Reporter (850) 413-6732
21	APPEARANCES:	(As heretofore noted.)
22		
23		
24		
25		DOCUMENT NUMBER - DATE

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FLORIDA PUBLIC SERVICE COMMISSION FPSC-COMMISSION CLERK

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1	PROCEEDINGS
2	(Transcript follows in sequence from
3	Volume 7.)
4	MR. ANDERSON: May we proceed?
5	CHAIRMAN GRAHAM: Sure.
6	MR. ANDERSON: FPL calls as its next witness
7	John Reed.
8	JOHN J. REED
9	was called as a rebuttal witness on behalf of Florida
10	Power & Light Company and, having been duly sworn,
11	testified as follows:
L2	DIRECT EXAMINATION
L3	BY MR. ROSS:
L4	Q Good morning, Mr. Reed.
L5	A Good morning.
L6	Q You were sworn yesterday before you even
L7	testified; correct?
L8	A That's correct.
L9	${f Q}$ Would you please reintroduce yourself to the
20	Commission.
21	A Yes. I'm John Reed, Chairman and CEO of
22	Concentric Energy Advisors.
23	Q Have you prepared and caused to be filed 15
24	pages of rebuttal testimony in this proceeding on
:5	July 25th, 2011?

1	A Yes, I did.
2	Q Do you have any changes or revisions to your
3	rebuttal testimony?
4	A No. No changes.
5	Q If I asked you the same questions contained in
6	your prefiled rebuttal testimony, would your answers be
7	the same?
8	A Yes, they would be.
9	MR. ROSS: Mr. Chairman, I ask that the
10	prefiled rebuttal testimony of Mr. Reed be inserted into
11	the record as though read.
12	CHAIRMAN GRAHAM: We will insert the prefiled
13	rebuttal testimony of Mr. Reed into the record as though
14	read.
15	MR. ROSS: I would note there's no exhibits
16	being sponsored by Mr. Reed for his rebuttal.
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1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2		FLORIDA POWER & LIGHT COMPANY
3		REBUTTAL TESTIMONY OF JOHN J. REED
4		DOCKET NO. 110009
5		July 25, 2011
6	Q.	Please state your name and business address.
7	A.	My name is John J. Reed. My business address is 293 Boston Post Road West,
8		Marlborough, Massachusetts 01752.
9	Q.	Have you previously filed direct testimony in this proceeding?
10	A.	Yes, I have.
11	Q.	Please state the purpose of your rebuttal testimony.
12	A.	I have been asked by FPL to respond to portions of the direct testimonies of
13		William Jacobs and Brian D. Smith, submitted on behalf of the Florida Office of
14		the Public Counsel ("OPC"). Specifically, FPL has asked me to assess OPC
15		Witnesses Jacobs's and Smith's critique of the Company's approach to
16		establishing the feasibility of the Extended Power Uprate ("EPU") Project at
17		FPL's Saint Lucie Units 1 & 2 and Turkey Point Units 3 & 4 (the "EPU Project"
18		or the "Project") using a Cumulative Present Value of Revenue Requirements
19		("CPVRR") analysis, Witness Jacobs's recommendation that the Commission
20		require FPL to perform an alternative assessment of the feasibility of the EPU
21		Project using a "breakeven" approach that incorporates prior-spent (i.e., "sunk")
22		costs, and Witness Jacobs's recommendation that the Commission disallow all
23		EPU Project costs incurred by FPL that are over a hypothetical "breakeven"

1	amount. In addition, I have been asked to respond to Witness Jacobs's
2	assertions that the Company has acted imprudently by undertaking the EPU
3	Project on an expedited or "fast track" basis.

- Q. Please summarize your conclusions regarding the direct testimony of
   OPC witnesses Jacobs and Smith.
- 6 A. I believe that (1) Witness Jacobs's and Smith's concerns regarding FPL's CPVRR 7 methodology are unfounded; (2) their recommended treatment of sunk costs is 8 inappropriate for the EPU Project; (3) the OPC witnesses ignore prior prudence 9 findings by the Commission while assuming a finding of imprudence in this 10 proceeding; and (4) that their recommendations and analysis are inconsistent 11 with regulatory policy and corporate finance theory. It is also my opinion that 12 Witness Jacobs's recommendation regarding the disallowance of costs puts the 13 Company in the position in which recovery of costs is not determined by FPL's 14 actions, but rather is determined by factors that are outside of its control. For these reasons, I conclude that the Commission should reject Witnesses Jacobs's 15 and Smith's recommendations regarding their proposed alternative feasibility 16 methodology. 17
  - Q. Please describe FPL's approach to assessing the feasibility of the EPU Project.

19

A. As described in the May 2, 2011 direct testimony of FPL Witness Steven R. Sim,
FPL performs a feasibility analysis for the EPU Project in which it compares the
CPVRR of a generation portfolio that includes the EPU Project to one that does
not. This is the same approach that FPL used in its 2007 Determination of Need

filings for the EPU Project, in which the Commission determined the need for the EPU Project explicitly based on a CPVRR analysis, as well as in feasibility analyses in 2008, 2009, and 2010. The costs for the EPU Project that are included in the feasibility analysis are the "going forward" or "to-go" costs, which are simply the remaining costs of a project that is underway. Costs incurred prior to the analysis, also called "sunk costs," are excluded from the analysis, although the Company provides a total of those costs as part of its filings.

- Q. At page 6 of his direct testimony, Witness Jacobs recommends that the Commission require FPL to perform an analysis "similar to the 'break-even' study that it prepares to support the long-term feasibility of its proposed new nuclear units," instead of a CPVRR analysis. How do you respond?
- A. Inasmuch as Witness Jacobs links that recommendation to the inclusion of sunk costs in FPL's analysis (which I will discuss in more detail below), he is mistaken.

  As described by FPL Witness Sim,<sup>3</sup> previously spent capital costs are excluded from FPL's feasibility analysis for the new nuclear units. This has been FPL's consistent practice.

In addition, Witness Jacobs appears to misunderstand the similarities and differences between the CPVRR and breakeven analyses. The two analyses are founded on the same approach (*i.e.*, a comparison of competing resource plans – one with the project being considered and one without). The difference between the two approaches is how the results of each analysis are expressed. Specifically,

the CPVRR result is expressed in the present value of the difference in revenue requirements of competing resource plans whereas the breakeven result is expressed as the dollars per kilowatt for the capital costs of the proposed resource plan at which it has the same cost as the alternate plan. Decisions as to which resource plan is lower cost, and whether to proceed with a project, are exactly the same under either methodology.

### 7 Q. Please review the concept of "to-go" and sunk costs.

A. The "to-go" cost of a project is simply the remaining cost of a project that is underway. It is the incremental cost from a point in time that will be required in order to complete the project. Sunk costs, on the other hand, are essentially the opposite. They are costs that have already been incurred up to a given point in a project. It is important to note that sunk costs represent funds that have been expended to date and cannot be recouped or avoided.

## Q. How are to-go and sunk costs relevant to the EPU Project?

A. Large construction projects, including the EPU Project, often take years to complete. Costs are incurred throughout the development process, during the planning, procurement and engineering stages as well as during construction itself. As the project proceeds through initial engineering and construction toward completion, to-go costs gradually fall until the point at which the project enters service. As I mentioned above, the to-go cost of the EPU Project is the total project cost less sunk costs.

## Q. Why are sunk costs excluded from the CPVRR analysis?

A. The irrelevance of sunk costs and the more appropriate consideration of to-go costs for purposes of determining the forward-looking economic feasibility of a project are basic principles of economics and corporate finance. Due to the fact that a sunk cost cannot be changed or removed based on decision-making today, those costs don't affect the analysis underlying a decision as to whether it is economically advisable to complete a project or not.

The Nuclear Cost Recovery Rule specifically requires the company to submit an analysis of the long-term feasibility of completing the project, consistent with a forward-looking approach. The Commission also acknowledged a requirement that FPL separately account for sunk costs in its economic and feasibility analyses in Order No. PSC-08-0237-FOF-EI:

FPL shall provide a long-term feasibility analysis as part of its annual cost recovery process which, in this case, shall also include updated fuel forecasts, environmental forecasts, break-even costs, and capital cost estimates. In addition, FPL should account for sunk costs. Providing this information on an annual basis will allow us to monitor the feasibility regarding the continued construction of Turkey Point 6 and 7.

In order to determine the prudent path forward, the Company and the Commission need to evaluate the best information available in the present. Using this information and forecasts that represent appropriately calibrated expectations, FPL must determine the wisdom of proceeding with the EPU Project. Costs that have been incurred to date simply do not apply to this analysis. In evaluating whether to proceed with construction, firms conducting ongoing, capital-intensive projects must determine whether the benefits to be

gained from additional investment will exceed the total costs that remain. That alone is the basis upon which sound decisions can be made. Witness Jacobs agrees that this is the conventional approach; however, he argues that an assessment of the feasibility of the EPU Project should include amounts already spent. He offers no explanation or justification for why this violation of a fundamental principle of economics and finance will produce a rational decision.

### 7 Q. Do you have a response to Witness Jacobs's concerns?

A.

Yes. Including costs that have been incurred in the past in a forward-looking economic feasibility analysis will quite possibly produce incorrect decisions and is tantamount to a hindsight review of decisions that have already been deemed prudent. The questions that need to be answered in each annual Nuclear Cost Recovery Clause (NCRC) filing are: (1) whether past costs have been prudently incurred, and (2) whether the project should be continued or abandoned, based on a forward-looking economic feasibility test. These are two separate tests. Customers remain responsible for past prudently-incurred costs regardless of whether the decision to the second question is to proceed with or to abandon the project. Similarly, FPL does not escape the responsibility for imprudently-incurred costs based on whether the project is continued or abandoned. The decision to continue or abandon the project needs to be made without regard to past costs, because the recovery of and responsibility for those costs isn't affected by the decision to continue with or abandon the project.

1	Q.	Is FPL's use and	application of	of the	CPVRR	analysis	imprudent,	as
2		Witness Jacobs's asse	erts?		, .			

A.

A.

Absolutely not; it is the correct approach for answering the questions that FPL must answer. As stated above, this is the same approach FPL used in its 2007 Determination of Need filing, as well as in feasibility analyses in 2008, 2009, and 2010. As also stated above, the Commission explicitly relied on the CPVRR approach in determining the need for the EPU Project and has not taken issue with the approach in subsequent NCRC proceedings. In addition, as I noted previously, the Commission has ordered FPL to separately account for sunk costs in its annual filings for two new nuclear generating units at the Turkey Point site. Thus, while Witness Jacobs may disagree with the appropriateness of the approach, there is absolutely no basis for considering the approach imprudent, especially given the repeated history with which the CPVRR analysis has been proffered by the Company and incorporated (whether explicitly or implicitly) in the Commission's orders.

# 16 Q. Do you have a response to Witness Jacobs's suggestion that FPL acted 17 imprudently while developing the EPU Project?

Yes. I believe Witness Jacobs has misapplied the prudence standard as it applies to this proceeding. As described in my Direct Testimony regarding the EPU Project, a reasonable application of the prudence standard involves judging a utility's actions based on what was known or knowable at the time the action was made. This is consistent with the prudence test the Commission has applied in the past. However, Witness Jacobs has used the benefit of hindsight to question

FPL's prior actions without considering what was known or reasonably could have been known at the time of the actions. In fact, while the decision to use an expedited approach for the EPU Project was made as early as 2007<sup>5</sup> (i.e., two years prior to the period of review in this proceeding), Witness Jacobs (or any other OPC witness) made no mention of his views of the prudence or imprudence of that management decision in his direct testimony in prior NCRC proceedings. The Commission has approved the 2007 and 2008 costs of the EPU Project in prior NCRC dockets. Thus, Witness Jacobs is clearly using facts and circumstances known only years after the decision he questions were made. This is an unreasonable and improper application of the prudence standard, and should be rejected by the Commission.

- Q. Witness Jacobs recommends that all costs, including sunk costs, above a breakeven amount be disallowed due to alleged imprudence. Do you agree with this recommendation?
- 15 A. No, I do not. Witness Jacobs's recommendation is inconsistent with the Nuclear

  16 Cost Recovery Rule, and if it were accepted it could lead to the disallowance of

  17 costs that were previously determined to be prudently incurred, and put FPL at

  18 risk for factors that are completely out of its control. There are even plausible

  19 scenarios under Witness Jacobs's approach in which costs that are disallowed in

  20 one year become allowable in the following year. This is clearly unreasonable.
- Q. Why do you believe Witness Jacobs's recommendation is inconsistent with the Nuclear Cost Recovery Rule?

The Nuclear Cost Recovery Rule states that alternative cost recovery mechanisms shall "promote electric utility investment in nuclear or integrated gasification combined cycle power plants and allow for the recovery in rates of all such prudently incurred costs." The Nuclear Cost Recovery Rule further states, "[s]uch costs shall not be subject to disallowance or further prudence review." However, under Witness Jacobs's recommendation, the costs that are allowable for recovery in rates would be set not by a Commission determination of prudence, but rather by reference to the constantly changing resource plan that excludes the EPU Project, and is thus in no way affected or connected to the prudence or imprudence of FPL's management of the EPU Project. In addition, Witness Jacobs's recommendation regarding the inclusion of sunk costs in a prudence determination essentially calls for a reversion to the highly unsuccessful all-or-nothing "used and useful" regulatory paradigm that prevailed in the 1980s.

### Q. Please explain.

A.

A.

The regulatory processes applied to the development of nuclear generation in the 1980s were characterized by significant cost disallowances, at times owing to results-oriented hindsight reviews that determined whether plants turned out to be economic a decade or more after construction was begun. The standards used by regulators at that time evolved from traditional prudence reviews to include also an "economically used and useful" standard that, based on hindsight, determined what portion of a plant's prudently incurred cost was "economically" useful in providing service to customers. The recovery of prudently-incurred

	costs was further narrowed by the adoption of more onerous standards such as
	an "economic benefits test" and eventually simple "risk sharing," whereby costs
	were simply declared unrecoverable on the basis that the total cost was too large
	for customers alone to bear the burden. By recommending both the setting of a
	benchmark that is unrelated to FPL's development of the EPU Project (i.e., a
	constantly changing resource portfolio excluding the EPU Project) and the
	disallowance of any costs above that benchmark, regardless of the Commission's
	views on the prudence or imprudence of the actions of the utility, Witness Jacobs
	is essentially calling for a return to the prior paradigm. The Nuclear Cost
	Recovery Rule, however, strongly suggests that the Florida Legislature and the
	Florida Public Service Commission ("PSC") wished to provide a framework
	within which the Commission has the opportunity to address and avoid many
	flawed aspects of those past regulatory processes.
0	II astina accoming approved concerns about consistent appropriate

- Q. Have rating agencies expressed concerns about regulatory uncertainty such as that which you have described above?
- 16 A. Yes. Rating agencies are concerned that the level of infrastructure investment
  17 needed to meet growing demand in an environmentally acceptable manner will
  18 create the same "perfect storm" of economic and political pressures that
  19 preceded the prudence disallowances and hindsight reviews of the past.
- For example, Moody's has noted:

Conceivably, the combination of rising costs, higher infrastructure investment needs and larger or more frequent requests for rate relief could create pressure for future incremental rate relief from state regulators, or at a minimum, raise the uncertainty level associated with expected

A.

recoveries—thereby directly affecting one of our primary This potential for increased regulatory rating drivers. uncertainty and pressure for rate relief might peak several years from now, at precisely the time when many companies are completing their base-load generation construction projects or other non-discretionary infrastructure investment projects and the potential for rate shock to consumers would be highest...However, none of the issues currently facing the industry are new. In fact, the utility sector has faced an environment with eerily similar uncertainties in the past. The risk, in our opinion, is whether or not the experiences of the past will be repeated in the future. The most significant risk might be future disallowances of investments that were made with an understanding that those investments were prudent and necessary at the time they were made.8

# Q. How might Witness Jacobs's recommendation lead to the disallowance of costs that were previously determined to be prudently incurred?

The following example, in which I have assumed for the sake of argument that the Commission adopts Witness Jacobs's recommendation, demonstrates how this could happen. If the forecasted price of natural gas (or any other forecasted input that may affect the resource plan that excludes the EPU Project to a greater extent than the resource plan that includes the EPU Project) drops precipitously in any given year, Witness Jacobs's breakeven amount could theoretically drop below amounts FPL has already spent on the EPU Project that the Commission has determined to have been prudently incurred. This scenario would put the Commission in the position of disallowing previously approved, prudently incurred costs. In addition, the reason for the disallowance would not be any action or inaction on the part of FPL, but rather it would be due to something that is completely out of FPL's control.

To extend the example, if, in the following year, the forecasted price of gas rises to such a degree that the breakeven amount now exceeds FPL's costs, those costs would presumably be allowed back into the recoverable balance. This is clearly an unreasonable approach to determining the level of allowed costs in this and future NCRC proceedings.

A.

A.

## 6 Q. How would a more reasonable application of the prudence standard work?

A proper application of the prudence standard in regards to the allowance or disallowance of costs involves: (a) establishing the prudence or imprudence of management decision making or actions and allowing the recovery of all prudently-incurred costs, and (b) if imprudence is established, determining which costs were higher than they would have been had management acted prudently and disallowing those costs. Under this construct, the decision to continue with the project is simply one of the decisions for which a prudence review is appropriate, based on all of the usual rules for such a review, including a prohibition on the use of hindsight to judge prudence. In my opinion, Witness Jacobs has performed neither of these steps, and therefore his recommendations for disallowances are not consistent with sound regulatory policy or Florida's Nuclear Cost Recovery Rule.

# Q. Do you have any additional comments regarding Witness Smith's analysis that he presents in his direct testimony?

Yes. In order to perform an analysis that Witness Smith asserts will approximate the economic feasibility of the EPU Project, Witness Smith has taken the net benefit demonstrated in FPL's CPVRR analysis, and subtracts from that FPL's

sunk costs, escalated by Witness Smith to 2011 dollars. That analysis results in what Witness Smith concludes is a negative customer impact. I believe this analysis is faulty in that it incorporates FPL's sunk costs, and also incorporates those costs inconsistently.

### 5 Q. Please explain.

A.

A. My disagreement with Witnesses Jacobs and Smith regarding the treatment of sunk costs is described above. In addition, even if one were to accept that an analysis with sunk costs is appropriate for assessing the feasibility of the EPU Project (which I do not), Witness Smith has used a one-sided approach to incorporating sunk costs that assumes that all of FPL's prior costs have been deemed imprudent by the Commission. This is clearly counterfactual, in that the Commission made prudence determinations regarding FPL's 2007 and 2008 costs, making no disallowances, and has yet to make a determination regarding 2009 and 2010 costs.

#### 15 Q. What would be the proper treatment of prudently incurred sunk costs?

If costs are determined by the Commission to have been incurred prudently, then those costs should either be excluded altogether, as the Company does, or included in both the generation portfolio that includes the EPU Project and the portfolio that excludes the EPU Project (and thus would net to \$0). The reason for this is that FPL has a right to recover prudently incurred costs, and is entitled to recover all prior prudently incurred costs regardless of whether the EPU Project goes forward. In that regard, Witness Smith and I are in agreement. Specifically, in his direct testimony, Witness Smith states, "[i]f previous costs

- were prudently incurred and are allowed to be included in rate base, then
- excluding them in the current and future feasibility analyses is appropriate."9
- Witness Smith's analysis, however, ignores this point.
- 4 Q. Does this conclude your testimony?
- 5 A. Yes it does.

- 5 See, Exhibit WRJ-11, line 12, at 5 of 30.
- 6 Nuclear Power Plant Cost Recovery Rule, Section 25-6.0423, F.A.C.
- 7 Ibid.
- Moody's Investors Service, Global Credit Research, "Storm Clouds Gathering on the Horizon for the North American Electric Utility Sector," August 2007, at 1, 15.
- 9 Direct Testimony of Brian Smith, at 4.

FL PSC Order No. PSC-08-0021-FOF-EI, at 4.

Testimony & Exhibits of Steven R. Sim, May 2, 2011, at 10.

<sup>3</sup> Ibid., at 21.

See, e.g., Ross, Stephen A., Westerfield, Randolph W., and Jordan, Bradford, Jordan D., <u>Fundamentals of Corporate Finance</u>, 4th ed., at 280.

#### BY MR. ROSS:

Q Mr. Reed, would you please provide a summary of your rebuttal testimony to the Commission.

A Certainly. The purpose of my rebuttal testimony is to respond to portions of the direct testimonies of OPC Witnesses Dr. Jacobs and Mr. Smith.

Contrary to the recommendations of Dr. Jacobs and an analysis performed by Mr. Smith, the inclusion of previously spent costs, otherwise known as sunk costs, in a forward-looking feasibility study for FPL's EPU project is inappropriate. Specifically due to the fact that a sunk cost cannot be changed or removed based on decision-making today, those costs don't affect the analysis underlying a decision as to whether it is economically advisable to complete a project or not. That is a basic principle of economics and corporate finance.

