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FPSC - COMMISSION CLERK

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 150009-EI

NUCLEAR COST RECOVERY CLAUSE.
_____ /

VOLUME 4

Pages 492 through 630

PROCEEDINGS: HEARING

COMMISSIONERS
PARTICIPATING:

CHAIRMAN ART GRAHAM
COMMISSIONER RONALD A. BRISÉ
COMMISSIONER JULIE I. BROWN
COMMISSIONER JIMMY PATRONIS

DATE: Tuesday, August 18, 2015

TIME: Commenced at 5:00 p.m.
Concluded at 10:35 p.m.

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

REPORTED BY: MICHELLE SUBIA, CCR, RPR
Premier Reporting
(850)894-0828

APPEARANCES: (As heretofore noted.)

1 I N D E X

2

3 WITNESSES

4 NAME : PAGE NO .

5

6 WILLIAM JACOBS 495

7

8 Examination by Ms. Christensen 496

9

10 Prefiled Direct Testimony of
William Jacobs 497

11

12 Examination by Mr. Moyle 519

13

14 Examination by Ms. Cano 520

15

16 Examination by Ms. Barrera 522

17

18 Examination by Ms. Christensen 539

19

20 JENNIFER GRANT-KEENE 540

21

22 Examination by Mr. Donaldson 541

23

24 Prefiled Direct Testimony of

25

Jennifer Grant-Keene 3/2/15 543

26

27 Prefiled Direct Testimony of

28

29 Jennifer Grant-Keene 5/1/15 554

30

31 Errata of Jennifer Grant-Keene 566

32

33 Examination by Mr. Moyle 572

34

35 Examination by Mr. Cavros 579

36

37 Examination by Ms. Méndez 581

38

39 Prefiled Direct Testimony of

40

41 Iliana H. Piedra 586

42

43 Prefiled Direct Testimony of

44

45 David Rich 590

46

47 EUGENE T. MEEHAN 592

48

49 Examination by Mr. Haber 592

50

51 Prefiled Direct Testimony of

52

53 Eugene T. Meehan 589

54

55 Examination by Mr. Moyle 621

56

57 Examination by Ms. Mapp 623

58

59 Examination by Mr. Haber 627

60

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150009

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EXHIBITS

2

NUMBER :

ID.

ADMTD.

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

2 (Transcript follows in sequence from
3 Volume 3.)

4 We still have on the table the offer from
5 Florida Power & Light about Sim. Is there anybody
6 that has any concern about Sim doing both his
7 direct and rebuttal sometime tomorrow at the time
8 he's scheduled to do rebuttal?

9 MR. MOYLE: No, as long as he goes tomorrow,
10 I'm good.

11 CHAIRMAN GRAHAM: Staff?

12 MS. BARRERA: No.

13 CHAIRMAN GRAHAM: Commissioners?

14 (No responses.)

15 CHAIRMAN GRAHAM: Okay. So you have your
16 answer.

17 All right. So we are at the time to take up
18 Jacobs, who is out of order, but that's what we
19 planned.

20 OPC, this is your witness.

21 MS. CHRISTENSEN: Yes. I was going to ask if
22 it's okay if we just remove the FPL placard since
23 it's not related to our case.

24 CHAIRMAN GRAHAM: Sure.

25 Thereupon,

1

WILLIAM JACOBS

2

was called as a witness, having been previously sworn,

3

was examined and testified as follows:

4

EXAMINATION

5

BY MS. CHRISTENSEN:

6

Q Can you please state your name and business

7

address for the record.

8

A My name is William Jacobs, address is 1850

9

Parkway Place, Marietta, Georgia.

10

Q And did you cause to be prefiled direct

11

testimony consisting of 19 pages in this docket?

12

A I did.

13

Q And do you have any corrections to your

14

testimony?

15

A I do not.

16

Q And if I were to ask you those same questions

17

today, would your answers be the same?

18

A Yes, they would.

19

MS. CHRISTENSEN: I would ask that his

20

prefiled direct testimony be entered into the

21

record as though read?

22

CHAIRMAN GRAHAM: We will enter Mr. Jacobs'

23

prefiled direct testimony into the record as

24

though read, Dr. Jacobs.

25

DIRECT TESTIMONY

OF

WILLIAM R. JACOBS, JR., Ph.D.

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 150009-EI

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Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A. My name is William R. Jacobs, Jr., Ph.D. I am an Executive Consultant with GDS Associates, Inc. ("GDS"). My business address is 1850 Parkway Place, Suite 800, Marietta, Georgia 30067.

Q. DR. JACOBS, PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Mechanical Engineering in 1968, a Master of Science in Nuclear Engineering in 1969 and a Ph.D. in Nuclear Engineering in 1971, all from the Georgia Institute of Technology. I am a registered professional engineer and a member of the American Nuclear Society. I have more than 35 years of experience in the electric power industry including more than 12 years of power plant construction and start-up experience. I have participated in the construction and start-up of seven power plants in this country and overseas in management positions including start-up manager and site manager. As a loaned employee at the Institute of Nuclear Power

1 Operations (“INPO”), I participated in the Construction Project Evaluation Program,
2 performed operating plant evaluations, and assisted in the development of the Outage
3 Management Evaluation Program. Since joining GDS in 1986, I have participated in
4 rate case and litigation support activities related to power plant construction,
5 operation, and decommissioning. I have evaluated nuclear power plant outages at
6 numerous nuclear plants throughout the United States. I served on the management
7 committee of Plum Point Unit 1, a 650 MWe coal fired power plant located near
8 Osceola, Arkansas. As a member of the management committee, I assisted in
9 providing oversight of the engineering, procurement, and construction (“EPC”)
10 contractor for this project. I am currently the Georgia Public Service Commission’s
11 (“GPSC”) Independent Construction Monitor for Georgia Power Vogtle Units 3 and 4
12 nuclear project (“Vogtle”). As the Independent Construction Monitor, I assist the
13 GPSC Commissioners and Staff in providing regulatory oversight of the project. My
14 monitoring activities include regular meetings with project management personnel
15 and regular visits to the Vogtle plant site to monitor construction activities and assess
16 the project schedule and budget. My résumé is included as Exhibit WRJ-1.

17
18 **Q. WHAT IS THE NATURE OF YOUR BUSINESS?**

19 A. GDS is an engineering and consulting firm with offices in Marietta, Georgia; Austin,
20 Texas; Manchester, New Hampshire; Madison, Wisconsin; and Auburn, Alabama.
21 GDS provides a variety of services to the electric utility industry, including power
22 supply planning, generation support services, rates and regulatory consulting,
23 financial analysis, load forecasting, and statistical services. Generation support

1 services provided by GDS include fossil and nuclear plant monitoring, plant
2 ownership feasibility studies, plant management audits, production cost modeling,
3 and expert testimony on matters relating to plant management, construction,
4 licensing, and performance issues in technical litigation and regulatory proceedings.
5

6 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

7 A. I am appearing on behalf of the Florida Office of Public Counsel (“OPC”), who
8 represents the ratepayers of Florida Power & Light Company (“FPL”).
9

10 **Q. WHAT WAS YOUR ASSIGNMENT IN THIS PROCEEDING?**

11 A. I was asked to assist OPC in conducting a review and evaluation of requests by FPL
12 for authority to collect historical and projected costs associated with FPL’s Turkey
13 Point Units 6 and 7 new nuclear project through the capacity cost recovery clause. I
14 was asked to present my findings to assist the Florida Public Service Commission
15 (“FPSC” or “Commission”) in making its determination regarding FPL’s requests.
16

17 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION IN**
18 **THE NUCLEAR COST RECOVERY CLAUSE?**

19 A. Yes. I testified on behalf of OPC in the previous nuclear cost recovery clause
20 (“NCRC”) proceedings in Docket Nos. 080009-EI, 090009-EI, 100009-EI, 110009-
21 EI, 120009-EI and 130009-EI.

1 **Q. PLEASE SUMMARIZE OPC'S PAST PARTICIPATION IN THE**
2 **PROCEEDINGS REGARDING TURKEY POINT UNITS 6 AND 7.**

3 A. I am informed that OPC's earliest involvement was when OPC objected to FPL's
4 request for a declaratory statement concerning the classification of expenses that FPL
5 was to incur prior to the date that site selection expenses were completed. FPL asked
6 the Commission to confirm that such items would be treated as preconstruction
7 expenses, and thus would qualify for recovery through the NCRC. Because FPL's
8 examples included expensive, "long lead" equipment, OPC asked for a hearing to
9 develop the impact of FPL's petition on customers' bills. The Commission denied
10 OPC's request for a hearing and granted FPL's petition.

11 In Docket No. 080009-EI, I criticized FPL's initial policy of contracting for
12 the development of Turkey Point Units 6 and 7 on the basis of separate contracts
13 rather than an overall EPC contract. More recently, it has been my opinion that the
14 minimalist approach that FPL is taking with respect to the development of its
15 proposed new nuclear units is a preferable course of action in light of the downward
16 trend in natural gas prices, uncertainty regarding future load growth, and construction
17 delays being experienced with current nuclear power plant construction projects.
18 OPC has not taken exception to FPL's pursuit of the Combined License ("COL")
19 from the Nuclear Regulatory Commission ("NRC") or the costs related to that effort.

20

21 **Q. ARE YOU AWARE OF ANY CHANGES IN THE STATUTE THAT**
22 **AUTHORIZES COST RECOVERY FOR TURKEY POINT UNITS 6 AND 7?**

1 A. Yes, I am aware that the statute for nuclear cost recovery was amended by the
2 Legislature in 2013. Section 366.93(3)(a)-(e), Florida Statutes, now reads as follows:

3 (3)(a) After a petition for determination of need is granted, a
4 utility may petition the commission for cost recovery as
5 permitted by this section and commission rules.

6 (b) During the time that a utility seeks to obtain a combined
7 license from the Nuclear Regulatory Commission for a nuclear
8 power plant or a certification for an integrated gasification
9 combined cycle power plant, the utility may recover only costs
10 related to, or necessary for, obtaining such licensing or
11 certification.

12 (c) After a utility obtains a license or certification, it must
13 petition the commission for approval before proceeding with
14 preconstruction work beyond those activities necessary to
15 obtain or maintain a license or certificate.

16 1. The only costs that a utility that has obtained a license
17 or certification may recover before obtaining commission
18 approval are those that are previously approved or necessary to
19 maintain the license or certification.

20 2. In order for the commission to approve preconstruction
21 work on a plant, it must determine that:

22 a. The plant remains feasible; and

23 b. The projected costs for the plant are reasonable.

24 (d) After a utility obtains approval to proceed with
25 postlicensure or postcertification preconstruction work, it must
26 petition the commission for approval of any preconstruction
27 materials or equipment purchases that exceed 1 percent of the
28 total projected cost for the project. Such petition shall be
29 reviewed and completed in the annual Nuclear Cost Recovery
30 Clause proceeding in which it is filed or in a separate
31 proceeding by the utility.

32 (e) A utility must petition the commission for approval
33 before beginning the construction phase.

34 1. The only costs that a utility that has obtained
35 commission approval may recover before beginning
36 construction work are those that are previously approved or
37 necessary to maintain the license or certification.

38 2. In order for the commission to approve proceeding with
39 construction on a plant, it must determine that:

- 1 a. The plant remains feasible; and
2 b. The projected costs for the plant are reasonable.

3
4 While I will not opine on the legal implications of these statutory changes, I am aware
5 that it is now relevant to the annual cost recovery review to distinguish which costs
6 are associated with the various phases of the nuclear project, such as obtaining the
7 COL, preconstruction, and construction phases.

8
9 **Q. WHAT ISSUES WILL YOU ADDRESS IN YOUR TESTIMONY?**

10 A. I will address a fundamental flaw in FPL's feasibility analysis. I will also address
11 FPL's request for recovery of preconstruction costs that are not related to, or
12 necessary for, obtaining the COL for Turkey Point Units 6 and 7.

13
14 **Q. WHAT ARE THE PRIMARY COST DRIVERS IN THE FEASIBILITY**
15 **ANALYSIS PREPARED BY FPL?**

16 A. The primary cost drivers in FPL's feasibility analyses are capital costs of the
17 generation options, projected fuel costs, and projected environmental impact costs.
18 These three components of the feasibility analysis must accurately reflect the
19 proposed project costs for the analysis to provide meaningful results.

20
21 **Q. IN YOUR OPINION, IS FPL'S FEASIBILITY ANALYSIS FLAWED?**

22 A. Yes, I believe that FPL's feasibility analysis as presented in this year's cost recovery
23 docket is flawed.

1 **Q. PLEASE EXPLAIN WHY YOU CONSIDER FPL'S FEASIBILITY ANALYSIS**
2 **FOR TURKEY POINT UNITS 6 AND 7 TO BE FLAWED.**

3 A. I believe that FPL's feasibility analysis for Turkey Point Units 6 and 7 is flawed
4 because the analysis utilizes unreasonably low costs for Turkey Point Units 6 and 7.
5

6 **Q. PLEASE EXPLAIN WHY YOU BELIEVE THE COST ESTIMATES FOR**
7 **TURKEY POINT UNITS 6 AND 7 USED IN FPL'S FEASIBILITY ANALYSIS**
8 **ARE SIGNIFICANTLY UNDERSTATED.**

9 A. The cost estimates used by FPL are based on the current, publicly reported costs for
10 the Vogtle Units 3 and 4 project and the V.C. Summer 2 and 3 ("Summer") project.
11 As explained in more detail later in my testimony, the costs reported by the Vogtle
12 and Summer owners do not include the costs being incurred by the contractor over
13 and above the contract cost. The costs actually being incurred by the contractor are
14 significant and will be fully reflected in the cost for the next AP1000 plant.
15

16 **Q. WHY ARE THE PUBLICLY REPORTED COST ESTIMATES FOR VOGTLE**
17 **AND SUMMER NOT REPRESENTATIVE OF TURKEY POINT UNITS 6**
18 **AND 7 COSTS WHEN ESCALATED TO THE APPROPRIATE TIME**
19 **PERIOD?**

20 A. The publicly reported costs for Vogtle and Summer do not fully represent the actual
21 costs being incurred on the Vogtle and Summer projects. Vogtle and Summer are
22 being constructed using fixed/firm price engineering, procurement, and construction
23 (EPC) contracts. This type of contract protects the owner from most of the risk of

1 capital cost increases due to increased labor resulting from lower productivity than
2 estimated, the impact of engineering design changes, the impact of material cost
3 increases, and the impact of schedule delays. The costs being publicly reported by
4 Vogtle and Summer are only the owner's costs under their EPC agreements. They do
5 not include the actual costs being incurred (and absorbed to date) by Westinghouse
6 and Chicago Bridge and Iron ("CB&I"), the contractor for these projects. In my
7 opinion, the costs being incurred by the Vogtle and Summer contractor are
8 substantially higher than those covered by the Vogtle and Summer EPC agreements
9 and these additional contractor costs must be included in a reasonable estimate of the
10 costs of Turkey Point Units 6 and 7.

11
12 **Q. WHAT EVIDENCE DO YOU HAVE THAT THE VOGTLE AND SUMMER**
13 **CONTRACTOR IS INCURRING SIGNIFICANTLY HIGHER COSTS THAN**
14 **ARE BEING SHOWN BY THE PROJECT OWNERS?**

15 A. The contractor for the Vogtle and Summer projects is definitely incurring significant
16 costs beyond the firm price in the EPC contracts. The precise amount of these
17 additional costs is not publicly available; however, the magnitude of these costs can
18 be inferred. Much of the additional costs are schedule driven. The projects were bid
19 based on a 54-month schedule with commercial operation for Vogtle Unit 3 to occur
20 in April 2016. The current schedule for Vogtle Unit 3 is now 39 months later with a
21 Commercial Operation Date ("COD") to occur in June 2019. This is a 72% increase
22 in construction schedule duration. These additional costs for construction labor,

1 project management, and technical support during this delay are being absorbed by
2 the contractor and are not being included in the costs “publicly reported” for Vogtle.

