

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**DOCKET NO. 130009-EI
FLORIDA POWER & LIGHT COMPANY**

**IN RE: NUCLEAR POWER PLANT COST RECOVERY AMOUNT
FOR THE YEAR 2014**

REBUTTAL TESTIMONY & EXHIBITS OF:

TERRY DEASON

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REBUTTAL TESTIMONY OF TERRY DEASON

DOCKET NO. 130009-EI

JULY 5, 2013

Q: Please state your name and business address.

A: My name is Terry Deason. My business address is 301 S. Bronough Street, Suite 200, Tallahassee, Florida 32301.

Q: By whom are you employed and in what capacity?

A: I am employed by the Radey Law Firm as a Special Consultant specializing in the fields of energy, telecommunications, water and wastewater, and public utilities generally.

Q: Please describe your educational background and professional experience.

A: I have thirty-six years of experience in the field of public utility regulation spanning a wide range of responsibilities and roles. I served a total of seven years as a consumer advocate in the Florida Office of Public Counsel (OPC) on two separate occasions. In that role, I testified as an expert witness in numerous rate proceedings before the Florida Public Service Commission (Commission). My tenure of service at the Florida Office of Public Counsel was interrupted by six years as Chief Advisor to Florida Public Service Commissioner Gerald L. Gunter. I left OPC as its Chief Regulatory Analyst when I was first appointed to the Commission in 1991. I served as

1 Commissioner on the Commission for sixteen years, serving as its chairman
2 on two separate occasions. Since retiring from the Commission at the end of
3 2006, I have been providing consulting services and expert testimony on
4 behalf of various clients, including public service commission advocacy staff
5 and regulated utility companies, before commissions in Arkansas, Florida,
6 Montana, New York and North Dakota. My testimony has addressed various
7 regulatory policy matters, including: regulated income tax policy; storm cost
8 recovery procedures; austerity adjustments; depreciation policy; subsequent
9 year rate adjustments; appropriate capital structure ratios; and prudence
10 determinations for proposed new generating plants and associated
11 transmission facilities. I have also testified before various legislative
12 committees on regulatory policy matters. I hold a Bachelor of Science Degree
13 in Accounting, summa cum laude, and a Master of Accounting, both from
14 Florida State University.

15 **Q: Are you sponsoring any exhibits?**

16 A: Yes. I am sponsoring the following rebuttal exhibits:

- 17 ▪ TD - 1, Biographical Information for Terry Deason
- 18 ▪ TD - 2, Jacobs' Non-symmetrical Analysis for Turkey Point Applied
19 to St. Lucie

20 **Q: What is the purpose of your rebuttal testimony?**

21 A: The purpose of my rebuttal testimony is to respond to certain assertions and a
22 recommendation to disallow costs made by OPC Witness Jacobs concerning

1 Florida Power & Light Company's (FPL) extended power uprate (EPU)
2 project.

3 **Q: Does witness Jacobs make a recommendation on how the Commission**
4 **should treat certain costs of the EPU project?**

5 A: Yes. Based on a strained analysis of the relative cost effectiveness of the
6 Turkey Point portion of the EPU project versus the St. Lucie portion of the
7 EPU project, witness Jacobs, on behalf of the OPC, recommends that the
8 Commission disallow \$200 million of costs incurred to complete the EPU
9 project. In essence, witness Jacobs is recommending an arbitrary cap on
10 otherwise prudently incurred costs.

11 **Q: Should the Commission accept this recommendation?**

12 A: No, the Commission should absolutely reject this recommendation.

13 **Q: Why should the Commission reject witness Jacobs' recommendation?**

14 A: A close examination of this recommendation quickly reveals that it is a
15 rehashing and repackaging of arguments that have already been considered
16 and rejected by the Commission. In addition, his recommendation runs
17 grossly afoul of Florida's policy to promote nuclear generation, the standards
18 of nuclear cost recovery contained in statute and rule, principles of
19 ratemaking, and sound regulatory policy.

20 **Q: What is Florida's policy concerning nuclear generation?**

21 A: Florida's policy is to promote electric utility investment in nuclear power
22 plants and allow for the recovery in rates of all such prudently incurred costs.
23 This is expressly stated in Rule 25-6.0423, F.A.C.

1 **Q: What was the impetus for the Commission’s adoption of Rule 25-6.0423,**
2 **F.A.C.?**

3 A: The most direct and obvious impetus was the enactment in 2006 of Section
4 366.93, Florida Statutes, which directed the Commission to “establish, by
5 rule, alternative cost recovery mechanisms for the recovery of costs incurred
6 in the siting, design, licensing and construction of a nuclear power plant.”

7 **Q: What was the purpose of this directive?**

8 A: The Legislature determined that the risks of planning, constructing, and
9 operating new nuclear generation were great and that the traditional regulatory
10 model was insufficient to address those risks. The traditional regulatory
11 model, which was used in the last round of new nuclear plants constructed in
12 the United States, resulted in the disallowance of substantial investments
13 based on reviews being undertaken only after plants were completed and
14 requests were made to have them included in rate base. Often these reviews
15 entailed upwards of a decade of costs that had been incurred. This caused
16 several problems, not the least of which was the complexity and the span of
17 time of the reviews. Another factor was the accumulated carrying costs of the
18 investments and their resulting impact on rates. For investors to be willing to
19 devote their capital to the planning, construction, and operation of new
20 nuclear plants and for the benefits of new nuclear generation to be achieved,
21 the Legislature determined that a different regulatory approach was needed. A
22 key component of this new approach was to provide greater certainty to the
23 amount and timing of recovery of all prudently incurred costs. Providing

1 regulatory certainty for the recovery of all prudently incurred costs avoided
2 the unacceptable risk of a determination of imprudence being made only after
3 many years of construction expenditures had been incurred. Pursuant to this
4 directive, Rule 25-6.0423, F.A.C., established annual prudence determinations
5 with much needed finality.