Dr. Jacobs has used hindsight to question

FPL's prior decision to use an expedited approach for
the EPU project, and Dr. Jacobs has not considered what
was known or reasonably could have been known at the
time of that decision. In doing so, Dr. Jacobs has
misapplied the prudence standard.

Lastly, there is no merit in Dr. Jacobs' recommendation of the disallowance of all costs incurred

in the EPU project that exceed a hypothetical breakeven 1 amount set with reference to a constantly changing 2 resource portfolio, excluding the EPU project. 3 The resource portfolio that excludes the EPU project is in no way affected by or even connected to 5 the prudence of FPL's management of the EPU project, and 6 the acceptance of Dr. Jacobs' proposal would be 7 inconsistent with the nuclear cost recovery rule, could 8 lead to the disallowance of costs that were previously 9 determined to be prudent, and would put FPL at risk for 10 factors that are completely outside of its control. 11 That concludes my testimony. Thank you. 12 MR. ROSS: Mr. Reed is available for 13 cross-examination. 14 CHAIRMAN GRAHAM: Thank you. 15 Intervenors? 16 MR. WHITLOCK: Thank you, Mr. Chairman. 17 CROSS EXAMINATION 18 BY MR. WHITLOCK: 19 Good morning, Mr. Reed. 20 0 Good morning. 21 22 If I could ask you to look at page 5 of your rebuttal testimony, please, sir. 23 I have that. 24 Okay. And at line 8 you talk about the 25 Q

1	nuclear cost recovery rule, and you state it
2	"specifically requires the company to submit an analysis
3	of the long-term feasibility of completing the project,
4	consistent with a forward-looking approach." Is that
5	accurate?
6	A Yes.
7	<b>Q</b> Okay. Now "consistent with a forward-looking
8	approach," is that part of the language of the rule?
9	A No. The language doesn't use the term
LO	"forward-looking approach," but it does specifically
11	provide for the approval year to year and the recovery
12	of all prudently incurred costs. And that once those
13	costs are determined
14	<b>Q</b> Okay. You've answered my question, Mr. Reed.
15	You're going a bit beyond anything I've talked, anything
16	I asked you, so
17	<b>MR. ROSS:</b> Mr. Chairman, I object. He was
18	explaining his answer. He should be allowed to
19	MR. WHITLOCK: He had plenty of time, Mr.
20	Chairman.
21	CHAIRMAN GRAHAM: I think Mr. Reed had time to
22	explain his answer. I thought he was editorializing a
23	little further.
24	MR. WHITLOCK: Thank you.
25	BY MR. WHITLOCK:

1	$oldsymbol{Q}$ So consistent with a forward-looking approach
2	is your interpretation of what that rule says, correct,
3	Mr. Reed?
4	A That's correct.
5	Q Are you a lawyer?
6	A No.
7	<b>Q</b> Do you engage in statutory or regulatory
8	requirement interpretation very often?
9	A Yes, frequently with regard to regulatory
10	policies.
11	<b>Q</b> But you're not a lawyer; correct?
12	A I am not.
13	$oldsymbol{Q}$ Okay. Going on there in line 10, you note
14	that "The Commission also acknowledged a requirement
15	that FPL," in your words, "separately account for sunk
16	costs in its economic and feasibility analyses."
17	Correct?
18	A Yes.
19	$oldsymbol{Q}$ Okay. Could you read that language there from
20	the order on lines 13 through 20, please, sir?
21	A "FPL shall provide a long-term feasibility
22	analysis as part of its annual cost recovery process
23	which, in this case, shall also include updated fuel
24	forecasts, environmental forecasts, breakeven costs, and
25	capital cost estimates. In addition, FPL should account

for sunk costs. Providing this information on an annual basis will allow us to monitor the feasibility regarding the continued construction of Turkey Point 6 and 7."

Q Thank you, sir. And I want to focus on the sentence there on line 16 over to 17. "In addition, FPL should account for sunk costs."

So it's your testimony that in the, in the order, in the order cited there, when the Commission said, "FPL should account for sunk costs," that meant FPL should exclude sunk costs; that's what your testimony is today.

A No. It should account for them, as it says, in addition to the long-term feasibility analysis.

That's how I interpret it, I think just as written.

Q Okay. Well, that wasn't responsive to my question, so I ask you again. The Commission specifically said, "FPL should account for sunk costs." Correct?

A Yes, it did.

Q It's your testimony that FPL should account for sunk costs by excluding them from the CPVRR analysis; correct?

A It shouldn't exclude them from the feasibility analysis. That's what it means when it says in addition to the feasibility analysis it should account for sunk

1	COSTS.		
2	<b>Q</b> And you say that's what it means. Were you on		
3	the Commission at that time that this order was issued?		
4	A I'm offering you my interpretation.		
5	<b>Q</b> Okay. Were you part of that proceeding in		
6	which that order was issued? Did you offer testimony?		
7	${f A}$ No, I did not offer testimony on that issue.		
8	Q So simply your, that's simply your analysis,		
9	your interpretation of what that, of what that sentence		
.0	means is that, "In addition, FPL should account for sunk		
.1	costs," that means they should exclude them from the		
.2	feasibility?		
.3	MR. ROSS: Objection. Asked and answered at		
_4	least three times.		
L5	CHAIRMAN GRAHAM: I agree with the objection.		
L6	MR. WHITLOCK: No further questions.		
L7	CHAIRMAN GRAHAM: Other Intervenors?		
L8	Mr. McGlothlin.		
L9	CROSS EXAMINATION		
20	BY MR. McGLOTHLIN:		
21	<b>Q</b> Mr. Reed, please refer to page 4 of your		
22	rebuttal testimony.		
23	<b>A</b> I have that.		
24	${f Q}$ Beginning at, with your answer to the question		
25	posed at line 14, you talk generally about the nature of		

1	large construction projects, do you not?
2	A I do.
3	Q And at line 18 you say, "As the project
4	proceeds through initial engineering and construction
5	toward completion, to-go costs gradually fall until the
6	point at which the project enters service." Do you see
7	that statement?
8	A I do.
9	Q With respect to the FP&L EPU project, have you
LO	seen any gradual or even appreciable decline of the
L1	to-go costs reported to date?
L2	f A No. This is a statement in terms of all other
L3	things being held constant. In this case, with the
14	total cost estimate increasing, the to-go costs from one
15	year to the next have not gone down. So we don't have
16	all other things being held constant.
17	Q And more precisely, FPL has spent about
18	\$700 million on the uprate project, and in about the
19	same time frame it's increased its estimate by, again,
20	approximately \$700 million; correct?
21	${f A}$ I can accept those numbers, subject to check.
22	MR. McGLOTHLIN: Nothing further.
23	CHAIRMAN GRAHAM: Thank you.
24	Ms. Kaufman.
25	CROSS EXAMINATION

BY MS. KAUFMAN:

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Q I have to look at the clock. Good morning again, Mr. Reed.

I just want to talk to you and be sure that I understand this, this concept of sunk costs that's gotten a lot of attention in this proceeding.

What, what is the amount of sunk costs that we're talking about that you have excluded or that has been excluded from the feasibility analysis?

A The sunk costs are all of the costs that have been expended as of the date that the feasibility analysis is prepared. In this case, I don't have the specific number at my fingertips, that was excluded from Dr. Sim's analysis, but generally whenever one updates or performs a feasibility test, sunk costs are all the costs expended or committed to irreversibly at that point in time.

Q Would you accept, subject to check, that that amount is around \$700 million?

A For the two EPU projects together, yes.

Q Okay. So when the Commission looks at this project, they should, it's your testimony that they should ignore the fact that the ratepayers have already expended \$700 million when they decide whether or not this project is a good idea for the ratepayers?

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A Let's be clear as to what the question being asked is. When they decide whether to move forward with the project or not? Yes, you should definitely exclude sunk costs. When they decide whether costs have been prudently incurred, that has nothing to do with sunk costs. The determination of prudence goes on year by year whether the costs are sunk or not. But whether they -- when they are deciding whether to continue to move forward with the project, the answer is quite definitely yes, they should explain sunk costs from that decision.

Q Now you would agree with me that this \$700 million that, that is being termed sunk costs, that the bill for those sunk costs has already been picked up by the ratepayers; correct?

A The '07 and '08 costs have been determined to be prudent and are being picked up by customers. The '09 and '10 costs are, of course, subject to this decision.

Q And if FPL prevails in its position at the end of the day, there will be about \$700 million worth of costs that the ratepayers have or will be responsible for; right?

- **A** Yes.
- Q And in that regard it's your testimony that

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those costs have no bearing on the go-forward of the project.

No forward on the decision -- no bearing on Α whether to continue with the project. That's correct. Those costs having been incurred irrevocably, it does not make sense to include them in an analysis of whether to continue or not.

And by saying that they've been incurred irrevocably means that the ratepayers have paid for it, they're never going to get that money back, regardless of what happens to the project, and therefore they should be ignored as the Commission proceeds in this docket?

Not completely correct. Whether ratepayers have paid for them or not, whether they've been determined to be prudent or not, doesn't enter into the question as to whether you include them in the economic viability standard going forward. If they are sunk, meaning that you, whatever happens to them, incurred and passed through, incurred and not passed through, the fact that they're sunk is what determines that you exclude them from the analysis, not the issue of whether they've been recovered from ratepayers.

Well, you're not suggesting that FPL is offering to pick up any of the \$700 million; right?

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No, they're not.

Okay. Do you think that to the extent that -you know I represent large consumers. Do you think that they might be concerned that consumers have sunk \$700 million into this project thus far?

I'm sure that customers are concerned about the cost of the project and how much has been spent. And I'm sure that they're also looking forward to the benefits that'll be derived from the project when it's done.

Would you agree with me that if the project is never completed, not only will they have -- not see the benefit of the \$700 million, but they won't receive any benefits from the project?

Arguably that's the case if the project were to be abandoned now fully. Well, actually that's not Some additional megawatts have already been put into service, so there is a benefit actually occurring today from the incremental output of the St. Lucie unit. So, yes, there will be benefits from that regardless of what happens from this point forward.

But it would certainly be slight in comparison to the, to the Turkey Point, Turkey Point projects; correct?

The amount that's occurred so far is only a Α

1	small portion of the total increment of additional
2	capacity. That's correct.
3	Q And as I said, it's, in your view it's sunk,
4	regardless of what happens.
5	A The monies spent so far, the 700 million in
6	your example, are sunk, and there's no question that
7	they should not enter into the decision of whether to
8	proceed with the project.
9	MS. KAUFMAN: Thank you.
LO	CHAIRMAN GRAHAM: Any other questions,
L1	Intervenors?
L2	Staff?
L3	MS. NORRIS: Staff has no questions.
L <b>4</b>	CHAIRMAN GRAHAM: Commission board? Wow.
L5	Commissioner Brisé.
L6	COMMISSIONER BRISÉ: Thank you, Mr. Chairman.
L7	I'm going to ask you the same question I asked
L8	Mr. Deason with respect to the breakeven analysis as, as
L9	suggested by Dr. Jacobs.
20	Not only dealing with the instant case before
21	us but dealing in terms of broader policy, do you think
22	the application of the breakeven analysis as suggested
23	by Dr. Jacobs is a good analytical tool to apply to
24	similar cases moving forward?
25	THE WITNESS: No. I would object to that as

being appropriate under any structure. I mean, that is an approach that says we're going to wait until the end of the project, until it's done, to determine what portion of the project gets included in rates. That's a bad regulatory construct full stop.

It's a worse one when it occurs in a state in which the policy to date has been that we will make annual determinations of prudence and the recovery of costs, because that represents a major change in policy and creates a very unpleasant surprise for the financial community. But I would say it's a bad policy overall, and it's even worse under these circumstances.

COMMISSIONER BRISÉ: One follow-up question.

So do you think that, that if we pursued that policy, it would be in direct conflict with the intention that the Legislature had when it established the nuclear recovery rule?

THE WITNESS: I think that's clear, yes. The nuclear cost recovery rule speaks in terms of providing assurances that prudently incurred costs can be recovered, and that standard would, in fact, disallow potentially prudently incurred costs if the economics of the project changed.

COMMISSIONER BRISÉ: Thank you. That's all I have.

CHAIRMAN GRAHAM: Commissioner Balbis.

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COMMISSIONER BALBIS: Thank you, Mr. Chairman.

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I have one question for Mr. Reed.

to be feasible; is that correct?

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The -- you know, obviously there's been a lot of discussion on the two different methods, breakeven versus the CPVRR. Isn't it true then using the CPVRR going forward as part of the feasibility analysis, as

long as the remaining costs do not exceed the alternative or replacement costs, then it will continue

THE WITNESS: Yes, that's correct.

COMMISSIONER BALBIS: So then, in other words, the only thing that would affect the feasibility, again provided the remaining costs are below the replacement costs, would be if the need for that generation capacity changes.

No. That's not the only thing THE WITNESS: that would cause you to determine that it was uneconomic going forward. If the costs were to increase dramatically for the project or if the cost of the alternatives were to decrease substantially, for example, pick an extreme example, if natural gas prices went to a dollar and you predicted they would stay at a dollar forever, then you could in fact have, even on an incremental basis, the economics change such that the

decision to go forward should be changed. So it, it reflects the economics of the alternative being pursued, the economics of the alternative not being pursued.

Part of the economics of that alternative not being pursued is need, the year of need for new capacity. And, of course, that could be pushed off by five or ten years by very bad economic circumstances. But there are many factors that go into the comparison of the two scenarios, including fuel cost, need is one, inflation is another, capital and construction costs are others.

COMMISSIONER BALBIS: Okay. Thank you.

CHAIRMAN GRAHAM: Redirect?

#### REDIRECT EXAMINATION

#### BY MR. ROSS:

Q Mr. Reed, to follow up on a question that Commissioner Brisé asked you about the appropriateness of a breakeven analysis as a suggested tool, do you have an opinion as to whether using a breakeven analysis and separating out the projects as OPC has recommended, the Turkey Point versus St. Lucie, would impact the risk profile and the financing costs for the project?

A I think unquestionably. I testified about this issue at the very beginning of this project in 2007 and '08 and said you need to have certainty of recovery.

You need to have the investors understand and be able to count on the rules for cost recovery from the very beginning of this type of a project. If you don't have that, your capital costs will be higher, substantially higher.

If we have that type of a change in the construct, either going to the breakeven analysis or further going to breakeven and separating it into two projects, that's a fundamental change in the rules of the road. And that is the kind of thing that not only will increase the cost of capital for this project, but that in my opinion financial markets will remember going forward to the next project and to bigger projects like new nuclear. I would find that to be very troubling.

MR. ROSS: That's all I have, Mr. Chairman.

CHAIRMAN GRAHAM: Okay. Do we have any exhibits that need to be entered into the record?

MR. ROSS: No exhibits for Mr. Reed, and we would request that he be excused.

CHAIRMAN GRAHAM: If there's no objections from Staff or from Intervenors. Seeing none, sir, thank you very much for your testimony today. You're excused.

THE WITNESS: My pleasure. Thank you.

MR. ANDERSON: FPL would call as its next witness Terry Jones, who has been previously sworn.

TERRY O. JONES 1 was called as a rebuttal witness on behalf of Florida 2 Power & Light Company and, having been duly sworn, 3 testified as follows: 4 5 DIRECT EXAMINATION BY MR. ANDERSON: 6 Mr. Jones, would you please reintroduce 7 yourself to the Commission. 8 9 Yes. My name is Terry Jones. And by whom are you employed and in what 10 capacity? 11 Florida Power & Light, Vice President of 12 Extended Power Uprates. 13 Have you prepared and caused to be filed 16 14 pages of prefiled rebuttal testimony in this proceeding 15 on July 25, 2011? 16 17 That's correct. 18 Do you have any changes or revisions to your rebuttal testimony? 19 20 No, sir. If I asked you the same questions contained in 21 22 your prefiled rebuttal testimony, would your answers be the same? 23 24 Α Yes. 25 MR. ANDERSON: Chairman Graham, FPL asks that

the prefiled rebuttal testimony be inserted into the 1 record as though read. 2 CHAIRMAN GRAHAM: We will insert into the 3 record Mr. Jones' prefiled rebuttal testimony into the record as though read today. 5 BY MR. ANDERSON: 6 You're sponsoring two exhibits to your 7 rebuttal testimony? 8 9 That's correct. 10 They're attached to your testimony as TOJ-28 and TOJ-29? 11 12 That's correct. 13 MR. ANDERSON: Mr. Chairman, those have been premarked for identification on Staff's list as Exhibits 14 15 131 and 132. 16 CHAIRMAN GRAHAM: Noted. 17 18 19 20 21 22 23

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1		DEFURE THE FLURIDA FUBLIC SERVICE COMMISSION	
2	FLORIDA POWER & LIGHT COMPANY		
3	REBUTTAL TESTIMONY OF TERRY O. JONES		
4		<b>DOCKET NO. 110009-EI</b>	
5		JULY 25, 2011	
6			
7	Q.	Please state your name and business address.	
8	A.	My name is Terry Jones and my business address is 700 Universe Blvd., Juno	
9		Beach, FL 33408. I am employed by Florida Power & Light Company (FPL)	
10		as Vice President, Nuclear Power Uprate.	
11	Q.	Have you previously provided testimony in this docket?	
12	A.	Yes.	
13	Q.	Are you sponsoring any rebuttal exhibits in this case?	
14	A.	Yes. I am sponsoring the following exhibits, which are attached to my	
15	rebuttal testimony:		
16		• TOJ-28, FPL's Response to OPC's Sixth Set of Interrogatories No. 47	
17		TOJ-29, SL 1-24 Design Engineering Production	
18	Q.	What is the purpose of your rebuttal testimony?	
19	A.	My rebuttal testimony addresses the direct testimony provided by William R.	
20		Jacobs on behalf of the Office of Public Counsel (OPC). Additionally, I	
21		briefly respond to the testimony of Staff witnesses Lynn Fisher and David	
22		Rich.	
23	Q.	Please summarize your rebuttal testimony.	

Witness Jacobs criticizes the Company's 2007 decision to perform the Extend 1 A. Power Uprate (EPU) project on an expedited basis in a manner that implies 2 any "fast track" project is an imprudent one. That is simply not the case. 3 Expedited projects may present unique risks (as I have consistently testified 4 to), but as described by FPL Witness Sim, this expedited approach was in 5 2007 and remains today the approach that maximizes benefits for FPL's 6 7 customers. 8 Witness Jacobs also questions the current status of the EPU project, 9 characterizing the information I have provided in testimony about project 10 uncertainties as some sort of revelation that the EPU project is a difficult one. 11 This section of Witness Jacobs's testimony offers little new insight and fails to 12 13 disparage the project in the manner attempted. 14 Staff witnesses express some concern over costs associated with three "work 15 stoppages" that have occurred. Work stoppages, however, are not only 16 routine but are an appropriate response to personnel errors. FPL's actions in 17 hiring the particular vendors at issue, providing necessary training and 18 oversight, and working to minimize any schedule or cost impact have been 19 prudent. 20 21 22

## **EPU PROJECT APPROACH (2007-2011)**

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- Q. Please respond to Witness Jacobs's assertion that the EPU project is "unsuitable" for the fast track approach (p. 7).
- Every capital project undertaken by a utility company, including expedited A. 5 6 projects, will involve challenges and benefits. In the case of the EPU project, it faces increased schedule risk, for example, but will also provide benefits in 7 the form of more baseload, emission-free megawatts electric (MWe) to 8 9 customers sooner. In fact, FPL's customers are currently benefitting from an 10 additional 29 MWe from St. Lucie Unit 2 as a result of the expedited approach 11 FPL has taken. The fact that challenges exist does not indicate that the project 12 is ill-suited for an expedited approach – to the contrary, it is expected that 13 challenges will be faced.

# Q. How long has this been the project approach?

- 15 A. This has been the consistent approach taken, and discussed in testimony, since
  16 FPL applied for a Need Determination in 2007. I personally have consistently
  17 testified to and worked to explain this approach consisting of the four
  18 overlapping project phases of Licensing, Long Lead Procurement,
  19 Engineering, and Implementation for the last two years. It is surprising that
  20 any party would now, four years later, take issue with this aspect of the EPU
  21 project.
  - Q. How long would the EPU project have taken if FPL did not decide to expedite it in 2007?

