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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**
2 **FLORIDA POWER & LIGHT COMPANY**
3 **AMENDED REBUTTAL TESTIMONY OF JOHN J. REED**
4 **DOCKET NO. 130009**
5 **July 26, 2013**

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

8 A. My name is John J. Reed. My business address is 293 Boston Post Road West,
9 Marlborough, Massachusetts 01752.

10 **Q. Have you previously filed direct testimony in this proceeding?**

11 A. Yes, I have.

12 **Q. Please state the purpose of your rebuttal testimony.**

13 A. I have been asked by Florida Power & Light Company ("FPL" or the
14 "Company") to respond to the direct testimony of William Jacobs, Jr., and
15 specifically Witness Jacobs' recommendation that the Florida Public Service
16 Commission (the "Commission") disallow \$200 million of Extended Power
17 Uprate ("EPU") project (*i.e.*, EPUs at Turkey Point ("PTN") and St. Lucie
18 ("PSL"), which I refer to as the "EPU Project" or the "Project") costs incurred
19 by FPL.

20 **Q. Please summarize your conclusions regarding the direct testimony of**
21 **OPC Witness Jacobs.**

22 A. It is my opinion that Witness Jacobs' recommendation to disallow \$200 million
23 of EPU Project costs is inconsistent with both a reasonable application of the
24 prudence standard (as described in my direct testimony in this proceeding and

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1 further in my rebuttal testimony) and the scope of this proceeding. Specifically,
2 Witness Jacobs' recommendation to disallow \$200 million is not linked to any
3 imprudent decision or action by the Company in 2012 (*i.e.*, the period of review
4 in this proceeding) or in any other period. A reasonable application of the
5 prudence standard involves evaluating decisions and actions, and, if there is a
6 finding of imprudence, quantifying the cost impact that can be attributed to
7 those decisions and actions. Witness Jacobs has not done that and simply relies
8 on a results-oriented analysis to create a recommended disallowance.

9 The prudence standard also requires an exclusion of hindsight. Witness
10 Jacobs, however, embraces rather than excludes hindsight from his evaluation, as
11 he performs a review of the EPU Project based on information that was not
12 available at the time FPL had to make its decisions, and uses the results of that
13 approach to question decisions made by FPL as far back as 2007 (*i.e.*, the year
14 FPL decided to undertake the EPU Project). All of FPL's decisions that
15 occurred prior to 2012 were previously reviewed by the Commission, and were
16 found to be reasonable. Witness Jacobs recounts how all of his previous
17 challenges to those actions were found by the Commission to be without merit,
18 but he attempts to revisit those recommendations, and reverse the Commission's
19 prior findings, based solely on the fact that the Project has turned out to cost
20 more than expected. That is the epitome of reliance on hindsight. For that
21 reason, among others, I conclude that the Commission should reject Witness
22 Jacobs' recommendation to disallow \$200 million of EPU Project costs.

23 I also disagree with Witness Jacobs' suggestions that excluding sunk costs
24 from forward-looking feasibility analyses is a flawed approach, and that the PTN

1 and PSL uprates should be evaluated on a separate, stand-alone basis. I note that
2 both of these arguments by Witness Jacobs have been rejected by the
3 Commission in the past. The Company's assessment of the economic feasibility
4 of the EPU Project must only focus on avoidable expenses and must ignore sunk
5 or unavoidable costs that have already been incurred. In addition, because of the
6 high levels of joint costs and project interdependence, the EPU Project is best
7 considered on an integrated basis as a single project.

8 **Q. Please briefly describe the testimony that was filed by Witness Jacobs that**
9 **you will address in your Rebuttal Testimony.**

10 A. In his direct testimony, Witness Jacobs reviewed and evaluated FPL's request for
11 authority to collect historical and projected costs associated with the EPU
12 Project and FPL's new nuclear project. Witness Jacobs accepts the charges
13 incurred by FPL for the new nuclear project. He recommends, however, a
14 disallowance associated with the EPU Project. Witness Jacobs assessed the
15 economic feasibility of the EPU modifications at PTN and PSL on separate
16 bases and concluded that the EPU modifications at PTN are uneconomic.
17 Witness Jacobs recommends an arbitrary disallowance of \$200 million, which he
18 asserts at page 22 of his testimony "provides only partial protection to the
19 ratepayers" based on the difference between Witness Jacobs' assessment of
20 actual spending at PTN in 2012 and the estimate provided by the Company in
21 April 2012. As discussed earlier, Witness Jacobs does not identify any specific
22 decision that led to this \$200 million of "disallowed" cost as having been
23 imprudent, and he has not tied this amount to any excess costs based on what he
24 believes would have been an alternative prudent decision.