3
4 It is also very difficult to quantify these additional costs that are being incurred by the
5 contractor. By way of example, Southern Nuclear (the project manager for the
6 Vogtle owners) has approximately 400 employees stationed at the Vogtle site.
7 Southern Nuclear estimates that its cost of labor during the schedule delays is
8 approximately \$6 million per month. Applying the current 39-month delay in the
9 schedule results in an approximate \$234 million increase in labor costs for the Vogtle
10 owners. However, the contractor has over 5,000 workers at the Vogtle site. Thus, the
11 monthly contractor cost just for site labor alone at Vogtle could easily be at least \$40
12 million to \$50 million per month of delay. For a 39-month delay, this amounts to
13 between \$1.56 billion and \$1.95 billion of additional site labor costs to the contractor,
14 above the original EPC contract amount. In addition, the contractor has hundreds of
15 highly paid engineers working on the project in their home office. Therefore, these
16 additional labor costs are also being incurred but are not being accounted for in FPL’s
17 flawed feasibility analysis.

18
19 Another significant cost not included in the publicly reported costs for Vogtle is the
20 \$1.1 billion amount which is now the subject of litigation between the Vogtle owners
21 and the contractor. These are costs that have been claimed to have been incurred by
22 the contractor that will either be borne by the contractor or by the Vogtle owners
23 depending on the outcome of the litigation.

1 In summary, while it cannot be precisely determined, the contractor for Vogtle and
2 Summer is incurring very large costs beyond those being publicly reported by the
3 owners of the Vogtle and Summer projects. Thus, it is highly unlikely that in the next
4 round of AP 1000 construction projects, contractors will offer fixed/firm price EPC
5 contracts given the magnitude of the cost overruns for both the Vogtle and Summer
6 projects. In any case, these additional costs will certainly factor into the price of all
7 future AP 1000 construction contracts.

8
9 **Q. ARE YOU ABLE TO OPINE UPON OR DISCUSS THE MAGNITUDE OF**
10 **THESE KNOWN, BUT NOT PUBLICLY QUANTIFIED, COST OVERRUNS?**

11 **A.** No. The contractor's cost overruns are confidential; however, they are significant.

12
13 **Q. WHY ARE COSTS OVERRUNS OF VOGTLE AND SUMMER PROJECTS**
14 **RELEVANT TO FPL'S FEASIBILITY ANALYSIS FOR TURKEY POINT**
15 **UNITS 6 AND 7?**

16 **A.** The costs proposed by the contractors to design and build the Turkey Point Units 6
17 and 7 project will be informed by the total costs to design and construct the Vogtle
18 and Summer projects. The Turkey Point Unit 6 and 7 costs will include the actual
19 amounts borne by the project owners and the actual amounts incurred and borne by
20 the contractor. As a result, the capital costs to build Turkey Point Units 6 and 7 will
21 be far greater than the costs borne by the owners of Vogtle and Summer under their
22 firm/fixed price EPC contracts. Thus, FPL's actual costs will most assuredly be
23 greater than the publicly reported Vogtle and Summer owners' only costs that are

1 currently being used by FPL in its feasibility analysis for the Turkey Point Units 6
2 and 7 project.

3
4 **Q. WHAT IS THE IMPACT OF UNDERSTATING THE COST OF THE**
5 **TURKEY POINT UNITS 6 AND 7 PROJECT ON FPL'S FEASIBILITY**
6 **ANALYSIS?**

7 A. Relatively small changes in assumed capital cost can have a significant impact on the
8 results of the feasibility analysis. It is extremely important and critical to the validity
9 of the Turkey Point Units 6 and 7 feasibility analysis that the capital costs of the
10 generation options being compared are accurate and reasonably reflect the anticipated
11 cost of the units. For example, considering the 40-year operating life case shown in
12 FPL witness Brown's testimony, an increase of 7.91% in Turkey Point Units 6 and 7
13 capital costs results in no cases with feasibility.¹ For the 60-year operating life case,
14 an increase in capital costs of 36.7% results in no cases with feasibility. In these
15 analyses, Turkey Point Units 6 and 7 are considered feasible in the scenarios in which
16 the breakeven cost exceeds the HIGH end of FPL's nuclear cost range (FPL's nuclear
17 cost range is based on the non-binding cost estimate range for constructing Turkey
18 Point Units 6 and 7). The HIGH end of the non-binding cost estimate range to which
19 the breakeven cost is being compared is \$5,589/kW in 2015 dollars which is
20 contained in FPL Witness Brown's Exhibits ROB-5 and ROB-6. For example, when
21 you compare \$5,589/kW to the breakeven cost of \$5,254/kW that is also found in
22 FPL Witness Brown's ROB-5, High Fuel Cost, Env I case, this results in no

¹ The breakeven cost is the cost below which the unit is cost effective or feasible if the cost of building the unit is below that point; if the cost of building the unit is above the breakeven costs, it is no longer feasible.

1 feasibility. Tables showing the impact of increased capital costs of project feasibility
2 are presented below:

3 40-Year Operating Life

% Increase	Adjusted Cost (\$/kW)	No. of Cases with Feasibility
0%	5,589	2
5%	5,868	1
10%	6,148	0

5
6 A project cost increase of 7.91% to the HIGH end non-binding cost estimate of \$5,589/kW in
7 2015 dollars results in no feasibility when compared to the breakeven Nuclear Capital Costs
8 from FPL Witness Brown's Exhibit ROB-5.

9 60-Year Operating Life

% Increase	Adjusted Cost (\$/kW)	No. of Cases with Feasibility
0%	5,589	6
5%	5,868	5
10%	6,148	5
15%	6,427	3
20%	6,707	3
25%	6,986	2
30%	7,266	1
35%	7,545	1
40%	7,825	0

10
11
12 A project cost increase of 36.7% to the HIGH end non-binding cost estimate of \$5,589/kW in
13 2015 dollars results in no feasibility when compared to the breakeven Nuclear Capital Costs
14 from Witness Brown's Exhibit ROB-6. Thus, it is very likely the capital costs will exceed

1 the feasibility tipping point for a 40-year operating life, and more than likely for a 60-year
2 operating life.

3
4 **Q. WHAT TYPE OF ENGINEERING AND CONSTRUCTION CONTRACT IS**
5 **FPL ANTICIPATING FOR THE TURKEY POINT UNITS 6 AND 7**
6 **PROJECT?**

7 A. From FPL's responses to OPC's discovery, it appears FPL has not decided on the
8 type of contract they anticipate nor have they developed a list of firms that will be
9 contacted on this matter. In response to Interrogatory Number 6 of OPC's First Set of
10 Interrogatories, FPL states:

11 FPL has not determined the form of contract to be used for the design
12 and construction of Turkey Point Units 6 & 7.

13
14 In response to Interrogatory Number 7 of OPC's First Set of Interrogatories, FPL
15 states:

16 FPL has not developed a list of firms that will be contacted regarding
17 provision of engineering, procurement and/or construction (i.e., "EPC"
18 or "EP/C") services.
19

20 **Q. DO YOU BELIEVE THAT FPL WILL BE ABLE TO NEGOTIATE A FIRM**
21 **PRICE EPC CONTRACT SIMILAR TO THE VOGTLE AND SUMMER**
22 **CONTRACTS?**

23 A. No, I do not. Based on FPL's discovery responses, FPL has not yet developed the
24 type of contract they will use for the design and construction. In my opinion, given
25 the experience at Vogtle and Summer, it is very unlikely that any contractor will be
26 willing to agree to a firm price EPC contract similar to the Vogtle and Summer

1 contracts. Even if FPL could negotiate a firm price EPC contract, the overall contract
2 price would most certainly include the additional costs experienced in the Vogtle and
3 Summer projects.

4 **Q. SHOULD FPL'S FEASIBILITY ANALYSIS BE UPDATED TO ADDRESS**
5 **THE TRUE COSTS TO FPL RATEPAYERS?**

6 **A.** Yes, it should.

7
8 **Q. WHEN SHOULD FPL'S FEASIBILITY ANALYSIS BE UPDATED TO**
9 **ADDRESS THE TRUE COSTS TO FPL RATEPAYERS?**

10 **A.** The feasibility analysis submitted by FPL should be updated in this docket and going
11 forward to reflect the costs realistically anticipated for the Turkey Point Units 6 and 7
12 project prior to incurring costs associated with preconstruction beyond those activities
13 necessary to obtain or maintain the COL. At a minimum, the feasibility analysis
14 should be corrected by FPL to reflect the higher costs experienced in the Vogtle and
15 Summer projects including the owners' costs and an estimate of the contractor's cost
16 related to the Vogtle and Summer projects.

17
18 **Q. WHAT WILL BE A REALISTIC INDICATION OF THE TRUE COST OF**
19 **TURKEY POINT UNITS 6 AND 7 THAT SHOULD BE USED IN FPL'S**
20 **FEASIBILITY ANALYSES?**

21 **A.** I believe that the best indicator of expected true costs for the Turkey Point Units 6
22 and 7 project will be the actual, binding bids from qualified engineering, procurement
23 and/or construction (EPC or EP/C) contractors with an appropriate amount of

1 contingency added to the bids. These true costs should be incorporated both now
 2 while FPL is supporting the COL application and at the time that FPL requests
 3 approval to proceed to incur preconstruction costs after obtaining the COL. In the
 4 absence of actual, binding bids to update its feasibility analysis, FPL should include
 5 both the owners' costs and estimates for contractor's costs related to the Vogtle and
 6 Summer projects.

7
 8 **Q. PLEASE IDENTIFY THE COSTS RELATED TO TURKEY POINT UNITS 6**
 9 **AND 7 FOR WHICH FPL IS REQUESTING RECOVERY IN THIS**
 10 **PROCEEDING.**

11 A. FPL is requesting approval for recovery of the following actual/estimated costs in
 12 2015 and projected costs in 2016 as shown on FPL Witness Scroggs' Exhibit SDS-9.
 13 Although all of these costs are labeled Preconstruction Costs in Mr. Scroggs' Exhibit,
 14 the Licensing, Permitting, and Engineering & Design cost categories are related to
 15 obtaining the COL.

Category	2015 Actual/Estimated Costs (\$)	2016 Projected Costs (\$)
Licensing	15,377,764	17,047,175
Permitting	291,349	520,642
Engineering & Design	4,026,573	4,684,208
Total Preconstruction Costs Required for the COL	19,695,685	22,252,025
Initial Assessments	1,842,105	3,157,895

1 **Q. ARE THESE COSTS ALL RELATED TO OR NECESSARY FOR**
2 **OBTAINING THE COL FOR THE TURKEY POINT UNITS?**

3 A. No, they are not. In response to Interrogatory Number 4 of OPC's First Set of
4 Interrogatories, FPL states:

5 Initial Assessment analyses are required to inform the project schedule
6 and cost estimates that will be relied upon in the 2016 feasibility
7 analysis that will support FPL's anticipated request to proceed from
8 the licensing phase to the initiation of "pre-construction work," upon
9 receipt of the COL.

10
11 The Initial Assessments are not related to or required for obtaining the COL for
12 Turkey Point Units 6 and 7. In my opinion, the Initial Assessment costs as described
13 by FPL are preconstruction costs and these costs are not related to or necessary to
14 obtain or maintain the COL.

15

16 **Q. AS DESCRIBED BY FPL, ARE THE INITIAL ASSESSMENT COSTS**
17 **PRECONSTRUCTION WORK BEYOND THOSE ACTIVITIES NECESSARY**
18 **TO OBTAIN OR MAINTAIN A LICENSE?**

19 A. Yes, the Initial Assessment costs as described by FPL are preconstruction work
20 beyond those activities that are necessary to obtain or maintain a combined license
21 from the NRC for a nuclear power plant.

22

23 **Q. PLEASE PROVIDE YOUR RECOMMENDATIONS FOR THE COL.**

24 A. I recommend that only costs related to, or necessary for, obtaining the COL be
25 approved for recovery at this time. Regardless of the feasibility analysis, FPL has

1 spent a significant percent of the total cost to obtain the COL. Thus, it would be
2 unreasonable at this point for FPL not to continue the pursuit of obtaining its COL.

3
4 **Q. PLEASE GIVE YOUR RECOMMENDATIONS ON THE FLAWED**
5 **FEASIBILITY ANALYSIS.**

6 A. As I discussed earlier, FPL's feasibility analysis is flawed because the future costs of
7 the project are significantly understated. I recommend that FPL be required to correct
8 its flawed feasibility analysis during this cycle of the NCRC proceeding for the
9 Commission's consideration as appropriate.

10
11 **Q. WHAT SPECIFIC RECOMMENDATIONS TO THE FEASIBILITY**
12 **ANALYSIS WOULD YOU MAKE REGARDING FPL'S ANTICIPATED**
13 **REQUEST TO PROCEED FROM THE LICENSING PHASE TO THE**
14 **INITIATION OF PRECONSTRUCTION WORK?**

15 A. I recommend that the cost estimates that will be relied upon in the feasibility analysis,
16 that will support FPL's anticipated request to proceed from the licensing phase to the
17 initiation of preconstruction work upon receipt of the COL, be based on actual,
18 binding bids from qualified EPC or EP/C contractors with an appropriate amount of
19 contingency added to the bids. In lieu of binding bids from qualified contractors, the
20 feasibility analysis should reflect the higher costs experienced in the Vogtle and
21 Summer projects and, at a minimum, include the owners' costs and an estimate of the
22 contractor's cost related to the Vogtle and Summer projects; and FPL should submit

1 this updated analysis as a not-to-exceed cost or cap above which FPL would not seek
2 cost recovery from ratepayers for the Turkey Point Units 6 and 7 project.

3

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 **A. Yes, it does.**

6

1 BY MS. CHRISTENSEN:

2 Q And to your prefiled testimony, do you have
3 an exhibit attached labeled WRJ-1?

4 A Yes, I do.

5 Q Do you have any corrections to make to your
6 exhibit?

7 A No, I do not.

8 Q Mr -- or excuse me -- Dr. Jacobs, can you
9 please provide a summary of your testimony.

10 A Yes, I will.

11 Good evening, Mr. Chairman, Commissioners. I
12 appreciate you accommodating my schedule by taking me
13 out of turn.

14 In my reading of the company's testimony and
15 listening today to their testimony strikes me that the
16 company and I are in agreement in many areas. These
17 areas of agreement include that the Turkey Point 6 and
18 7 project should be beneficial to FPL ratepayers.
19 Turkey Point 6 and 7 project should be shown to be
20 beneficial prior to spending large amounts of money on
21 the project.

22 The economic benefit to the Turkey Point
23 project should be demonstrated by an economic
24 feasibility analysis submitted by the company.

25 The estimated cost of the project is an

1 important input to the feasibility analysis. It's with
2 the estimated cost of the project that the company and
3 I do not agree. I believe that FPL's feasibility
4 analysis is flawed. The primary drivers in FPL's
5 analysis are the capital cost of the generation
6 options, projected fuel cost and projected
7 environmental impact cost. My testimony focuses on the
8 capital costs that FPL has used as its check on the
9 nonbinding cost estimate for the Turkey Point Unit 6
10 and 7.

11 The company has supported its nonbinding cost
12 estimates by using the publicly reported cost of the
13 two AP1000 projects currently under construction,
14 Vogtle 3 and 4 in Georgia, and Summer Units 2 and 3 in
15 South Carolina. However, the publicly reported costs
16 are significantly understated.

17 It's important to understand that these
18 publicly reported costs are only the costs being
19 incurred by the utility owners in accordance with the
20 firm price EPC contracts for these projects.

21 I am a Georgia Public Service Commission's
22 independent construction monitor for the Vogtle 3 and 4
23 project and I have a detailed understanding of the
24 costs being incurred on the project.

25 I demonstrate in my testimony that the EPC

1 contractor, Westinghouse and CBI, is incurring costs
2 far greater than those costs being reported by the
3 utility owners. I estimate in my testimony that the
4 EPC contractor is incurring costs of greater than
5 \$50 million per month on the Vogtle project alone.
6 This is far greater than the costs being reported by
7 the owners.

8 I believe it is highly unlikely that the next
9 contractors will order fixed or firm EPC contracts
10 based on the magnitude of the cost overruns for the
11 Vogtle and Summer projects. But in any case, these
12 additional costs will certainly be considered in the
13 price of the next AP1000 construction contracts.

14 I believe the company's estimate for Turkey
15 Point 6 and 7 should be informed by the two total costs
16 being incurred by the projects now under construction.
17 This is critically important because, as I demonstrate
18 in my testimony, relatively small increases in cost of
19 the project render the Turkey Point 6 and 7 project not
20 feasible in all of FPL's feasibility scenarios.

21 There's also an issue of recovery of costs of
22 initial assessments that the company wants to perform
23 prior to receiving the COL. In my opinion, the initial
24 assessments are not required for or related to
25 receiving or maintaining a COL.