6 **Q: Did the Commission specifically address the need for annual prudency
7 reviews and the need for finality?**

8 A: Yes, the matter received much discussion at the Commission's December 19,
9 2006, Agenda Conference during which the Commission voted to propose
10 Rule 25-6.0423, F.A.C. The Public Counsel, while acknowledging his initial
11 opposition to an annual prudence review, stated that "it's probably a good idea
12 for you to take an annual look at this program, a pervasive look, and enter a
13 judgment as to whether you believe the investment undertaken to that point is
14 prudent or not prudent..." And in response to a question on the finality of
15 those determinations, the Commission's General Counsel stated: "I think the
16 concept of administrative finality doesn't let you go back and revisit decisions
17 that were made looking at the record and doing the normal course of things."
18 And the general sentiment of the Commission was encapsulated in this
19 statement by Commissioner Arriaga:

20 *Are we leaving doors open in the middle so that the companies*
21 *may not avail themselves of the rules? I think the purpose here is*
22 *to make sure that nukes are built, because we need that energy.*
23 *We said it over and over and over, we need nuclear energy. Ten*

1 *years from now if we don't have it, we are going to look back and*
2 *say we did not do our job as Commissioners.*

3 **Q: Why is this finality needed?**

4 A: It is needed to avoid the same concerns I expressed earlier with prudence
5 reviews spanning unacceptable time frames and addressing costs that have
6 accumulated over multiple years. Without the finality of the annual prudence
7 determinations, it is possible and perhaps likely that investments in new
8 nuclear generation would be subject to the same risks that plagued earlier
9 investments in nuclear generation.

10 **Q: What is Florida's policy on the finality of prudence determinations of**
11 **nuclear costs?**

12 A: Florida's policy is to review the prudence of incurred costs annually and to
13 disallow those costs found to be imprudent. Costs determined to be prudent
14 are no longer subject to disallowance or further prudence review.

15 **Q: Were there any other statutory changes in 2006 setting forth Florida's**
16 **policy concerning nuclear generation?**

17 A: Yes, there were significant additions and clarifications made to Section
18 403.519, Florida Statutes. These changes work in conjunction with Section
19 366.93, Florida Statutes, and Rule 25-6.043, F.A.C., to further delineate and
20 implement Florida's policy to promote nuclear generation.

21 **Q: What were the notable changes to Section 403.519, Florida Statutes?**

22 A: Section 403.519 establishes the Commission to be the exclusive forum for a
23 determination of need of an electrical power plant subject to the Florida

1 Electrical Power Plant Siting Act. The notable changes did three things.
2 First, nuclear generation was exempted from Rule 25-22.082, F.A.C., which is
3 commonly referred to as “the bid rule.” Second, standards and procedures for
4 the determination of imprudence were established. And third, the
5 Commission was specifically charged to consider whether a proposed nuclear
6 generation facility would: “Enhance the reliability of electric power
7 production within the state by improving the balance of power plant fuel
8 diversity and reducing Florida’s dependence on fuel oil and natural gas.”

9 **Q: Was this last item a new consideration for the Commission?**

10 A: No, while this specific statutory language was new, the Commission had long
11 recognized the need for fuel diversity and the need to reduce Florida’s
12 dependence on fuel oil and natural gas.

13 **Q: What has the Commission done to promote fuel diversity?**

14 A: The Commission recognized the need for generation from “solid fuel” plants.
15 As early as the 1980s the Commission encouraged utilities to purchase “coal-
16 by-wire” from the Southern Company, which had coal capacity available. As
17 part of this initiative, the Commission instituted an “Oil Back-out Clause” to
18 provide a more rapid recovery of costs and thus to promote the use of coal
19 generation. In 2005, FPL’s and Progress Energy’s contracts with Southern
20 came up for renewal and the Commission approved them.

21

22 The Commission also expressed concern over the increasing reliance on
23 natural gas as a base-load generation fuel. As part of its review of 2004 Ten

1 Year Site Plans, the Commission stated, “based on current fuel mix and fuel
2 price projections, Florida’s utilities should explore the feasibility of adding
3 solid fuel generation as part of future capacity additions.”

4 **Q: What was the response from the utilities?**

5 A: The result was the inclusion of seven new coal plants in the reporting utilities’
6 2005 Ten Year Site Plans. JEA, Gainesville Regional Utilities and Seminole
7 Electric Cooperative, Inc. each proposed to build new coal-fired generating
8 units. The Florida Municipal Power Agency, JEA, Reedy Creek, and City of
9 Tallahassee proposed joint ownership in a new coal-fired project. The
10 Orlando Utilities Commission planned to build an integrated coal gasification
11 combined cycle unit. And FPL planned to build two new coal-fired units.

12 **Q: Were any of these planned units ever constructed?**

13 A: No.

14 **Q: What were the circumstances concerning FPL’s two planned coal-fired
15 units?**

16 A: In response to the Commission’s concerns over a lack of fuel diversity, FPL
17 committed to file a feasibility study of coal-fired alternatives, which was filed
18 in 2005. In 2006, in emphasizing its concern of a lack of fuel diversity, the
19 Commission further stated that utilities should not assume the automatic
20 approval of gas-fired plants in future need determination proceedings. In
21 response to the Commission’s direction, FPL then proposed building two
22 ultra-supercritical pulverized coal units in Glades County to come online in
23 2012 and 2013. These units were referred to as the FPL Glades Power Park

1 and were the subject of a proposed need determination before the Commission
2 in 2007. While the project had attractive economics and significant reliability
3 benefits, it was not approved by the Commission. The Commission cited
4 concerns with the risks associated with new coal generation in light of
5 anticipated greenhouse gas emissions regulations. FPL then found itself in a
6 situation of needing to meet its customers' 2012 electricity capacity needs
7 reliably and cost effectively and provide greater fuel diversity while
8 minimizing greenhouse gas emissions. As a result, FPL proposed the EPU
9 project on an expedited basis in order to meet these needs. The Commission
10 issued an order approving FPL's need determination request in 2008.