1	A.	If FPL had chosen to perform each phase of the project in sequence – and		
2		perform all the necessary design engineering prior to beginning any of the		
3		implementation - the project would have taken a total of approximately		
4		eleven and half years, or six years longer than the current EPU project		
5		schedule. This was explained in my response to OPC's Sixth Set of		
6		Interrogatories No. 47, attached as Exhibit TOJ-28.		
7	Q.	What would be the project cost impact if FPL had implemented the EPU		
8		project phases in series rather than as a fast track project?		
9	A.	For the following reasons, FPL expects that the total cost of the project would		
10		have been significantly greater if FPL worked the EPU project phases in		
11		series:		
12		• Costs for project personnel would have been greater due to reduced		
13		efficiencies, lost continuity, increased turnover, and longer durations		
14		for project personnel.		
15		• Equipment costs would be greater due to escalation in fabrication and		
16		commodity prices.		
17		• Vendor pricing would be greater due to increased risk of longer time		
18		frame to implement the project.		
19		Carrying charges charged to the customers through the Nuclear Cost		
20		Recovery Clause, would be much greater due to longer time periods		
21		between expenditures and placing equipment in service.		
22		Overhead and indirect costs would be much greater for an eleven and a		
23		half year project than for a five and a half year project.		

Q.	Vitness Jacobs claims that FPL had "little grasp" of what the ca	pita
	osts would be at the beginning of the project. How do you respond?	

A.

A.

I disagree with Witness Jacobs's description of the 2007 non-binding cost estimate. FPL's estimate at that time was reasonable, in that it was consistent with the earliest stages of the project and the information that was known at that time. FPL's witnesses have consistently testified that additional License Amendment Request (LAR) engineering and design engineering would provide greater cost certainty, in an attempt to keep all parties fully informed of both the approach toward the project as well as the maturity of the cost information in hand. This approach was not in error – rather, it was a deliberate choice to bring the EPU project benefits to customers in the quickest, most cost-effective manner. For reasons described by FPL Witness Sim, the economics continue to prove that this was the right choice.

# Q. Do you agree that FPL was "slow to recognize and take into account early indications that its initial cost estimates were inadequate" (p. 7)?

No. Witness Jacobs's assertion fails to recognize all that has been disclosed about this project from its inception. First, he implies that the "initial cost estimates" were expected to be final and unchanging (and because they did change, they were "inadequate"). That was never the case. The initial cost estimates were based on preliminary scoping studies and of course subject to change as additional LAR engineering and design engineering was completed. Additionally, FPL was fully responsive to all potential cost increases — whether due to scope growth or new estimates from its Engineering,

7	Q.	Witness Jacobs implies on the bottom of page 15 that because of FPL's
6		significantly eroded FPL's efforts to control costs.
5		accept them as the inevitable result and plan to incur them - would have
4		into account" these early estimates in the manner OPC is implying - i.e., to
3		was an attempt to keep costs low for the benefit of FPL's customers. To "take
2		challenge such increases and mitigate them where possible. This, of course,
1		Procurement, and Construction (EPC) vendor. FPL's response was to

Q. Witness Jacobs implies on the bottom of page 15 that because of FPL's approach, it could only hire an EPC contractor on a "time and materials" basis. Please respond.

- A. Time and materials contracts are standard project management tools. Initially, using a time and materials EPC contract provided FPL management the greatest control of vendor costs and work scope. As the LAR engineering and design engineering progressed, the work scope became more defined. FPL then negotiated the target price with the EPC vendor for St. Lucie based on the defined scope, as described in my May 2, 2011 testimony (p. 7). FPL plans to do the same for the Turkey Point EPC contract when the scope is sufficiently defined.
- Q. Please respond to the comparison between the EPU project and the last round of new nuclear generation construction that occurred in the 1980s.
- A. This comparison is not accurate. The scope of new nuclear construction is enormous compared to the EPU project, the Nuclear Regulatory Commission (NRC) regulatory process in the 1980s (during the last wave of construction) was far more uncertain than it is today with numerous requirements changing

1		during and following construction, including the ability to ultimately obtain an
2		operating license post construction was itself uncertain.
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4		We all agree that the EPU project is complex, primarily because it must be
5		accomplished within operating nuclear facilities. But the NRC regulatory
6		process today is better defined than during past periods of nuclear
7		construction, and despite the complexity, FPL is confident it will be able to
8		successfully complete the project. The EPU project is therefore quite unlike
9		the projects Witness Jacobs attempts to compare it to.
0	Q.	With respect to the recommendations Witness Jacobs makes related to
1		FPL's feasibility analysis, he asserts that the St. Lucie and Turkey Point
2		uprates should be evaluated separately. Please respond.
3	A.	Witness Jacobs ignores the cost advantages of performing four uprates at four
4		units. Performing an EPU on all units within one fleet simultaneously allows
5		the project team to share resources and lessons learned from performing the
6		numerous outages with similar work scopes, thereby increasing efficiency and
7		reducing costs. Additionally, engineering and construction strategy for one
8		unit can be used to support engineering and construction strategy for the other
9		units.
0.0		
21		Additionally, FPL was able to realize cost savings and leverage purchasing
22		power by purchasing multiple pieces of the same equipment. For example
23		the equipment needed to upgrade the main turbines and generators to

accommodate the increased steam flows and electrical output is needed at 1 each unit. Instead of procuring this equipment for one unit, FPL procured the 2 3 equipment for four units. This was also done for the long lead equipment purchases of the moisture separator reheaters and feedwater heaters. 4 5 6 **CURRENT STATUS OF THE EPU PROJECT** 7 Do you have a summary response to Witness Jacobs's testimony related 8 Q. 9 to the current status of the EPU project? Yes. My summary response is that Witness Jacobs tells the Commission 10 Α. 11 nothing new. He simply recasts the project information I have testified to over the last two years in a negative light, attempting to turn FPL's efforts to 12 13 keep the Commission and all parties fully apprised of project status and progress of prudent decision making into claims of imprudence. 14 15 Q. Witness Jacobs criticizes FPL for not having "a good handle on the 16 ultimate cost of the uprates" (p. 7), ultimately concluding that FPL's May 2011 non-binding cost estimate is an "uneducated guess" (p. 22-23). 17 18 Please respond. 19 FPL's current non-binding cost estimate is more defined now than it has been A. 20 in previous years. This definition comes from the completion of the LAR 21 engineering, the completion of about 70% of the design engineering, and the 22 information learned from the early stages of implementation. FPL's non-

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binding cost estimate is therefore highly informed. It reflects three years of

project experience and advancement, as well as the input from an independent
project estimating expert, Highbridge Associates (as described in my March 1,
2011 testimony addressing the EPU project in 2010, p. 27), and a new target
price contract with one of FPL's primary vendors (as described in my May 2,
2011 testimony, p. 7). Nonetheless, the non-binding cost estimate still
accounts for the fact that more design engineering needs to be accomplished.
FPL continues to gain more cost certainty as the design engineering and
implementation planning progresses.

A.

- Q. Despite his criticism related to the lack of finality of FPL's cost estimate,
  Witness Jacobs also claims FPL's contingency factor is inadequate (p. 7
  and 25). What is your response?
  - Witness Jacobs seems to misunderstand the reference to 7% in FPL's interrogatory response. It is not a contingency value; rather it simply represents the spread between the low end and high end of the non-binding cost forecast estimate range provided in May 2011. The contingency FPL used in its May 2011 non-binding cost estimate range was systematically comprised of 2-5% of the well defined to-go engineering, materials, and FPL internal costs, and 18-30% of the less defined to-go construction costs, which is appropriate for this stage of the Project.
  - Q. On pages 15-16, Witness Jacobs explains his Exhibit WRJ-4, purporting to show the needed acceleration of the design engineering to complete the EPU on time. He again refers to FPL's current status of design engineering and WRJ-4 on pages 20-21. Please respond.

A. Witness Jacobs's Exhibit WRJ-4 is a slide from FPL's Executive Steering Committee (ESC) meeting, which shows the total number of Plant Change Modifications (PCMs) to be developed for St. Lucie as of October 2010. He attempts to demonstrate the acceleration of work needed to meet that historical plan, but FPL does not manage the EPU project in that manner. The engineering plan itself has changed substantially since October 2010, reflecting a number of management decisions to ensure the progression of the needed design engineering. For example, FPL has prioritized the development of the PCM packages by outage and scope, and the EPC vendor is proceeding accordingly.

The quantity of PCMs required for support of the St. Lucie Unit 1 Fall 2011 EPU outage is 43. At this time, 37 are at 90% complete or greater. Exhibit TOJ-29 presents the status of design engineering for the Fall 2011 St. Lucie 1 EPU outage. As can be seen, FPL is well-positioned to complete all necessary design engineering prior to the outage start date.

The current plan for the 32 PCMs required for the Summer 2012 St. Lucie Unit 2 EPU outage is to complete the PCMs by approximately April 2012. Thus, not all the St. Lucie PCMs need to be completed by the end of 2011 as indicated by Witness Jacobs. FPL is confident that the required PCMs will be completed to support implementation during the scheduled EPU outages.

1	Q.	Does WRJ-4 indicate that FPL will employ risky methods to complete the	
2		project by 2013?	
3	A.	No. FPL has taken several reasonable steps to ensure the preparation of	
4		PCMs to support the EPU work planning and implementation plans. FPL has	
5		increased field engineering resources and leveraged the expertise of	
6		subcontractors, to ensure the engineering and work planning are completed for	
7		each respective outage.	
8	Q.	Please explain when FPL might perform work without "complete design	
9		drawings" (p. 15-16).	
10	A.	FPL has well defined processes and procedures that allow planning and	
11		implementation to proceed in a controlled manner, based on risk, in cases	
12		when engineering is not 100% complete. As demonstrated by Exhibit TOJ-	
13		29, this will likely not be necessary for the next EPU outage.	
14	Q.	Please respond to Witness Jacobs's characterization of your deposition	
15		testimony, wherein you explain that construction may be undertaken "at	
16		risk".	
17	A.	Witness Jacobs mischaracterizes my deposition testimony. First, at the time I	
18		was speaking in generalities - not stating what FPL will or will not be doing.	
19		Second, the examples I gave demonstrated that certain components of an	
20		implementation effort have very little to no risk (such as the pouring of a	
21		concrete pad or the installation of an I-beam) - and that they can be	
22		undertaken while the remainder of the engineering for the modification is	

1		being completed. Such activities are not "very risky from a cost, schedule and
2		NRC point of view" as Witness Jacobs would have one believe.
3	Q.	Are there other mischaracterizations of your testimony, whether in
4		deposition or prefiled?
5	A.	Yes. At pages 23-24 of Witness Jacobs's testimony, he uses the examples of
6		project complexity I provided in my May 2, 2011 testimony to attempt to
7		explain the type of information that is unknown and discovered during the
8		course of a project (and how it may affect total project costs) and refers to
9		them as "problems" with the project. I would not categorize them as such. As
10		my testimony explains, the potential for these types of challenges are already
11		accounted for in the May 2011 non-binding cost estimate range.
12	Q.	Please respond to Witness Jacobs's assertion on page 22 that "late"
13		engineering is causing delays.
14	A.	Due to increased scope and discovery, engineering has not progressed as
15		originally planned, mainly because more engineering has been needed, not
16		because engineers have worked too slowly. But with respect to the delays he
17		notes, it should come as no surprise that FPL will adjust its EPU project
18		schedule and outage schedules from time to time as circumstances warrant.
19		Project schedule flexibility is necessary and expected for the prudent
20		management of such a large, complex undertaking as the EPU project.
21	Q.	Please summarize FPL's efforts over the last two years to complete the

necessary design engineering.

1	A.	It has been known and documented by FPL (and FPSC Internal Controls
2		auditors) from the outset of the EPU project that providing the necessary
3		specialized nuclear engineering design staffing resources would be one of the
4		major challenges for the EPU. Recognizing this, FPL has used, in addition to
5		the EPC vendor, several other engineering and specialty contractors to
6		perform specific scopes of work. Westinghouse and Areva are the Nuclear
7		Steam Supply System firms that have been engaged in the LAR licensing
8		effort. Shaw Stone and Webster has expertise in the balance of plant (non-
9		nuclear portion of the power plant), and is engaged in the secondary steam,
10		condensate, and feedwater systems evaluations. Siemens is one of the
11		Original Equipment Manufacturers (OEM) and has been contracted to modify
12		and upgrade turbine and generator equipment needed for the EPU project.
13		Other highly-qualified, major nuclear engineering and construction firms such
14		as Enercon, Sargent & Lundy, and Zachry have also all been contracted to
15		complete modification packages.
16	Q.	Is Witness Jacobs correct that FPL has just "started" to award portions

- Q. Is Witness Jacobs correct that FPL has just "started" to award portions of the EPC scope to other vendors (p. 21)?
- 18 A. No. FPL awarded design modification work to other vendors going back as
  19 far as 2008 and will continue to do so as appropriate.

- Q. Witness Jacobs states that the status of project design completion is important to the success of a project. What is your response?
- A. It goes without saying that design engineering must be completed to successfully complete the project. If that is the point of Witness Jacobs's

1 testimony, then we are in agreement. However, I disagree that initiating a 2 project with initial scoping information, and proceeding down parallel paths in 3 an effort to bring the project's benefits to customers on the earliest practicable 4 timetable, creates a level of uncertainty that is likely to lead to an unsuccessful 5 project. While there may be uncertainty on total installed cost in the early 6 phases of the project, that does not equate to an unsuccessful project. FPL is currently on track for the successful completion of this project, and based on 7 8 all the information known today, customers are already benefitting and are 9 expected to benefit substantially in the future from the EPU project. 10 11 INTERNAL CONTROLS AUDIT TESTIMONY 12 13 Q. Are you also responding to Staff's testimony? 14 A. Yes. I am responding to the recommendation of Mr. Fisher and Mr. Rich in 15 their report that costs associated with three "work stoppages" that occurred in 16 2010 and 2011 be closely examined. 17 Q. What is your response to Staff's recommendation? 18 A. FPL expects the Commission and its Staff to closely examine all the costs it 19 incurs related to the EPU project. FPL is therefore providing additional 20

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information to assure the Commission that costs were prudently incurred.

Staff's report at pages 24 through 25 discusses three "work stoppages" that

have occurred - two at Turkey Point in 2010 and one at St. Lucie in 2011.

1	Each event is a classic example of "human error" by vendor personnel.
2	Human error does not, however, indicate imprudence on the part of FPL (or
3	the vendor, for that matter). Because FPL was prudent in the hiring of each
4	particular vendor, has reasonable contract terms governing its relationship
5	with its vendors, and has provided reasonable training and/or oversight, any
6	costs resulting from such human error events are reasonable project expenses.
7	This was the case in each of the situations highlighted in Staff's report.
8	
9	FPL hired Siemens and Bechtel in 2008 to perform the work at Turkey Point
10	discussed on page 24, and FPL hired Siemens in 2008 to perform the work at
11	St. Lucie discussed on page 25. These vendors are highly specialized and
12	highly qualified for this type of work. Moreover, with respect to the St. Lucie
13	event, Siemens is the OEM of the turbine generators and therefore owns the
14	intellectual property and has the skill sets to perform this scope of work. For
15	this reason, it was appropriate to hire Siemens. The contracts governing
16	FPL's relationships with these vendors, and specifically the terms limiting
17	FPL's liability for costs such as those associated with personnel errors, are
18	industry-standard and reasonable.
19	
20	With respect to training and oversight, as described in my March 1, 2011 and
21	May 2, 2011 testimony, FPL followed its procedures and processes to ensure
22	proper oversight of the work. It would not be appropriate - nor cost effective
23	- to provide 100% oversight of all vendor activities (to hire hundreds of

6	A.	Yes.	
5	Q.	Does this conclude your testimony?	
4		corrective action when errors occur.	
3	record of its vendors, adheres to its management procedures, and takes		
2	its industry peers) relies on the vast experience and excellent performance		
1		employees to stand over the shoulder of every contractor). Rather, FPL (and	

### BY MR. ANDERSON:

Q Mr. Jones, would you please provide the summary of your rebuttal testimony to the Commission.

A Yes. Good afternoon, Chairman Graham and Commissioners.

The expedited approach to the extended power uprate project approved by the Commission will maximize the benefits of the EPU project for FPL's customers. If FPL had decided to perform the work sequentially, as Intervenors have suggested, the EPU, the EPU project would have taken much longer, about six years longer. This would significantly delay the major fuel cost savings and other benefits for FPL's customers. Additionally, the cost of the project itself would have been significantly greater if done in a sequential, non-expedited manner.

FPL has a well-informed total cost estimate which includes contingency for the successful completion of the project. The project is well positioned to complete all necessary design engineering work prior to the start of each EPU outage. The project remains on track for successful completion.

Staff Witnesses Fisher and Rich express concerns about two events which occurred in 2010 and one in 2011. These were the result of human error by vendor

FLORIDA PUBLIC SERVICE COMMISSION

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employees working on the EPU project. FPL was prudent in hiring well-qualified vendors, made sure that reasonable contract terms governed its relationship with the vendors, and provided appropriate and reasonable training and oversight for the performance of their functions at our plants. Despite reasonable and prudent management actions, human errors will occur on major construction projects; therefore, costs resulting from such events are prudently incurred and reasonable project expenses. This concludes my summary.

MR. ANDERSON: Mr. Jones is available for cross-examination.

CHAIRMAN GRAHAM: Intervenors? Mr. McGlothlin.

MR. McGLOTHLIN: Yes, very briefly.

#### CROSS EXAMINATION

#### BY MR. McGLOTHLIN:

Q Mr. Jones, please look at page 7 of your rebuttal testimony. And this is the area of your rebuttal in which you respond to Dr. Jacobs' recommendation of a separate breakeven analysis for each of the St. Lucie and Turkey Point uprate activities. Do you see that?

- A Yes. I'm on page 7, line 10.
- Q And among the reasons that you cite in

opposition to that recommendation at page -- at line
21 you say, "FPL was able to realize cost savings and
leverage purchasing power by purchasing multiple pieces
of the same equipment."

My question is this, if FPL were to perform separate standalone breakeven calculations for each of the St. Lucie and Turkey Point projects, wouldn't it reflect the impact of those savings and economies by attributing the, those economies to the capital costs associated with each of the projects?

A Could you repeat that question? There seemed to be about three questions in that question.

Q Well, I hope not, but I'll try.

With respect to the statement that FPL was able to realize cost savings when it approached the EPU project, isn't it true those savings would be reflected in the costs attributable to each of the St. Lucie and Turkey Point projects in a separated breakeven analysis?

A I'm sorry. I'm not familiar with the breakeven, breakeven analysis and how those computations are performed. That's not my, that's not my area, so I don't think I can answer your question.

Q Would you agree that to the extent FPL was able to achieve the types of savings that you describe here, those savings would be reflected in the costs of

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the Turkey Point and St. Lucie projects?

I think the answer to the question is yes, that by doing the four units in parallel and procuring the turbines all basically at the same time, negotiating that in volume, as well as large heat exchangers, that cost savings is reflected in the project. Was that the question?

- That's the question. Thank you.
- Okay.

Oh, I have one more. At page 9, and the question at line 9 relates to the adequacy of contingency factor. And in your answer you say Dr. Jacobs seems to misunderstand the reference to 7% in the response.

At line 15 you say the contingency FPL used in its May 2011 non-binding cost estimate range was systematically comprised of 2 to 5% of the well defined to-go engineering, and 18 to 30% of the less defined to-go construction costs. Do you see that statement?

- Yes, I do.
- Now do I understand correctly that when you apply these separate ranges to the appropriate portion of the overall costs and then reflect them on a composite basis, you get back to the 7%?
  - Could you repeat that question?

Q Yes. You were referring to the contingency that FPL uses in its non-binding cost estimate range; correct?

- A That is correct.
- Q And that consists of two components; correct?
- A No. It, it consists of many components.

  There are many cost centers on this, on this major project. This text is to simplify it.

Could I explain?

**Q** Go ahead.

A Okay. So when I look at the cost centers necessary to do this major extended power uprate, again speaking in some broad categories such as LAR engineering, design engineering, long-lead material, there are fixed price contracts, there is implementation cost in this project, some of the larger categories, and so what this simply describes is -- and I heard mentioned earlier in this chamber today that to-go costs aren't going down, and that simply isn't true. To-go costs for LAR engineering has simply gone down substantially. To-go costs for design engineering is going down.

So when we look at 70% complete on design engineering, we're essentially 90% complete on LAR engineering. The contingency factor that you would

assign to those to-go costs is very low: Anywhere on a 1 1% to 5% scale. 2 Your uncertainty is in the implementation and 3 the construction phase, and that's where we apply 18 to 4 30% contingency depending on the unit and where we 5 progress in the EPU outages. Does that clarify it? 6 7 I have a follow-up question. When you go through this exercise of assigning the appropriate range 8 to the various categories, do you then calculate an 9 overall or composite contingency factor? 10 Yes. For the multiple cost centers, and we 11 assign, we do the contingency analysis for each one of 12 those. Then that rolls up into the total contingency 13 for the project. That is correct. 14 And is that 7%? 15 No. 16 17 What is it? I'd have to go pull the project controls, 18 Α details and do that, that calculation. I don't have 19 that with me. 20 I'm not asking you to do that. That's all I 21 22 have. CHAIRMAN GRAHAM: Okay. Ms. Kaufman. 23 MS. KAUFMAN: I don't have any questions, 24

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Mr. Chairman.