1 Finally, it's important that the feasibility
2 analysis reflect the full cost of the project, because
3 FPL is planning to ask this Commission for
4 authorization to move into the pre-construction phase
5 on a feasibility analysis using its current estimate.

6 A large amount of money can be spent in a
7 pre-construction phase. Turkey Point 6 and 7 project
8 should be determined to be economically feasible prior
9 to spending that large amount of money.

10 FPL should be required to update its 2015
11 feasibility analysis. FPL should obtain binding bids
12 from qualified EPC contractors with an appropriate
13 amount of contingency added to the bid. Short of a
14 binding bid, FPL should be required to reflect the
15 total cost of Summer and Vogtle projects in this
16 updated analysis as a not-to-exceed cap. That
17 concludes my opening statement, thank you.

18 MS. CHRISTENSEN: We tender the witness for
19 cross.

20 CHAIRMAN GRAHAM: Doctor Jacobs, I didn't
21 hear, were you sworn in this morning?

22 THE WITNESS: I was, yes, sir.

23 CHAIRMAN GRAHAM: Okay. Retail Federation?

24 MR. LAVIA: No questions.

25 CHAIRMAN GRAHAM: FIPUG?

1 MR. MOYLE: One point of clarification, if I
2 could.

3 EXAMINATION

4 BY MR. MOYLE:

5 Q You're the independent construction monitor
6 for Georgia; is that right?

7 A Yes, sir, for the Georgia Public Service
8 Commission. When the Public Service Commission of
9 Georgia certified the Vogtle 3 and 4 Units for Georgia
10 Power, one of their requirements in the stipulation was
11 that they, Georgia Power, fund an independent
12 construction monitor reporting to the Commission to
13 keep them informed of the costs and the schedules.

14 Q Did Georgia also have an independent economic
15 analysis performed on the plant?

16 A Well, that's part of the -- part of what I
17 do.

18 Q Part of what you do?

19 A Part of our team, yes.

20 MR. MOYLE: That is all I have. Thank you.

21 THE WITNESS: Thank you.

22 CHAIRMAN GRAHAM: SACE?

23 MR. CAVROS: No questions, thank you.

24 CHAIRMAN GRAHAM: City of Miami?

25 MR. HABER: No questions.

1 CHAIRMAN GRAHAM: Florida Power & Light?

2 MS. CANO: FPL has less than ten questions
3 for the witness.

4 CHAIRMAN GRAHAM: Okay.

5 EXAMINATION

6 BY MS. CANO:

7 Q Dr. Jacobs, if you could please turn to
8 Page 15 of your prefiled testimony.

9 A Yes, ma'am. I'm there.

10 Q Line 21.

11 A Yes.

12 Q There you state that "I believe the best
13 indicator of the expected true costs for the Turkey
14 Point Units 6 and 7 project will be the actual binding
15 bids from qualified engineering procurement and/or
16 construction contractors with an appropriate amount of
17 contingency added to the bids"?

18 A Yes.

19 Q "These true costs should be incorporated both
20 now while FPL is supporting the COL application and at
21 the time that FPL requests approval to proceed to incur
22 pre-construction costs after obtaining the COL."

23 Did I read that correctly?

24 A Yes, you did.

25 Q If you could please turn now to Page 17,

1 **Line 19. There you state, "The initial assessment**
2 **costs as described by FPL are pre-construction work**
3 **beyond those activities that are necessary to obtain or**
4 **maintain a license" -- I'm sorry -- "a combined license**
5 **from the NRC for a nuclear power plant."**

6 Did I read that section correctly?

7 A Yes, you did.

8 Q Okay. Would the work that you recommend FPL
9 perform to obtain binding bids from EPC contractors now
10 be pre-construction work beyond those activities that
11 are necessary to obtain or maintain a license?

12 A I'm sorry, could you repeat that?

13 Q Sure. Would the work that you recommend FPL
14 undertake now to obtain binding EPC contractor bids be
15 pre-construction work beyond those activities necessary
16 to obtain or maintain a license?

17 A Yes, I believe so.

18 Q So in the event that FPL could follow your
19 recommendation to perform that work at this time, it
20 would be your position that FPL should be permitted to
21 recover the costs associated with that work?

22 A I'm certainly not an expert in cost recovery,
23 but it's my understanding they could recover the costs
24 but not through the NCRC.

25 Q Okay. If you could please look at Line 24 on

1 **Page 17.**

2 A I'm sorry, line what?

3 Q **Line 24, Page 17.**

4 A Yes.

5 Q **There you state, "I recommend only costs**
6 **related to or necessary for obtaining COL be approved**
7 **for recovery at this time." And you're referring to**
8 **recovery through the nuclear recovery process?**

9 A Yes.

10 Q **Okay. So if I understand your testimony**
11 **correctly, the obtaining of binding bids from EPC**
12 **contractors would somehow be recoverable at this time,**
13 **whether through this clause or not?**

14 A Correct.

15 Q **Okay.**

16 A But not through the NCRC.

17 Q **Okay. Thank you.**

18 MS. CANO: No further questions.

19 CHAIRMAN GRAHAM: Staff?

20 MS. BARRERA: We have questions.

21 EXAMINATION

22 BY MS. BARRERA:

23 Q **Good evening, Mr. Jacobs.**

24 A Good evening.

25 Q **Do you recommend any adjustments to FP&L's**

1 costs for 2014, '15 and '16?

2 A No.

3 Q Okay. In your opinion, are FPL's cost
4 recovery levels dependent on your recommendation for an
5 updated feasibility analysis?

6 A I'm sorry, could you repeat that? I'm having
7 trouble.

8 Q Yes. Are FP&L's cost recovery levels
9 dependent on your recommendation for an updated
10 feasibility analysis?

11 A No, they're not.

12 Q Do you agree that pre-construction is the
13 time period after a site has been selected through the
14 completion of the site cleaning?

15 A Yes.

16 Q And you agree that the work required to
17 obtain the license takes place during the
18 pre-construction period; is that correct?

19 A That's correct.

20 Q And in your opinion, is conducting an initial
21 assessment study an activity that should take place
22 during the pre-construction period?

23 A That's correct.

24 Q And please turn to your testimony on Page 17,
25 which is very popular, Lines 12 to 14, where you say,

1 **"In my opinion, the initial assessment costs as**
2 **described by FPL are pre-construction costs and these**
3 **costs are not related to or necessary to obtain or**
4 **maintain a COL."**

5 Did I read it okay?

6 A That's correct.

7 Q **Okay. Please turn -- is it your opinion that**
8 **initial assessment studies are activities that should**
9 **take place only after FP&L secures its combined**
10 **operating license?**

11 A No, they can take place whenever it's
12 appropriate in the schedule. I think the question is
13 with cost recovery. It's my understanding that they
14 should not be allowed to recover those through the
15 Nuclear Cost Recovery Clause, if they -- based on the
16 amended legislation, if they are conducted prior to
17 receiving the COL.

18 Q **Well, let me ask you this. If the**
19 **legislation says that you have to file a petition to**
20 **recover pre-construction to allow -- for the Commission**
21 **to allow you to proceed to pre-construction costs?**

22 A Yes.

23 Q **Are you saying that those costs, those**
24 **initial assessment studies can only be recovered after**
25 **the petition is approved?**

1 A That's my understanding.

2 Q Okay.

3 A I'm sorry, after receipt of the COL.

4 Q Okay. So it's after receipt of the COL
5 irrespective of whether or not the Commission allows --

6 A Yes, that's correct.

7 Q Okay. Is it your opinion that FP&L cannot
8 recover any costs associated with initial assessment
9 studies during the pendency of the proceedings because
10 the initial assessment study activity is not necessary
11 to secure the combined license?

12 A Again, they can recover those costs, but not
13 through the NCRC, is my understanding, based on the
14 amended legislation, NCRC Legislation.

15 Q So would they then have to wait until a base
16 rate proceeding, is that what you're thinking?

17 A Yes. Put it in a CWIP account, yes.

18 Q Okay. You testified that you're aware of the
19 changes to the Nuclear Cost Recovery Statute 366.93?

20 A Yes.

21 Q And, in fact, you quote the statute in your
22 testimony. As a lay person, if not -- what is your
23 understanding of the effect of the amendments on cost
24 recovery?

25 A Well, in particular for this proceeding, the

1 company can only recover costs that are required for or
2 related to obtaining the COL.

3 **Q And you may have said this before, but is it**
4 **your understanding as a lay person that the 2013**
5 **amendments don't prohibit FP&L from undertaking any**
6 **activity that's not required by the NCRC -- I mean, by**
7 **the NRC in its review of the combined license**
8 **application?**

9 MS. CHRISTENSEN: I'm going to object, just
10 because I think this is starting to get a little
11 far afield of his expertise and requiring more of
12 a legal interpretation of the statute than an
13 actual lay person, unless she would like to
14 rephrase the question.

15 CHAIRMAN GRAHAM: Can I get you to reask the
16 question or just say it in your layman's opinion?

17 MS. BARRERA: Yeah.

18 BY MS. BARRERA:

19 **Q What is your understanding, as a lay person,**
20 **of the 2013 amendments, whether or not they prohibit**
21 **FP&L from undertaking any activity not required by the**
22 **NRC?**

23 A Again, I think we covered that. It doesn't
24 prohibit them from undertaking any activity that's
25 needed.

1 Q Okay. And can you please turn to your
2 testimony on Page 15, Lines 8 through 16.

3 A Yes.

4 Q Okay. And the question was "When should
5 FP&L's feasibility analysis be updated to address the
6 true costs to FP&L ratepayers?" And in your answer,
7 you say it should be -- the feasibility analysis should
8 be updated and going forward to reflect the costs
9 realistically anticipated prior to incurring the costs
10 associated with pre-construction beyond those
11 activities necessary to obtain or maintain the COL.

12 Am I reading it correctly?

13 A Yes.

14 Q Okay. And in your opinion, are the costs to
15 implement your recommendation necessary to obtain the
16 combined license?

17 A I'm sorry, could you restate that?

18 Q Yes. Your testimony seems to say, or I think
19 it says, that FP&L should update its feasibility
20 analysis and add all this other information in it,
21 that's your recommendation?

22 A Yes.

23 Q Including binding bids. And what I'm asking
24 is, are the costs to implement your recommendation
25 necessary to obtain the NRC license?

1 A No, they're not.

2 Q Do. You believe that the implementation of
3 your recommendation concerning the FP&L's feasibility
4 analysis, is that required by the Nuclear Regulatory
5 Commission in its review of FP&L's combined license
6 application?

7 A It's not required, no.

8 Q Okay. Do you think the information that
9 would be in the feasibility analysis would be something
10 that the NRC -- the updated feasibility analysis, I'm
11 sorry -- something that the NRC would consider?

12 A No, I don't believe they would.

13 Q Okay. Please turn to your testimony on
14 Page 18.

15 A Yes.

16 Q Okay. And here basically from Lines 15 to
17 22, you recommend actions that you believe FP&L needs
18 to undertake to update its feasibility analysis,
19 including obtaining binding bids from contractors.

20 Are you recommending that as a condition of
21 cost recovery, FP&L engage in work that may not be
22 necessary to obtain or maintain the combined license?

23 A What I'm recommending is that they gather
24 additional information to better inform what their
25 estimated cost to the project is based on the work

1 that's going on at the Vogtle and the Summer projects.

2 **Q Does that include the binding bids that you**
3 **recommended?**

4 A If possible. And, you know, I agree it could
5 be -- binding bids at this point in the project could
6 be difficult. But I think they can better inform their
7 bids based on what's happening on the current existing
8 projects than they have done.

9 **Q Do you characterize the work of obtaining**
10 **bids, binding bids as pre-construction work?**

11 A It would be typically done in the
12 pre-construction period as you defined it, yes.

13 **Q Okay. Would that be before or after the**
14 **Commission hears FP&L's petition to begin**
15 **pre-construction activities?**

16 A It should be done before.

17 **Q Okay. Can you return to Page 17 of your**
18 **testimony where you discuss FP&L's initial assessment**
19 **studies. Do you believe FP&L should secure binding**
20 **contracts to construct Turkey Point before FP&L**
21 **completes the initial assessment studies?**

22 A No.

23 **Q In order to implement your recommendation**
24 **that FP&L secure binding bids, would FP&L necessarily**
25 **have to begin the contracting process for associated**

1 facilities, various long lead time items and the AP1000
2 proprietary portions of the Turkey Point project?

3 A I'm sorry, could you repeat that? I'm having
4 trouble understanding.

5 Q Okay. In order to implement your
6 recommendation, which is that FP&L secure binding bids,
7 would FP&L necessarily have to begin a contracting
8 process for items like associated facilities, long lead
9 time items and the AP1000 proprietary portions?

10 A No, they wouldn't have to contract those.
11 They could begin with discussions with those firms.

12 Q Okay. I'm sorry. In your opinion, is FP&L's
13 position that they would obtain binding bids upon
14 receipt of the license and the Commission's approval to
15 proceed, is that consistent with your recommendation
16 that only costs related to are necessary for obtaining
17 the combined license be approved?

18 A Please repeat that. I'm having trouble
19 following your question, sorry.

20 Q I'm sorry. FP&L's position is that they will
21 obtain binding bids upon receipt of the license and
22 after they receive the Commission approval. Is their
23 position consistent with your recommendation that the
24 only costs that they obtain are costs that are related
25 to or necessary for obtaining the combined licensed?

1 A Well, again, those are the costs that they
2 can recover through the NCRC. They can do whatever
3 work is necessary to receive the best information they
4 can to inform their cost estimate as needed.

5 Q Would you turn to Page 8 of your testimony,
6 **Lines 9 through 14?**

7 A Okay.

8 Q Okay. And you explain that the contractors
9 at the Vogtle and Summer projects are losing money as
10 they're incurring costs over and above what the
11 contracts actually pay?

12 A Correct.

13 Q Is it your opinion that FP&L failed to take
14 into consideration in estimating the costs for Turkey
15 Point the fact that the contractors would seek higher
16 prices?

17 A Yes.

18 Q And in your opinion, does the NRC require
19 these higher over-and-above contractor cost estimates
20 to complete its combined license review?

21 A You lost me on the second part of that
22 question.

23 Q Does the NRC require these higher
24 over-and-above contractor cost estimates to complete
25 its combined license review?

1 A No, NRC does not care about contractor's
2 costs.

3 Q **Okay. Please turn to Page 19 of your**
4 **testimony.**

5 A Okay.

6 Q **Okay. There you testify that FP&L should**
7 **submit an updated analysis with a not-to-exceed cap.**

8 Would you expect an estimated not-to-exceed
9 cap to continue to be updated as FP&L proceeds in
10 securing contracts?

11 A Ideally, yes.

12 Q **Okay. And should FP&L's combined license**
13 **application be updated for all generic AP1000 design**
14 **and construction changes that would have surfaced since**
15 **FP&L's initial filing with the NRC?**

16 A Well, that's part of the NRC licensing
17 process. They would get a license based on a certain
18 design. And their license, per se, would not be
19 updated after that point.

20 Q **Okay. In your opinion, could a series of**
21 **combined license amendment requirements after the**
22 **signing of a contract contribute to both project costs**
23 **and schedule changes?**

24 A Definitely, yes.

25 Q **Okay. And based on your experience, would**

1 **you recommend that FP&L undertake additional efforts to**
2 **confirm and verify a site-specific Turkey Point Unit 6**
3 **and 7 project schedule before committing to binding**
4 **contracts?**

5 A Yes.

6 Q **And do you agree that there will be costs to**
7 **update the feasibility analysis to include additional**
8 **updated information that you believe FP&L has not**
9 **included in its filing?**

10 A Yes.

11 Q **And do you agree -- hold on. Thank you.**

12 Do you agree that FP&L should have
13 substantial analysis and competent support
14 documentation when it requests the Commission's
15 approval to begin post-license, pre-construction work?

16 A Yes.

17 Q **Okay. And in your opinion, is the**
18 **development of these analysis for this Commission**
19 **review activities necessary to obtain or maintain a**
20 **license or certificate?**

21 A I'm sorry, could you repeat that?

22 Q **In the development of these analysis that**
23 **FP&L would have to do in support of its application to**
24 **begin post-license, pre-construction work, do you**
25 **believe that they're necessary to obtain or maintain --**

1 well, obtain the NRC license, the combined?