11 **Q: Why did the Commission encourage utilities to pursue solid fuel**
12 **generation?**

13 A: The Commission had two primary reasons. First was a desire to maintain the
14 reliability of Florida's electric generation. Second was a desire to mitigate the
15 impact of the volatility of natural gas prices and the resulting impact on
16 customers.

17 **Q: Why was the Commission concerned with the reliability of Florida's**
18 **electric generation?**

19 A: During the time the Commission was encouraging the pursuit of solid fuel
20 generation, the Commission was particularly concerned with two fundamental
21 facts impacting Florida's electric generation reliability, facts which continue
22 to this day.

23

1 First is the fact that Florida is a peninsula with limited electric power import
2 capability. In the early 1990s, the Commission attempted to address this
3 constraint. Studies were performed to determine the feasibility of
4 constructing additional transmission lines that would increase the import
5 capability of coal-fired generation from the north. Cost effectiveness
6 considerations, local opposition to construction, and ambiguity in wholesale
7 pricing policies all led to the project not being constructed. And in subsequent
8 years, the amount of coal-fired generation available for import declined.

9

10 The second fundamental fact is that Florida was then becoming and continues
11 now to be increasingly dependent on gas fired generation to meet base-load
12 requirements. This fact, coupled with Florida's dependency on only two main
13 natural gas pipelines into the state, added to the urgency.

14 **Q: Are there instances in which these concerns actually manifested**
15 **themselves?**

16 **A:** Yes, there are at least two. First, was an incident involving the Florida Gas
17 Transmission line. In 1998, when natural gas supplied approximately only 15
18 percent of Florida's needs, a lightning strike and subsequent explosion at a
19 compressor station near Perry, Florida, significantly reduced the
20 pressurization and pumping capability in the pipeline. This in turn reduced
21 the amount of gas fired generation available for dispatch and jeopardized the
22 integrity of the grid. The Florida Department of Environmental Protection
23 declared a thirty day state of emergency and stated: "The Department finds

1 that the explosion has created a state of emergency threatening the public
2 health, safety, and welfare throughout portions of the state that are adversely
3 affected by the curtailment of natural gas supply to various power plants in
4 these areas.” Resulting environmental waivers to allow increased output from
5 non-gas generating units and the extensive use of load control programs were
6 necessary to maintain integrity and prevent a large scale black-out. And then
7 in 2005, Hurricanes Katrina and Rita shut down natural gas production in the
8 Gulf of Mexico. As a result, gas importation into Florida was curtailed and
9 utilities had to make public appeals for conservation and had to seek
10 environmental waivers allowing them to burn back-up fuels such as oil.

11 **Q: In response to previous questions you indicated that the Commission was**
12 **also concerned with the price volatility of natural gas and its impact on**
13 **customers. Could you explain?**

14 **A:** While the price of natural gas is low at present, it still remains volatile and
15 difficult to predict. This exposes utilities and their customers to the potential
16 for large under-recoveries of fuel costs. This was particularly evident during
17 the years 2001 through 2005. The Commission’s Review of 2007 Ten-Year
18 Site Plans addressed this and at page 10 stated:

19 *Starting in 2001, natural gas prices began to increase nationwide*
20 *despite electric utility forecasts of flat prices with moderate growth*
21 *rates. For example, the actual cost of natural gas for FPL more*
22 *than doubled between 2002 and 2006, rising from approximately*
23 *\$4.06 per MMBtu in 2002 to \$8.81 per MMBtu in 2006. In 2005,*

1 *hurricanes and tropical storms in the Gulf of Mexico caused short-*
2 *term spikes as high as \$12 per MMBtu due to gas supply*
3 *disruptions. The effects of higher volatile gas prices can be*
4 *dramatic on customer bills. Between 2003 and 2005, Florida's*
5 *IOUs experienced record fuel cost under-recoveries compared to*
6 *forecasts. Under-recoveries of fuel costs totaled approximately*
7 *\$670 million in 2003, \$353 million in 2004, and \$1.564 billion in*
8 *2005. The three years of higher than predicted fuel costs alone are*
9 *approximately the same as the capital cost of a new coal-fired*
10 *plant.*

11 **Q: How does the Commission's encouragement of solid fuel generation relate**
12 **to FPL's EPU project?**

13 **A:** All of the concerns expressed earlier by the Commission arising from an
14 increasing reliance on natural gas continue today. Coal no longer appears to
15 be an available means to increase solid fuel generation in Florida, primarily
16 due to concerns with air emission impacts. Nuclear generation remains a cost-
17 effective means to increase solid fuel generation without air emission impacts.
18 The policy of the State of Florida recognizes this and encourages the
19 development of additional nuclear generation. Relying on this policy and the
20 procedures provided in law and rule, FPL has taken on the higher risk of
21 constructing additional nuclear generation to comply with this policy and to
22 address the Commission's long held concerns.

1 **Q: Given Florida's policy of promoting nuclear and the procedures in law**
2 **and rule, why is nuclear a higher risk option?**

3 A: As a general rule, a higher capital cost and lower fuel cost alternative is a
4 more risky choice than a lower capital cost and higher fuel cost alternative.
5 This risk differential is further amplified in the case of nuclear construction
6 and the unique challenges it brings. This is clearly stated by Commission
7 Staff in its February 1, 2007 recommendation to the Commission to adopt new
8 Rule 25-6.0423, F.A.C., which the Commission did by Order No. PSC-07-
9 0240-FOF-EI:

10 *No new nuclear power plants have been built in the United States*
11 *in several decades. This is in part due to the extraordinary*
12 *obstacles faced by electric utilities wishing to construct new*
13 *nuclear power plants that are not present for other types of*
14 *generation like coal and natural gas. These obstacles include the*
15 *requirement of an intensive federal application, permitting, and*
16 *review process, including oversight by the federal Nuclear*
17 *Regulatory Commission; an extremely long permitting and*
18 *construction period; and a public perception of nuclear generation*
19 *which can pose significant challenges. The clear intent of the 2006*
20 *Florida Legislation is to promote new nuclear generation in*
21 *Florida by providing Florida utilities the incentives needed to*
22 *overcome these obstacles; the Legislature was clearly concerned*
23 *that without these incentives, Florida utilities will continue to build*