MS. WHITE: No questions.

CHAIRMAN GRAHAM: Mr. Whitlock?

MR. WHITLOCK: No questions.

CHAIRMAN GRAHAM: Okay. Staff?

MR. YOUNG: No questions.

CHAIRMAN GRAHAM: Commission board? Ms. --

I'm sorry. Commissioner Brown.

COMMISSIONER BROWN: Thank you, Mr. Chairman.

Mr. Jones, on page 8, line 19, regarding the May 2011 non-binding cost estimate, you state that, "FPL's current non-binding cost estimate is more defined now than it has been in previous years." Can you please elaborate for us on, on why it's more defined now?

THE WITNESS: Yes. It's more defined now simply as a result of progressing through the design engineering. The extended power uprate is, is really a basis of what is the maximum power output that we can get out of the nuclear reactor safely and efficiently and with adequate margin? And so therefore through engineering analysis, which is a very objective process, is what changes do we need to make to achieve that power uprate?

And when you start out initially, you have,

I'll call it a rough order of magnitude or conceptual

idea of the number of systems and the type of components

that you're going to have to, to replace or touch and how you would go about doing that.

As you progress through the engineering, you have both discovery in that engineering as well as you are doing planning in parallel, so you start to begin, you begin to understand what the logistics are going to be required to do these major component replacements:

Other components and systems that may be, have to be removed; what type of engineered, I'll call them mega lift, systems that you're going to have to install to move the components.

And so as we've progressed through time and gone from little to no engineering to 1 to 2% engineering that was complete for the first non-binding cost estimate to 70% complete, the uncertainty is, is, is reduced accordingly.

So the majority of the risk then remains in the actual implementation in your planning and your construction phase, if that -- does that answer your question?

another question. As Vice President of Nuclear Power
Uprate, Mr. -- I think you're capable of answering this
question. Earlier Mr. Scroggs testified that projects
adapt to the pace of the regulatory environment. I

understand that this has resulted in some delays. Can you please tell us a little bit about the problems FPL has encountered with regulatory authorities, not only for the uprate projects, but also for Turkey Point 6 and 7, if you can?

THE WITNESS: Yes. First, on 6 and 7, that's outside of my scope, so I can't comment on, on 6 and 7.

But in regards to the extended power uprates, as I mentioned yesterday in my summary testimony, this is the, really the largest, most complex licensing action that the Nuclear Regulatory Commission can undertake, short of constructing a new plant. And so it requires you to go back and, and analysis by analysis do a comparison of the current licensing basis to what the impact will be on those margins and accident (phonetic) analysis at the higher power level.

And so the document, the license amendment request that you submit to describe how you did that work -- I don't mean the actual work, the actual calculations, but just the document that you would submit to the Nuclear Regulatory Commission is over 2,000 pages. And it takes months for their engineers to go through that, ask their follow-up questions, request additional information.

And, and so in regards to problems

encountered, obviously there's resource limitations for the, for the federal authorities. Also, even though we follow, follow the published NRC guideline called regulatory -- or Review Standard 001, the NRC didn't even accept previously approved methodology in some cases and wanted additional analysis. Additional analysis takes more time and costs more. And so those have resulted in some delays for the license amendment requests.

As we, as we are here today, I'm still expecting the Turkey Point license amendment request to be approved in advance of the outage, and for the St.

Lucie Unit 1 and Unit 2 to be approved first and second quarter. And having said that, even with these challenges, and we expected them, it's progressing very well. And our experience with our affiliate company is we received that license amendment request during that outage and that EPU was successfully implemented on that unit, which I'm also responsible for. So we have one of the six reactors at EPU conditions as I sit here today.

COMMISSIONER BROWN: You answered my question.

Thank you.

THE WITNESS: Okay.

CHAIRMAN GRAHAM: Commissioner Balbis.

COMMISSIONER BALBIS: Thank you, Mr. Chairman.

And I have a couple of clarifications. If you could provide those, that would be great. On page 9 of your rebuttal testimony where there's discussion about the contingency used, and it's FPL's May 2011 non-binding cost estimate. And that 18 to 30% contingency, was that applied by FPL or by the vendors?

THE WITNESS: No. That, that's our analysis of the to-go costs in the various cost centers for the project.

COMMISSIONER BALBIS: So FPL then for a cost center, which is mostly a vendor, you take the price from the vendor or the estimate from the vendor and then apply or add another line for the contingency for each individual cost center, or you --

THE WITNESS: Yes.

COMMISSIONER BALBIS: Okay.

THE WITNESS: And some of those -- excuse me.

Some of those cost centers for the vendors are fixed price, to which we would apply no contingency.

commissioner BALBIS: Okay. And in your experience based on where the design engineering is now -- and I think you answered this in your testimony, but I'd like for you to answer again -- do you feel that that level of contingency is appropriate, and are you comfortable with the to-go cost estimates which again

are used with the feasibility analysis are accurate and are you comfortable with those contingencies?

THE WITNESS: Yes. We work very hard and, and do our due diligence, and our project controls people are very experienced in that regard. And as I mentioned yesterday, if you look year over year, I think we said it yesterday, year over year from '09 to'010, we had a change of 28%. If you look year over year from 2009 to 2011 the non-binding cost estimate changed by only 8%. I'd like it to not change at all. But the reality is, is that with 30% engineering to go, there's likely to be some continued discovery, or in the construction planning some continued discovery that will cause some upward cost pressure.

But the, but the, but as you can see the trend, the trend is from 28% to 8%, which is in the right direction based on how, based on the progress of the project.

COMMISSIONER BALBIS: Thank you. And one last clarification. Your Exhibit TOJ-29, which is the, the chart showing design engineering EC package production -- you can let me know when you get to that point.

THE WITNESS: You could read that?

COMMISSIONER BALBIS: Yes.

THE WITNESS: Okay.

COMMISSIONER BALBIS: And I just have a question. If you can explain the difference between the plan line and the actual complete and the difference between the two.

Because at first glance, and, again, I haven't, I didn't prepare this or study this in detail, is that showing that the actual complete was in accordance with what was planned?

matrix I took right out of the, our weekly project report. And on the engineering for St. Lucie -- this, this is for St. Lucie Unit 1, the upcoming outage. And Bechtel was not where we wanted them per the original plan, and so we required them to put together a recovery plan. And that recovery plan is reflected by the black line.

The blue line illustrates actual modification projects that are at 90% complete. It means they're just short of getting some comments reviewed and they'll go to final. And the black line would represent what I'll say is done, done, the actual recovery plan. And the red is the actual, actual progress.

COMMISSIONER BALBIS: And I think I used the word "line" and maybe I should have used "bar." But I'm

referring to the Bechtel scope dates for the black bar being planned, and then the red bar being actual complete. And those just seem to be matching exactly, and if you could explain that. Because I would assume that it would be difficult -- or you would like to have the actual match the plan. Am I just reading that incorrectly or --

THE WITNESS: Yes. The, the -- you are, you are reading that complete as, as the red bar. The, the bar, the vertical bar red is the actual complete and the black would be the plan, and that's on a week-to-week basis. And so you can see that there's some actual complete. So you -- and if you look at the black line and the red line, you do see there is some variability week over week.

And now, as I mentioned earlier, Bechtel was behind plan, so this was their adjusted recovery plan. So I would expect them, for the volume of work they have left for Unit 1, I would expect them to stay very close to this, this recovery plan and not have much variability. Over the course of the project though there is greater variability.

COMMISSIONER BALBIS: Okay. Thank you.

THE WITNESS: Okay.

CHAIRMAN GRAHAM: Redirect.

25 CHAIRMAN GRAHAM

MR. ANDERSON: FPL doesn't have any redirect.

But Commissioner Balbis had asked questions about costs associated with management changes. Mr. Jones is the person who worked with what's called the change management plan, which the nuclear division does any time there are reassignments. I just wanted to indicate

that in case that information was desired.

bringing that up. And I don't know if you heard the question that I asked Mr. Olivera, but the transition with the management team, and you being the new leader of that team, what was the -- how did that transition occur and how can the ratepayers be assured that there were no additional FPL overhead costs associated with that transition that the ratepayers would be paying for?

THE WITNESS: Yes. When we have a -- when we make a change within our nuclear fleet, a significant change, and it could be a personnel change, it could be a process change, we have a change management procedure. And that change management procedure, as you can imagine, is you've got to identify all the stakeholders, all the potential risk vulnerabilities, schedule costs and things like that, and lay out a very rigorous systematic plan on how to make the, the transition and minimize any perturbations that could result from that.

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And so we put together that change management plan jointly.

This change was to take a major project's organization that had EPU projects, non-EPU projects, and nuclear fuels and create two separate departments. And so we, so we put together that change management plan, we involve multiple stakeholders, and work through that change management plan systematically. I had to cover that change management plan as well as Raj Kundalkar with our senior executive for review and approval, and that change management plan was provided in discovery and the results.

As far the change itself, we -- as far as the leadership, we only changed a couple of people. senior directors that were running the project remained with, with the project. And so other than probably some administrative cost that's typical with any kind of organizational change and change in title and change in procedures, there really is no significant cost associated with that.

COMMISSIONER BALBIS: Okay. Thank you. That answers my question.

CHAIRMAN GRAHAM: Any further redirect? MR. ANDERSON: No, sir. We would just offer the exhibits.

1	CHAIRMAN GRAHAM: That will be Exhibits 131,
2	132?
3	MR. ANDERSON: Yes, sir. That is correct.
4	CHAIRMAN GRAHAM: We'll enter those into the
5	record.
6	(Exhibits 131 and 132 admitted into evidence.)
7	Anything else for this witness?
8	MR. ANDERSON: No, sir. That would conclude
9	his testimony. We'd ask that he be excused for the
10	balance of the hearing.
11	CHAIRMAN GRAHAM: Is there any objection to
12	this witness being excused for the balance of the
13	hearing?
14	Seeing none, thank you, sir, for your
15	testimony today.
16	THE WITNESS: Thank you.
17	MR. ANDERSON: FPL would call as its next
18	witness Art Stall.
19	J. ART STALL
20	was called as a rebuttal witness on behalf of Florida
21	Power & Light Company and, having been duly sworn,
22	testified as follows:
23	DIRECT EXAMINATION
24	BY MR. ROSS:
25	<b>Q</b> Good afternoon, Mr. Stall.

1	A Good afternoon.
2	<b>Q</b> You were sworn yesterday; correct?
3	A Yes, I was.
4	<b>Q</b> Would you please reintroduce yourself to the
5	Commission?
6	A Good afternoon, Commissioners. Art Stall,
7	consultant to FPL.
8	Q Mr. Stall, have you prepared and caused to be
9	filed six pages of prefiled direct testimony in this
10	proceeding on I'm sorry.
11	A Yes, I have.
12	${f Q}$ I'm on rebuttal. Let me strike that question,
13	please.
14	Have you prepared and caused to be filed nine
15	pages of prefiled rebuttal testimony in this proceeding
16	on July 25th, 2011?
17	A Yes, I have.
18	Q Do you have any changes or revisions to your
19	rebuttal testimony?
20	A No.
21	Q If I asked you the same questions contained in
22	your prefiled rebuttal testimony, would your answers be
23	the same?
24	A Yes.
25	MR. ROSS: Mr. Chairman, I'd ask that the

prefiled rebuttal testimony of Mr. Stall be inserted into the record as though read. CHAIRMAN GRAHAM: We will install -- excuse me. We will add to the record Mr. Stall's prefiled rebuttal testimony as though read today. MR. ROSS: I would note that there are no exhibits being sponsored by Mr. Stall. 

1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2		FLORIDA POWER & LIGHT COMPANY
3		REBUTTAL TESTIMONY OF ART STALL
4		<b>DOCKET NO. 110009-EI</b>
5		JULY 25, 2011
6		
7	Q.	Please state your name and business address.
8	A.	My name is J. A. (Art) Stall. My address is 1803 SW Foxpoint Trail, Palm
9		City, Florida 34990.
10	Q.	Have you previously testified in this docket?
11	A.	Yes. I filed direct testimony in this docket on March 1, 2011.
12	Q.	What is the purpose of your rebuttal testimony?
13	A.	The purpose of my rebuttal testimony is to address certain allegations by
14		Office of Public Counsel Witness William R. Jacobs regarding Florida Power
15		& Light Company's Extended Power Uprate (EPU) project.
16		
17		EXPEDITED APPROACH TO THE EPU PROJECT
18		
19	Q.	Can you describe FPL's approach toward executing the EPU project?
20	A.	Yes. Pursuant to the Commission's need determination in Docket No.
21		070602-EI, FPL is pursuing the EPU project on an expedited basis. This
22		means that in order to enter the EPU into service in an expedited manner, the

1		project was initiated in parallel with design, engineering, procurement and
2		construction efforts.
3	Q.	Are there benefits to customers by pursuing the EPU project in an
4		expedited manner?
5	A.	Yes. As I explained in my deposition in this docket on June 1, 2011, in this
6		case, the benefits to customers of putting in service additional low cost, zero
7		emissions, baseload capacity of over 450 MWe in a five-year time frame, and
8		the cost savings to customers in completing the project in five years warranted
9		an expedited approach.
10	Q.	How long would the EPU project have taken if FPL had pursued project
11		execution only after engineering, procurement, and construction plans
12		had been completed?
13	A.	The project would have taken six additional years to complete. The economic
14		impacts of such delay are discussed in the rebuttal testimony of FPL Witness
15		Dr. Sim.
16	Q.	Can you comment on Witness Jacobs's assertion that FPL's expedited
17		approach toward the EPU project is imprudent?
18	A.	Witness Jacobs's testimony is nothing more than "Monday morning
19		quarterbacking" previous decisions made by FPL and by the Florida Public
20		Service Commission and should be disregarded. FPL was very clear with the
21		Commission in its 2007 filing seeking approval of the EPU Project as to the
22		approach to the project and the schedule to complete the project in the 2012
23		timeframe, and that FPL would not have pursued the project in such an

expedited manner absent the cost recovery mechanism in the Florida Statutes and in the Commission's rules. In the Company's Petition filed in Docket No. 070602-EI on September 17, 2007, the Company stated (at page 5) that "[a]bsent the increased regulatory certainty and cost recovery provisions that have been provided by the Florida Legislature and Commission, FPL would not be encouraged to undertake such capital-intensive nuclear uprates on such an expedited basis." FPL's position was also clearly stated in the testimony of its' witnesses supporting the petition. FPL Witness Stephen T. Hale stated in his testimony (page 4) that FPL was required to "commence equipment orders now in order to complete the necessary work on schedule. Thus, there is a limited window of opportunity to obtain the full benefits of the PTN and PSL Uprates."

#### FPL Witness Kim Ousdahl stated in her testimony (page 3):

The Commission's confirmation of the application of the [nuclear cost recovery] Statute and the [nuclear cost recovery] Rule plays an essential role in FPL's decision to pursue the development of more than 400 MW of cost-effective, non-greenhouse gas emitting nuclear generation in a time frame where it may not otherwise occur. The Commission's timely ongoing review and determination of the prudence of FPL's nuclear uprate expenditures, as well as the interim cost recovery and base rate adjustment provisions contained in the Statute and the Rule, provide an appropriate regulatory framework

within which FPL is encouraged to undertake this significant and beneficial investment at the earliest feasible point in time. Absent the enhanced regulatory certainty and more predictable cost recovery provided for nuclear plant investment by the Florida Legislature and the Commission, FPL would not be encouraged to undertake this capital-intensive nuclear investment on an expedited basis.

A.

Witness Jacobs's testimony is an attack on the Commission's need determination, which considered and approved FPL's proposed project plan and expedited project schedule, more than three years after that decision was issued. This attack should be rejected.

### Q. Can you comment on Witness Jacobs's testimony regarding the "lessons learned" discussed in FPL's internal documents?

Yes. Witness Jacobs criticizes FPL for its findings regarding lessons learned from its pursuit of the EPU project as candidly presented to FPL's senior management. FPL is a learning and self-improving organization and consistently seeks to improve its performance. Nowhere is there a culture more dedicated to self-improvement than in the nuclear power industry. The mere fact that FPL is self-critical and identifies areas for improvement in its business practices does not mean that FPL was imprudent.

## Q. Can you address Witness Jacobs's assertion that the EPU project did not start out as an expedited project?

Yes. His incorrect assertion is based on a misreading of a single passage from A. 1 Rai Kundalkar's deposition. I was FPL's Chief Nuclear Officer at the time 2 that FPL filed its petition with the Commission for a determination of need for 3 4 the EPU project. As I explained in my deposition in this docket on June 1, 2011, FPL had previous preliminary engineering information regarding the 5 feasibility of uprating the St. Lucie and Turkey Point nuclear units suggesting 6 that the project may be feasible and cost-effective to perform but had no plans 7 8 to execute that project until the Commission denied FPL's petition for a determination of need for the Glades coal project in 2007. At that point I was 9 10 directed by senior company management to pursue the EPU project as quickly as reasonably possible. There was never any plan to pursue the EPU project 11 12 in a sequential manner.

# Q. Has FPL successfully executed other expedited projects in its nuclear operations?

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Yes. During my tenure with FPL, FPL has implemented projects on an expedited basis for a variety of reasons. Sometimes projects are executed on an expedited basis because of new or changing regulatory requirements. Examples of such projects are a number of security upgrades ordered by the NRC after the terrorist attacks of September 11, 2001. Also, the Company successfully executed replacement of the reactor vessel heads at all four Florida nuclear units; replacement of the steam generators at St. Lucie Unit 1 in 1997 and St. Lucie Unit 2 in 2007, and replacement of the St. Lucie Unit 1 pressurizer in 2005. All of these large capital projects were executed on an

expedited basis, meaning that project management steps of design, engineering, procurement and construction were performed in parallel, and were successfully completed. FPL and its customers enjoyed a substantial cost savings because FPL placed orders for the replacement components for these projects on an expedited basis prior to substantial cost increases for materials and prior to the extension of delivery times resulting from increased demand for these materials.

#### SEPTEMBER 2009 NCRC HEARING TESTIMONY

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Q. Do you agree with Witness Jacobs testimony that FPL should have revised its testimony to reflect a different EPU project cost estimate in September 2009?

- A. No. I do not believe that the testimony provided to this Commission was 13 inaccurate or that it was necessary or appropriate to update that testimony 14 based on some preliminary cost figures provided to FPL from its EPC vendor 15 that were not credible. 16
- Please explain why you think it would not have been appropriate to revise Q. 17 the EPU testimony on this point. 18
- As documented in my direct testimony, in the direct testimony of FPL A. Witness Terry Jones, in the direct testimony of Armando Olivera, and as 20 explained by Raj Kundalkar in his deposition, major factors affecting the EPU total project cost estimate were in a state of flux in 2009. FPL had received 22 preliminary cost estimates from its Engineering, Procurement, 23

Construction (EPC) vendor that were not acceptable to EPU management. Senior FPL management directed the EPU project to conduct significant challenging, vetting, project scope refinement, and the consideration of alternatives to FPL's EPC vendor. Witness Jacobs's assertion, based on a very selective reading of certain documents and testimony, that these efforts had been completed by the time of the September 2009 hearing is wrong. As I explained in detail in my deposition in this docket on June 1, 2011, in February 2009 the Company had significant concerns regarding Bechtel's EPU cost estimates. FPL directed its project controls group to exert pressure on Bechtel to reduce its estimates. Over the succeeding months, FPL had made no progress with Bechtel, and as a result Bechtel executives were directed to attend a meeting at FPL's headquarters in July 2009. Only then did Bechtel reduce its estimates, which gave FPL management the impression that more progress could be made with Bechtel. Further, two former Bechtel employees who worked for FPL advised, based on their prior work experience, that continued pressure on Bechtel could bear fruit in lower project costs. Additionally, the September 2009 Executive Steering Committee presentation demonstrates that there was only ten percent certainty around implementation costs. Witness Jacobs completely ignores these facts in his speculative testimony. Is Witness Jacobs correct that disclosure of the information to the Commission would have no effect on negotiations with Bechtel and FPL's

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Q.

attempts to control costs?

- A. No. If Bechtel's estimates were disclosed at the September 2009 hearings, it would have impeded FPL's negotiations. Reporting Bechtel's estimates would have been seen as tacit approval of them or, at a minimum, an indication that FPL considered the estimates to have some validity. Those estimates would have likely become a self-fulfilling prophecy, which would not have been in the best interests of FPL's customers.
- Q. Witness Jacobs claims on page 35 of his testimony that efforts to reduce scope and "push back" against the EPC vendor were already reflected in the July 25, 2009 forecast that was presented to the ESC. Is he correct?
- 10 A. No. The July 25, 2009 numbers only reflected Bechtel's initial response to
  11 FPL's efforts to "push back" on its estimates. As I explained in my response
  12 to the Concentric Report, Bechtel's initial response was unacceptable to FPL
  13 senior management, and provided a strong indication that further cost
  14 reductions were possible. The July 25, 2009 estimates therefore only reflected
  15 the very beginning of the effort that was undertaken over the next several
  16 months to challenge the future cost projections.
- Q. Witness Jacobs's testimony implies that FPL has been less than forthcoming with the Commission. Please respond.
- I take serious issue with any implication that FPL has been less than
  forthcoming. In my experience, I have never worked on a nuclear project that
  affords such transparency into the decision making, costs, risks, and progress
  of a project. In addition to the annual testimony and exhibits that are required
  on a year-round basis, FPL fully responds to discovery from intervenors,

- including OPC, responds to data requests from Staff Auditors, and hosts visits
- and meetings with Audit Staff and other interested parties.
- 3 Q. Does this conclude your rebuttal testimony?
- 4 A. Yes.