2 A No.

3 Q Okay. Do you believe the initial assessment
4 studies proposed by FP&L would be consistent with the
5 updated feasibility analysis that you propose?

6 A Yes.

7 Q Okay. Excuse me one second.

8 Thank you, I have no more questions.

9 A Okay. Thank you.

10 CHAIRMAN GRAHAM: Thank you, Staff.

11 Commissioners.

12 Commissioner Brisé.

13 COMMISSIONER BRISÉ: Thank you, Mr. Chairman.

14 Dr. Jacobs, thank you for your testimony this
15 afternoon.

16 THE WITNESS: Yes, sir.

17 COMMISSIONER BRISÉ: This evening.

18 A couple of quick questions. So based upon
19 the information that you have, would you say that
20 considering the additional charges -- not
21 charges -- but additional costs associated with
22 Vogtle and Summer, that the Turkey Point 6 and 7
23 would not be feasible from your perspective?

24 THE WITNESS: That's hard to say. But in my
25 testimony, I show that for the 40-year scenario,

1 if the estimated costs increase by under
2 8 percent, then the unit would no longer be
3 feasible, economically feasible. So there's a
4 good possibility, yes, that it could result in the
5 economics demonstrating that the units are no
6 longer feasible.

7 COMMISSIONER BRISÉ: Okay. So in some of the
8 questions that Staff asked and that FPL asked
9 dealing with the initial assessment cost, so we
10 would agree that is non-COL?

11 THE WITNESS: That's correct.

12 COMMISSIONER BRISÉ: So where would you
13 suggest that that would be recovered? Because you
14 seem to make a distinction between it being able
15 to be recovered for COL and it -- it not being
16 able to be recovered for COL. Where would you
17 suggest that that would be recovered if it was
18 going to be pre-construction work?

19 THE WITNESS: Unfortunately, that's not one
20 of my areas of expertise is cost recovery. But
21 it's just my understanding in discussion with OPC
22 that only costs related to the -- required or
23 related to a COL can be recovered through the
24 NCRC. So it would be recovered through another
25 rate recovery mechanism.

1 COMMISSIONER BRISÉ: Okay. So if I
2 understand your testimony properly, you're asking
3 the Commission really to look at as much
4 information, most current information as possible,
5 look at the experience of plants that are coming
6 into service in the near future so that we can use
7 the most appropriate data, the most current data
8 for us to make an informed decision, independent
9 of how that may fall in within the COL?

10 THE WITNESS: That's exactly right.

11 And the other thing is that in the
12 pre-construction period, very large amounts of
13 money, hundreds and hundreds of millions of
14 dollars can be spent, so you can't authorize them
15 to begin pre-construction thinking that that's
16 not -- you know, that there won't be a lot of
17 money spent there, because there will be.

18 COMMISSIONER BRISÉ: Okay. So in essence, if
19 I'm understanding some of the testimony by the
20 company, that they're trying to address the COL
21 stuff here, and then let's then begin to look at
22 the pre-construction stuff there, because now we
23 have to make a decision based upon the COL and
24 then move is into that next phase? Is my reading
25 of the testimony proffered by the company correct

1 in sort of putting it in those two categories?

2 THE WITNESS: That's my understanding of what
3 they've been saying, yes.

4 COMMISSIONER BRISÉ: Okay. Thank you.

5 CHAIRMAN GRAHAM: Commissioner Brown.

6 COMMISSIONER BROWN: Thank you. A follow-up
7 to Commissioner Brisè's question, earlier question
8 regarding looking at Summer and Vogtle and those
9 increased costs from their projections and
10 considering business best practices and whatnot.
11 You said during over a 40-year life of a nuclear
12 plant that it would not -- most likely not be
13 feasible; is that right?

14 THE WITNESS: Well, what I said was looking
15 at the company's feasibility analysis, if their
16 estimated costs were increased by a little under
17 8 percent, their analysis would show that the
18 project is no longer feasible.

19 COMMISSIONER BROWN: Okay. Now, how about
20 over a 60-year life?

21 THE WITNESS: Over a 60-year life, it would
22 take about a 36 percent increase in cost to be
23 shown to be not feasible.

24 COMMISSIONER BROWN: Now, obviously Florida
25 Power & Light is different than Georgia Power or

1 operations in South Carolina?

2 THE WITNESS: Correct.

3 COMMISSIONER BROWN: Are there distinguishing
4 factors or relative comparisons other than them
5 using the AP1000 reactor?

6 THE WITNESS: Well, I think that the major
7 difference is the type of contract that both the
8 Vogtle and Summer projects have. They have
9 essentially a fixed or firm price contract. Where
10 the vast majority -- although, there's about a
11 billion dollars of it in litigation right now.
12 But the vast majority of costs for a schedule
13 delay, redesign, rework are all being absorbed by
14 the contractor on those projects.

15 And I think the company has agreed,
16 Mr. Scroggs has agreed, it's very unlikely that
17 the Turkey Point units would be able to contract
18 under a fixed price type of scenario. So
19 therefore, the costs that the contractor is
20 incurring on Vogtle -- they will be a lot smarter
21 on Vogtle and Summer, they will have a much better
22 idea of what their costs are going to be. And the
23 costs will be reflected in the contracts for 6 and
24 7 Turkey Point.

25 COMMISSIONER BROWN: Thank you.

1 THE WITNESS: Yes, thank you.

2 CHAIRMAN GRAHAM: Redirect?

3 MS. CHRISTENSEN: Yes.

4 EXAMINATION

5 BY MS. CHRISTENSEN:

6 Q Yes, I have a couple of points that I would
7 like to clarify. I think you used the term CWIP. Can
8 you tell us what that term means?

9 A Construction work in progress. So I think --
10 I mean, my understanding is that's an account that a
11 utility would put costs into that they could then
12 recover at a later point in time as the project comes
13 online.

14 Q Okay. Now, I think you were having a
15 discussion with Ms. Barrera and she was talking about
16 bids and contracts. Can you tell us what you mean by a
17 binding bid?

18 A Well, ideally a binding bid would be a firm
19 contract from an engineering procurement, construction
20 contractor that would lay out the terms and the
21 conditions and what the costs would be for the project.

22 Q Is that the same as a contract, a signed
23 executed contract, or is that different?

24 A Well, it would be their initial bid for the
25 project, not necessarily an executed contract.

1 Q Okay. I think that's all the questions that
2 I have. Thank you.

3 CHAIRMAN GRAHAM: Okay. Exhibits?

4 MS. CHRISTENSEN: I would move in Dr. Jacobs'
5 exhibit to his testimony, which I believe is
6 marked as Number 27 on the Comprehensive Exhibit
7 List.

8 CHAIRMAN GRAHAM: If there's no objections,
9 we will move that into the record.

10 (Exhibit No. 27 was received in evidence.)

11 CHAIRMAN GRAHAM: And I think that's all that
12 we had with this witness.

13 MS. CHRISTENSEN: I would ask that he be
14 excused.

15 CHAIRMAN GRAHAM: Dr. Jacob, travel safe.
16 You're excused.

17 THE WITNESS: Thank you, I appreciate it.

18 CHAIRMAN GRAHAM: Okay. Back to the list.
19 Florida Power & Light, your next witness, please.

20 MR. DONALDSON: Yes. FPL at this time calls
21 Jennifer Grant-Keene.

22 Commissioner, may I proceed?

23 CHAIRMAN GRAHAM: Yes.

24 Thereupon,

25 JENNIFER GRANT-KEENE

1 was called as a witness, having been previously duly
2 sworn, was examined and testified as follows:

3 EXAMINATION

4 BY MR. DONALDSON:

5 Q Ms. Grant-Keene, you were here when everyone
6 was being sworn; is that correct?

7 A Yes.

8 Q Would you please state your name and business
9 address.

10 A Jennifer Grant-Keene, 700 Universe Boulevard,
11 Juno Beach, Florida 33408.

12 Q By whom are you employed and in what
13 capacity?

14 A I'm employed by Florida Power & Light Company
15 as an accounting project manager, clause accounting.

16 Q Have you prepared and caused to be filed 11
17 pages of prefiled direct testimony in this proceeding
18 on March 2nd, 2015?

19 A Yes, I have.

20 Q Did you also prepare and cause to be filed 12
21 pages of prefiled direct testimony for May 1st, 2015?

22 A Yes.

23 Q And, finally, did you also cause to be filed
24 an errata revised on July 17th, 2015?

25 A That's correct.

1 Q Okay. Do you have any other changes to
2 either your prefiled direct testimony or your errata?

3 A No.

4 Q Okay. If I was to ask you the same questions
5 that were listed on your prefiled direct testimony and
6 on the errata, would your answers still be the same?

7 A Yes.

8 MR. DONALDSON: At this time, Your Honor,
9 Mr. Chairman, I would ask that those items be put
10 into the record as though read.

11 CHAIRMAN GRAHAM: We'll put her prefiled
12 direct testimony into the record as though read.

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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **DIRECT TESTIMONY OF JENNIFER GRANT-KEENE**

4 **DOCKET NO. 150009-EI**

5 **March 2, 2015**

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

7 A. My name is Jennifer Grant-Keene. My business address is 700 Universe Boulevard,
8 Juno Beach, FL 33408.

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

10 A. I am employed by Florida Power & Light Company (FPL or the Company) as the
11 New Nuclear Accounting Project Manager.

12 **Q. Please describe your duties and responsibilities in that position.**

13 A. I am responsible for the accounting related to the Company's Turkey Point 6 & 7 (TP
14 6 & 7) Project, and for what accounting remains related to the Extended Power Uprate
15 (EPU) Project. I ensure that the costs for these projects are accurately reflected in the
16 filings made in the Nuclear Cost Recovery (NCR) docket, including the Nuclear Filing
17 Requirements (NFR) Schedules. In addition, I am responsible for ensuring that the
18 Company's assets associated with these projects are appropriately recorded and
19 reflected in FPL's financial statements.

20 **Q. Please describe your educational background and professional experience.**

21 I graduated from Concordia University, Montreal, Canada with a Bachelor of Arts in
22 1978 and Rutgers University, New Jersey in 1984 with a Masters of Business
23 Administration degree, with a Concentration in Accounting. That same year, I was

1 employed by Peat Marwick Mitchell & Company, in Short Hills, New Jersey.
2 Between 1990 and 2000, I lectured in the Accounting Departments of North Carolina
3 Central University, Durham, North Carolina and Lynn University, Boca Raton,
4 Florida. Since 2001 and prior to joining FPL, I have held various Corporate
5 Accounting positions in the State of Florida. In 2009, I joined FPL as an Accounting
6 Manager responsible for Fossil and Nuclear Fuel Accounting, Storm Accounting and
7 Reporting and Analysis for the Property Accounting Group. In January 2014, I
8 assumed the role of New Nuclear Accounting Project Manager. I am a Certified
9 Public Accountant (CPA) licensed in the State of New Jersey and a member of the
10 American Institute of CPAs.

11 **Q. Are you sponsoring or co-sponsoring any Exhibits in this case?**

12 A. Yes, I am sponsoring the following Exhibits:

- 13 • Exhibit JGK-1, Final True-Up of 2014 Revenue Requirements, details the
14 components of the 2014 Turkey Point 6 & 7 and EPU revenue requirements
15 reflected in the NFR True-Up (T) Schedules by project, by year and by category of
16 costs being recovered.
- 17 • Exhibit JGK-2, NFR Schedules, which include Schedules T-1 through T-4 and
18 Appendix C that provide the final true-up of 2014 EPU prior years costs.

19
20 Additionally, I sponsor and co-sponsor some of the NFR Schedules included in
21 exhibits sponsored by FPL Witnesses Scroggs as described below:

- 22 • Exhibit SDS-1 consists of the 2014 “T-Schedules” that provide the final true-up of
23 2014 Turkey Point 6 & 7 costs. Exhibit SDS-1 contains a table of contents which

1 lists the T-Schedules sponsored and co-sponsored by FPL Witness Scroggs and by
2 me, respectively.

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

4 A. The purpose of my testimony is to present the final true-up calculation of the 2014
5 revenue requirements. I provide an overview of the components of the revenue
6 requirements included in FPL's filing and demonstrate that the filing complies with
7 FPSC Rule No. 25-6.0423, Nuclear or Integrated Gasification Combined Cycle Power
8 Plant Cost Recovery Rule. I also discuss the accounting controls FPL relies upon to
9 ensure only appropriate costs are charged to the TP 6 & 7 Project.

10 **Q. Please summarize your testimony.**

11 A. FPL is requesting the Florida Public Service Commission (FPSC or Commission) to
12 approve as prudent its 2014 costs and the resulting overrecovery of revenue
13 requirements of \$691,433, which will reduce the Capacity Cost Recovery Clause
14 (CCRC) charge to customers in 2016. As shown in my Exhibit JGK-1, these revenue
15 requirements are comprised of the difference between \$22,532,841 Actual revenue
16 requirements versus \$23,224,274 Actual/Estimated revenue requirements filed in
17 Docket No. 140009-EI. My testimony includes the exhibits and NFR Schedules
18 needed to support the true-up of 2014 costs and revenue requirements.

19

20 FPL is complying with the NCR Rule and has in place robust and comprehensive
21 corporate and overlapping business unit controls for incurring and validating costs and
22 recording transactions associated with FPL's Nuclear Projects. I describe these

1 controls and outline the documentation, assessment and auditing process for these
2 overlapping control activities.

3 **Q. Please describe the NFR Schedules included in this filing.**

4 A. FPL is filing its 2014 T-Schedules, consistent with the requirements of the NCR Rule,
5 to provide an overview of the financial aspects of its nuclear power plant projects,
6 outline the categories of costs represented, and provide the calculation of detailed
7 project revenue requirements for the prior years.

8

9 **2014 TRUE-UP**

10 **Q. Is FPL filing any NFR Schedules related to TP 6 & 7 Site Selection costs?**

11 A. Yes. FPL is filing the NFR Schedules T-1, T-2 and T-3A described in FPL Witness
12 Scroggs's testimony for TP 6 & 7 Site Selection costs.

13 **Q. What are FPL's Actual 2014 TP 6 & 7 Site Selection costs compared to the**
14 **previous Actual/Estimated costs?**

15 A. FPL's TP 6 & 7 Site Selection costs ceased with the filing of its need petition on
16 October 16, 2007. All recoveries of Site Selection costs and resulting true-ups have
17 been reflected in prior Nuclear Cost Recovery filings. Accordingly, the true-up of
18 costs and resulting revenue requirements each equal zero.

19 **Q. What are FPL's Actual 2014 TP 6 & 7 Site Selection carrying charges compared**
20 **to the previous Actual/Estimated carrying charges and any resulting**
21 **(over)/under recovery?**

22 A. Site Selection carrying charges are predominantly related to the deferred tax assets.
23 The calculation of FPL's 2014 Actual TP 6 & 7 Site Selection carrying charges on the

1 deferred tax asset are \$159,224 as shown in Exhibit JGK-1 and Exhibit SDS-1, NFR
2 Schedule T-3A. FPL's previous Actual/Estimated carrying costs on the deferred tax
3 asset were \$159,144, resulting in an underrecovery of \$79. The deferred tax asset is
4 created by the recovery of Site Selection costs and the payment of income taxes before
5 a deduction for the costs is allowed for income tax purposes.

6 **Q. Is FPL filing any NFR Schedules related to 2014 TP 6 & 7 Pre-construction**
7 **costs?**

8 A. Yes. FPL is filing NFR Schedules T-1 through T-7B as described in FPL Witness
9 Scroggs's testimony for the final true-up of TP 6 & 7 Pre-construction costs.

10 **Q. What revenue requirement amount is FPL requesting for recovery to reflect the**
11 **final true-up of its 2014 TP 6 & 7 Pre-construction costs?**

12 A. FPL is requesting to include in its 2016 CCRC charge an overrecovery of \$691,512 in
13 revenue requirements, which represents an overrecovery of Pre-construction costs of
14 \$821,804, and an underrecovery of carrying charges of \$130,292 as shown on Exhibit
15 JGK-1 and in the calculations in Exhibit SDS-1, NFR Schedules T-2 and T-3A.

16 **Q. What are FPL's 2014 Actual TP 6 & 7 Pre-construction costs compared to 2014**
17 **Actual/Estimated costs and any resulting (over)/under recoveries?**

18 A. FPL's Actual TP 6 & 7 Pre-construction costs for the period January through
19 December 2014 are \$18,448,666 on a jurisdictional basis, as presented in FPL Witness
20 Scroggs's testimony and provided in Exhibit SDS-1, NFR Schedule T-6. FPL's
21 Actual/Estimated 2014 Pre-construction costs were \$19,270,470 on a jurisdictional
22 basis. The result is an overrecovery of Pre-construction revenue requirements of
23 \$821,804.