1 *natural gas and coal fired generation to meet Florida's growing*
2 *energy needs. The provisions of the rule which staff is*
3 *recommending for adoption were designed to address the intent of*
4 *the statute and these concerns, which are unique to construction of*
5 *nuclear power plants.*

6 **Q: In an answer to a previous question, you stated that Section 403.519,**
7 **Florida Statutes, was revised in 2006 to establish standards and**
8 **procedures for the determination of prudence or imprudence. What is**
9 **the standard in making these determinations?**

10 **A:** After a new nuclear project has received a determination of need, the
11 associated costs are not subject to challenge unless and only to the extent the
12 Commission finds, based on a preponderance of the evidence adduced at a
13 hearing, that certain costs were imprudently incurred. In addition, imprudence
14 shall not include any cost increases due to events beyond the utility's control.
15 Further, a decision to proceed with construction after a determination of need
16 is granted "shall not constitute or be evidence of imprudence." This standard
17 is contained in Section 403.519(4)(e), Florida Statutes, and is specifically
18 referenced by Rule 25-6.0423, F.A.C.

19 **Q: Is witness Jacobs' recommendation consistent with this standard?**

20 **A:** It is not. Witness Jacobs' recommendation presents at least three
21 inconsistencies with this standard. First, witness Jacobs' recommendation is
22 not based on evidence that certain costs were imprudently incurred. Rather,
23 his recommendation is based on an arbitrary disallowance of otherwise

1 prudently incurred costs. Second, he ignores the statutory requirement that
2 any costs incurred due to events beyond the utility's control are not subject to
3 a finding of imprudence. Witness Jacobs makes wildly accusatory and
4 unsubstantiated claims that Mr. Jones failed to fully inform the Commission
5 of cost increases necessary to complete the EPU project at the time of the
6 September 2012 hearing in Docket No. 120009-EI. Witness Jacobs then
7 arbitrarily recommends that \$200 million of the EPU project cost be
8 disallowed. At no place in his testimony does witness Jacobs specifically
9 identify cost increases that were within FPL's control and that those specific
10 increases resulted from management imprudence. And third, witness Jacobs'
11 recommendation would effectively penalize FPL for proceeding with
12 construction after a determination of need had been granted by the
13 Commission and after a consistent annual determination by the Commission
14 that completing the EPU project was in the customers' best interest and would
15 produce substantial cost savings as properly based on a Cumulative Present
16 Value of Revenue Requirements (CPVRR) analysis. These and other
17 inconsistencies cause witness Jacobs' recommendation to be in direct
18 contravention of Florida's policy and standards to promote nuclear power.

19 **Q: Are there other provisions contained in Section 403.519, Florida Statutes,**
20 **which witness Jacobs' recommendation ignores?**

21 A: Yes, there are at least two. Section 403.519(4)(a) recognizes that the estimate
22 of costs of a nuclear power plant presented as part of a need determination is
23 non-binding. This provision recognizes that the same challenges, which make

1 the construction of new nuclear power difficult and in need of policies to
2 overcome them, also make the estimation of costs difficult. Thus it is clearly
3 set forth in statute that the cost estimates are non-binding. This same
4 acknowledgement and rationale would logically extend to subsequent cost
5 estimates. However, witness Jacobs' recommendation would, in essence,
6 have the Commission make the April 2012 cost estimate binding on FPL.
7 And second, Section 403.519(4)(c) declares that no provision of Rule 25-
8 22.082, F.A.C., shall be applicable to a nuclear power plant, including
9 provisions for cost recovery. This provision recognizes that the many
10 challenges of constructing nuclear power plants, such as the high capital costs,
11 the many permits and licenses required, the length of construction, and the
12 difficulty of estimating costs, make the bidding and cost control provisions of
13 Rule 25-22.082, F.A.C., inapplicable. Yet witness Jacobs' recommendation
14 ignores this and would deny recovery of costs in excess of the non-binding
15 estimate. It should also be noted that even Rule 25-22.082, F.A.C., when
16 applied to conventional power plants allows a public utility an opportunity to
17 demonstrate that costs over those identified in the need determination are
18 prudently incurred. The provisions of Rule 25-6.043, F.A.C., specifically
19 recognize the need for this and provide for annual prudence determinations of
20 costs incurred. FPL has been demonstrating annually that costs were incurred
21 prudently since the inception of the EPU project. However, witness Jacobs'
22 recommendation would violate this basic opportunity to show costs to be

1 prudently incurred and declare that \$200 million of costs in excess of the
2 April 2012 forecast were imprudently incurred and should be denied recovery.

3 **Q: In response to a previous question, you stated that witness Jacobs’**
4 **recommendation is a rehashing and repackaging of previous**
5 **recommendations that have been rejected by the Commission. Please**
6 **explain.**

7 A: Witness Jacobs’ recommendation to disallow \$200 million of the Turkey
8 Point portion of the EPU project is basically a repackaging of five arguments
9 that have previously been considered and rejected by the Commission.

10 **Q: What is the first argument that has been presented and rejected by the**
11 **Commission?**

12 A: The first argument is that a risk sharing mechanism should be adopted for the
13 recovery of nuclear project costs.