BY MR. ROSS:

Q Mr. Stall, would you please provide a summary of your testimony to the Commission.

A Good afternoon, Commissioners.

FPL's pursuit of the extended power uprate project on an expedited basis will produce significant benefits for the customers.

The company explained to the Commission in the 2007 need determination petition that the benefits to customers of placing into service additional low cost, zero emissions baseload capacity in a five-year time frame warranted an expedited approach. The Commission agreed with FPL's proposal, and the company relied upon the need determination in pursuing this project on an expedited basis.

I was personally involved in the 2007 decision to pursue the EPU project. I can assure you at no point did the company have a plan to pursue the EPU project in a sequential manner. The company had previously developed preliminary information regarding the feasibility of uprating the St. Lucie and Turkey Point nuclear plants in a cost-effective manner, but had no plans to pursue that project until the Commission denied FPL's petition for a determination of need for the Glades coal project in 2007.

FLORIDA PUBLIC SERVICE COMMISSION

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The testimony provided to this Commission in September 2009 on the EPU cost estimate was complete and accurate. It was not appropriate to update that testimony based upon some preliminary cost figures and management discussions provided to FPL from its engineering, procurement and construction vendor that simply were not credible.

In July of 2009, executive FPL management directed the EPU project to conduct a significant, challenging vetting project scope refinement and even consider alternatives to FPL's primary EPC vendor. These efforts had not been completed by the time of the September 2009 hearing. The July 25th, 2009, estimates reflected the beginning and not the end of the effort undertaken to challenge future cost projections.

If Bechtel's cost estimates were disclosed at the September of 2009 hearings, this would have been seen as tacit approval of them or an indication that FPL considered the estimates to have some merit or validity. From a negotiating standpoint, this would not have been in the best interest of our customers.

In my 30-year career in the nuclear industry this project is as transparent and open decision-making for review as any project that I've ever been involved with at the company or in my career elsewhere.

The company annually responds to an extensive 1 discovery from Intervenors, data requests from Staff 2 auditors, and hosts visits and meetings with the audit 3 Staff and other interested parties. This concludes my 4 5 summary. MR. ROSS: Mr. Chairman, Mr. Stall is 6 available for cross-examination. 7 CHAIRMAN GRAHAM: Thank you. 8 9 Intervenors. MR. McGLOTHLIN: OPC has no questions. 10 MR. WHITLOCK: SACE has no questions, 11 12 Mr. Chairman. MS. KAUFMAN: I just have one question. 13 CROSS EXAMINATION 14 BY MS. KAUFMAN: 1.5 Good afternoon, Mr. Stall. 16 17 Good afternoon. You mention in your remarks and you mention in 18 your summary that if the Bechtel estimates had been 19 disclosed at the September hearing, that that might have 20 impeded your negotiations with Bechtel; correct? 21 22 Yes, ma'am. Α 23 Are you aware that the Commission has policies in place to keep information confidential? 24 I am aware of that. 25

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1	<b>Q</b> And so if that, that procedure had been
2	followed in regard to the estimates, there would have
3	been no issue with Bechtel having received the
4	information.
5	A That's correct. Provided all of that could
6	have been maintained confidential, we would have still
7	been in a good negotiating position with Bechtel.
8	Q And are you aware that FPL has filed in this
9	very docket many requests for confidentiality?
10	f A I only am aware of my specific portions of it,
11	so I accept at face value what you would say there.
12	<b>Q</b> And, to your knowledge, there hasn't been any
13	issue with anyone revealing confidential information,
14	has there?
15	A No.
16	MS. KAUFMAN: Thank you.
17	MS. WHITE: No questions.
18	CHAIRMAN GRAHAM: Staff?
19	MS. NORRIS: No questions.
20	CHAIRMAN GRAHAM: Commission board?
21	Commissioner Brown.
22	COMMISSIONER BROWN: Thank you, Mr. Chairman.
23	Mr. Stall, as Chief Nuclear Officer of FPL
24	from 2001 to 2009 maybe you can help answer my question
25	a little, even if it's in general terms.

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What problems has the company encountered with regard to reg -- with regulatory authorities for Turkey Point 6 and 7?

THE WITNESS: Well, I can, I can only speak in generalities with regard to the entire licensing process that's going on in this country. There have been several issues that have been raised, very technical issues, with the licensing specifics and the design criteria of some of the new reactor designs that are being proposed by various utilities across the country, and some of those technical issues have caused delays in the NRC's internal approval process for those designs. So to the extent that various utilities have specific timetables laid out for the licensing, design, and construction of new nuclear units across this country, any delays that happen at the federal level with the Nuclear Regulatory Commission would necessarily translate themselves through to delays and changes to the schedule that, internally that utilities would have.

COMMISSIONER BROWN: And in your 30-year career, do you think that these delays, this is unduly burdensome or unusual?

THE WITNESS: They're not unusual. They can be unduly burdensome. I mean, a lot of --

COMMISSIONER BROWN: Pardon me. My focus is

really on unusual.

THE WITNESS: It's, it's not unusual. It's customary almost in, in this industry. As new information develops or as a new technical issue surfaces and those issues are resolved, they translate themselves quite often into new rules and regulations, which can impact not only daily operations, but projects such as new construction of plants or even these EPU projects.

COMMISSIONER BROWN: Thank you.

CHAIRMAN GRAHAM: Redirect.

MR. ROSS: No redirect, Mr. Chairman. We'd request that Mr. Stall be excused.

CHAIRMAN GRAHAM: Do we have nothing to add into the record, no exhibits?

MR. ROSS: No exhibits, sir.

CHAIRMAN GRAHAM: Any objections to excusing this witness?

MR. YOUNG: No objection.

CHAIRMAN GRAHAM: Seeing none, Mr. Stall, thank you today for your testimony.

THE WITNESS: Thank you.

MR. ANDERSON: FPL would call as its next witness Dr. Steve Sim. This is our final rebuttal witness.

And while Dr. Sim gets seated, just for information, Commissioner Balbis asked about the change management plan. That document is available, if desired. It was produced in response to OPC POD, production of documents, 5th set, Number 50. Its Bate stamp is Number 24250 to 25323. And if desired, that, of course, could be made part of the record. I just make that, make that offer. We have no independent need or desire for that for the record, but we're happy to accommodate such request if the Commission desires.

CHAIRMAN GRAHAM: Commissioner Balbis.

COMMISSIONER BALBIS: Thank you, Mr. Chairman. One of the concerns that I have is that when I asked Staff whether or not they reviewed specifically FPL's overhead costs associated with the change in management and they had indicated they had not. So maybe I'd look to Staff to advise as to, as far as entering this document into the record or not, is now the only time that could happen or is that something that I could make the decision -- or we can make the decision later?

MR. YOUNG: I think if you're going to rely on it for, in terms of any decisions you make during the recommendation, it needs to be entered into the record because you can only rely on the record as you make your decision.

1	COMMISSIONER BALBIS: So with that, I would
2	request that it's entered into the record.
3	CHAIRMAN GRAHAM: Is there any objections?
4	Seeing none, we'll give this ID Number 201, I believe.
5	MR. ANDERSON: Yes, sir, that would be
6	correct.
7	CHAIRMAN GRAHAM: And we will show that being
8	entered into the record.
9	MR. ANDERSON: We will take care of the
10	administrative task of reproduction and production of
11	the document to the parties. We've noted that it's been
12	accepted and admitted into the record. Thank you.
13	MR. YOUNG: I think we also need a title, and
14	if I'm sure FPL can prepare a cover sheet and then we
15	can mark if for identification purposes and deal with it
16	as we move it into the record at that time, at the
17	appropriate time.
18	CHAIRMAN GRAHAM: I'm sure that you're sure.
19	Yes.
20	MR. ANDERSON: We'll just call it Change
21	Management Plan, Exhibit 201.
22	(Exhibit 201 marked for identification and
23	admitted into evidence.)
24	MS. CANO: May I proceed?
25	MR. YOUNG: I think and if I'm correct,

Mr. Chairman, you moved that into the record. 1 2 CHAIRMAN GRAHAM: Yes, I did. 3 MR. YOUNG: Okay. 4 MR. ANDERSON: That's why, just for 5 clarification, we're noting it in the record for later distribution with the appropriate cover sheet so we 6 7 don't hold the record open with our last witness. 8 MR. YOUNG: Exactly. 9 CHAIRMAN GRAHAM: That's correct. Now you can 1.0 go. 11 MS. CANO: Okay. 12 STEVEN R. SIM 13 was called as a rebuttal witness on behalf of Florida 14 Power & Light Company and, having been duly sworn, 15 testified as follows: 16 DIRECT EXAMINATION 17 BY MS. CANO: 18 Good afternoon, Dr. Sim. Q 19 Good afternoon. Α 20 0 You were sworn yesterday; correct? 21 Α Yes. 22 Would you please provide again your name, Q 23 business address and employment for the record? 24 My name is Steven Sim. My business address is 25 9250 West Flagler Street, Miami, Florida. I work for

1	Florida Power & Light as a Senior Manager in the
2	Integrated, Integrated Resource Planning.
3	<b>Q</b> Thank you. Did you prepare and cause to be
4	filed 33 pages of prefiled rebuttal testimony in this
5	docket on July 25th, 2011?
6	A Yes, I did.
7	Q And did you also cause to be filed errata to
8	that rebuttal testimony on August 4th, 2011?
9	A Errata to the rebuttal testimony?
10	Q Yes.
11	A Yes, I did. Excuse me. Memory lapse here.
12	Q Do you have any other changes or revisions to
13	make to your rebuttal?
14	A No.
15	Q If I were to ask you the same questions
16	contained in your prefiled rebuttal, would your answers
17	be the same?
18	A Yes, they would.
19	MS. CANO: Mr. Chairman, I would ask that the
20	prefiled rebuttal testimony of Dr. Sim be entered into
21	the record as though read.
22	CHAIRMAN GRAHAM: We will enter into the
23	record as though read Dr. Sim's previously given
24	rebuttal.
25	MS. CANO: Thank you.

1	BY MS. CANO:
2	Q Did you also sponsor exhibits to your
3	testimony?
4	A Yes.
5	Q And did those consist of SRS-13 and SRS-14?
6	A That's correct.
7	MS. CANO: I would note that these have been
8	premarked for identification on Staff's list as Exhibits
9	133 and 134.
10	CHAIRMAN GRAHAM: So noted.
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Replace Supplement to Exhibit SRS-9 with Revised Supplement to Exhibit SRS-9

All graphed values for both resource plans have changed (increased).

Replace Supplement to Exhibit SRS-11 with Revised Supplement to Exhibit SRS-11

All values in columns 3, 4, 5, and 6 have changed. Values for resource plan costs in columns 3 and 4 have decreased. Values for differences in resource plan costs in column 5, and breakeven costs in column 6, have changed little

#### REBUTTAL TESTIMONY OF STEVEN R. SIM, JULY 25, 2011

PAGE#	LINE#	
Page 4	18	Change "provided by" to "of which" and insert "was a part of" after "Jacobs"
Page 5	18	Insert ". This suggestion" after "inappropriate"
Page 14	23	Insert "Project" after "6 & 7"
Page 24	4	Change "\$139" to "\$141"

1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2		FLORIDA POWER & LIGHT COMPANY
3		REBUTTAL TESTIMONY OF DR. STEVEN R. SIM
4		DOCKET NO. 110009 - EI
5		JULY 25, 2011
6 7	Q.	Please state your name and business address.
8	A.	My name is Steven R. Sim and my business address is Florida Power & Light
9		Company, 9250 West Flagler Street, Miami, Florida 33174.
10	Q.	Have you previously submitted direct testimony in this proceeding?
11	A.	Yes.
12	Q.	Are you sponsoring any rebuttal exhibits in this case?
13	A.	Yes. I am sponsoring the following two exhibits that are attached to my
14		rebuttal testimony:
15		Exhibit SRS - 13: Transcript of Dr. Jacobs' Panel Testimony.
16		Exhibit SRS - 14: Comparison of 2009 Feasibility Analysis Results and
17		Sensitivity Analysis Results.
18	Q.	What is the purpose of your rebuttal testimony?
19	A.	The purpose of my rebuttal testimony is to explain why a number of
20		statements and recommendations made by Office of Public Counsel (OPC)
21		Witnesses Jacobs and Smith who have filed testimony in this docket are not
22		appropriate and should be disregarded by the Florida Public Service
23		Commission (FPSC). My rebuttal testimony will focus on aspects of their
24		testimonies that relate to FPL's 2011 feasibility analyses and to resource

planning issues. Because both of these witnesses are from the same company (GDS), and appear to have virtually identical views, I will use the convention of referring to their testimonies as "GDS testimony". However, when discussing a specific statement, I will identify the witness who provided that statement.

#### Q. What is your overall reaction to the GDS testimony?

My first reaction is that now, in the 2011 NCRC docket, which represents a very late point in the overall timeline of the EPU project, OPC, through the GDS testimony, is attempting to introduce a new set of "rules" by which the EPU project should now be judged, not only on a prospective basis, but retrospectively as well. Using the analogy of an athletic contest, this strikes me as not only attempting to change the rules after play has begun, but to attempt to do so after play has begun in the 4<sup>th</sup> quarter of the contest. Such an attempt is highly questionable.

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Second, FPL's expedited approach for the EPU project was fully disclosed in the 2007 Need filing and has been openly discussed in each NCRC docket since that Need filing. OPC has been a party to all of those dockets. Furthermore, although the GDS testimony now criticizes the expedited approach FPL has openly taken since the project's inception in 2007, the GDS testimony is not quite clear as to what other approach or path they believe FPL should have taken starting in 2007. Putting aside the fact that OPC never raised any of these concerns when the project and its timelines were being

discussed and decided in 2007 and 2008, the only other options (of either a longer/slower schedule or not doing the project at all) would have resulted in very poor results for FPL's customers.

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Delaying the project by proceeding on a slower schedule would have guaranteed that: (i) fuel costs for FPL's customers would have been at least \$840 million higher based on current assumptions, and (ii) the costeffectiveness of the EPU project would have been significantly reduced due to these lost fuel savings. Not undertaking the EPU project at all would have meant proceeding with building more gas-fired new units. This path would have resulted in FPL's customers not receiving the many benefits of the EPU project that were the basis of the original decision by the FPSC for FPL to proceed with the EPU project. In addition to significant projected economic savings, the benefits of the EPU project include: (i) greater fuel diversity for the FPL system, (ii) emission-free energy that would be delivered at very high (90%) capacity factors, (iii) a hedge against unexpected cost increases in, and/or unavailability of, fossil fuels, (iv) a hedge against new or unexpected environmental regulations that affect fossil fuel-fired generation sources, (v) generation and delivery of baseload capacity and energy at a location (Turkey Point primarily) that will improve the overall efficiency in FPL's transmission system, and (vi) generation and delivery of baseload capacity and energy at a location (Turkey Point) that will help maintain a balance between growing load and generation in Southeastern Florida.

Third, the new ill-advised "rules" recommended by the GDS testimony should be rejected because they (i) ignore well established and widely accepted economic principles, (ii) require an arbitrary selection of a single "standard" rather than continuing to rely on a very wide range of information regarding potential future outcomes for the EPU project, and (iii) install a "moving target" by changing the "standard" each year.

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Fourth, I disagree with the GDS testimony that FPL should not have excluded sunk costs in its 2011 feasibility analyses of the EPU project. recommendation: (i) ignores the plain language of the FPSC's Nuclear Cost Recovery Rule and the specific guidance provided by the FPSC regarding the treatment of sunk costs; (ii) seeks to turn the well established and widely accepted economic principle of excluding sunk costs in economic analyses on its head by advocating that this principle now be "conditional", based on a characteristic of the project being analyzed, which goes against common sense and would unnecessarily introduce arbitrariness into economic analysis; and (iii) is inconsistent with panel testimony provided by Witness Jacobs in a recent Georgia Public Service Commission nuclear docket. Therefore, the GDS testimony recommendation that the FPSC suddenly change the way in which economic analyses of resource options have consistently and successfully been performed in Florida for decades does not warrant serious consideration. This topic is discussed below in section I of my rebuttal testimony.

Fifth, the GDS recommendation that FPL begin using the same breakeven cost analysis approach used for evaluating the Turkey Point 6 & 7 project, and to then apply the results from this approach in the manner recommended in the GDS testimony, should be rejected because it would result in the arbitrary selection of a single value each year from this analysis to use as a standard for judging future EPU project costs, despite the fact that this arbitrarily selected value allows only a very narrow perspective to be taken and the arbitrarily selected value will change from year to year. This approach would improperly introduce both arbitrariness and confusion into the NCRC dockets. This topic is discussed below in section II of my rebuttal testimony.

Sixth, from a resource planning perspective I discuss and challenge several points raised in the GDS testimony in section III of my rebuttal testimony. Among these is the GDS testimony suggestion that the expedited approach of the EPU project was inappropriate ignores significant advantages that will be realized by FPL's customers from the expedited approach.

Another such point is the GDS testimony implication that the July 2009 sensitivity analyses performed by FPL were something unusual, as well as the GDS testimony's contention that FPL should have informed the FPSC of the "...material changes in...feasibility..." (Witness Jacobs, page 39, lines 17 and 18) are also discussed in section III of my testimony. This particular sensitivity analysis is merely one of many such sensitivity analyses FPL

performs each year in regard to various types of resource options. Therefore, the fact that a sensitivity analysis was performed is not noteworthy. Furthermore, the results of this sensitivity analysis are entirely consistent with prior and then-current EPU feasibility analyses results. Therefore, the results of the July 2009 sensitivity analyses did not represent a 'material change' in the projected feasibility of the project.

Yet another point is the inherent implication in the GDS testimony that FPL's analytical approach to evaluating the feasibility of the EPU project may be designed to artificially enhance the projected cost-effectiveness. However, exactly the opposite is true. For example, FPL's feasibility analyses have deliberately not accounted for additional benefits of the EPU project that are real, but difficult to accurately quantify at this time, or for potential benefits which are speculative at this time. FPL's feasibility analyses of the EPU project do not currently account for two benefits that are certain to result from the EPU project: (i) reduced transmission losses due to increased baseload capacity and energy, particularly from the Turkey Point site, close to FPL's load center, and (ii) assistance from additional baseload capacity and energy at the Turkey Point site in addressing the ongoing issue of an imbalance between growing load and generation in the Southeastern Florida region (i.e., in Miami-Dade and Broward counties).

1 I believe that the FPSC and FPL's customers have been well served by the 2 economic analysis approach that FPL has been utilizing since the 2007 Need filing for the EPU project. This analytical approach is straightforward, logical, 3 4 and utilizes well established and widely accepted economic principles. 5 I. The Issue of Sunk Costs 6 7 Q. Please summarize the recommendation regarding sunk costs that is made 8 9 in the GDS testimony. A. The recommendation that is made in the GDS testimony regarding sunk costs 10 is that it is inappropriate to remove sunk costs in FPL's annual feasibility 11 12 analyses of the EPU project. The GDS testimony asserts that the well established economic principle of excluding sunk costs when evaluating 13 14 whether to proceed with a project should be ignored if a certain "condition" exists for the project. Specifically, this principle should be ignored if the costs 15 16 for the project increase over time. Q. Do you agree with the GDS testimony that this established economic 17 principle should be changed and now be made conditional? 18 A. 19 No. The GDS recommendation is inconsistent with both the Nuclear Cost

of sunk costs, in addition to being illogical.

Recovery Rule and specific guidance provided by the FPSC on the treatment

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Rule 25-6.0423(5)(c)5 states that by May 1 of each year, the utility shall submit an analysis of the long-term feasibility of **completing** the power plant. This is a requirement to examine whether to proceed with the project, in light of remaining costs, precisely as FPL has done. The FPSC has also provided specific guidance regarding the requirements of the long-term feasibility analyses for purposes of complying with this Rule. The FPSC stated in Order No. PSC-08-0237-FOF-EI, on page 29, as follows:

"FPL shall provide a long-term feasibility analysis as part of its annual cost recovery process which, in this case, shall also include updated fuel costs, environmental forecasts, break-even costs, and capital cost estimates. In addition, FPL should account for sunk costs."