1 Q. Witness Jacobs implies on page 19 of his testimony that FPL's decision to
2 undertake the PTN EPU was imprudent. Is that decision relevant to this
3 proceeding?

4 A. No. FPL's decision to undertake the EPU Project, including modifications at
5 PTN, was approved by the Commission over five years ago in the certificate of
6 need filing in Docket No. 070602-EI.¹ Since that time, the Commission has
7 approved FPL's request to recover all of its prudently-incurred costs through the
8 annual Nuclear Cost Recovery Clause ("NCRC") proceedings. Witness Jacobs
9 therefore suggests that the Commission essentially reverse former prudence
10 findings, which I believe is both unfounded and inconsistent with NCRC rules
11 and basic ratemaking principles.

12 Q. Witness Jacobs asserts that the PTN EPU was uneconomic in 2012, which
13 suggests the project should have been abandoned. Does Witness Jacobs
14 demonstrate that FPL should have abandoned the PTN EPU in 2012?

15 A. No, nor could he. In 2012, at such a late stage in the implementation process of
16 a mega project such as the EPU Project, there would typically be very few
17 remaining costs that were truly avoidable. As stated in my direct testimony, at
18 page 20, in late 2012 the Engineering Analysis Phase of the EPU Project was
19 completed, the Long Lead Equipment Procurement Phase and the Engineering
20 Design Modification Phase were essentially completed, and the Implementation
21 Phase of the EPU Project was well underway and nearing completion. At that
22 point, therefore, the vast majority of the EPU Project costs were either spent
23 (*i.e.*, sunk costs), or unavoidable (*i.e.*, unspent but contractually obligated). In my
24 direct testimony, I described the steps FPL took to control costs in the late

1 stages of the Project, including incorporation of lessons learned from earlier
2 outages into the design, engineering, and implementation of subsequent outages,
3 and the re-assignment of work scope from the Engineering, Procurement, and
4 Construction (“EPC”) vendor to other, qualified specialist firms in order to
5 efficiently manage the multiple outages, along with rigorous oversight and
6 management of those vendors. Witness Jacobs fails to address those decisions
7 and actions by the Company. Instead, he focuses on the end result with no
8 analysis of the challenges faced by FPL in implementing the EPU Project and the
9 Company’s response to those challenges.

10 **Q. Is Witness Jacobs correct to assess the prudence of FPL’s decision to**
11 **undertake and complete the PTN uprate based solely on the final cost of**
12 **the project?**

13 A. No. Witness Jacobs concludes that the PTN EPU is uneconomic based on his
14 assessment of the near-completed cost of the PTN modifications. Further,
15 Witness Jacobs states at page 11 of his testimony that “[n]ow that the full cost of
16 the Turkey Point EPU project is finally coming into focus, the magnitude of the
17 harm to ratepayers can be comprehended,” and at page 19 of his testimony that
18 “[s]ometimes the impact of an imprudent decision does not show up in the form
19 of unreasonable (and even inordinate) costs until subsequent periods.” This is
20 incorrect and an unreasonable application of the prudence standard described in
21 my direct testimony for two reasons. First, Witness Jacobs implies that we do
22 not know whether a decision is prudent or imprudent until the final cost is
23 known. This approach clearly relies on hindsight and is a violation of the
24 prudence standard that has been consistently applied by the Commission.