1 **Q. What are FPL's Actual 2014 TP 6 & 7 Pre-construction carrying charges**
2 **compared to 2014 Actual/Estimated carrying charges and any resulting**
3 **(over)/under recoveries?**

4 A. FPL's Actual 2014 TP 6 & 7 Pre-construction carrying charges are \$4,970,056. FPL's
5 previous Actual/Estimated carrying charges were \$4,839,764, resulting in an
6 underrecovery of revenue requirements of \$130,292. The calculations of the carrying
7 charges can be found in Exhibit SDS-1, NFR Schedules T-2 and T-3A.

8 **Q. Is FPL filing any NFR Schedules related to the EPU Project?**

9 A. Yes, FPL is filing Exhibit JGK-2, NFR Schedules T-1, T-3, T-4, and Appendix C.
10 The EPU project was completed in 2013 and as a result FPL no longer incurs
11 construction costs related to the project. These schedules reflect a total underrecovery
12 of \$2,871 that FPL is adjusting out of its true-up request in order to finalize NFR filing
13 requirements for the project. Therefore, 2014 Actual revenue requirements remain the
14 same as the 2014 Actual/Estimated revenue requirements. No true-up request of EPU
15 revenue requirements is required as shown in Exhibit JGK-1.

16

17

ACCOUNTING CONTROLS

18 **Q. Please describe the accounting controls FPL relied upon to ensure proper cost**
19 **recording and reporting for the Company's nuclear projects.**

20 A. FPL relied on its comprehensive corporate and overlapping business unit controls for
21 recording and reporting transactions. These comprehensive and overlapping controls
22 included:

23

- FPL's Accounting Policies and Procedures;

- 1 • Financial systems and related controls including FPL's general ledger (SAP) and
2 construction asset tracking system (PowerPlan); and
- 3 • Business Unit specific controls and processes.

4 The project controls are discussed in the testimony of FPL Witnesses Scroggs.

5 **Q. How did FPL's policies and procedures ensure accurate recording and reporting**
6 **treatment of project costs?**

7 A. In order to ensure accurate recording and reporting treatment of project costs
8 incurred, FPL relied on a framework of corporate procedures and accounting policies,
9 which are used in conjunction with its Property Retirement Unit Catalog (PRUC).
10 The PRUC is FPL's guide for determining whether or not an activity and the cost
11 incurred in that activity will result in capitalization or otherwise be treated as an
12 expense and conforms to FPSC guidance. Capital costs were recorded by the Nuclear
13 Business Unit in the accounting construction asset tracking system (PowerPlan),
14 which is FPL's fixed asset subsidiary ledger. Capital transactions in PowerPlan were
15 interfaced with the SAP general ledger system during each month. Monthly
16 regulatory reporting was achieved by accessing detailed information from PowerPlan
17 which was reconciled with data in SAP.

18 **Q. How did internal controls support accurate financial reporting of project costs?**

19 A. The application of the corporate and accounting policies and procedures were
20 supported by an interconnected system of internal controls as required by Sarbanes-
21 Oxley Act of 2002, Section 404 (SOX). Under SOX, management identified,
22 documented, administered and certified as to the effectiveness of control activities.
23 Segments or subprocesses of a business process were documented in SOX narratives,

1 which described specific controls necessary to ensure accurate financial reporting of
2 transactions produced by a particular subprocess. Additionally, upstream and down
3 stream subprocesses that fed information into and out of a particular subprocess were
4 identified. This control structure allowed management and owners of the processes to
5 have visibility to the overlapping and overall business processes and how the controls
6 helped to achieve accurate financial reporting.

7 **Q. Were these controls documented, assessed and audited and/or tested?**

8 A. Yes. The FPL corporate accounting policies and procedures were documented and
9 published on the Company's internal website, Employee Web. In addition, accounting
10 management provided formal representation as to the continued compliance with those
11 policies and procedures. Sarbanes-Oxley processes were identified, documented,
12 tested and maintained, including specific processes for planning and executing capital
13 internal orders, as well as acquiring and developing fixed assets. Certain key financial
14 processes were tested during the Company's annual internal test cycle. The
15 Company's external auditor, Deloitte & Touché, LLP, conducted an annual audit,
16 which included assessing the Company's internal controls over financial reporting and
17 testing of general computer controls.

18 **Q. Describe the responsibilities and accounting controls of the New Nuclear
19 Accounting Project Group in 2014.**

20 A. The primary responsibility of the New Nuclear Accounting Project Group was to
21 provide financial accounting guidance for the recording and recovery of costs under
22 the Nuclear Cost Recovery Rule. Additional responsibilities included the preparation
23 and maintenance of the NFR Schedules and, on a monthly basis, ensuring the costs

1 included in the NFR Schedules reflect the financial records of the Company. The TP
2 6 & 7 project utilized unique internal orders to capture costs directly related to the
3 project. After ensuring costs were accurately recorded, adjustments were made to
4 reflect the jurisdictionalized costs and other adjustments required in the NFR
5 Schedules. Monthly journal entries were prepared to reflect the effects of the recovery
6 of these costs and monthly reconciliations of the project general ledger accounts were
7 performed. The resulting NFR Schedules are included in FPL's Nuclear Cost
8 Recovery filings and described in testimony.

9
10 The New Nuclear Accounting Project Group worked closely with the Nuclear
11 Business Unit to ensure proper accounting for costs related to the projects.

12 **Q. Please describe how the Nuclear Business Unit accounting controls operated to**
13 **provide assurance that the costs included in the filing were reasonable and**
14 **properly captured.**

15 A. Business Unit accounting control activities are founded on existing corporate policies
16 and procedures. These policies and procedures provided guidance to the Nuclear
17 Business Unit as to the accounting processing and recording of new nuclear project
18 costs. Specifically, the New Nuclear Business Unit relied upon the following
19 accounting-related control activities:

- 20 • Initiated and maintained unique project internal orders and account coding
21 structure.

- 1 • Conducted monthly detail transaction reviews to ensure that labor costs
- 2 recorded to the project were only for those FPL personnel authorized to charge
- 3 time to the project.
- 4 • Reviewed, approved, and recorded monthly accruals.
- 5 • Reconciled project costs in the General Ledger with project costs provided by
- 6 the New Nuclear Accounting Group from the subsidiary system.
- 7 • Performed analyses of the costs being incurred by the project to ensure that
- 8 costs were appropriately allocated to the correct internal orders.
- 9 • Worked closely with FPL's Accounting and Regulatory Accounting
- 10 Departments to determine which project costs were capital and which were
- 11 O&M.
- 12 • Conducted monthly variance analysis of actual and budgeted expenditures.
- 13 • Managed internal and external financial audit requests.

14

15 **ADDITIONAL NUCLEAR PROJECT ACCOUNTING OVERSIGHT**

16 **Q. Is there any other oversight for the accounting associated with the TP 6 & 7**
17 **Project?**

18 A. Yes. There is an annual internal audit conducted to review the TP 6 & 7 costs.
19 Additionally, the NCR process itself provides an additional layer of review and
20 oversight.

21 **Q. What is the purpose of the annual internal audits conducted by FPL on the TP 6**
22 **& 7 Project?**

23 A. The objective of the audit is to test the propriety of expenses charged to NCR to

1 ensure they are recoverable project expenses and to ensure compliance with the NCR
2 Rule. Any potential process improvements identified during the audits are
3 communicated to management to further enhance internal controls. The audit of the
4 2014 costs related to the TP 6 & 7 Project is currently underway and is expected to be
5 completed in the second quarter of 2015. These audits provide assurance that the
6 internal controls surrounding transactions and processes are well established,
7 maintained and communicated to employees, and provide additional assurance that the
8 financial and operating information generated within the Company is accurate and
9 reliable.

10 **Q. Please comment on the overall level of control and oversight of the NCR process.**

11 A. The ongoing cycles of cost collection, aggregation, analysis, and review which lead to
12 the filing of NFR Schedules provide for a level of detailed review that is
13 unprecedented. For example, in the preparation of the NFR Schedules, transactional
14 expenditures are projected by activity and an immediate review of projections to
15 actuals, in many cases at the transactional level, is conducted. The nature of the data
16 collection and aggregation process, along with the calculation of carrying charges and
17 construction period interest, provides an increased level of detailed review. The
18 requirements of the NCR Rule have, by design, significantly increased the
19 transparency of the costs.

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

21 A. Yes.

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PUBLIC SERVICE COMMISSION
FLORIDA POWER & LIGHT COMPANY
DIRECT TESTIMONY OF JENNIFER GRANT-KEENE
DOCKET NO. 150009-EI

May 1, 2015

Q. Please state your name and business address.

A. My name is Jennifer Grant-Keene. My business address is 700 Universe Boulevard, Juno Beach, FL 33408.

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

A. I am employed by Florida Power & Light Company (FPL or the Company). My current title is Accounting Project Manager, Clause Accounting.

Q. Have you previously filed testimony in this docket?

A. Yes.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present the calculation of the \$34,249,614 revenue requirements that FPL is requesting to recover through the Capacity Cost Recovery Clause (CCRC) in 2016. These revenue requirements are summarized in my Exhibit JGK-3 and shown in FPL's Nuclear Filing Requirement Schedules (NFRs) filed in this docket. Included in these revenue requirements is FPL's final true-up from the 2014 True-Up (T) Schedules filed in this docket on March 2, 2015. In addition, I provide an overview of the components of the revenue requirements included in FPL's filing and

1 demonstrate that the filing complies with the Florida Public Service
2 Commission (FPSC or Commission) Rule No. 25-6.0423, Nuclear or
3 Integrated Gasification Combined Cycle Power Plant Cost Recovery (Nuclear
4 Cost Recovery Rule or NCR Rule). I also discuss the accounting controls
5 FPL relies upon to ensure only appropriate costs are charged to the projects.

6 **Q. Please summarize your testimony.**

7 A. FPL is requesting to recover \$34,249,614 in revenue requirements in 2016.

8 These revenue requirements are based on:

- 9 (1) The final true-up of 2014 costs resulting in an overrecovery of \$691,433;
10 (2) The Actual/Estimated true-up of 2015 costs resulting in an underrecovery
11 of \$6,101,628; and
12 (3) Revenue requirements of \$28,839,419 related to the Projection of 2016
13 costs.

14

15 FPL's 2015 Actual/Estimated (AE) and 2016 Projected (P) Schedules comply
16 with the Nuclear Cost Recovery Rule and reflect information subject to the
17 robust and comprehensive corporate and overlapping business unit controls
18 for incurring and validating costs and recording transactions associated with
19 FPL's Turkey Point 6 & 7 Project (TP 6 & 7 or the Project).

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

21 A. Yes. I am sponsoring the following exhibits:

- 22 • Exhibit JGK-3, 2016 Revenue Requirements, summarizes the revenue
23 requirements requested to be recovered in 2016. These amounts include

1 the results of the 2014 T NFRs filed in this docket on March 2, 2015, the
2 2015 AE NFRs, and the 2016 P NFRs. The NFRs detail the components
3 of costs for the Project, by year and by category of costs being recovered.
4 For the Project this includes Site Selection and Pre-construction costs,
5 and carrying costs on unrecovered balances and on the deferred tax
6 asset/liability.

7 I additionally sponsor or co-sponsor some of the NFRs included in Exhibit
8 SDS-8, Turkey Point 6 & 7 Site Selection and Pre-construction NFR
9 Schedules. These consist of 2015 AE Schedules, 2016 P Schedules, and 2016
10 TOR Schedules. The NFRs contain a table of contents listing the schedules
11 sponsored and co-sponsored by FPL Witness Scroggs and me, respectively.

12

13 **NUCLEAR FILING REQUIREMENT SCHEDULES**

14

15 **Q. Please describe the NFRs you are filing with this testimony.**

16 A. For the Project, FPL is filing its 2015 AE, 2016 P, and 2016 TOR Schedules
17 consistent with the requirements of the NCR Rule to provide an overview of
18 the financial and construction aspects of its new nuclear power plant project,
19 outline the categories of costs represented, and provide the calculation of
20 detailed project revenue requirements. My testimony refers to exhibits that
21 include the 2015 AE Schedules, 2016 P Schedules, and the 2016 TOR
22 Schedules. The 2016 TOR Schedules provide an updated summary of the
23 cumulative project costs.

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The Extended Power Uprate (EPU) Project was completed in 2013 and no additional construction or O&M costs were incurred in 2014. There were no over/under recoveries resulting from the 2014 true-up in 2015. Therefore, FPL is not filing any 2015 EPU schedules in this docket.

Q. Does the Nuclear Cost Recovery Rule describe the annual filing requirements that a utility must make in support of its current year expenditures for Commission review and approval?

A. Yes. The Nuclear Cost Recovery Rule, 25-6.0423(6)(c) states:

“1. Each year . . . a utility shall submit, for Commission review and approval, as part of its cost recovery filings: ...

b. True-Up and Projections for Current Year. A utility shall submit for Commission review and approval its actual/estimated true-up of projected pre-construction expenditures based on a comparison of current year actual/estimated expenditures and the previously-filed estimated expenditures for such current year and a description of the pre-construction work projected to be performed during such year; or, once construction begins, its actual/estimated true-up of projected carrying costs on construction expenditures based on a comparison of current year actual/estimated carrying costs on construction expenditures and the previously filed estimated carrying costs on construction expenditures for such current year and a description of the construction work projected to be performed during such year.”

1 **Q. Is FPL complying with these requirements with respect to its 2015**
2 **Actual/Estimated TP 6 & 7 Project costs?**

3 A. Yes. FPL has included for the Project the 2015 AE Schedules in Exhibit
4 SDS-8 for Site Selection and Pre-construction costs.

5 **Q. Does the Nuclear Cost Recovery Rule describe the annual filing**
6 **requirements that a utility must make for the projected year expenditures**
7 **for Commission review and approval?**

8 A. Yes. The Nuclear Cost Recovery Rule, 25-6.0423(6)(c) states:
9 “1. Each year . . . a utility shall submit, for Commission review and approval,
10 as part of its cost recovery filings: ...

11 c. Projected Costs for Subsequent Years. A utility shall submit, for
12 Commission review and approval, its projected pre-construction expenditures
13 for the subsequent year and a description of the pre-construction work
14 projected to be performed during such year; or, once construction begins, its
15 projected construction expenditures for the subsequent year and a description
16 of the construction work projected to be performed during such year.”

17 **Q. Is FPL complying with these requirements with respect to its 2016**
18 **Projected TP 6 & 7 Project costs?**

19 A. Yes. FPL has included the 2016 P Schedules in Exhibit SDS-8 for Site
20 Selection and Pre-construction costs. My Exhibit JGK-3, details the true up of
21 2014 actual costs (as filed on March 2, 2015 in this docket), and the 2015
22 Actual/Estimated and 2016 Projected revenue requirements FPL is filing now
23 and requesting to recover in 2016.

1 **Q. How is FPL providing an update to the original TP 6 & 7 Project?**

2 A. FPL has included the 2016 TOR Schedules in Exhibit SDS-8 for Site
3 Selection and Pre-construction costs. The TOR Schedules follow the format
4 of the T, AE, and P Schedules, but also detail the actual to date project costs
5 and projected total retail revenue requirements for the duration of the project
6 based on the best available information prior to this filing. Schedule TOR-2
7 provides the information required by Rule 25-6.0423(9)(f).

8 **Q. What is the amount of sunk costs that FPL is accounting for in the**
9 **feasibility analysis?**

10 A. FPL's sunk costs for the Project are approximately \$254 million as of
11 December 31, 2014.

12 **Q. Please explain the components of the revenue requirements that FPL is**
13 **requesting to include for recovery effective January 2, 2016.**

14 A. The total amount FPL is requesting to recover in 2016 is \$34,249,614. This
15 amount reflects the true-up to 2014 Actual costs as filed on March 2, 2015
16 representing an overrecovery of \$691,433, the underrecovery of 2015
17 Actual/Estimated costs of \$6,101,628, and the recovery of 2016 Projected
18 costs of \$28,839,419 as shown on Exhibit JGK-3.