This guidance from the FPSC clearly distinguishes "sunk costs" from "updated capital cost estimates" in regard to feasibility analyses. Consequently, FPL has effectively separated sunk costs from its updated capital cost estimates, resulting in the use of the relevant portion of the updated capital cost estimate (i.e., the "going forward" portion of the capital costs) in its feasibility analysis. While FPL's approach to sunk costs complies with the Rule and follows the guidance provided by the FPSC, the GDS testimony recommendation to not exclude sunk costs is a recommendation to violate the Rule and the FPSC's order regarding this issue.

#### Q. Please explain why the GDS recommendation is illogical.

A. The economic principle that sunk costs should not be included when evaluating whether to proceed with a project is not contingent upon a certain condition such as whether costs of a project are changing. Nor should the economic principle now be warped into being contingent upon such a condition.

A simple analogy or example should help demonstrate this. Let's assume that a couple is faced with a decision of whether to remodel their home or purchase a new home. Let's also assume that the couple will be equally satisfied with both alternatives so the sole decision criterion is cost.

At the start of the process, the couple obtains estimates of the costs for the two options. The remodeling option initially had an estimated (i.e., non-binding) cost of \$300,000 and the new home option had a projected cost of \$500,000. The couple chooses the remodeling option. Skipping ahead to a point in time when a significant portion of the remodeling work has now been completed, the couple is informed that \$200,000 has already been spent on the remodeling effort, and they receive an updated projection of costs to complete the project.

At this point we will take a look at two different, updated cost-to-complete projection scenarios which the couple might receive in order to see how the couple should respond. In Scenario 1, we assume that the cost-to-complete is now projected to be an additional \$250,000. Therefore, the total cost of the

entire remodeling project is now projected to be \$450,000 (= \$200,000 of costs already spent, or sunk costs, + \$250,000 to complete the project). The couple once again considers its two options: complete the remodeling, or stop the remodeling work and buy a new house (which we will assume still costs \$500,000). If our couple is thinking rationally from an economic perspective, it understands that its true cost options are: (i) spend \$250,000 to complete the remodeling, or (ii) spend \$500,000 for a new home. The \$200,000 that has already been spent (i.e., sunk costs) has no bearing from an economic decision making perspective on the choice the couple now faces. The couple chooses to continue the remodeling because it is clearly the economic choice.

In Scenario 2, we assume that the cost-to-complete is projected to be \$350,000. Therefore, the total cost of the entire remodeling project is now projected to be \$550,000 (= \$200,000 in sunk costs + \$350,000 to complete the project). The total cost of the remodeling project is now projected to be higher than the \$500,000 cost of buying a new home. The couple will again consider its two options: complete the remodeling or stop the remodeling work and buy a new house (which still costs \$500,000). If our couple is still thinking rationally from an economic perspective, it understands that its cost options are: (i) spend \$350,000 to complete the remodeling, or (ii) spend \$500,000 to purchase a new home. The \$200,000 that has already been spent (i.e., sunk costs) again has no bearing from an economic decision making

1		perspective on the choice it now faces. The couple chooses to continue the
2		remodeling because it is clearly the economic choice.
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4		Under either scenario, the couple has made the economically sound choice by
5		ignoring sunk costs and selecting the option that results in the lowest going
6		forward costs. If the couple ignored the economic principle of sunk costs
7		they could end up much worse off by spending a total of \$700,000 (=\$200,000
8		of remodeling costs already incurred + \$500,000 for a new home purchase).
9	Q.	What conclusion do you draw from this example?
10	A.	It is clear that there should be no "conditional" corollary attached to the wel
11		established economic principle of excluding costs already spent when
12		evaluating the economics of proceeding with a project, even when the
13		projected costs of the project are increasing. To do otherwise fails the basic
14		test of common sense. However, the GDS testimony calls for just such
15		corollary to be attached to this sound economic principle.
16	Q.	Does the fact that we are examining the costs of the EPU project in
17		regulated utility environment suggest that there should somehow be
18		change in this economic principle?
19	A.	No. However, Witness Smith attempts to make this case in his testimony a
20		page 4, lines 9-18 of his testimony.
21	Q.	In this testimony, Witness Smith seems to believe that it is important in

disallowed for cost recovery. Do you share this belief?

"going forward" analysis to know if a past cost has been allowed or

9	Q.	Are there any other aspects of the GDS testimony regarding the issue of
8		from the analysis for both resource plans in either case.
7		forward economic analysis perspective, the past cost can be properly excluded
6		Resource Plan with EPU or the Resource Plan without EPU. From a going
5		recovered from FPL's customers, that cost will not be recovered in either the
4		past cost for the EPU project is not deemed prudent, and is not allowed to be
3		Resource Plan with EPU and the Resource Plan without EPU. However, if a
2		recovered from FPL's customers, that cost will be recovered in both the
1	A.	No. If a past cost for the EPU project is deemed prudent, and is allowed to be

Q. Are there any other aspects of the GDS testimony regarding the issue of sunk costs that you would care to comment on?

Yes. I was surprised by the fact that Witness Jacobs's statement that sunk costs should be thought of as somehow conditional is not consistent with recent testimony he was a part of. In Docket No. 29849, the Georgia Public Service Commission addressed the "Review of Proposed Revisions and Verification of Expenditures Pursuant to GEORGIA POWER COMPANY's Certificate of Public Convenience and Necessity for Plant Vogtle Units 3 and 4".

A.

In testimony on December 16, 2009, Dr. Jacobs was on the stand as part of panel testimony with a Mr. Hayet. The relevant part of that testimony appears starting on page 202, line 18, through page 203, line 7:

1	"Q. In Georgia Power's economic analysis, you make reference to the
2	fact that they ignore sunk costs and also they said that they ignore
3	the weighting of various factors. I think that's page 25. Could
4	you kind of elaborate on that, please? And why that matters or
5	doesn't matter?"
6	A. (Witness Hayet) "The point there is just to point out that the
7	economic analysis as you go forward with the project, the question
8	that you have to answer is what are the future costs that will be
9	incurred and what do those costs - how do those costs compare to
10	your next best alternative. So, the notion of the costs that have
11	already been spent as being sunk is something that you ignore and
12	we're just simply pointing that out, that's the company's practice,
13	we agree with it and that's fairly industry standard." (emphasis
14	added)
15	
16	Pages 202 and 203 of testimony in this docket are presented in Exhibit SRS -
17	13.
18	
19	Yet Witness Jacobs, who is now recommending that the concept of sunk costs
20	should be thought of as being somehow conditional, was comfortable with his
21	co-panelist Mr. Hayet stating that both of them agreed with the conventional
22	approach to sunk costs; i.e., sunk costs should be removed from economic
23	decision-making regarding whether to proceed with a resource option, even

for new nuclear plants whose cost is inherently uncertain. Witness Jacobs does not appear to have offered any suggestion that "conditions" should be placed on the treatment of sunk costs in the Georgia Public Service Commission docket.

#### II. The Concept of a Breakeven Cost Approach

Q. Another aspect of the GDS testimony that deals with FPL's feasibility analyses of the EPU project is a dual recommendation that FPL be required to: (i) now utilize a specific breakeven cost analytical approach for the EPU project that is being used to evaluate the Turkey Point 6 & 7 project, and (ii) perform such a breakeven cost analysis separately for Turkey Point and St. Lucie. Do you believe that either of these recommendations is warranted or advisable?

15 A. No.

- Q. FPL is using a type of breakeven cost approach for analyzing its Turkey

  Point 6 & 7 project. Why did FPL utilize this approach for the Turkey

  Point 6 & 7?
- A. The traditional and historically acceptable way in which the evaluation of two generation options is performed is to compare the total cumulative present value of revenue requirements (CPVRR) costs of two resource plans in which each resource plan has one of the two competing generation options. In such

analyses, projections for key parameters of both generation options are known or can be reasonably estimated.

However, in 2007 when FPL began evaluating the Turkey Point 6 & 7 project, many of these key parameters were unknown and could not be reasonably estimated. For example, at that time FPL had not yet decided on a reactor technology. As a consequence of that, there was a wide range of potential MW that could be supplied by two new nuclear units: 2,200 MW to 3,020 MW. This wide range in technology size also contributed to a wide range in potential costs for the two units.

In order to perform a traditional CPVRR analysis of the new nuclear units versus CC capacity, FPL would have had to assume a technology and associated MW size and costs at a time when no selection of the technology had been made. It was believed that this would likely lead to confusion regarding the results of economic analyses carried out in later years which might be compared back to these original analysis results and assumptions, particularly in regard to the assumed costs of new nuclear units. Consequently, FPL chose to introduce what was (in regard to FPL's FPSC filings) a new and different breakeven cost approach for evaluating the Turkey Point 6 & 7 project.

## Q. Please describe this breakeven cost approach.

In this type of breakeven cost approach, the capital cost of one of the two resource options being evaluated is omitted. In the breakeven cost analyses for Turkey Point 6 & 7, a traditional CPVRR evaluation of the two resource plans is first carried out, but with the assumption of zero capital costs for Turkey Point 6 & 7. In this analysis, the Resource Plan with Turkey Point 6 & 7 has significantly lower CPVRR costs than the Resource Plan without Turkey Point 6 & 7. Then, using that CPVRR cost differential between the two resource plans, a "breakeven" overnight capital cost value for Turkey Point 6 & 7 is calculated that will result in the total CPVRR costs for the two resource plans being identical.

A.

However, as FPL's feasibility analyses of Turkey Point 6 & 7 have shown, there: (i) is a different breakeven cost for each scenario of fuel cost and environmental compliance cost, and (ii) those different breakeven costs by scenario change from year-to-year as numerous assumptions are updated.

In regard to FPL's initial analyses of the EPU project that was to be included in its 2007 Need filing, FPL could have selected either a CPVRR approach or this same type of breakeven cost approach. My view of the assumptions regarding the EPU project was that, although there was less certainty regarding various aspects of the EPU project than is typically the case with new CC capacity, the uncertainty level of the EPU project was significantly less than with the Turkey Point 6 & 7 project. For that reason, a decision was

made to utilize the traditional CPVRR analytical approach for evaluating the EPU project instead of the type of breakeven cost analysis approach used for evaluating Turkey Point 6 & 7. As I mentioned earlier, this proposed approach was clearly delineated in the 2007 EPU project need determination docket that culminated in the FPSC's approval.

Q. Does FPL's current CPVRR analysis provide breakeven information similar to that sought by Witness Jacobs?

- A. Yes. While Witness Jacobs asserts that a breakeven analysis should be done, he misses the point that the CPVRR analysis already provides breakeven cost information. The CPVRR-based approach that FPL has used in its feasibility analyses of the EPU project uses the currently projected going forward capital costs of completing the EPU project. The result of these analyses is a projection of net CPVRR benefits for the EPU project for each fuel cost and environmental compliance cost scenario. The result for each such scenario represents not only the projected net CPVRR benefits for the EPU project for that scenario, but also represents the CPVRR amount of additional money that could be spent on the EPU project so that the projected net CPVRR benefits become zero; i.e., to reach a breakeven point.
  - Q. Do you believe the way in which the GDS testimony recommends to use breakeven cost information would provide the FPSC with a more meaningful way to judge the going forward cost-effectiveness of the EPU project?

A. No. This is the real problem with the GDS testimony recommendation regarding breakeven costs. FPL's long standing approach examines the feasibility of the project in a wide range of fuel cost and environmental cost scenarios. The current results of FPL's analyses show that the EPU project will be cost-effective in each of these scenarios. The GDS recommendation would seem to require that a single breakeven cost value be used. If a single value is to be used, then a single fuel cost and environmental compliance cost scenario must be chosen to be the basis or standard by which the economics of the EPU project are judged.

This forces the perspective by which the EPU project may be judged from the current perspective in which a wide range of future fuel and environmental compliance costs is used, into a much narrower perspective in which only one view of future fuel and environmental compliance costs will be used to judge the project (the GDS recommended single breakeven cost approach). In my opinion, seeking to restrict the breadth of the view by which the EPU project may be judged to a single scenario of fuel and environmental compliance costs is not a move in a positive direction.

- Q. What is your opinion regarding Witness Jacobs' recommendation that

  "The amount of the breakeven cost could be reviewed and trued up each

  vear."?
  - A. My opinion is that Witness Jacobs recognizes that not only is his recommendation to select a single breakeven cost value by which to judge the

22		separate analysis of those portions of the EPU project that are being
21	Q.	The second aspect of the GDS testimony recommendation is to require a
20		compliance costs.
19		the EPU project using a wide range of future fuel and environmenta
18		feasibility analysis approach which allows the FPSC to judge the feasibility or
17		set standard that will change from year to year, an improvement to the current
16		In no way is the GDS testimony's recommendation, to impose an arbitrarily
15		
14		be described as a recommendation to pile confusion on top of arbitrariness.
13		single value in each subsequent year (i.e., his moving target remedy), can only
12		as the standard in one year, then to adjust to a different arbitrarily chosen
11		The result of his recommendation to select an arbitrarily chosen single value
10		
9		created by a poor recommendation.
8		"standard" a moving target. This strikes me as a poor solution to a problem
7		to this inherent problem in his ill-advised recommendation makes his
6		account for this in his above 'true up' statement. But his proposed 'remedy
5		breakeven cost values will change each year. Therefore, he attempts to
4		He recognizes that, due to the annual updating of assumptions, the projected
3		
2		he recognizes that this projected value will change from one year to the next.
1		EPU project a call to use an arbitrarily selected single value as a standard, but

carried out at the St. Lucie site and at the Turkey Point site. Please

1		discuss why FPL has chosen to consider the economics of the EPU project
2		as a whole.
3	A.	FPL's analyses of the EPU project have consistently evaluated the EPU work
4		as a single project for several reasons. First, FPL has viewed the EPU project
5		as a single comprehensive project since the Need filing in 2007 and continues
6		with that view today. In the 2007 Need docket, FPL proposed the project to
7		the FPSC as a comprehensive project, and was granted a determination of
8		need on that basis.
9		
10		Second, although FPL has separate contracts with Bechtel for work at the St.
11		Lucie and Turkey Point sites, and separate contracts with Siemens for work at
12		the St. Lucie and Turkey Point sites, all of these contracts were negotiated on
13		the basis that FPL would proceed with the EPU projects at all four units.
14		Therefore, all of FPL's projected costs for the EPU project are based on the
15		total EPU project and would not be appropriate for analyzing EPU work being
16		conducted at only one site, but with no EPU work at the other site. Thus it
17		would be meaningless to attempt an analysis of conducting EPU work at only
18		one site using the current cost projections that are based upon the total EPU
19		project proceeding at both sites.
20		
21		Third, even if one were to try a different approach of first assuming that the
22		total EPU project would continue (in an attempt to use the current cost
23		projections), but then try to somehow dissect the current economic analyses of

the total EPU project into two site-based results, one would run into trouble regarding the benefits. It would not be possible to accurately determine the site-specific benefits contributions from each site using such an approach.

The in-service dates for EPU work at the four units are currently projected to be as follows: May 2012 (St. Lucie 1), July 2012 (Turkey Point 3), November 2012 (St. Lucie 2), and March 2013 (Turkey Point 4). This means that almost as soon as the benefits begin to appear at one site, benefits from the other site also begin to appear. The "mixing" of benefits that occurs is due to the backand-forth in-service dates for units between the two sites. This means that there is no clear chronological dividing line with which to attempt to dissect the contribution to benefits from the total EPU work from each site. Because of this, trying to accurately determine EPU benefits separately at each site from the current feasibility analysis results of the total EPU project is not workable.

In summary, the EPU project has been conceived as a total project from its inception, all projected costs are based on performing the EPU work at all four units, and it is not possible to accurately dissect the benefits from the feasibility analysis results into site-specific components. Consequently, the GDS testimony recommendation to require site-specific analyses is not practical and should not be given serious consideration.

## III. Other Topics

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Q.	What other topics from the GDS testimony regarding the EPU projec
	and FPL's feasibility analyses will you discuss?

- A. There are three other such topics that I will discuss from a resource planning/economic analysis perspective. These topics are: (1) the GDS testimony implication that the "fast tracking" of the EPU project was inappropriate; (2) the GDS testimony implication that the July 2009 sensitivity analyses were something out of the ordinary, and the testimony contention that FPL should have informed the FPSC of the "...material changes in...feasibility..." (Witness Jacobs, page 39, lines 17 and 18); and (3) the GDS testimony's general characterization of FPL's feasibility analysis approach as inappropriate. In regard to the third topic, specific aspects of this issue have been discussed in sections I and II of my rebuttal testimony. There are other aspects related to this statement that I will also address.
- Q. Please discuss the first topic: the GDS testimony's contention that "fast tracking" of the EPU project was inappropriate.
- A. From the perspective of a resource planner who is evaluating the projected economics of two competing resource options, there were, and are, significant benefits to be gained for FPL's customers by expediting the EPU project.
  - To see this, let's recall what is being analyzed in the Resource Plan with EPU and the Resource Plan without EPU. In the Resource Plan with EPU, the resource option in question, the uprating of existing nuclear plants, is an

option that currently has what I will call a "hard stop". Each of these existing nuclear units has a firm date at which their current operating license will end. At that time, the operation of the nuclear plant in question, and the benefits derived from the EPU project, will end.

On the other hand, in the Resource Plan without EPU, the resource option in question is new combined cycle (CC) capacity. This resource option does not have a hard stop in the same sense. Instead, it has a projected 30-year life, the duration of which remains the same regardless of whether the resource option is placed in-service today or some time in the future.

Assume for a moment that instead of proceeding with the EPU project in an expedited approach as the FPSC authorized, FPL had performed all of the work in a deliberate sequence. Such an approach would have delayed the completion of the EPU work by approximately 6 years. (This 6-year estimate of additional time was previously provided by FPL Witness Jones in response to OPC Interrogatory 47 and is discussed in FPL Witness Jones' rebuttal testimony.) Because of the hard stop characteristic of the EPU project, this 6-year project delay would have automatically resulted in a loss up front of 6 years of fuel savings for FPL's customers.

## Q. Would these lost fuel savings for FPL's customers have been significant?

A. Yes. The projected first full year nominal fuel savings for the EPU project (presented in Supplement to Exhibit SRS – 1 to my Supplemental Direct

1		Testimony) is \$139 million. Even using an approximate annual fuel savings
2		value of \$140 million, without accounting for expected annual fuel cost
3		escalation, a 6-year delay in the project would have resulted in approximately
4		\$840 million of higher fuel costs for FPL's customers over those 6 years.
5	Q.	What would have been the impact of these significant lost fuel savings on
6		the projected cost-effectiveness of the EPU project?
7	A.	From the perspective of project feasibility, these lost fuel savings for FPL's
8		customers also represent lowered net benefits for the project, thus lowering
9		the projected cost-effectiveness of the project. Note also that there would
0		have been no such negative impact for the competing CC capacity because,
. 1		all else equal, its 30-year life duration could simply "slide" out in time and
.2		begin six years later.
3	Q.	What is your conclusion with respect to FPL's decision to expedite the
4		EPU project.
5	A.	If FPL had not expedited the EPU project, the resulting delays would have
6		guaranteed: (i) significant lost fuel savings for FPL's customers, and (ii)
17		decreased cost-effectiveness of the project.
18	Q.	Please discuss the second topic: the GDS testimony implication that the
19		July 2009 sensitivity analyses were something out of the ordinary, and the
20		testimony contention that FPL should have informed the FPSC of the
21		"material changes infeasibility" (Witness Jacobs, page 39, lines 17

and 18).

[	A.	In regard to the inherent implication that such analyses are out of the ordinary,
2		quite the contrary is true. Sensitivity or scenario analyses are conducted all
3		the time by FPL for a wide variety of resource options, particularly when
1		preliminary information is first received regarding a resource option.

- Q. Is there another aspect of the GDS testimony regarding this sensitivity analysis that you wish to comment on?
- A. Yes. In Witness Jacobs' testimony, on page 39, lines 16 through 19, he states that FPL has an obligation to inform the FPSC of information regarding the EPU project including "...material changes in...feasibility that occur following the regular submission date." There are two aspects of that statement that warrant a response.

First, the NCRC dockets are not "one look only" dockets. By that I mean that the FPSC regularly sees updated feasibility analyses that use completely updated assumptions on an established, set schedule. Therefore, if an assumption used in a current NCRC filing has changed after the filing of the feasibility analyses for that year is made, this changed assumption – once the change in the assumption has been fully vetted and accepted – will be used in the next round of feasibility analyses the following year. Those results will then be presented to the FPSC. Witness Jacobs' concern over changing assumptions would seem to be more appropriate for a more regular "one look only" type of docket than for an NCRC docket which is explicitly designed to

update assumptions annually, and provide updated analysis results based on the updated assumptions, on an established, set schedule.

A.

Second, I do not agree that there were in 2009 "...material changes in... feasibility". This is apparent when the results of the 2009 feasibility analyses filed with the FPSC are compared with the results of the July 2009 sensitivity analyses. This comparison is presented in Exhibit SRS – 14.