14 **Q: How does witness Jacobs’ recommendation constitute a risk sharing**
15 **mechanism?**

16 A: Whether called a “risk sharing” mechanism or a “disallowance,” both
17 approaches attempt to accomplish the same outcome of denying FPL the
18 opportunity to recover all prudently incurred costs. As I explained earlier, the
19 disallowance based on an increase in costs above the April 2012 projection
20 does not attempt to determine whether costs were prudently incurred and thus
21 is in conflict with the statutory and rule provisions encouraging nuclear
22 projects. In Order No. 11-0095-FOF-EI, the Commission found that a risk
23 sharing mechanism would not be consistent with the clear statutory

1 requirement that all prudently incurred costs are recoverable. The
2 Commission stated:

3 *In conclusion, based upon the analysis above, we find that we do*
4 *not have the authority under the existing statutory framework to*
5 *require a utility to implement a risk sharing mechanism that would*
6 *preclude a utility from recovering all prudently incurred costs*
7 *resulting from the siting, design, licensing, and construction of a*
8 *nuclear power plant. To do so would limit the scope and effect of*
9 *a specific statute, and an agency may not modify, limit, or enlarge*
10 *the authority it derives from the statute.*

11 This same rationale would equally apply to witness Jacobs' current
12 recommendation. Accordingly, his recommendation should be rejected.

13 **Q: What is the second argument that has been presented and rejected by the**
14 **Commission?**

15 A: The second argument that has been rejected is that FPL was imprudent to "fast
16 track" the EPU project. While witness Jacobs' recommendation to disallow
17 \$200 million of EPU costs is based upon an increase in cost estimates
18 presented by Mr. Jones, witness Jacobs criticizes the cost increases as being
19 impacted by the imprudence of failing to accomplish advanced engineering at
20 the outset. However, the Commission has previously rejected the notion that
21 costs have increased due to the decision to fast track. In its Order No. PSC-
22 11-0547-FOF-EI, the Commission stated:

1 *We find that the above testimony suggests that witness Jacobs*
2 *views the cost increases relative to the original project estimate*
3 *would have likely occurred even without a fast track approach. In*
4 *its brief, FPL argued that there is no basis for OPC witness*
5 *Jacobs' claim that project costs were higher due to FPL's EPU*
6 *approach. We agree.*

7 And later in the same order, the Commission concluded:

8 *Therefore, based on the record evidence, we are hesitant to place*
9 *any weight on the assumption that a traditional approach was a*
10 *reasonable option when considering all relevant facts and*
11 *circumstances surrounding FPL's decision, because there is no*
12 *dispute that a traditional approach to the EPU project would not*
13 *have met the target 2012-2013 need requirements and would have*
14 *resulted in less customer fuel savings. We find that the record*
15 *demonstrates that FPL's decision to implement the EPU project*
16 *using a fast track approach was dependent on the outcome of its*
17 *EPU need petition.*

18 **Q: What is the third argument that has been presented and rejected by the**
19 **Commission?**

20 **A:** The third argument that has been rejected is that sunk costs should be
21 considered in the economic feasibility analysis. Witness Jacobs refers to this
22 as the “sunk cost exclusion” and states that the “sunk cost exclusion” form of

1 feasibility analysis may not be sufficient, in and of itself, to identify a project
2 that is “spiraling out of control.”

3 **Q: What did the Commission say about using sunk costs in a feasibility**
4 **analysis?**

5 A: In its Order No. PSC-11-0547-FOF-EI, the Commission stated:

6 *Sunk costs, by definition, would exist regardless of the*
7 *continuation or cancellation of the EPU project. In adding sunk*
8 *costs to only one side of a CPVRR analysis, witness Smith engaged*
9 *in hindsight review. We note that the feasibility analysis is meant*
10 *to determine whether the EPU projects should be continued or*
11 *canceled. The feasibility analysis does not address the issue of*
12 *whether or not a different path, starting at some point in the past,*
13 *would have resulted in a better outcome. Without the ability to*
14 *make changes to the past, such analysis is not fruitful and does not*
15 *provide us with information to address our charge of determining*
16 *whether the EPU project should be continued.*

17 **Q. Witness Jacobs attaches an article to his testimony as Exhibit No. WRJ-7.**
18 **What does this article say about the use of sunk costs?**

19 A. This article was apparently written to give decision making advice to software
20 managers. On the subject of sunk costs, the article rejects the use of sunk
21 costs in decision making and states:

22 *The result is that sunk costs should not be considered in your*
23 *decision making. Sunk costs do not alter the future costs and*

1 *revenues of your options, so they should not be included in the*
2 *analysis.*

3 The article continues by giving software managers advice to avoid over-
4 optimism and other aspects of psychological barriers and human nature.

5 **Q. Witness Jacobs first references this article when responding to a question**
6 **about “the risk of using FPL’s feasibility methodology for a project that**
7 **involves substantial uncertainty.” Should this article be relied upon by**
8 **the Commission to change its approach to determine economic**
9 **feasibility?**

10 A. No. First, the CPVRR feasibility analysis is not FPL’s approach, but rather is
11 a generally recognized approach used throughout the industry and routinely
12 relied upon by regulators. Second, the article is directed to software managers
13 making decisions about their internal projects and how to avoid wrong
14 decisions based on human nature perspectives. It has no applicability to
15 decision making in an evidentiary proceeding where economic feasibility is an
16 objective standard based on evidence. It is this objective standard and its
17 annual application that is a fundamental foundation of Florida’s policy to
18 promote nuclear energy in the face of substantial uncertainty, while insuring
19 that it is done in a manner which protects customers and provides benefits to
20 them.

21 **Q. What is the fourth argument that has been presented and rejected by the**
22 **Commission?**

1 A. The fourth argument that has been rejected is that the EPU project should be
2 viewed and analyzed as two separate projects. Witness Jacobs makes a
3 number of assumptions to calculate what he believes to be the cost of the St.
4 Lucie portion of the EPU project compared to the Turkey Point portion of the
5 EPU project. Based on his calculations, he concludes that the St. Lucie
6 portion is “economically justifiable and beneficial to customers.” However,
7 for the Turkey Point portion, witness Jacobs opines that it “will be
8 uneconomic to ratepayers.” Based on this opinion and differences in cost
9 estimates, witness Jacobs recommends a \$200 million disallowance of EPU
10 project costs.