1 Second, Witness Jacobs points to and seeks to revisit decisions that happened
2 long before 2012 (*i.e.*, the period under review), such as FPL's decision to
3 "undertake the Turkey Point EPU." As stated above, those decisions were
4 evaluated and approved by the Commission in prior NCRC proceedings, and
5 Witness Jacobs' implication that they should be revisited now is clearly
6 inconsistent with the scope of this proceeding and a reasonable application of
7 the prudence standard. Further, Witness Jacobs' recommendation to assess the
8 prudence of FPL's decision to undertake and complete the PTN uprate based
9 solely on the final cost of the project is reminiscent of the highly unsuccessful
10 "all-or-nothing" regulatory paradigm that was applied in some jurisdictions in the
11 1980s. It was the avoidance of this kind of hindsight-based review that led to the
12 establishment of the NCRC, and the desire to avoid the highly contentious and
13 destructive results that occurred in the 1980s.

14 **Q. Please explain.**

15 A. The regulatory processes applied to the development of nuclear generation in the
16 1980s were characterized by significant cost disallowances, at times owing to
17 results-oriented hindsight reviews that determined whether plants turned out to
18 be economic a decade or more after construction had begun. The standards
19 used by regulators at that time evolved from traditional prudence reviews to
20 include an "economically used and useful" standard that, based on hindsight,
21 determined what portion of a plant's prudently incurred cost was "economically"
22 useful in providing service to customers. The recovery of prudently-incurred
23 costs was further narrowed by the adoption of more onerous standards such as
24 an "economic benefits test" and eventually simple "risk sharing," whereby costs

1 were simply declared unrecoverable on the basis that the total cost was too large
2 for customers alone to bear the burden. By recommending a disallowance based
3 on the final cost of the EPU Project, regardless of the Commission's views on
4 the prudence or imprudence of the actions of the utility, Witness Jacobs is
5 essentially calling for a return to mistaken methodologies of the distant past. The
6 Nuclear Cost Recovery rule, however, demonstrates that the Florida Legislature
7 and the Commission wished to provide a framework within which the
8 Commission has the opportunity to address and avoid many flawed aspects of
9 those past regulatory processes.

10 **Q. Did Witness Jacobs address any of the specific actions and decisions of**
11 **the Company as they related to FPL's execution of the EPU Project?**

12 A. No. Witness Jacobs asserts at page 20 of his testimony that FPL Witness Jones
13 has not established the reasonableness of FPL's PTN expenditures, yet Witness
14 Jacobs does nothing to establish their unreasonableness other than to point out
15 that the EPU Project's costs were higher than anticipated. This is an
16 inappropriate application of the prudence standard.

17 **Q. What is an appropriate application of the prudence standard as it relates to**
18 **FPL's 2012 expenditures?**

19 A. As described in my direct testimony, at pages 11 and 12, the prudence standard is
20 captured by three key features: (1) prudence relates to actions and decisions;
21 costs themselves are not prudent or imprudent; (2) the standard incorporates a
22 presumption of prudence, which is often referred to as a rebuttable presumption;
23 and (3) there is a total exclusion of hindsight. An appropriate application of the
24 prudence standard also considers a range of reasonable behavior regarding

1 elements of the EPU Project that are within FPL's control. That standard of
2 prudence is consistent with the standard applied by the Commission, many other
3 state and federal utility regulators, the U.S. Supreme Court, and regulatory
4 advisory groups such as the National Regulatory Research Institute ("NRRI").²

5 Witness Jacobs has violated all of the above-mentioned features of an
6 appropriate application of the prudence standard by: (a) focusing on the end
7 result (*i.e.*, total costs), rather than the Company's decisions and actions in
8 implementing the EPU Project; (b) assuming imprudent management of the
9 Project by the Company based on his assessment of increasing costs, rather than
10 any analysis of specific decisions FPL made in implementing the Project; and (c),
11 as described above, relying on hindsight.

12 **Q. Witness Jacobs states at page 21 of his testimony that if the Commission**
13 **had known FPL's actual total calendar year 2012 expenditures in Docket**
14 **No. 120009-EI, "it may have decided the issue of disallowance that OPC**
15 **raised at that time differently." Do you agree with Witness Jacobs'**
16 **speculation?**

17 **A.** No. Witness Jacobs' argument is predicated on the Commission agreeing with
18 the approach to determining a disallowance that Witness Jacobs presented in
19 Docket No. 120009-EI. As Witness Jacobs acknowledges, at page nine of his
20 testimony, the Commission did not adopt his recommendation in that
21 proceeding. In addition, Witness Jacobs already concluded that the PTN EPU
22 was uneconomic in the 2012 proceeding, and recommended a cap on FPL's
23 recovery of EPU costs. Simply because Witness Jacobs finds the PTN update to
24 be *more* "uneconomic" this year does not mean the Commission would have