19 **Q. What is the projected 2016 residential customer bill impact based on 2016**
20 **NCR revenue requirements?**

21 A. The projected residential customer monthly bill impact for 2016 is \$0.34 per
22 1,000 kWh.

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Revenue Requirements Overview

Q. What is the revenue requirement amount that FPL is requesting to reflect for the true-up of its 2015 Project costs?

A. FPL is requesting \$6,101,628 in revenue requirements, which represents an underrecovery of Pre-construction costs of \$6,089,262, and an underrecovery of carrying costs of \$12,367 as shown on Exhibit JGK-3. These carrying costs consist of an underrecovery of \$11,769 for Pre-construction, and \$598 for Site Selection. The true-up of 2015 Site Selection costs pertain to the recovery of carrying costs on the deferred tax asset for Site Selection. FPL Witness Scroggs's Exhibit SDS-8, Schedules AE-2 and AE-3A, summarize the revenue requirements identified above. This amount is being requested to be reflected in the 2016 CCRC factors.

Q. What are FPL's 2015 Actual/Estimated TP 6 & 7 Project Pre-construction expenditures compared to costs previously projected and any resulting (over)/under recoveries of costs?

A. FPL's Actual/Estimated Project Pre-construction expenditures for the period January through December 2015, upon which FPL's recovery request is based, are \$18,638,220 on a jurisdictional basis as presented on Exhibit SDS-8, Schedule AE-6. FPL's previous projected 2015 Pre-construction expenditures were \$12,548,959 on a jurisdictional basis. The result is an underrecovery of Pre-construction revenue requirements of \$6,089,262.

1 **Q. What are FPL's 2015 Actual/Estimated TP 6 & 7 Project Pre-**
2 **construction and Site Selection carrying charges compared to carrying**
3 **charges previously projected and any resulting (over)/under recoveries of**
4 **costs?**

5 A. FPL's 2015 Actual/Estimated Project carrying charges are \$6,806,302. FPL's
6 previous projected carrying charges were \$6,793,935, resulting in an
7 underrecovery of revenue requirements of \$12,367. The calculations of the
8 carrying charges can be found in Exhibits JGK-3 and SDS-8, Schedules AE-2
9 and AE-3A.

10 **Q. What revenue requirement amount is FPL requesting for its 2016**
11 **projected TP 6 & 7 Project costs?**

12 A. FPL is requesting recovery of \$28,839,419 in revenue requirements related to
13 its projected 2016 Project Site Selection and Pre-construction costs. These
14 revenue requirements consist of projected Pre-construction expenditures of
15 \$21,057,310 on a jurisdictional basis as presented in FPL Witness Scroggs's
16 testimony and provided in Exhibit SDS-8, Schedule P-6, and projected
17 carrying charges of \$7,622,521 as shown in Exhibit SDS-8, Schedules P-2 and
18 P-3A. Also included are projected Site Selection carrying costs of \$159,588
19 as shown on Exhibit JGK-3.

20 **Q. Please describe the accounting adjustment on line 13 of Schedule AE-6**
21 **and the related adjustment on line 13 of Schedule P-6?**

22 A. FPL will incur \$5 million of initial assessment costs during 2015 and 2016 as
23 discussed in FPL Witness Scroggs's testimony. These costs are reflected on

1 Schedule AE-6 in the amount of \$1,842,105, while the remaining amount of
2 \$3,157,895 is reflected on Schedule P-6, line 8 on both Schedules. The
3 Company is not seeking to recover these costs through NCR in 2016 and
4 therefore has excluded them on line 13 of the above mentioned Schedules, as
5 they do not impact the 2016 revenue requirements request. FPL will
6 capitalize these project costs as incurred and accrue allowance for funds used
7 during construction (AFUDC).

8 **Q. What is the total amount FPL is requesting to recover in its 2016 NCR**
9 **CCRC factors for the TP 6 & 7 Project?**

10 A. FPL is requesting to include \$34,249,614 of revenue requirements in 2016 for
11 the Project of which \$34,089,349 is for Pre-construction costs and \$160,265 is
12 attributed to carrying costs for Site Selection.

13

14 This total amount consists of the true-up of 2014 actual Project Pre-
15 construction costs and carrying costs of \$691,512 overrecovery, described in
16 my March 2, 2015 testimony; the true-up of 2015 Actual/Estimated Project
17 Pre-construction costs and carrying costs of \$6,101,031 underrecovery; and
18 the 2016 Projected Pre-construction costs and carrying costs of \$28,679,830.

19 The amount pertaining to Project Site Selection includes the 2014 true-up of
20 underrecovered carrying costs of \$79, as described in my March 2, 2015
21 testimony; the 2015 Actual/Estimated carrying costs of \$598 underrecovery;
22 and the 2016 Projected carrying costs of \$159,588, as shown on Exhibit JGK-

23 3.

1

2 FPL respectfully requests that the Commission approve the 2015
3 Actual/Estimated and 2016 Projected costs, and the resulting Pre-construction
4 and Site Selection carrying charges as reasonable, and approve the revenue
5 requirements described in my testimony for recovery in FPL's 2016 CCRC
6 factors.

7

8

ACCOUNTING CONTROLS

9

10 **Q. Please describe the accounting controls that provide you reasonable**
11 **assurance that the costs included in the filing are correct.**

12 A. As described more fully in my March 2, 2015 testimony, FPL has a robust
13 system of corporate accounting controls. These accounting controls continue
14 to be utilized in 2015. The Company relies on its comprehensive corporate
15 and overlapping business unit controls for recording and reporting
16 transactions associated with any of its capital projects including the TP 6 & 7
17 Project. Highlights of the Company's comprehensive and overlapping
18 controls which continue to be utilized in 2015 for the Project include:

- 19 • FPL's Accounting Policies and Procedures;
- 20 • Financial systems and related controls including FPL's general ledger
21 (SAP) and construction asset tracking system (PowerPlan);
- 22 • Reporting and monitoring of planned costs to actual costs incurred;
- 23 and

- 1 • Business unit specific controls and processes.

2 **Q. Are these controls documented, assessed, audited and/or tested on an**
3 **ongoing basis?**

4 A. Yes. The FPL corporate accounting policies and procedures are documented
5 and published on the Company's internal website (Employee Web). Included
6 on the Company's internal website are the corporate procedures regarding
7 cash disbursements, accounts payable, contract administration, and financial
8 closing schedules, which provide the business units guidance as to the
9 processing and recording of transactions. The business units can then build
10 their more specific procedures around these corporate procedures. FPL's
11 internal audit department annually audits the Project. The FPL internal audit
12 of 2014 costs and controls found no exceptions and that project controls were
13 good. The FPSC staff also is continuing its audits. Additionally, by virtue of
14 the NFRs themselves, a high level of transparency allows all parties to review
15 and determine the prudence and reasonableness of the decisions and
16 expenditures identified in FPL's filing.

17 **Q. How does FPL ensure only incremental payroll is charged to the**
18 **projects?**

19 A. The Company has issued specific guidelines for charging labor costs to the
20 project internal orders. These guidelines emphasize the need for particular
21 care in charging only incremental labor to the project internal orders included
22 for nuclear cost recovery and ensure consistent application of the Company's
23 capitalization policy. These guidelines describe the process for the exclusion

1 of non-incremental labor from nuclear cost recovery while providing full
2 capitalization of all appropriate labor costs through the implementation of
3 separate project capital internal orders that will be included in future base rate
4 recoveries.

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

6 **A. Yes.**

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

In re: Nuclear Cost)
Recovery Clause)

DOCKET NO. 150009-EI
FILED: July 17, 2015

ERRATA SHEET – JENNIFER GRANT-KEENE

May 1, 2015 Exhibits

<u>EXHIBIT #</u>	<u>PAGE #</u>	<u>LINE #</u>	
SDS-8 (co-sponsored)	1 of 1	Lines 4, 5	See Revised Schedule TOR-2 of Exhibit SDS-8, attached

1 BY MR. DONALDSON:

2 Q Okay. Are you also sponsoring Exhibits JGK-1
3 through JGK-3?

4 A Yes, I am.

5 Q And those have been premarked on Staff's
6 Comprehensive Exhibit List as Numbers 18, 19, and 20;
7 is that correct?

8 A Yes.

9 Q And did you also co-sponsor two exhibits for
10 Mr. Scroggs, SDS-1 and SDS-8?

11 A Yes.

12 MR. DONALDSON: And those have been premarked
13 on Staff's Comprehensive Exhibit List 2 and 9, and
14 I believe that they have already been entered into
15 the record as evidence.

16 BY MR. DONALDSON:

17 Q Have you prepared a summary of your direct
18 testimony?

19 A I have.

20 Q Can you please present that to the
21 Commission.

22 A Good evening, Mr. Chairman, Commissioners.
23 My name is Jennifer Grant-Keene, and I'm FPL's
24 Accounting Project Manager, Clause Accounting. My work
25 includes preparing all of the detailed schedules

1 submitted to the Commission each year. The document
2 and support are cost recovery requests for approval
3 under the Nuclear Cost Recovery Rule.

4 In this year's Nuclear Cost Recovery
5 proceeding, FPL asked the Commission to approve for
6 recovery the company's total revenue requirements
7 request of approximately 34.2 million, which excludes
8 the company's initial assessment costs.

9 I sponsor FPL's nuclear filing requirement
10 schedules, or NFR's, that quantify and support our
11 request. FPL's NFR filings support the development of
12 new nuclear unit 6 and 7 at the Turkey Point Plant that
13 qualifies for cost recovery under the Nuclear Cost
14 Recovery Rule.

15 My March and May direct testimony describes
16 and explains how FPL's accounting and filing complies
17 with the Nuclear Cost Recovery Rule. My testimony also
18 details the comprehensive corporate and overlapping
19 business unit accounting and cost controls that FPL
20 uses, which are documented, assessed, audited and
21 tested on an on-going basis by both FPL's internal and
22 external auditors. Audit results received in 2015 have
23 reported good accounting and cost controls.

24 All of these controls work together to assure
25 that only those costs properly attributable to the

1 nuclear project are submitted to the Commission for
2 recovery through the Nuclear Cost Recovery Clause.
3 FPL's comprehensive corporate and overlapping business
4 unit controls, along with the testimony provided by our
5 witnesses, provide assurance that our actual costs are
6 prudent and that our estimated and projected costs are
7 reasonable.

8 This concludes the oral summary of my direct
9 testimony.

10 MR. DONALDSON: I tender the witness for
11 cross.

12 CHAIRMAN GRAHAM: Thank you. Welcome,
13 Ms. Grant-Keene.

14 OPC.

15 MR. SAYLER: Good evening, Mr. Chairman. I
16 do have one exhibit that I gave to Staff to pass
17 out, if you'll give us a minute while it's being
18 passed out.

19 CHAIRMAN GRAHAM: Okay.

20 MR. SAYLER: And I would like to have it
21 identified as Exhibit 79. It's a compilation of
22 FPL interrogatory responses to Interrogatories
23 Number 31, 32, 34. Short title could be FERC
24 accounts, F-E-R-C accounts.

25 CHAIRMAN GRAHAM: This is will be Exhibit 79.

1 (Exhibit No. 79 was marked for
2 identification.)

3 BY MR. SAYLER:

4 Q All right. Ms. Grant-Keene, good evening.
5 How are you?

6 A Fine, thank you.

7 Q My name is Erik Sayler with the Office of
8 Public Counsel.

9 I have prepared this exhibit. Are you
10 familiar with these interrogatory responses?

11 A Yes, I am.

12 Q And according to the affidavit, you were the
13 one who signed that; is that correct?

14 A Correct.

15 Q All right. Please refer to your response to
16 Interrogatory Number 31. And you would agree that the
17 FERC Account 183 is -- FERC is F-E-R-C -- FERC Account
18 183 is entitled "Preliminary Survey and Investigation
19 Charges"; is that correct?

20 A Yes, that's correct.

21 Q And that is a balance sheet account used for
22 recording preliminary feasibility studies; is that
23 correct?

24 A Yes.

25 Q All right. And you would also agree that

1 this account is used for larger projects like a nuclear
2 power plant construction project prior to the company
3 receiving a determination of need; is that correct?

4 A Yes.

5 Q All right. Would you refer to Interrogatory
6 Number 32?

7 A Thirty-two?

8 Q Yes, ma'am.

9 A Okay.

10 Q You would agree that once construction work
11 commences for an electric power plant, the costs
12 accumulated in FERC Account 183 are transferred to FERC
13 Account 107, which is construction work in progress or
14 otherwise known as CWIP, C-W-I-P; is that correct?

15 A Yes.

16 Q All right. And please refer to Interrogatory
17 Number 34. The initial assessment costs which are at
18 issue in this case, they are currently being recorded
19 as CWIP in FERC Account 107; is that correct?

20 A Correct.

21 Q All right. Thank you, Ms. Grant-Keene. No
22 further questions from the Public Counsel's Office.

23 CHAIRMAN GRAHAM: Retail Federation?

24 MR. LAVIA: No questions. Thank you.

25 CHAIRMAN GRAHAM: FIPUG?

1 MR. MOYLE: We have a few questions.

2 EXAMINATION

3 BY MR. MOYLE:

4 Q Good evening. How are you?

5 A Fine. Thank you.

6 Q Good. I want to refer you to your May
7 testimony on Page 6. Tell me when you're there.

8 A I'm there.

9 Q Okay. So Line 14 -- I think you said this in
10 your summary -- the total amount FPL is requesting to
11 recover in 2016 is \$34,249,614; is that right?

12 A Yes.

13 Q And down on Line 21, you state, "The
14 projected residential customer monthly bill impact for
15 2016 is 34 cents per thousand kWh"; is that right?

16 A Yes.

17 Q So my math, give or take a little bit, is for
18 every penny -- a penny on a residential -- on a typical
19 residential customer bill is worth about a million
20 dollars to FP&L; is that right?

21 A I would not translate that in that manner,
22 no.

23 Q We didn't get a chance to talk beforehand and
24 they told me not to ask why if I don't know why, but it
25 seems pretty clear to me, right, 34 cents? Why is that

1 **ratio not accurate?**

2 Well, let me ask you this way. I'll tell you
3 what, let's say if FPL was trying to recover a billion
4 dollars this year, if it was not 34, if it was a
5 billion dollars, that would result in everyone's bill,
6 a residential customer who had a thousand kWh, that
7 would result in it going up \$10; is that right?

8 A No, not necessarily. To be quite honest, I
9 do not calculate the rate, and there are a number of
10 factors that go into calculating this rate. There are
11 a certain number of dollars that, for instance, will
12 move the needle by a cent. So I cannot tell you that
13 there's a one-to-one correlation here between the 34
14 cents and the 34 million that we request.

15 Q So logically you're not comfortable saying,
16 well, you could just double it if you needed to get to
17 68?

18 A No.

19 Q Do you have any information in another
20 docket, the FPL Woodford project, FPL asked the
21 Commission to make an adjustment and remove a million
22 dollars and it was about a penny in that effect on
23 residential customers? Is that familiar to you or no?

24 A No.

25 MR. DONALDSON: Let me object. Well, she

1 answered the question. Thanks.

2 BY MR. MOYLE:

3 Q Who would be the best person with respect to
4 rates that, if I had these questions, that could say,
5 oh, I can answer that for you, out of the people that
6 you have here with you this evening; Mr. Sim?

7 A No.

8 Q Who?

9 A This is calculated by -- within the rates
10 area within regulatory accounting affairs.

11 Q So they give you these numbers, you just kind
12 of take them and put them in your testimony?

13 A The procedure is I calculate the revenue
14 requirements request, I turn that over to the rates
15 area, and they calculate the impact. And notice this
16 is a projected impact.

17 Q Okay. So my idea of saying, well, a billion
18 dollars, you know, that would be \$10, you don't know
19 whether that would be right or wrong, right? I mean,
20 you can't say, no, Moyle, you got it wrong, or you
21 can't say, no, Moyle, you got it right, you just don't
22 know?

23 A I don't know.

24 Q Okay. On Page 6, Line 5, I believe it may be
25 your March testimony -- it is -- you talk about some

1 **pre-construction carrying charges?**

2 A Would you give me a minute to get there,
3 please.

4 Q **Sure.**

5 A You said Page 6?

6 Q **Yes, ma'am.**

7 A Line?

8 Q **There's a question up on Line 1 about the**
9 **pre-construction carrying charges compared to the 2014**
10 **actual/estimated carrying charges?**

11 A Yes.

12 Q **And you said that the actual/estimated**
13 **carrying charges were 4.8 million -- that's my**
14 **rounding -- correct?**

15 A Yes.

16 Q **Do you know what the rate being applied to**
17 **the carrying charges is?**

18 A Yes, it's 9.39.

19 Q **And do you know where that comes from?**

20 A It's an approved rate. The FPSC approves
21 this rate. It's an adjusted based -- an adjusted
22 capital structure. The rate is approved by FPSC and it
23 is based on what we file in December in the earnings
24 surveillance report.