11 **Q: Is this appropriate?**

12 A: No, it is not. The EPU project was planned and executed as a single project.
13 The need determination was for a single project. The feasibility of the EPU
14 project has consistently been reviewed and approved by the Commission as a
15 single project. In its Order No. PSC-11-0547-FOF-EI, the Commission found
16 a separate economic analysis for each of the individual project plant[s] would
17 be “unnecessary”, “difficult to calculate”, and would “incorrectly attribute to
18 the individual plants the benefits gained from performing uprates at both
19 plants simultaneously.” In the following year, in its Order No. PSC-12-0650-
20 FOF-EI, the Commission reaffirmed its previous decision and went on to say:

21 *Finally, we note that OPC argues in its brief that, “At this*
22 *advanced stage of the project, OPC believes FPL should complete*
23 *the project.” Consequently, the additional [separate plant]*

1 *analysis does not have any bearing on whether the FPL EPU*
2 *project should be completed.*

3 **Q: Does this passage from Order No. PSC-12-0650-FOF-EI have any bearing**
4 **on the issue of a disallowance currently before the Commission?**

5 A: Yes, it goes right to the heart of the issue.

6 **Q. How so?**

7 A. It clearly shows that OPC’s true purpose of proposing a separate-site approach
8 to evaluate the feasibility of the Turkey Point portion of the EPU project is not
9 being done to determine whether the EPU project should be completed, but
10 rather is an attempt to not pay the full cost of the EPU project once it is
11 completed.

12 **Q. Is this appropriate?**

13 A. No, this position takes the true purpose of a feasibility analysis and “stands it
14 on its head”. The true purpose of a feasibility analysis, whether it be a
15 CPVRR analysis or a breakeven analysis, is to determine the ongoing
16 financial feasibility of completing a project, not to propose a disallowance of
17 otherwise prudently incurred costs.

18 **Q. Has OPC previously advanced a position to use a breakeven analysis to**
19 **propose a disallowance of costs?**

20 A. Yes.

21 **Q: Is this the fifth of the five arguments that have been presented and**
22 **rejected by the Commission?**

1 A: Yes. This argument was presented by witness Jacobs in Docket No. 110009-
2 EI and was rejected by the Commission. While finding that the Commission
3 is not limited to any specific form of economic analysis, breakeven or
4 otherwise, to determine cost-effectiveness, the Commission in Order No.
5 PSC-11-0547-FOF-EI stated:

6 *However, we do not find that a breakeven analysis is necessary at*
7 *this time for the EPU project. As noted above, the EPU project is*
8 *scheduled to have completed or begun all four of the uprate*
9 *outages by the end of 2012. We find that the capital cost estimates*
10 *provided by FPL are adequate. A breakeven analysis would not*
11 *provide additional, dispositive information beyond that which is*
12 *provided in the CPVRR to determine the cost-effectiveness of the*
13 *project.*

14 And in this same order, the Commission went on to emphatically reject the
15 use of a breakeven analysis to disallow otherwise prudently incurred costs,
16 stating:

17 *However, as we addressed below, the breakeven analysis*
18 *suggested by OPC relies on hindsight and does not distinguish*
19 *between prudent and impudent FPL management actions and*
20 *resultant costs. Consequently, OPC's suggestion to interpret or*
21 *define what constitutes "certain costs" in Section 403.519(4), F.S.,*
22 *implements hindsight review and does not consider specific*
23 *management actions or resultant costs.*

1 **Q. What is the relevant language in Section 403.519(4), F.S. to which the**
2 **Commission was referring?**

3 A. The relevant language addresses the right of a utility to recover costs incurred
4 prior to the commercial operation of a nuclear power project and states that
5 such costs:

6 *shall not be subject to challenge unless and only to the extent the*
7 *commission finds, based on a preponderance of the evidence*
8 *adduced at a hearing before the commission under s. 120.57, that*
9 *certain costs were imprudently incurred.*

10 **Q. What is the significance of this language?**

11 A. Consistent with Florida's policy to promote the development of new nuclear
12 generation, which I earlier discussed, this language makes it clear that any
13 disallowance must be based on an evidentiary finding of imprudence.

14 **Q. Do witness Jacobs' assertions supporting his recommendation to disallow**
15 **\$200 million of costs meet this standard?**

16 A. No, not in my opinion. He refers to a "2012 surge in unreasonable costs" and
17 asserts that costs have increased to the point that the Turkey Point portion of
18 the EPU project is now "uneconomic to ratepayers." In no place in his
19 testimony does he attribute the increase in costs to be the result of imprudence
20 on the part of FPL management, which is required before costs can be
21 disallowed.

22 **Q: If actual costs are ultimately higher than a previous projection, would**
23 **those costs be imprudent?**

1 A: Not necessarily. There is nothing so magical about a particular cost estimate
2 that would render costs incurred above that estimate unreasonable or
3 imprudent, as witnesses Jacobs' recommendation implies. Rather, it is the
4 nature of the costs themselves and whether the costs have been prudently
5 incurred that determines their recoverability.

6 **Q. As you noted earlier, witness Jacobs also asserts that the Turkey Point**
7 **portion of the EPU is now uneconomic to ratepayers. Does this meet the**
8 **standard in Section 403.519(4) F.S. before costs can be disallowed?**

9 A. First, it should be recognized that this is only his assertion and is contingent
10 on the Commission reversing itself and looking at the Turkey Point portion of
11 the EPU project on a stand-alone basis. Further, his assertion is forcefully
12 rebutted by other FPL witnesses. Nevertheless, his assertion clearly does not
13 meet the statutory standard. Even if one assumes (merely for that the sake of
14 argument) that the Turkey Point portion of the EPU project is uneconomic,
15 this does not equate to management imprudence. Other than his assertion that
16 the decision to expedite the EPU project affected costs, witness Jacobs does
17 not attribute the relative economic feasibility of the EPU project as being
18 attributable to any imprudence. And the challenge to FPL's decision to
19 expedite the EPU project is a contention that has already been rejected by the
20 Commission. Furthermore, his assertion and recommendation to disallow
21 costs totally ignore the fundamental truth that costs can and likely will
22 increase due to factors beyond management control. This fundamental truth is
23 a reason why cost estimates are non-binding. Witness Jacobs would have the

1 Commission ignore this fundamental truth and would have the Commission
2 essentially impose a guarantee that all projects, and sub-parts of projects, will
3 meet his definition of being economic or be subject to having part of the
4 project costs disallowed.