# Q. What does this comparison show?

The results of the two sensitivity analyses that were performed in July 2009 were either very similar to the results of feasibility analyses previously presented to the FPSC in the 2007 Need and 2008 NCRC dockets (in which the EPU project was projected to be cost-effective in all scenarios of fuel and environmental compliance costs except one), or were very similar to the results of feasibility analyses previously presented to the FPSC in the thencurrent 2009 NCRC docket (in which the EPU project was projected to be cost-effective in all fuel and environmental compliance cost scenarios). When viewed as part of a continuum of feasibility results for the EPU project that had been presented to the FPSC from the 2007 Need docket through the 2009 NCRC filing, the results of the July 2009 sensitivity analyses are very similar. Consequently, I disagree with Witness Jacobs' charge that the results of the July 2009 sensitivity analyses represent a "material change" in the projected feasibility of the EPU project. That is simply not an accurate characterization of the results.

1	Q.	Please summarize your view of the significance of the	July 200	9
2		ensitivity analyses and the results of those analyses.		

- A. The fact that FPL conducted such an analysis has little/no significance in itself because sensitivity or scenario analyses are often conducted by FPL to test the effect of different assumptions regarding the economics of various resource options. If there is any significance related to the July 2009 sensitivity analyses, it is that the results of the sensitivity analyses reaffirmed, once again, that the EPU project is a cost-effective choice for FPL's customers.
- Q. In regard to the third topic regarding the GDS testimony, how would you characterize this analytical approach as applied to the EPU project?
  - A. I would characterize FPL's analytical approach for evaluating the EPU project as appropriate, providing meaningful results, and as being conservative by design.

# Q. Would you please explain what you mean by "conservative by design"?

A. Yes. As indicated earlier in my testimony, FPL's analytical approach, as applied to the EPU project, is conservative by design because it does not currently include in its calculation two types of benefits that will definitely result from the EPU project. In addition, there are other types of benefits that may result from the EPU project, but which are not currently included in FPL's evaluation because they are speculative in nature at this time.

Therefore, the projected net benefits for the EPU project that are provided by
FPL's analytical approach are understated. Consequently, FPL's analytical
approach can accurately be described as being conservative by design.

- Q. Please discuss the two types of benefits that will definitely occur from the EPU project, but which are not currently included in FPL's feasibility analyses of the project.
  - The first type of benefit that will definitely result from the EPU project, but which has not been included to-date in FPL's feasibility analyses of the project, is reduced FPL system transmission losses. This outcome of reduced losses is due to the additional capacity derived from the EPU project being generated and delivered close to FPL's load center. This effect is primarily driven by the additional EPU capacity that will be gained at the Turkey Point site. This additional baseload capacity at the Turkey Point site will not only reduce system losses at peak hours, but will also reduce system losses throughout the year. The result is enhanced system efficiency which results in savings for FPL's customers. These customer savings also represent additional net benefits for the EPU project.

A.

The second type of benefit that will definitely result from the EPU project, but which has not been included to-date in FPL's feasibility analyses of the project, is the contribution that the EPU project will make to maintain a balance between load and generating capacity in Southeastern Florida (i.e., in Miami-Dade and Broward counties). As the load continues to grow in these

1 two counties, one of two things must happen. Either generating capacity in this area must also continue to grow to keep pace with the load, or additional 2 transmission lines to transport energy into this area must be built. 3 4 5 The addition of generating capacity in Southeastern Florida will avoid or defer the need to build expensive additional transmission lines to bring electricity 6 into Miami-Dade and Broward counties from elsewhere. If new generating 7 capacity can be added in this area, the avoided or deferred transmission 8 9 expenditures represent savings for FPL's customers. 10 In these two populous counties, it is very difficult to find greenfield sites on 11 which to build new generating capacity. In regard to FPL's feasibility 12 analyses and its Resource Plan without EPU, the greenfield CC capacity that 13 would be added absent the EPU project would almost certainly not be added 14 in either of these two counties. Thus this greenfield capacity would not help 15 address the Southeastern Florida imbalance issue. 16 17 However, the EPU project will add more than 200 MW of baseload capacity 18 and energy at the Turkey Point site in Miami-Dade County. This capacity 19 addition will definitely assist in avoiding or deferring transmission 20

represents additional net benefits for the EPU project.

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expenditures. This will result in savings for FPL's customers which also

- Q. Has FPL discussed these two types of additional benefits for the EPU project before and why has FPL not accounted for these additional benefits in its feasibility analyses of the project to-date?
- Yes, both of these additional benefits that will definitely result from the EPU A. project were discussed at the beginning of FPL's presentation of the EPU project to the FPSC; i.e., in my direct testimony in the 2007 Need docket for the EPU project starting on page 47, line 20. However, FPL has not included these additional benefits from the EPU project in its feasibility analyses to-date for several practical reasons including, but not limited to, the combination of lack of specific locations for greenfield CC units and the different in-service dates of greenfield units between the Resource Plan with EPU and the Resource Plan without EPU.
  - Q. You also mentioned that there are other types of benefits that are not included in FPL's feasibility analyses of the EPU project because they are speculative at this time. Please provide an example of such a potential benefit.
  - A. One such example is that FPL has not included in its feasibility analyses of the EPU project the additional benefits that would be realized from the project if there were a further extension of the operating licenses for the four existing nuclear units. The first expiration date among those operating licenses is approximately 20 years in the future. Consequently, FPL has not had to make a decision yet regarding a possible license extension request.

Although the projected benefits for the EPU project that would result from license extensions are very large, these benefits are speculative at this time because FPL has not yet applied for, or received, a license extension. Consequently, FPL has not included the projected benefits from an extension in its feasibility analyses to-date. However, completing the project ensures the opportunity to realize these potential additional benefits.

- Q. Accepting the fact that a projection of additional benefits from the EPU project due to license extensions is speculative at this time, can you provide approximate values of the potential benefits and costs for the EPU project if license extensions became a reality?
- A. Yes. Assuming that the operating licenses for each of the four nuclear units were extended for 20 years beyond their current license expiration dates, the projected additional benefits for the EPU project using a Medium Fuel Cost, Environmental Compliance Cost Env II scenario are approximately \$1,300 million CPVRR. In contrast, the total cost for previously obtaining the license extensions for all four nuclear units about a decade ago was approximately \$22 million (nominal \$). Consequently, if license extensions for FPL's four nuclear units were to occur, the additional benefits from the EPU project that would be realized by FPL's customers would be very large indeed.

1		IV. Conclusions
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3	Q.	Please summarize the conclusions you have reached in your rebuttal
4		testimony.
5	A.	Based on my review of the GDS testimony, I have reached the following 4
6		conclusions:
7		
8		1) The GDS testimony recommendation that Florida abandon the well
9		established and widely accepted economic principle of excluding sunk
10		costs from current analyses in the sole case of the EPU project has no
11		merit. This recommendation has the dubious distinction of
12		simultaneously: (i) ignoring the basic common sense foundation upon
13		which this well established economic principle was based, and (ii)
14		ignoring the plain language of the Nuclear Cost Recovery Rule, as
15		supported by the FPSC's order regarding how economic analyses of
16		new nuclear capacity are to be performed.
17		2) The GDS testimony recommendation that the FPSC abandon the
18		current economic analysis approach (a CPVRR comparison) it has
19		consistently used to evaluate the EPU project since the 2007 Need
20		docket is also without merit and should be rejected. The CPVRR
21		method provides the Commission with a wide range of fuel and
22		environmental compliance costs from which to judge the EPU project

and its economic feasibility. In contrast, the GDS testimony's

1	recommended approach would sacrifice this robust assessment in
2	exchange for a single, arbitrary snapshot obtained from a breakeven
3	analysis that would change the following year.
4	3) The GDS testimony recommendation to require that the analysis of the
5	EPU project be broken out into two separate, site-specific parts should
6	be rejected for several reasons. Most importantly, FPL proposed and
7	has managed the EPU project as a comprehensive project
8	encompassing both sites since its inception, and the FPSC approved
9	the project in its entirety for the overall system and customer benefits
10	that would be realized from the project.
11	4) GDS testimony's criticism of the expedited nature of the EPU project
12	should be rejected. The GDS testimony's claims fail to acknowledge
13	that proceeding with the EPU project on a slower, sequential schedule
14	would deprive FPL's customers of more than \$800 million in fuel cost
15	savings compared with the expedited approach proposed by FPL and
16	approved by the Commission. FPL's approach maximizes the number
17	of years that fuel savings, and other benefits, will be realized by FPL's
18	customers, thus maximizing the cost-effectiveness of the EPU project.
19 <b>Q. D</b> o	oes this conclude your rebuttal testimony?
20 A. Ye	es.

### BY MS. CANO:

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Would you please provide a summary of your rebuttal testimony to the Commission at this time?

Yes, I'd be happy to. Α

Good afternoon again, Chairman Graham and Commissioners.

My rebuttal testimony addresses the direct testimony of OPC Witnesses Jacobs and Smith, who seek to attack the EPU project at this very late stage in the overall process through various recommendations and assertions. In this summary I'll focus on four of these.

First, these witnesses recommend that sunk costs should not be excluded in FPL's feasibility analyses. Their recommendation seeks to both violate the Commission's nuclear cost recovery rule and ignore specific guidance provided by the Commission order regarding the treatment of sunk costs.

Furthermore, this misguided recommendation seeks to alter the well-established economic analysis principle that past costs should not be considered when deciding whether to complete a project.

Second, these witnesses also recommend that feasibility analysis of the EPU project should be switched from a CPVRR approach to a break, to the

breakeven cost approach used for evaluating Turkey Point 6 and 7 and should select then a single result from these analyses to use as a standard for judging the project. This late arriving recommendation ignores the fact that the EPU project was initially approved in 2007 and has been evaluated in NCRC dockets ever since based on CPVRR analyses.

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Furthermore, these witnesses do not appear to realize that a CPVRR analysis automatically provides breakeven cost information they contend should be provided.

Their recommendation that the Commission then select a result from only one of seven fuel and environmental cost scenarios each year and use it as a standard to judge the project is illogical and confusion -- and confusing because it is a call to utilize a moving target as a standard.

Third, they recommend that FPL break the EPU project into two site-specific pieces. Again, this recommendation ignores the previous decisions of this Commission. The EPU project was presented to and approved by the Commission as a total two-cite, four-unit package. In addition, all costs and benefits of the project are based on completing work at all four units. Attempting to evaluate pieces of the project at

this late date would require a number of assumptions dating all the way back to the inception of the project. 2

> Fourth, these witnesses assert that FPL's expedited approach to the EPU project is inappropriate. This late-in-the-game assertion totally ignores the fact that the EPU project was presented to and approved by the Commission based solely on FPL utilizing an expedited approach. Their assertion also ignores the fact that a slower sequential approach would delay the project six years, which would in turn guarantee at least \$800 million in higher fuel costs for FPL's customers, which would in turn significantly decrease the cost-effectiveness of the EPU project.

> In conclusion, Commissioners, these four recommendations or assertions, in addition to seeking to change the rules long after the process has been underway, are poorly thought out and do not warrant serious consideration.

> Commissioners, FPL's analytical approach for evaluating the EPU project is appropriate and it provides meaningful results. The results of FPL's 2011 feasibility analyses support continuing both the EPU and the Turkey Point 6 and 7 projects for the benefit of FPL's customers. Thank you.

> > MS. CANO: The witness is available for cross.

FLORIDA PUBLIC SERVICE COMMISSION

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Intervenors. CHAIRMAN GRAHAM:

MR. WHITLOCK: Thank you, Mr. Chairman.

### CROSS EXAMINATION

#### BY MR. WHITLOCK:

Good afternoon, Dr. Sim.

I'd like to continue a discussion we were having, it doesn't seem like it was all that long ago, late yesterday evening, regarding sunk costs. If you'd turn to page 8 of your rebuttal testimony, please, sir.

Now you've stated in your summary that the testimony -- or the opinion of OPC Witness Jacobs in regards to sunk costs would violate the cost recovery rule, quidance provided by the Commission, and a -- what I think you refer to it as a well-established economic principle; is that correct?

That is correct.

Okay. So let's start with your contention that it would violate the rule. It looks like on lines 5 and 6 of your testimony on page 8 you paraphrase the, the portion of the cost recovery rule there that talks about the long-term feasibility of a project. Is that correct?

The long-term feasibility of completing a power plant.

Q Okay.

- A And I believe that's the key point.
- Q Okay. And then you go on to say, "This is a requirement to examine whether to proceed with the project, in light of remaining costs." And my question for you is, is that's your interpretation of the rule; correct?
- A It is certainly my interpretation of the rule, and I think it is a most reasonable interpretation when one looks at the portion of the rule that states the feasibility of completing the power plant. So you're looking at projected costs from that point forward of completing a project.
  - Q Does the rule say that?
- A No. As I stated, that is my interpretation of what the rule states in regard to completing a power plant. Costs that have already been incurred are no longer costs of completing the power plant. Those costs are now behind you at that point in time.
- Q So that would be your interpretation of the rule; correct?
  - A Yes, that is certainly my interpretation.
- Q Did you take part in the rulemaking when that rule was promulgated by the Commission?
  - A No, I did not.
  - Q So you have, you have no, you have no basis to

state what the intent of the Commission was when they promulgated that rule, do you?

A I don't know -- the answer to your question is
I do not know what the deliberations were. I only know
what the rule currently says, and I know how the
analyses that have been performed all the way from 2007
up to now have been applied. And it is only now in
essentially the fourth quarter of the process that this
issue is being raised.

Q Okay. Let's move on to the guidance that the Commission provided in Order Number PSC-080237-FOF-EI. Would you read lines 13 through 16 there where you quote the guidance, please, sir? Read that out loud.

A Yes. Quote, FPL shall provide -- let me back up. This was in regard to the Turkey Point 6 and 7 project as I recall.

O Correct.

A Quote, FPL shall provide a long-term feasibility analysis as part of its annual cost recovery process which, in this case, shall also include updated fuel costs, environmental forecasts, breakeven costs, and capital cost estimates. In addition, FPL should account for sunk costs, close quote.

Q Were you here when I asked some questions of Mr. Reed earlier this morning, Dr. Sim?

1	A No, I was not here.
2	Q Okay. So you go on to say at lines 18 and 19
3	that this guidance clearly distinguishes sunk costs from
4	updated capital cost estimates; correct?
5	A That's correct.
6	<b>Q</b> Okay. And so it's, again it's your
7	interpretation of this guidance that the statement, "In
8	addition, FPL should account for sunk costs," means that
9	FPL should exclude them from the annual feasibility
-0	analysis. Is that accurate?
_1	$oldsymbol{\mathtt{A}}$ Yes. That is it is my view that the
2	Commission statement speaks for itself and that it
.3	clearly distinguished between capital cost estimates and
L <b>4</b>	sunk costs.
L5	Q So "FPL should account for sunk costs" means
L6	to you FPL should exclude sunk costs from its annual
L7	feasibility analysis?
L8	<b>A</b> Yes. Consistent with the Commission
L9	regulation which we discussed earlier regarding cost to
20	complete and
21	Q Consistent with your interpretation of that
22	regulation.
23	A That's correct.
24	Q And you're not a lawyer, are you?
25	A Fortunately or unfortunately, that's correct.

1	<b>Q</b> Are you an expert in statutory construction
2	interpretation?
3	A No. No. Basic common sense as to a reading
4	of a regulation, as well as several years of it being
5	applied in the need filing, as well as the follow-up
6	nuclear cost recovery dockets.
7	Q Now as far as you said it violated an
8	established economic principle, if, if the rule of the
9	Commission and/or the guidance of the Commission was in
10	conflict with an economic principle, certainly FPL would
11	be willing to comply with what the Commission requested;
12	correct?
13	<b>A</b> Yes. That's correct.
14	MR. WHITLOCK: Okay. Thank you. No more
15	questions.
16	CHAIRMAN GRAHAM: Okay. Mr. McGlothlin.
17	CROSS EXAMINATION
18	BY MR. McGLOTHLIN:
19	Q Hello, Dr. Sim. I'm looking at page 13 of
20	your rebuttal testimony, and there you quote from some
21	panel testimony in a Georgia case. Do you see that?
22	A Yes, sir.
23	Q And the subject is your comments on
24	Dr. Jacobs' treatment of sunk costs in the feasibility
25	study prepared for this FPL uprate; correct?

1	A Specifically the discussion here is in regard
2	not to FPL's project, but in regard to panel testimony
3	he was a part of in a Georgia Power new nuclear hearing.
4	Q Yes. I understand that. But you bring that
5	in as a way of criticizing his treatment of sunk costs
6	or his proposed treatment of sunk costs in this case;
7	correct?
8	A I'm not so sure I'd characterize it as much in
9	terms of criticizing as simply saying that it's an
10	inconsistent, to me, treatment of sunk costs.
11	<b>Q</b> Well, looking at the quotation, first, you
12	agree that the quotation is not from Dr. Jacobs'
13	statement but from a Mr. Hayet, who is on the panel;
14	correct?
15	A That's correct. That's indicated as Witness
16	Hayet on line 10 on that page.
17	Q Now you've read Dr. Jacobs' testimony with
18	some care, have you not?
19	A Yes, I have read it.
20	<b>Q</b> So you are aware that Dr. Jacobs does not
21	recommend that sunk costs be excluded that sunk costs
22	be included in every analysis; correct?
23	A That's correct.
24	Q And that he recommends that the his
25	treatment in this case in view of the rapidly increasing

capital cost estimates associated with the FPL uprate activities?

- A That is his contention.
- Q Now do you know whether the project that was the subject of the Georgia proceeding had similar rapid increases in projected capital costs?
- A No, sir, I do not know the specifics of the Georgia Power case, other than to say that it was in regard to new nuclear generation, which is inherently uncertain in regard to costs. And, in my opinion, far more uncertain in regard to costs than is the, FPL's EPU project.
- Q Well, did you not -- you did not investigate the pattern of cost estimates year over year in that proceeding to see if there was any parallel to this case, did you, Dr. Sim?
- A No, sir, I did not. I relied upon my reading of Dr. Jacobs' testimony in which he claimed that FPL's EPU project was at least as uncertain, if not more so, than costs for new nuclear units, which I find to be a fairly incredible statement.
  - Q I think you've answered my question.
- Now Dr. Jacobs attributes the rapid increase in the cost estimates in this case to the decision to fast track the EPU; correct?

1	${f A}$ I'm sorry. Can you repeat the question,
2	please sir?
3	Q Yes. You agree that Dr. Jacobs attributes the
4	rapid increase in capital cost estimates for FPL's EPU
5	to the decision to fast track the project.
6	MS. CANO: Excuse me. I'm going to object to
7	counsel's continuous characterization of the costs of
8	the EPU project.
9	MR. McGLOTHLIN: In what way do you object?
LO	MS. CANO: I think about four times you've
L1	referred to them as rapidly increasing, and I don't
L2	believe we've presented any testimony or evidence that
L3	supports that characterization.
14	BY MR. McGLOTHLIN:
15	$oldsymbol{\mathtt{Q}}$ Okay. Dr. Sim, if you know, has FPL increased
16	the estimated cost of the EPU project by approximately
17	\$700 million over the course of the last two years?
18	A That's approximately correct.
19	${f Q}$ Okay. And that's what I characterize as
20	rapidly increasing costs for purposes of my question.
21	Did you and you understand that Dr. Jacobs
22	attributes that pattern of cost increases to the
23	decision to fast track the project.
24	<b>A</b> I believe that is a correct interpretation of
25	Dr. Jacobs' testimony: however, I also am aware that

Okay. Did you check to see whether the project that is the subject of the Georgia proceeding is

No, sir. I do not know the, the approach being taken in the Georgia Power case.

At page, pages 9 and 10 you have some hypothetical scenarios, the assumptions of which vary with respect to the amount of to-go costs relative to the cost of a new home. Are you, are you at that point in your testimony? I'm going to ask you some questions

Yes, sir. I'm on page 9.

And as I understand it, the comparison being made is for the homeowner to decide between the remodeling of the house or the purchase of a new home, each of which is a satisfactory outcome in terms of preference; correct?

And in scenario number one -- in all cases the cost of the new house is \$500,000; correct?

That was the simplifying assumption in this

Yes. And the -- and originally anticipated costs of the remodeling was \$300,000. Am I correct

about that?

expended \$200,000, but learns that the to-go costs are

That's correct.

an additional \$250,000; correct?

A That's correct.

Q So in total they would spend \$450,000, and you make the point that in terms of that decision versus spending \$500,000, that's a rational decision. Is that the point of your analogy there?

In scenario number one the homeowner has

A No, sir, I don't believe it is.

The analogy was taking one to the point where one had already, the homeowner had already spent \$200,000 and was faced with two alternatives. They could either stop work on the project and go forward with the projected cost to complete of \$250,000, or stop work on the remodeling project, purchase a new home for \$500,000. And I point out that the rational choice economically would be to proceed with the remodeling, \$250,000 in additional costs versus \$500,000 additional for purchasing a new home.