25 Q **What's it called? Is it the CWIP? What's**

1 the rate called? Do you have a term?

2 A A-F-U-D-C.

3 Q Yeah, is that what it's called?

4 A Correct.

5 Q And as to how it works, you're saying these
6 are the carrying charges. And it's the carrying
7 charges that's interest on a principal sum, correct?

8 A They're finance charges.

9 Q Okay. So they're finance charges on what
10 principal sum?

11 A They are charges on over and under
12 recoveries, which result from our true-up process.

13 Q In terms of the review of the program costs,
14 you do internal audits of the nuclear business unit; is
15 that right?

16 A No.

17 Q So on Page 8 when you're -- actually your
18 internal controls that you're talking about on Page 7,
19 Page 7, Line 18, "How did internal controls support
20 accurate financial reporting of project costs"?

21 A Page 8, Line 18, you said?

22 Q No, Page 7, I'm sorry, Page 7, Line 18. And
23 up on Line 5, you were asked about FPL's policies and
24 procedures to ensure accurate recording and reporting
25 treatment of project costs. And then on Line 18,

1 **you're asked "How did internal controls support**
2 **accurate financial and reporting project costs?"**

3 Are you responsible for overseeing these
4 controls?

5 A These are controls that are in place both at
6 the corporate level and also at the business unit
7 level. These controls -- some of these controls also
8 affect my accounting team directly in, you know,
9 recording our recovered costs and recovering our --
10 recording our carrying charges on over/unders and on
11 the deferred tax asset.

12 These controls are in place and very much
13 with highly -- with a high level of oversight and
14 review. Reconciliations are performed. And the SOX
15 requirements, the Sarbanes-Oxley Act requirements,
16 these -- this is a extensive system of internal
17 controls that are monitored, they're reviewed, the
18 management certifies as to the effectiveness of these
19 controls, so it is a -- I am not directly responsible
20 for all of these controls, certainly, but within my
21 area, I certainly am.

22 **Q So can you help me understand what areas of**
23 **control that you would be responsible for?**

24 A For instance, in my area we've got SOX
25 documentation as to our -- the internal controls that

1 we follow and that are in place. These are reviewed,
2 they're assessed, they're tested. So those controls
3 I'm directly responsible for.

4 We have in place as well corporate procedures
5 where we have ongoing reviews and reconciliations that
6 we must perform.

7 **Q Are you a signer under --**

8 A Signer?

9 **Q Under SOX, do you sign?**

10 A I certify as to whether or not the controls
11 are in place.

12 **Q Okay.**

13 A And working.

14 **Q And on Page 8, is that the same thing that**
15 **Deloitte does as it's certifying that controls are in**
16 **place?**

17 A They do. That's one aspect of their audit
18 that they conduct.

19 **Q Has Deloitte done an audit of the nuclear --**
20 **new nuclear business unit in recent years, if you know?**

21 A We are definitely audited by Deloitte &
22 Touche, yes. They review our area and they check our
23 controls.

24 **Q Do they do it annually? I mean, my**
25 **understanding of audits is they come in, they don't**

1 **tell you what they're going do, they may go to this**
2 **unit, they may go to that unit. Is that largely your**
3 **understanding?**

4 A On an annual basis, yes, they are reviewed.
5 And remember, as I said, the SOX requirement ties into
6 their annual review as well.

7 Q **Did you review the Deloitte audit with**
8 **respect to the controls in the nuclear business unit?**

9 A Could you repeat your question?

10 Q **Did you review the Deloitte & Touche annual**
11 **audit in the last year related to internal controls?**

12 A I'm aware of the fact that I had no
13 deficiencies.

14 Q **Okay. So no deficiencies? You may not have**
15 **felt a need to review the audit because there were no**
16 **findings, no adverse findings, no deficiencies?**

17 A Correct.

18 MR. MOYLE: Thank you.

19 CHAIRMAN GRAHAM: SACE?

20 MR. CAVROS: Just a quick clarification.

21 EXAMINATION

22 BY MR. CAVROS:

23 Q **Good evening, Ms. Keene. You just had a**
24 **discussion with Mr. Moyle regarding carrying charges**
25 **and a rate of 9.39 percent; do you recall that?**

1 A Yes.

2 Q Okay. What comprises that 9.39 percent? How
3 is it determined?

4 A How is it determined?

5 Q (Nodding head affirmatively.)

6 A It's based a regular AFUDC rate, which is, as
7 I said, approved by the FPSC.

8 Q And is that a -- they are carrying charges,
9 so is that a blended rate between debt and equity?

10 A Correct.

11 Q Okay. And what's the equity return?

12 A It's --

13 Q I'm sorry, please answer.

14 A I believe it's 7.81.

15 Q On equity?

16 A Yes. You're asking me what component is the
17 equity component, I believe?

18 Q Right. Let me rephrase my question. There's
19 two components, I imagine, one is debt equity and one
20 is owner's equity.

21 What is the return on owner's equity?

22 A 7.81.

23 Q Okay. And debt equity?

24 A The remainder, 1 point -- I think it is 48, I
25 believe, 1.48.

1 **Q Great. Thank you.**

2 CHAIRMAN GRAHAM: City of Miami?

3 MS. MÉNDEZ: Thank you, Mr. Chairman. Just a
4 few questions.

5 EXAMINATION

6 BY MS. MÉNDEZ:

7 **Q With regard to your summarized testimony of**
8 **the revenue with over recovery and under recovery. Do**
9 **you do more of a desktop analysis or some of these**
10 **numbers are actually crunched by your division?**

11 A Yes, we actually calculate the return.

12 **Q And how many are in your division?**

13 A Four.

14 **Q Four of you?**

15 A Yes.

16 **Q And do you have to -- about how many months**
17 **does it take to actually do a calculation like this?**

18 A This is an ongoing process. We update the
19 NFRs every month.

20 **Q And when you say NFRs?**

21 A The Nuclear Cost Recovery filing requirement
22 that we submit and file with the testimony.

23 **Q Okay.**

24 A The schedules.

25 **Q So it's a monthly process?**

1 A Yes, we update our costs monthly.

2 Q And you were talking about certain controls
3 that are within this process. Are those controls that
4 are following best practices of the utilities' industry
5 or the accounting industry or FPL?

6 A Yes, they are.

7 Q Which one?

8 A We've got corporate controls that are in --
9 corporate procedures and policies that are in place.
10 The business unit, specific to the business unit, they
11 also have their processes and procedures in place that
12 mirror the corporate policies.

13 So therefore, you know, it's layers of
14 reviews, layers of controls. I also have certain
15 processes and procedures that I follow that also mirror
16 corporate policies.

17 Q And when you say the corporate policies,
18 those of FPL?

19 A Well, FPL, as well as regulatory requirements
20 that we must also follow.

21 Q And when you were describing about the
22 filings that are done on a monthly basis, when you work
23 with your team, is it all four of you pretty much
24 crunching the numbers or is it -- what are the checks
25 that have to do with I guess following -- these are

1 **large numbers -- so at least following up that they're**
2 **correct?**

3 A Well, there's reconciliations that are done,
4 okay. You know, we are recording our costs in our
5 subsidiary ledger. We are also reconciling those
6 numbers to our general ledger.

7 There is also comparisons of actuals to
8 projected numbers and investigations that are done, you
9 know, analysis that's done, variance analysis.

10 Q **And when you have an over recovery or an**
11 **under recovery, is that something that was missed or is**
12 **it -- how is it that you catch those?**

13 A No, not missed. The Nuclear Cost Recovery
14 framework has a true-up mechanism that is -- that we --
15 that is in fact a requirement. We true up our numbers.
16 So projections are compared against updated estimates,
17 estimates are compared against actuals.

18 Q **And that's when you determine if it was an**
19 **over recovery or an under recovery?**

20 A Correct.

21 Q **Now, if the revenues you're seeking are not**
22 **granted at this hearing, where would those revenues**
23 **then come from?**

24 A I'm not sure that I understand your question.

25 Q **If the cost recovery isn't granted, where --**

1 **do you know within your division, would you know where**
2 **that money would come from in order to cover these**
3 **costs?**

4 A I cannot answer that. You know, we are
5 recovering these costs per the nuclear statute and
6 rule. You know, this is a process or a procedure
7 that's been set up that we follow. I just can't
8 imagine these costs not being recovered under this
9 Nuclear Cost Recovery Clause, so I'm not sure I
10 understand your question.

11 **Q Thank you very much.**

12 CHAIRMAN GRAHAM: Staff?

13 MS. BARRERA: Staff has no questions.

14 CHAIRMAN GRAHAM: Commissioners?

15 (No response.)

16 CHAIRMAN GRAHAM: Redirect?

17 MR. DONALDSON: No redirect.

18 CHAIRMAN GRAHAM: Exhibits?

19 MR. DONALDSON: Yes. At this time, FPL would
20 like to enter into evidence on Staff's
21 Comprehensive Exhibit List 18, 19 and 20.

22 CHAIRMAN GRAHAM: We will enter Exhibits 18,
23 19 and 20 into the record.

24 (Exhibit Nos. 18, 19 and 20 were received in
25 evidence.)

1 MR. SAYLER: OPC would move Exhibit 79 into
2 the record.

3 CHAIRMAN GRAHAM: We will move Exhibit 79
4 into the record, if there's no objection.

5 (Exhibit No. 79 was received in evidence.)

6 CHAIRMAN GRAHAM: Okay.

7 MR. DONALDSON: No objection.

8 CHAIRMAN GRAHAM: All right. We are either
9 going to -- would you go like for this witness to
10 be excused?

11 MR. DONALDSON: Yes, I would.

12 CHAIRMAN GRAHAM: We will excuse this
13 witness.

14 MR. DONALDSON: Oh, she's already gone.

15 MS. CANO: She was quick.

16 THE WITNESS: I'm sorry.

17 CHAIRMAN GRAHAM: You're fine.

18 We're going to come back to Steven Sim.
19 Staff, your first witness.

20 MS. BARRERA: Yes. At this time, Staff would
21 like to move the testimony of Iliana Piedra and
22 David Rich into the record as though read.

23 CHAIRMAN GRAHAM: We will enter the direct
24 testimony of those two witnesses into the record
25 as though read.

1 MS. BARRERA: Yes. And the exhibits have
2 already been stipulated into the record.

3 CHAIRMAN GRAHAM: Okay. That brings us to
4 Miami's witness.

5 MR. HABER: Thank you, Mr. Chairman. The
6 City of Miami calls Eugene T. Meehan.

7 Thereupon,

8 EUGENE T. MEEHAN

9 was called as a witness, having been previously duly
10 sworn, was examined and testified as follows:

11 EXAMINATION

12 BY MR. HABER:

13 Q Good afternoon, Mr. Meehan. Would you please
14 introduce yourself to the Commission and provide your
15 business address.

16 A Yes. My name is Eugene T. Meehan. My
17 business address is 7042 Powderhorn Court, Park City,
18 Utah.

19 Q Mr. Meehan, have you already been sworn in as
20 a witness?

21 A I have.

22 Q And what do you do for a living?

23 A Well, I'm an independent energy consultant.
24 I've retired after over 35 years working with various
25 consulting companies, for roughly 25 years with NERA

1 Economic Consulting, retiring last November as a senior
2 vice-president. I've worked with Deloitte & Touche for
3 two years as a partner in the consulting practice and
4 for Energy Management Associates for 14-years as
5 vice-president doing planning and modeling consulting
6 for utilities. And currently, I am an independent
7 consultant.

8 **Q And have you prefiled testimony in this**
9 **proceeding?**

10 A Yes, I have.

11 **Q Do you have a copy of it with you?**

12 A I do.

13 **Q And do you have any changes to make to this**
14 **prefiled testimony?**

15 A No, I do not.

16 **Q If I asked you today the same questions asked**
17 **in your prefiled testimony, would you provide the same**
18 **answers as in that testimony?**

19 A Yes.

20 MR. HABER: We request that the prefiled
21 testimony of Eugene T. Meehan, filed on June 23rd,
22 2015, and corrected for line errors, be moved into
23 the record, as though it were read into the record
24 today?

25 CHAIRMAN GRAHAM: We will enter Mr. Meehan's

150009

1 prefiled testimony, as corrected, into the record
2 as though read.

3 MR. HABER: Thank you.

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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **THE CITY OF MIAMI**

3 **DIRECT TESTIMONY OF EUGENE T. MEEHAN**

4 **DOCKET NO. 150009-EI**

5 **June 22, 2015**

6
7 **1. Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

8 A. My name is Eugene T. Meehan. I am an independent energy and utility
9 consultant. My address is 7042 Powderhorn Ct., Park City, Utah, 84098. I have
10 prepared pre-filed testimony on behalf of the City of Miami (“the City”).

11
12 **2. Q. PLEASE SUMMARIZE YOUR PROFESSIONAL QUALIFICATIONS.**

13 A. I have over thirty five years of experience consulting with electric and gas
14 utilities. That work has involved examination and advice on many issues related
15 to power markets, power contract design, long term generation expansion
16 planning, competitive bidding and contract evaluation. For the past fifteen years,
17 I have been extensively involved in advising clients on restructuring-related
18 issues, including risk analysis, risk management, power plant and power contract
19 valuation, and post-transition regulatory issues. In recent years, I also have

1 advised several utilities with respect to the acquisition of power from third parties.
2 These assignments have involved the review of power contract offers made by
3 competitive power marketers and owners of generation assets. I have testified
4 several times with respect to the prudence of utility planning and power
5 procurement and the economic implications of specific generation investment
6 decisions, primarily in regard to investment in nuclear facilities. I have performed
7 these assignments as a Senior Vice President with NERA Economic Consulting
8 (“NERA”) (a position I retired from in November 2014), as a Principal at Deloitte
9 Consulting, and a Vice President at Energy Management Associates (“EMA”).
10 Exhibit ETM - 1 contains a more detailed statement of my qualifications.

11
12 **3. Q. PLEASE BRIEFLY SUMMARIZE YOUR EXPERIENCE AS A**
13 **CONSULTANT PROVIDING ADVICE AND TESTIMONY RELATED TO**
14 **THE ECONOMIC ANALYSES OF NUCLEAR INVESTMENTS.**

15 A. In the early 1980s, I advised the owners of the Nine Mile Point 2 on the
16 economics of continuing with construction of the Nine Mile Point 2 nuclear unit.
17 This analysis examined the costs and benefits of continuing with construction of
18 the unit versus abandoning the unit and recovering the investment to date. I
19 testified on the topic before the New York Public Service Commission. In the

1 same general time frame, I worked on similar analyses for the owners of the
2 Allen's Creek and Black Fox nuclear plants. In the mid and late 1980s, I
3 analyzed and testified as to the prudence of the Nine Mile Point 2 nuclear unit and
4 to the prudence of the decision to complete unit 2 at the South Texas Project
5 nuclear plant. In the 1990s, I directed projects for the Public Service Company of
6 Colorado examining the retirement of the Fort St. Vrain nuclear unit, for Central
7 Maine Power Company examining the potential retirement of the Maine Yankee
8 nuclear plant and for Niagara Mohawk Power Company examining the potential
9 retirement of unit 1 at the Nine Mile Point nuclear facility. In 2012, I testified
10 before a Nuclear Regulatory Commission ("NRC") atomic safety and licensing
11 board with respect to the implications of the NRC taking no action regarding the
12 extension of the operating license for the Indian Point nuclear facility. I am
13 currently retained by the Ontario Independent Electricity System Operator to
14 provide a Fairness Opinion with respect to a long term (through the early 2060s)
15 contract for securing the refurbishment and operation of the 6300 MW Bruce
16 nuclear facility.

17

18

1 **4. Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA**
2 **PUBLIC SERVICE COMMISSION (“COMMISSION”)?**

3 A. Yes. In 1987, I testified before the Commission on behalf of the investor-owned
4 and larger non investor-owned electric utilities in peninsular Florida on the
5 subject of electric system generation planning and the appropriateness of the
6 model used by those entities in the context of calculating avoided costs.