5 **Q: Are there other reasons why the cost estimates are non-binding?**

6 A: Yes, there are at least two. First, estimating costs on any large construction
7 project and especially ones of the complexity of the EPU project is difficult.
8 Second and perhaps more importantly, a regulatory requirement to impose
9 binding cost estimates would essentially “close the door” on complex, capital-
10 intensive projects that are needed to provide the best options for customers in
11 terms of cost, reliability, and diversity.

12 **Q: In response to a previous question, you answered that witness Jacobs was**
13 **essentially seeking to have the Commission impose a guarantee. Could**
14 **you please explain your answer?**

15 A: Yes. Despite having been thoroughly scrutinized annually and having been
16 consistently found to be economically feasible, witness Jacobs would have the
17 Commission, at this late date, guarantee that recoverable costs could not
18 exceed those which are economic (according to his calculation of being
19 economic) without substantial costs being disallowed. Besides not being
20 consistent with Florida’s policy to encourage nuclear power, such a guarantee
21 is inconsistent with sound ratemaking principles as applied to any investment,
22 regardless of technology.

23 **Q: How is this inconsistent with sound ratemaking principles?**

1 A: Besides potentially closing the door on many capital-intensive projects as I
2 earlier discussed, witness Jacobs' proposed "guarantee" is asymmetric.

3 **Q: Please explain.**

4 A: A regulated utility has an obligation to provide safe, reliable, and efficient
5 service. As part of this obligation, a regulated utility has a further obligation
6 to plan its system and make additions or changes as needed to reliably meet
7 customer demand and to do it as cost effectively as possible. Cost estimates
8 and construction budgets are tools used by utility managers and regulators to
9 continually evaluate construction projects to better achieve these goals.
10 However, when a construction project is completed, it is the actual cost of
11 construction that was prudently incurred that ultimately gets included in the
12 utility's rate base. This is regardless of whether the actual cost of construction
13 was under or over previous cost estimates or over or under some calculated
14 amount to break even. This is regulatory symmetry and the operative standard
15 is one of prudence. In stark contrast to this symmetry based on prudence,
16 witness Jacobs wants to "have his cake and eat it too". Witness Jacobs wants
17 to ignore actual costs for a sub-part of a project when they exceed his
18 calculated breakeven point and reduce the amount of costs to be allowed for
19 recovery, in this case by \$200 million. When actual costs are lower than his
20 calculated breakeven point, he wants to allow only the amount of actual costs.

21 **Q: If witness Jacobs wanted to present a balanced recommendation based on**
22 **his breakeven analysis, what would it be?**

1 A: First, I do not endorse witness Jacobs' breakeven analysis, or his continued
2 attempt to break apart the EPU project into two pieces. FPL witness Sim
3 explains the inappropriateness of witness Jacobs' approach in his rebuttal
4 testimony. However, if witness Jacobs wanted to be balanced and continue to
5 recommend a \$200 million disallowance for the Turkey Point portion of the
6 EPU project, he would also need to recommend a \$470 million increment, or
7 bonus, to be added to the recoverable cost of the St. Lucie portion of EPU
8 project. This calculation is based on the numbers presented in witness Jacobs'
9 testimony of the relative positions of the Turkey Point and the St. Lucie
10 portions of the EPU project compared to his breakeven point.

11 **Q: How did you calculate the \$470 million bonus for St. Lucie?**

12 A: The calculation is shown on my Exhibit TD - 2. I begin by showing the
13 calculation of the \$338,720,000, which witness Jacobs states is the amount by
14 which the Turkey Point portion of the EPU exceeds his breakeven benchmark.
15 I then calculate the percentage of his recommended disallowance, which is
16 59.046%. This is all shown on the top half of Exhibit TD - 2.

17

18 The lower half of the exhibit uses the same approach used by witness Jacobs
19 for Turkey Point and symmetrically applies it to the St. Lucie portion of the
20 EPU. Once again, I use witness Jacobs' numbers to calculate the amount by
21 which the St. Lucie portion of the EPU is below witness Jacobs' breakeven
22 benchmark or \$795,200,000. Applying the same 59.046% to this amount
23 results in the calculated bonus of \$470 million. Furthermore, if one were to

1 account for the additional 10 Turkey Point megawatts described in FPL
2 witness Jones' rebuttal testimony, this would increase the calculated bonus
3 amount for St. Lucie to about \$584 million.

4 **Q: Do you recommend that a \$470 million or \$584 million bonus be added to**
5 **the cost of the St. Lucie portion of the EPU project?**

6 A: No. The Commission should continue to evaluate the EPU project as one
7 project as it was originally planned and approved by the Commission. The
8 Commission should also continue to determine the amount of costs to be
9 recovered on a symmetrical basis using a standard of prudence, consistent
10 with sound ratemaking principles and Florida's policy to promote nuclear
11 power.

12 **Q: How is witness Jacobs' recommendation inconsistent with Florida's**
13 **policy?**

14 A: In addition to it being inconsistent with specific statutory and rule provisions
15 which I earlier identified, witness Jacobs' recommendation essentially
16 constitutes one of the fundamental problems that plagued earlier nuclear
17 projects and acted as a barrier to new nuclear development that policy makers
18 in Florida wanted to avoid.

19 **Q: What is this problem which acts as a barrier?**

20 A: It is the problem of making large disallowances of costs after a project has
21 been completed or is near completion. I identified this problem earlier in my
22 testimony. Witness Jacobs' recommendation is exactly that – a large
23 disallowance recommended to occur at the end of the EPU project and after it

1 had consistently been determined to have been economically justified and all
2 costs heretofore determined to have been prudently incurred.