Q The second scenario, the homeowners expended \$200,000, and then the to-go costs were \$350,000; correct?

A That's correct.

Q So in that instance the homeowner would spend in total \$550,000, but the decision to go forward would still be favorable; correct?

A Can you define what you mean by favorable, please?

Q The homeowner would be spending less on a to-go basis than it would spend on the \$500,000 alternative.

A Yes. In scenario 2, the homeowner is faced with the, much the same choice, except it's \$350,000 to complete the remodeling versus stopping work and spending \$500,000 for a new home. And, again, the economic choice going forward is you proceed with the remodeling and spend \$350,000 rather than the \$500,000.

Q And in both those scenarios the original anticipated cost of the remodeling was \$300,000; correct?

A That's correct.

Q I want to suggest a third scenario. In this one, again, the going in cost is \$300,000 and the homeowner has expended \$200,000, but the homeowner has also engaged an architect to spec the house. And on the basis of specifications, the contractor has entered a contract that is price certain so that the alternative is to spend only \$300,000 for the, for the remodeling.

Τ.	Would that also be a rational decision?
2	A I'm sorry. You'll have to repeat the premise.
3	I missed the first part of it, sir.
4	Q In the third scenario, the one I'm posing to
5	you, the homeowner has expended \$200,000, but because
6	the homeowner has also engaged an architect to draw
7	plans and specifications for the house and has a
8	contract that is price certain and is looking at only a
9	to-go cost of an additional \$100,000; is that also a
10	rational decision?
11	A If that option existed, that would be an
12	option for the homeowners.
13	MR. McGLOTHLIN: That's all. Thank you.
14	CHAIRMAN GRAHAM: Thank you.
15	Ms. Kaufman.
16	MS. KAUFMAN: I don't have any questions.
17	Thank you, Mr. Chairman.
18	MS. WHITE: Nor do I. Thank you.
19	CHAIRMAN GRAHAM: Staff?
20	MR. YOUNG: Staff has about a few
21	questions.
22	CHAIRMAN GRAHAM: Sure.
23	CROSS EXAMINATION
24	BY MR. YOUNG:
25	Q Dr. Sim, in your, in your opinion, would a

comparison of the total project costs for the fast track EPU project and, what I like to call, compared to the go slow, which the is non-EPU fast track, provide insight to the ratepayers' costs and savings associated with the two approaches?

- A Sir, could you repeat the question, please?
- Q In your opinion, would a comparison of the total project costs for a fast track EPU project to a go slow, which is a non-EPU, non-fast track EPU project, provide insight into ratepayers' costs and savings associated with these two approaches?

A My understanding of the question would lead me to answer no. If you considered only the costs of the project, fast track versus non-fast track, you'd be missing an important part of the equation, which would be the benefits to be derived from fast track versus non-fast track.

As I point out in rebuttal testimony, the go slow approach is estimated to have -- would have delayed the project six years. Those six years are up-front \$140 million a year in fuel savings that would have been foregone if we had gone the delayed slow approach.

So not only would there be a question in regard to the cost of the project, which Witness Jones has indicated would likely be higher, if not

significantly higher, if we had done the go slow approach, we also would have foregone six years of very significant fuel savings benefits for our customers.

MR. YOUNG: Thank you. No further questions.

CHAIRMAN GRAHAM: Okay. Commissioner Brisé.

COMMISSIONER BRISÉ: Thank you, Mr. Chairman.

Dr. Sim, I have one question -- maybe one or maybe two questions for you.

Earlier we had a discussion about the sunk costs in terms of them being irrevocable basically. I just want to know if there are any benefits to the consumer from your perspective since they're paying for these sunk costs.

THE WITNESS: I think as, Commissioner, as indicated earlier, we're already receiving benefits from the St. Lucie 2 project. I believe the -- there are 29 additional megawatts of nuclear capacity and energy that we're receiving benefits from.

But, again, it's early in the game, and at this point the benefits are relegated to that portion of the project that has provided an interim amount of megawatts.

COMMISSIONER BRISÉ: Follow up. So then the assertion that there is absolutely no benefit to the consumer with respect to the sunk costs would be

1 incorrect.

THE WITNESS: Yes. It is -- that would be an incorrect statement, because our customers, as of May of this year, began receiving benefits from an additional 29 megawatts of nuclear capacity out of the St. Lucie 2 project.

COMMISSIONER BRISÉ: Okay. I want to ask you if this were a different set of circumstances and we're looking at \$700 million, is \$700 million worth the 29 -- what did you say, megawatts?

THE WITNESS: Yes, sir. 29 megawatts.

COMMISSIONER BRISÉ: 29 megawatts that they have paid for, is it worth it under -- if you took that separate from what we're dealing with, is, is that worth the price?

THE WITNESS: In all likelihood, no, sir.

But what we're looking at in this situation is

hypothetically a situation in which the project were

stopped cold, you had spent \$700 million, and you had

only achieved a portion of the very large scale benefits

that you'd be receiving from this project.

So my, my reading of that is this would be an awfully strange place to try to stop the project, knowing that work is ongoing and you will begin to receive much more significant amounts of nuclear

capacity beginning, I believe, in March of 2012, another 1 increment shows up July of 2012, another November of 2012 -- well, let me back up for a moment. 3 By a year from today two of the nuclear uprate 5 projects will be completed. Then approximately three or 6 four months later, in November of 2012, a third one will be completed. In March of 2013 the fourth will be completed. So we're relatively close to significant 8 amounts of megawatts coming on the system from the 9 10 project. We're not there yet, but the first small 11 pieces have, have shown up. 12 COMMISSIONER BRISE: So from your perspective, 13 over time the benefit would be achieved for the 14 \$700 million that the consumers have expended, so long 15 as the project continues to go forward? 16 THE WITNESS: Yes, sir. It's the only way in which those additional benefits would be realized by our 17 18 customers by proceeding with the project. 19 COMMISSIONER BRISÉ: Okay. Thank you. 20 CHAIRMAN GRAHAM: Redirect? 21 MS. CANO: Briefly, yes. 22 CHAIRMAN GRAHAM: Sure. 23 REDIRECT EXAMINATION 24 BY MS. CANO: 25 Dr. Sim, Mr. McGlothlin pointed you to page 13

of your rebuttal testimony and to some panel testimony supporting the exclusion of sunk costs. Do you recall that -- those questions?

A Yes, I do.

**Q** And he pointed out that the quote here in your testimony is attributed to a Witness Hayet. Do you recall that?

A Yes.

**Q** On what basis do you attribute the statement to Dr. Jacobs?

A Dr. Jacobs was part of a panel testimony, and the quote from Witness Hayet is, "So, the notion of the costs that have already been spent as being sunk is something that you ignore and we're," emphasis on we're, "just simply pointing that out, that's the company's practice, we agree with it and that's fairly industry standard."

At no point in that testimony did I find a fact when Witness Jacobs, who was part of that panel testimony, took issue with his fellow panelist and said, I don't agree with that; there are conditions for certain projects in which it is not appropriate to treat sunk costs in that manner.

All I can say is if I were on a panel and my fellow panelist made a statement that I could not agree

1	with 100%, I would make a point to bring that
2	information out as part of my testimony. And I see no
3	evidence that Witness Jacobs made any such clarification
4	to his fellow co-panelist.
5	MS. CANO: Thank you. Nothing further.
6	CHAIRMAN GRAHAM: Are there any exhibits to be
7	entered?
8	MS. CANO: Yes. FPL moves Exhibits 133 and
9	134 into the record.
LO	CHAIRMAN GRAHAM: Are there any objections to
.1	133 and 134 being entered into the record? Seeing none,
L2	let it be, let it happen.
L3	(Exhibits 133 and 134 admitted into evidence.)
L4	MS. CANO: And FPL asks that Dr. Sim be
L5	excused.
L6	CHAIRMAN GRAHAM: If there are no objections
L7	to excusing Dr. Sim, Dr. Sim, thank you very much for
L8	your testimony today.
L9	THE WITNESS: Thank you, sir.
20	CHAIRMAN GRAHAM: I'm looking at the witness
21	list. We have Powers and Derrickson have already did
22	their rebuttal and their direct together, and Welch was
23	stipulated at the beginning.
24	MR. YOUNG: Yes, sir.
25	CHAIRMAN GRAHAM: Are there any additional

The clerical

concluding matters? 1 MR. YOUNG: Yes, sir, there are. 2 The hearing transcripts are expedited; briefs 3 are due on September the 8th, 2011; for a Staff recommendation on October 2012; for a Special Agenda on 5 October 2000 -- October 24th, 2011. 6 CHAIRMAN GRAHAM: Are those dates understood 7 and okay with everybody? 8 9 10 11 12 13 14 15 16 a housekeeping item. 17 18 19 20 Energy Florida's case. 21 CHAIRMAN GRAHAM: Okay. 22 23 24 Progress portion of the hearing. 25

MR. McGLOTHLIN: Yes. I'd like to bring one more housecleaning item up at the appropriate time. CHAIRMAN GRAHAM: Okay. The dates are okay? MR. ANDERSON: Yes, sir, they are. CHAIRMAN GRAHAM: Okay. Staff. MR. YOUNG: That is all Staff is aware of in this case. But, as Mr. McGlothlin said, he has to bring And also, when we conclude FPL's portion, Staff recommends that the Commission conclude the FPL portion and then discuss a scheduling matter in Progress MR. ANDERSON: We would also just ask that at the conclusion that counsel also be excused from the CHAIRMAN GRAHAM: I don't know. I think I may FLORIDA PUBLIC SERVICE COMMISSION

want to see you guys hang out for a while.

MR. ANDERSON: In my private law firm days, hanging around for a few days would have been great.

CHAIRMAN GRAHAM: Let's see what he's got to say first.

Mr. McGlothlin.

MR. McGLOTHLIN: Yesterday when Mr. Jones was on the stand during my cross-examination I contacted counsel for FPL regarding whether certain questions I had covered in a deposition involved confidential information. And after reviewing the transcript, it does appear that the subject matter I was going to pose in cross was treated as confidential. This morning I have with me an excerpt from that transcript ready to be marked as a confidential exhibit. I would do that in lieu of the cross-examination I had planned to propose to Mr. Jones when he was on direct.

MR. ANDERSON: No objection. We appreciate counsel's courtesy in treating the confidential matter in that way.

MR. McGLOTHLIN: Charles raises a good question. Are there parties who should not get this?

MS. CANO: All the parties here have signed confidentiality agreements and may receive it.

MR. McGLOTHLIN: We do need an exhibit number,

1	Chairman.
2	CHAIRMAN GRAHAM: Yes.
3	MR. YOUNG: And that's 202.
4	CHAIRMAN GRAHAM: Exhibit Number 202. And is
5	there a short title?
6	MR. McGLOTHLIN: And I'd move the admission of
7	202.
8	MR. YOUNG: A short title?
9	MR. McGLOTHLIN: What do we call it? Excerpt,
LO	confidential deposition, Terry Jones.
L1	(Exhibit 202 marked for identification.)
12	CHAIRMAN GRAHAM: Did the court reporter get
L3	that?
L <b>4</b>	THE COURT REPORTER: Yes.
L5	CHAIRMAN GRAHAM: Okay. If there's no
L6	objection to move 202 into the record
L7	MR. ANDERSON: None.
L8	CHAIRMAN GRAHAM: we'll make that happen.
L9	(Exhibit 202 admitted into the record.)
20	Was that it, Mr. McGlothlin?
21	MR. McGLOTHLIN: That's all.
22	CHAIRMAN GRAHAM: Okay. Is there any need to
23	hold on to the attorneys at Florida Power & Light for
24	the remaining
25	MR. YOUNG: Not that I know of, sir. At this

1	time I would note that the FPL's portion of this year's
2	2011 NCRC hearing is concluded.
3	MR. ANDERSON: We thank the parties, the
4	Commission and the Staff for a very efficient,
5	expeditious hearing. Thank you very much.
6	CHAIRMAN GRAHAM: Thank you for your time and
7	patience and for the way you conducted yourself. Thank
8	you very much. Travel safe. Enjoy your weekend.
9	Mr. Young, talk to me about why Progress
10	Energy is not here in front of me.
11	MR. YOUNG: Paul Lewis is here. I think Paul
12	Lewis may be able to answer that question.
13	CHAIRMAN GRAHAM: Mr. Lewis, you might as well
14	come on up to the front. I've got to yell at somebody.
15	Welcome, sir. I don't know if your mike is
16	on.
17	MR. LEWIS: Thank you, Chairman.
18	CHAIRMAN GRAHAM: Mr. Young.
19	MR. YOUNG: I think Mr. Rehwinkel would like
20	to be heard as relates to the scheduling and, and some,
21	and some proposed stipulations that's being in the
22	works.
23	MR. REHWINKEL: Thank you, Mr. Chairman and
24	Commissioners. Charles Rehwinkel with the Public
25	Counsel's Office.

been working, all of the parties, including Progress, have been working on a proposed stipulation that would give us a hearing time of one and a half to one day potentially for Progress. We haven't completed all of the approvals, so I can't say that we have a stipulation, but I think we're close to doing that. And if we can do that, it would mean that Progress would only have to bring two witnesses to Tallahassee, and we would have our one witness, and the Staff witnesses would be stipulated.

We are still trying to work on that. I've been in contact with Mr. Brew in Washington with respect to PCS and the other parties here. We're not there yet, but I think we will be. And I think we can guarantee the Commission that we'll have a very abbreviated Progress portion of the hearing.

It would also -- I think one of the, the company's concerns is to make sure that these logistics were done and sealed and they could make their arrangements to be in Tallahassee. It would be helpful for us to have a little bit of breathing room to do this stipulation and so we could give the Commission a very tightly knit hearing time for Progress. And so we would ask that, that we be allowed to continue pursuing this

and start first thing Monday.

CHAIRMAN GRAHAM: Mr. Lewis.

MR. LEWIS: Thank you, Chairman. We agree with that. I think that we're real close to bringing this in for a landing. I think the extra time will certainly, you know, get us there -- or hope it will get us there. So we would request a start time of Monday as well.

## CHAIRMAN GRAHAM: Staff?

MR. YOUNG: Staff is comfortable with starting on Monday.

CHAIRMAN GRAHAM: Well, I think I'm a little comfortable starting on Tuesday. Is that a problem with anybody?

MR. REHWINKEL: Tuesday is not a problem for us. We wanted a no earlier than Monday start time.

CHAIRMAN GRAHAM: No. It's just -- I mean, that's fine because just in case there's anything else that comes out over the weekend or you guys need to iron things out so we make sure that we're ready to go 9:30 Tuesday morning.

Is there any, anybody that's got a conflict with that? I know we had the entire week set aside for this. I just wanted to make sure that -- well, I do appreciate you guys working on stipulating a lot of

these things and trying to streamline this process.

If there's nothing else -- Staff, is there anything to be added?

MR. YOUNG: No, sir.

MR. REHWINKEL: Mr. Chairman, if I -- I also want to just add, because I know this has been an issue and has been a valid concern in the General Counsel's Office. We're working to make the hearing, the focus of the hearing next week all about the Levy nuclear project. The Crystal River uprate project is a very difficult issue to deal with because of the uncertainties that have, have arisen due to events this year.

So what we're trying to arrange is, is a scenario where we can deal with Levy now, and all of the parties believe we can, we can address the relevant remaining CR3 issues in the next cycle. So none of this is, is an attempt to kind of sweep anything under the rug. It is a very pragmatic situation all the parties recognize in our agreement, and I think the Commission has facilitated that as well.

CHAIRMAN GRAHAM: Yeah. I agree. By no means are we done with Crystal River. And that anything we can do to clarify this and streamline this, I think it's a good thing. And if you would reach out to Staff

sometime Monday morning and give them an idea of where 1 you are in the process, make sure that we know that 2 everything is moving smoothly. 3 MR. REHWINKEL: Okay. MR. YOUNG: You took the words right out of my 5 I was going to request that the company notify 6 Staff as soon as possible on any proposed stipulations 7 and where they are, where they're at in terms of the 8 proposed stipulations so we can brief the Commissioners 9 before we get back here Tuesday morning at 9:30 or 10 whatever time the Chairman decides. 11 CHAIRMAN GRAHAM: So you would give us, the 12 Commissioners, reach out to our offices at least by 13 14 1:00 on Monday? MR. YOUNG: Yes, sir. 15 MR. REHWINKEL: With the concurrence of the 16 parties, I have been keeping Staff posted on what we're 17 proposing to do so that we don't have any last minute 18 surprises or things that would, that would be a problem. 19 Especially with the Commissioners, if you wanted to hear 20 from certain witnesses. 21 CHAIRMAN GRAHAM: As you guys probably know by 22 now, I don't like surprises. 23 Commissioner Brisé. 24

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25

COMMISSIONER BRISÉ: Thank you, Mr. Chairman.

And I thank the parties for working certain things out together, and hopefully we can go further with that. And that is precisely, with respect to CR3, that is precisely the reason why it came to the full Commission so that there was an affirmative decision to move the issue to, 'til next year so that it was clear to the public that we are not leaving the issue behind, but we will deal with the issue at hand, which is Levy. And so I think when we did that, I think that message was sent loud and clear and there's nothing under the rug or anything to that effect. So I thank you for, for making that statement on the record as well.

CHAIRMAN GRAHAM: Commissioner Edgar.

Mr. Rehwinkel, on behalf of OPC, represented that you have been in contact with Mr. Brew, and he, of course, on behalf of his client, was not a party to the FPL portion and was excused from being here during that portion. But as long as we do have the other Intervenors that are still with us here today that will be participating in the Progress, I would just like to hear, you know, on the record if there are any, any concerns or any other issues with the process that has been laid out, and looking forward to a Tuesday time to be all gathered again together.

MS. KAUFMAN: Commissioner Edgar,

Commissioners, on behalf of FIPUG, we are fine with the process that has been laid out. We are hopeful that we will come to agreement, and we think that the time that's been discussed should be sufficient.

COMMISSIONER EDGAR: Thank you.

MS. WHITE: Yes. On behalf of the Federal Executive Agencies, we echo those. I thank

Mr. Rehwinkel for his work to try to streamline this.

It makes all of our jobs a lot easier.

MR. WHITLOCK: Thank you, Commissioner Edgar.

I'd also, on behalf of SACE, like to thank Mr. Rehwinkel and Progress for moving towards this stipulation. And I, too, would echo the same, and I think we're very close. And SACE is fine with a 9:30 a.m. Tuesday start time. Thank you.

COMMISSIONER EDGAR: Thank you.

CHAIRMAN GRAHAM: Commissioner Balbis.

COMMISSIONER BALBIS: Thank you, Mr. Chairman.

And, again, in the -- as far as transparency goes, I just wanted to point out for the public -- I mean, all those that are here understand that the issues associated with the CR3 repairs are a separate docket, and that as Prehearing Officer I'm working with the parties on addressing that and bringing that forth to

the Commission. But that issue again is separate from, 1 from this proceeding. I just wanted to point that out 2 for all those listening or watching. 3 CHAIRMAN GRAHAM: Thank you. Well, 4 6 7 8 9 10 11 (Laughter.) 12 13 14 15 16 until Tuesday morning at 9:30 a.m. 17 18 19 20 giving you like a deadline. 21 22 23 Young. 24 25

Intervenors, I want to thank you for what we've done so far, and I look forward to continuing on Tuesday. Staff members, I want to thank you for making this easy, expediting this process and lining it out pretty clearly. Especially our court reporter, thank you for your patience and your little fingers. So just as long as we make sure that we're clear that we're going to get back to Staff sometime Monday morning, Staff is going to get back to the Commissioners by 1:00 on Monday and give us a status update on where things stand, but we are going to recess MR. REHWINKEL: We will get back with Staff before Monday if we have an agreement. Yeah. CHAIRMAN GRAHAM: That's fine. I'm just All right. If there's nothing else, Mr. MR. YOUNG: There's nothing else. confidentialities, if you want to hold onto them or if

you want us to pick them up, we can do that. CHAIRMAN GRAHAM: All right. That all being said, then we are recessed until 9:30 Tuesday morning. Thank you very much, and have a safe weekend. (Recess taken at 1:18 p.m.) (Transcript continues in sequence with Volume 9.) 

1	CERTIFICATE OF REPORTER
2	
3	STATE OF FLORIDA )
4	COUNTY OF LEON )
5	I IINDA DOLEG DDD CDD Official Commission
6	I, LINDA BOLES, RPR, CRR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein
7	stated.
8	IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the
9	same has been transcribed under my direct supervision; and that this transcript constitutes a true
10	transcription of my notes of said proceedings.
11	I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor
12	am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I
13	financially interested in the action.
14	DATED THIS LOS day of Quguet,
15	. /)
16	Hinda Polan
17	LINDA BOLES, RPR, CRR  FPSC Official Commission Reporter
18	(850) 413-6734
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