1 reversed its rejection of his analytical framework and recommendations in that
2 prior proceeding. In addition, as discussed by Witness Jones in his rebuttal
3 testimony, it is notable that the final cost of the EPU Project on a cost per
4 kilowatt basis is only modestly higher than the non-binding cost estimate
5 presented by Witness Jones in April 2012 in Docket No. 120009-EI, despite
6 what Witness Jacobs attempts to demonstrate in his testimony. Lastly, as
7 discussed above, Witness Jacobs fails to consider that nearly all of the Project's
8 costs were either sunk or unavoidable in 2012, and that FPL had to make its
9 decision on whether or not to complete the project based on a comparison of
10 avoidable costs and lost benefits.

11 **Q. Witness Jacobs recommends a disallowance of \$200 million for the EPU**
12 **Project. Is such a disallowance formulated consistently with a sound**
13 **application of the prudence standard?**

14 **A.** No. A proper application of the prudence standard involves: (a) finding that
15 specific actions or decisions were within or outside a range of reasonable
16 behavior; and (b) quantifying the impact of those specific actions or decisions.
17 That quantification should occur by comparing what did occur to what would
18 have occurred under a "minimally prudent" course of action. Witness Jacobs has
19 done neither. His recommendation, therefore, is simply based on his view that
20 the Project costs more than was expected or more than he now believes it is
21 worth, and does not reflect any application of the prudence standard.

1 Q. Witness Jacobs asserts that FPL Witness Sim has a “flawed insistence on
2 ignoring sunk costs.”³ Do you agree?

3 A. No. Sunk costs are costs that have already been incurred up to a given point in a
4 project and it is important to note that sunk costs cannot be avoided whether the
5 project is cancelled or not. The irrelevance of sunk costs for purposes of
6 determining the forward-looking economic feasibility of a project is a basic
7 principle of economics and corporate finance.⁴ Due to the fact that sunk costs
8 cannot be changed or avoided based on decision-making today, those costs don’t
9 affect or even enter into the analysis underlying a decision as to whether it is
10 economically advisable to complete a project or not.

11 Q. Does Witness Jacobs’ Exhibit No. WRJ-7, that he relies on, support his
12 position?

13 A. No, in fact it supports my conclusion, which is the opposite of Witness Jacobs’
14 conclusion. Exhibit No. WRJ-7 of Witness Jacobs’ direct testimony is an article
15 titled “Successful Software Management: How to Improve Your Decision
16 Making – Sunk Costs”. The first page of that article states the following:

17 Sunk costs are money that you’ve already spent on one of the
18 options, before making the decision. Regardless of which
19 option you choose, the money has already been spent. That
20 money is, for all intents and purposes, gone. If you choose
21 option A, the money is spent. If you choose option B, the
22 money is spent. If you choose to do nothing, the money has
23 still been spent. The result is that *sunk costs should not be*
24 *considered in your decisions*. Sunk costs do not alter the future
25 costs and revenues of your options, so they should not be
26 included in the analysis.

27 Witness Jacobs’ exhibit clearly supports the position that FPL Witness Sim has
28 taken, and provides strong support for the exclusion of sunk costs when
29 assessing the economic feasibility of large capital projects. Under the correct

1 methodology, there is no question that it was prudent for FPL to complete the
2 EPU Project, and that this decision maximized the benefits to ratepayers.

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

4 **A.** Yes, it does.

¹ Order No. PSC-08-0021-FOF-EI, Issued January 7, 2008, in Docket No. 070602-EI, In re: Petition for determination of need for expansion of Turkey Point and St. Lucie nuclear power plants, for exemption from Bid Rule 25-22.082, F.A.C., and for cost recovery through the Commission's Nuclear Power Plant Cost Recovery Rule, Rule 25-6.0423, F.A.C.

² For example, as contained in National Regulatory Research Institute, The Prudent Investment Test in the 1980's, April 1985.

³ Direct Testimony of William R. Jacobs, Jr., Ph.D., at 21.

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