3 **Q: You have indicated that witness Jacobs' recommendation is inconsistent**
4 **with Florida's policy to encourage nuclear power, inconsistent with**
5 **Commission precedent, and inconsistent with sound ratemaking**
6 **principles. Is his recommendation consistent with good regulatory**
7 **policy?**

8 A: No, it is not. Consistent with good regulatory policy, the Commission has the
9 responsibility to balance the needs of investors and customers. Customers
10 have the reasonable expectation to receive safe, reliable and efficient services
11 and the responsibility to pay the cost of providing those services. Investors
12 have the reasonable expectation that capital deployed to provide services to
13 customers will earn a reasonable return and will be eventually repaid in the
14 form of depreciation allowances. In balancing these interests, the
15 Commission should protect customers from imprudently incurred costs and
16 yet ensure that all prudently incurred costs are recovered. Witness Jacobs'
17 recommendation does not do this and would not be consistent with good
18 regulatory policy.

19 **Q: Do you have any other concerns with witness Jacobs' recommendation?**

20 A: Yes, I do. Aside from the fact that the Commission has previously found the
21 rationale for his recommended disallowance to be statutorily impermissible,
22 and that it constitutes bad regulatory policy, I am concerned that adopting

1 such an approach to determining recoverable costs would have severe
2 negative implications for future generation expansion plans in Florida.

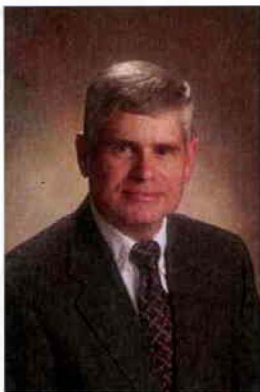
3 **Q: How so?**

4 A: I believe good regulatory policy should encourage utilities to consider all cost-
5 effective options for new generation. Having a full array of viable options can
6 only serve to provide benefits to customers in terms of reliability, cost and
7 fuel diversity. I fear that disallowing costs based on an ever changing
8 breakeven analysis, as contemplated by witness Jacobs, will lead to only the
9 lower-risk options being considered. In today's environment, this would
10 mean an even greater reliance upon gas-fired generation. Of course, a
11 potential over reliance on natural gas is one of the things the Legislature and
12 Commission are attempting to mitigate by encouraging additional nuclear
13 generation.

14 **Q: Does this conclude your rebuttal testimony?**

15 A: Yes, it does.

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Constrained Economic Dispatch, 2005 - 2006, Member
- Southeastern Association of Regulatory Utility Commissioners, 1991 - 2006, *Member*
- Florida Energy 20/20 Study Commission, 2000 - 2001, *Member*
- FCC Federal/State Joint Conference on Accounting, 2003 - 2005, *Member*
- Joint NARUC/Department of Energy Study Commission on Tax and Rate
Treatment of Renewable Energy Projects, 1993, Member
- Bonbright Utilities Center at the University of Georgia, 2001, *Bonbright Distinguished Service
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- Eastern NARUC Utility Rate School - Faculty Member

A Flawed Analysis, Asymmetrically Applied

OPC Witness Jacobs ignored the fact that the Extended Power Uprate Project has been considered one single project since its inception, and he has applied a flawed analysis to FPL's Turkey Point work. If he applied the same analysis to FPL's St. Lucie work, the result would support paying FPL a \$470 million bonus.

OPC WITNESS JACOBS' FLAWED ANALYSIS – IF HE APPLIED IT TO EPU WORK AT ST. LUCIE

- 1.** He would compare his figures for the installed cost of the St. Lucie uprates with his select benchmark figures for the breakeven overnight cost that were calculated for a completely different project – the Turkey Point 6&7 project.

$$\begin{array}{r}
 \$3,800/\text{kW} \\
 - \$6,640/\text{kW} \\
 \hline
 (\$2,840)/\text{kW}
 \end{array}$$

- 2.** He would then multiply this negative benchmark variance by the 280 new megawatts produced by the St. Lucie uprates to find a negative variance of \$795,200,000.

$$\begin{array}{r}
 (\$2,840)/\text{kW} \\
 \times \quad 280 \\
 \hline
 (\$795,200,000)
 \end{array}$$

- 3.** He would then multiply this negative variance of \$795,200,000 by the same 59.046% "disallowance percentage" that he used in the Turkey Point analysis, and the result would have been a credit of nearly \$470 million to FPL on top of the cost of the St. Lucie work.

$$\begin{array}{r}
 (\$795,200,000) \\
 \times \quad 59.046\% \\
 \hline
 (\$469,533,000) \\
 \text{CREDIT TO FPL}
 \end{array}$$

FPL is only seeking its prudently incurred costs associated with the EPU Project – without any penalty or bonus.

Jacobs' Non-symmetrical Analysis for Turkey Point
 Applied to St. Lucie

I. Jacobs' Penalty Calculation:

Jacobs' Installed Cost for TP EPU	\$8,100/kW
Jacobs' Benchmark: Breakeven Overnight Cost for TP 6 and 7 Project	<u>6,640/kW</u>
Benchmark Variance (positive)	\$1,460/kW
Turkey Point EPU Capacity	<u>x 232 MW</u>
Positive Variance	\$338,720,000
Disallowance Percentage	$\$200,000,000/\$338,720,000 = 59.046\%$

II. A Symmetrical Bonus Calculation:

Jacobs' Installed Cost for SL EPU	\$3,800/kW
Jacobs' Benchmark: Breakeven Overnight Cost for TP 6 and 7	<u>6,640kW</u>
Benchmark Variance (negative)	\$2,840/kW
St. Lucie EPU Capacity	<u>x 280 MW</u>
Negative Variance	\$795,200,000
Bonus Percentage	<u>x 59.046%</u>
Amount of Bonus ⁽¹⁾	\$469,533,000

⁽¹⁾Including additional Turkey Point megawatts described in FPL witness Jones' rebuttal testimony would increase the "Amount of Bonus" to \$584,019,000.