7
8 **5. Q. PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY.**

9 A. I have been asked by the City to examine the evidence provided by Florida Power
10 & Light Company (“FP&L”), and the consequences for ratepayers, concerning the
11 continued development of Turkey Point units 6 and 7. The purpose of my
12 testimony is to present to the Commission the results of that examination.

13
14 **6. Q. PLEASE EXPLAIN THE FEASIBILITY ANALYSIS CONDUCTED BY**
15 **FP&L WITH RESPECT TO CONTINUING LICENSING AND**
16 **CONSTRUCTION OF UNITS 6 AND 7 AT TURKEY POINT.**

17 A. FP&L has presented the Commission with a lifetime Net Present Value (“NPV”)
18 analyses of the economic implications for ratepayers of continuing to develop
19 Turkey Point units 6 and 7. The need for the first of those units has been delayed

1 until 2027. The analyses presented by FP&L to the Commission in support of the
2 economic case for continued development of the units are based on 40 and 60
3 year operating lives for the units and show the break even capital cost in 2015
4 dollars. If a unit is completed below the break even capital cost, customers
5 benefit on an NPV basis from completion. If a unit is completed at a cost above
6 the break even capital cost, customers will pay more on an NPV basis from
7 completion. In addition to examining 40 and 60 year operating periods, FP&L's
8 analyses also examine several cases with alternate assumptions for items such as
9 natural gas prices and alternate environmental cost assumptions. FP&L's
10 interpretation of its analyses alleges that completing Turkey Point units 6 and 7 is
11 the clear economic choice for customers because in 8 of the 14 scenarios
12 examined the break even costs are above the range of the non-binding
13 construction cost estimate. Similarly, FP&L alleges that in 6 of the 14 scenarios
14 examined, the break even cost is within the range of non-binding construction
15 costs estimates. For those 6 cases, FP&L's position is that the units may be
16 economic. As expected, the results for Turkey Point units 6 and 7 are more
17 favorable when a 60 year operating life is assumed. FP&L's analyses only
18 consider going forward capital costs for the units since the sunk, or already

1 invested, costs will be recovered from customers whether or not construction is
2 completed.

3
4 **7. Q. WHY IS IT PARTICULARLY IMPORTANT TO REVIEW CAREFULLY**
5 **FP&L'S FEASIBILITY ANALYSIS THIS YEAR?**

6 A. The economic analysis of continued construction is very important. While it is
7 true that FP&L has spent approximately \$250 million on Turkey Point units 6 and
8 7 to date and will not be spending very large sums in 2016 given that the date of
9 initial operation has been deferred to 2027, the framework for analyzing the
10 economics of Turkey Point units 6 and 7 ignores sunk costs and considers only
11 costs not yet spent or pledged. This is the correct way to analyze the economics
12 of the investment, but requires that at some points a very hard look be taken at the
13 outlook for the feasibility of the investment. By feasibility I mean the prospect
14 that the investment will be beneficial for ratepayers. There is a danger that an
15 investment such as Turkey Point units 6 and 7 is initially approved, that gradual
16 investments are made over time, that despite changing circumstances continued
17 creeping investments are made without a fundamental re-examination, that sunk
18 costs build up, and that ultimately the plant is justifiably completed based on
19 going forward cost analysis but results in much higher costs for customers than

1 the alternative because sunk costs that are ignored in the economic analysis are
2 reflected in the rate base. The only protection against this situation is periodic,
3 in-depth analyses of completion before significant additional costs are expended
4 or pledged and become sunk costs.

5
6 **8. Q. ARE YOU AWARE OF ANY CURRENT SITUATIONS WHERE SUNK**
7 **COSTS HAVE GROWN TO A VERY HIGH LEVEL AND THE**
8 **CIRCUMSTANCES JUSTIFYING THE INVESTMENT HAVE**
9 **CHANGED?**

10 A. Yes. A recent press report describes claims by a group that allege that that the
11 expansion of Plant Vogtle, which is currently underway in Georgia, has become
12 unnecessary and notes that over \$ 6 billion has been spent. This is an example of
13 a case where plant economics appear to have radically changed since the initial
14 approval to proceed was granted and where there may be a possibility that billions
15 of dollars of investment will be required to be paid for by ratepayers for an
16 investment that could be abandoned or is only viable on a going forward basis
17 because sunk costs are not relevant to decisions concerning future investment.
18 This is a position that the Commission would not want to be in. A very hard look
19 now, before the sunk costs of Turkey Point units 6 and 7 related costs grow to

1 very high levels, could avoid this situation. While it is true that sunk costs are not
2 relevant to going forward economic decisions, it is hard to be objective when sunk
3 costs are significant and it could be difficult to abandon an investment with
4 billions of dollars in sunk costs despite the prospect that returns on future
5 investment would be negative. I do not have any view as to whether the
6 investment in the units in Georgia remains economic, but do believe it is correct
7 that sunk costs have reached high levels and that assumptions have changed with
8 respect to the cost of alternatives.

9
10 **9. Q. IN YOUR OPINION IS THE FEASIBILITY ANALYSIS SUBMITTED BY**
11 **FP&L A REASONABLE BASIS FOR CONCLUDING THAT TURKEY**
12 **POINT UNITS 6 AND 7 REMAIN COST-EFFECTIVE FOR**
13 **RATEPAYERS?**

14 A. No. While I recognize that the analysis continues a process of presenting the
15 feasibility of Turkey Point units 6 and 7 by comparing NPV break even costs to
16 the non-binding construction costs range, I do not believe it is reasonable at this
17 time. The Turkey Point units 6 and 7 project is at a critical point in its life cycle.
18 First, there have been major changes in the long term outlook for the primary
19 alternative, which is natural gas. Second, the need for Turkey Point units 6 and 7

1 has been delayed to the latter half of the next decade and environmental
2 regulations on alternatives that are still speculative may be known with more
3 certainty in a short time. Third, new nuclear units that have progressed more
4 rapidly than Turkey Point have been experiencing construction delays and costs
5 increases. Fourth, new nuclear units that were not supported by ratepayer backing
6 that were planned around the same time as Turkey Point have been essentially
7 abandoned. Finally, the economic justification for Turkey Point units 6 and 7 is
8 increasingly dependent upon a 60 year life assumption, with that 60 year life
9 starting twelve years from now. In FP&L's analysis in 5 of the 7 cases assuming
10 a 40 year life, Turkey Point falls in the category that FP&L categorizes as "may"
11 be economic. That is a weak endorsement of an investment that according to
12 FP&L witness Steven Scroggs will range from \$13.7 to \$20 billion. All signs
13 clearly point to the need for a thorough, in-depth evaluation of the Turkey Point
14 units 6 and 7 investment at this time, when it is clear that the circumstances under
15 which the investment was approved have changed radically. Additionally, the
16 time is opportune. Sunk costs are still relatively low and the need for the capacity
17 is well into the future. At this juncture, the impact on customers of terminating
18 the project and having the sunk costs reflected in rates would be manageable. A
19 thorough investigation at this time could avoid two potentially bad outcomes.

1 The first would be an outcome where several years down the road such an
2 examination reveals the plant is not viable and sunk costs have grown to the point
3 where they are a much larger burden on ratepayers. The second is an outcome
4 where several years down the road such an examination reveals the plant is viable
5 on a going forward basis but will be more costly on a total costs basis than the
6 alternative. The point is that the circumstances at the current time both require
7 and facilitate a more in depth examination of the Turkey Point units 6 and 7
8 investment than FP&L has conducted. Projects can take on a life of their own
9 and the simple facts that, first, the natural gas price outlook has changed radically
10 from when Turkey Point units 6 and 7 were initially approved and, second, the
11 need for capacity has moved far enough into the future to raises concerns over
12 how the project can maintain economic feasibility.

13
14 **10. Q. ARE THERE SPECIFIC FACTORS THAT SHOULD BE CONSIDERED**
15 **BUT THAT ARE NOT CONSIDERED IN FP&L'S FEASIBILITY**
16 **ANALYSIS?**

17 A. Yes. The FP&L feasibility analysis in this case does not sufficiently consider or
18 explain the following factors:

- 1 • The consequences of assuming that natural gas-fired alternatives
- 2 will add \$ 1.7 billion in the NPV of revenue requirements.
- 3 • The consequences of the assumptions with respect to carbon
- 4 (“CO²”) costs.
- 5 • The time pattern of rate impacts and the risks associated with
- 6 benefits that take so long to materialize.
- 7 • The uncertainty of the construction schedule and costs assumptions.

8 At a minimum, these issues need to be fully explored.

9

10 **11. Q. WHAT FLAWS DO YOU SEE WITH THE ASSUMPTIONS MADE FOR**

11 **THE TRANSMISSION COSTS AND THE CARBON (“CO²”) COST**

12 **BENEFITS OF TURKEY POINT UNITS 6 AND 7?**

13 A. The units only appear economic because of these two assumptions. Absent these

14 projected savings in transmission and CO² costs, the breakeven cost would be at

15 least 20% below the bottom end of the non-binding cost range in all seven

16 scenarios that FP&L examined assuming a forty year life of the reactors.

17 Assuming a 60 year life, the breakeven cost would be below the bottom end of the

18 non-binding cost range in five of the seven scenarios that FP&L examined and

19 would be below the midpoint of the non-binding cost range in two of the seven

1 scenarios that FP&L examined. In no scenario would the breakeven cost exceed
2 the midpoint of the non-binding cost range. I believe it is fair to say that given
3 these economics, the project could not be viewed as viable. Hence, it is also fair
4 to say that the feasibility of the project depends upon the assumptions made with
5 respect to the transmission costs associated with the gas-fired alternative to
6 Turkey Point units 6 and 7 and with respect to the carbon cost assumptions.

7
8 **12. Q. WHAT CONCERNS DO YOU HAVE WITH RESPECT TO THE**
9 **ASSUMPTION MADE IN FP&L'S SUBMISSION CONCERNING THE**
10 **TRANSMISSION COMPONENT OF THE ALTERNATIVE TO THE**
11 **PROJECT?**

12 A. It is my understanding that FP&L's analysis assumed that if gas-fired combined
13 cycle units ("CCs") are constructed as an alternative to Turkey Point units 6 and
14 7, they will not be able to be constructed in southeast Florida. Hence, an
15 alternative will require a transmission investment with a NPV of revenue
16 requirements of \$ 1.7 billion in excess of that transmission investment associated
17 with Turkey Point units 6 and 7 to import the power from the north. This one
18 assumption increases the breakeven cost by over \$ 800 per KW. Prior to the
19 Commission accepting, as reasonable, FP&L's feasibility analysis, which would

1 result in substantial commitments and investment costs, it should require FP&L to
2 fully examine and support this assumption. To do otherwise would be imprudent.

3
4 **13. Q. WHAT CONCERNS DO YOU HAVE WITH RESPECT TO THE CARBON**
5 **(“CO²”) COST ASSUMPTION IN FP&L’S FEASIBILITY ANALYSIS?**

6 A. This assumption is even more critical. I estimate that carbon costs, depending
7 upon the environmental case, add from just over \$ 1400 per KW to over \$ 2600
8 per KW to the breakeven cost. I do not think it is unreasonable to attach a
9 monetary value to carbon as over the 2027 to 2088 period during which Turkey
10 Point units 6 and 7 would operate, some type of carbon limit and associated costs
11 would appear more likely than not. At a minimum, however, the Commission
12 should be fully informed of the importance of this assumption and the very large
13 contribution of this factor to the economic feasibility of Turkey Point units 6 and
14 7. With carbon costs adding between \$ 1400 per KW and \$ 2600 per KW to
15 breakeven costs, it is reasonable to say that the economic feasibility of Turkey
16 Point units 6 and 7 hinges on the avoided carbon costs. However, the carbon
17 price assumptions made by FP&L do not pass a common sense test. The carbon
18 price assumed in 2026 rises over a 43 year period by a factor of over 20 times
19 reaching up to eight times that which would result from inflation alone. In

1 comparison, over a 43 year period from 1972 to the present, the cost of tuition at
2 Harvard rose by three times that which would result from inflation alone. I use
3 this example because the cost of college tuition is a primary example of a cost that
4 is out of control and rising rapidly in real terms. A price forecast that predicts a
5 price will be 8 times the increase resulting from inflation is not consistent with
6 common sense. I would also note that FP&L forecasts sulfur dioxide allowance
7 prices to be zero. This is in line with consensus. But it does raise a concern that
8 if over time market prices for sulfur dioxide allowances, which reached as high as
9 \$ 800 a ton, have fallen to zero in just over 20 years, does it make any sense that
10 CO² prices in 54 years from the present will be at level 8 times that which would
11 result from just inflation? Because the assumption is so critical to the feasibility
12 of the plant, it would be imprudent to not thoroughly examine this assumption
13 before making a commitment of investment that ratepayers will bear whether or
14 not the plant is completed. The current forecast used by FP&L was developed by
15 one outside consultant and is not supported by testimony in this proceeding, but is
16 critical to the conclusion that the Turkey Point units 6 and 7 project is reasonable
17 and viable. I calculated carbon impacts by ratably spreading the 290 million tons
18 of carbon that is claimed to be avoided by the addition of Turkey Point units 6 and
19 7 (see page 26, line 14 of testimony of Richard O. Brown) over the units'

1 operating life and then valuing each year's ratable reduction by the annual carbon
2 price assumption for the relevant environmental scenario. Carbon reductions
3 should be more or less ratable as Turkey Point is replaced with very efficient
4 capacity in the alternate scenario. In any case given the pattern of carbon price
5 escalation variations in annual carbon reductions from a ratable pattern would not
6 have a material impact on results. I discounted the aggregate carbon values to the
7 beginning of 2015, while FP&L discounts these values to year end 2015, thereby
8 conservatively underestimating somewhat the impact of FP&L's extreme carbon
9 assumption. Additionally, I calibrated the reasonableness of the estimates I made
10 of the carbon costs impact assumption on breakeven costs by comparing the
11 breakeven cost differences between FP&L's Environmental 1 and Environmental
12 2 cases. The primary difference between those two cases is the cost of carbon.

13
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18

1 **14. Q. ASSUME HYPOTHETICALLY THAT FP&L'S CARBON ("CO²") COST**
2 **FORECAST WAS REASONABLE. WOULD THE FP&L FEASIBILITY**
3 **ANALYSIS THEN BE A REASONABLE BASIS FOR CONCLUDING**
4 **THAT TURKEY POINT UNITS 6 AND 7 WAS COST-EFFECTIVE FOR**
5 **RATEPAYERS?**

6 A. No, the FP&L analyses would still be seriously deficient. In any planning
7 analysis, simplifications are required to perform reasonable analysis without
8 examining every possible option. These simplifications must be examined to
9 understand what assumptions have been made and their effects on the resulting
10 analysis. One simplification that FP&L has made is to not look at timing options.
11 By this I mean that FP&L has not looked at deferring new nuclear in service dates
12 until, for example, 2047 and meeting interim needs with gas plants. FP&L has
13 not looked at other non-carbon emitting technologies that are, in the long run,
14 potentially more economic than new nuclear plants. The extremely high emission
15 costs assumed by FP&L could result in radical changes to the level and to the
16 seasonal and hourly pattern of demand and there is no indication that FP&L has
17 examined these potential changes. Normally, judgments must be made to keep
18 the analysis tractable. Even given the scope of investment, \$ 13 to \$ 20 billion,
19 such judgments that limit scope can be reasonable. However, FP&L's judgments

1 fail to be reasonable because the future assumed is radically different from the
2 present. FP&L assumes that carbon prices will rise by eight times inflation. A
3 scenario where the cost of carbon rises by eight times inflation qualifies as
4 radically different. In such a case, an experienced planner would recognize that
5 the typical analyses and typical simplifications are not reasonable in the context of
6 a radically different carbon cost scenario. Hence, even if FP&L's carbon
7 assumptions, as posited in the hypothetical, were reasonable, FP&L's analysis
8 cannot be relied on by an experienced planner to produce a reasonable result with
9 respect to the costs effectiveness of Turkey Point units 6 and 7.

10
11 **15. Q. CAN YOU PROVIDE AN ADDITIONAL EXAMPLE OF WHY YOU**
12 **CONSIDER FP&L'S CARBON COST ASSUMPTIONS EXTREME?**

13 A. Yes. In reviewing data that FP&L provided in a request for a production of
14 documents, I observed that in the high fuel cost scenario for Environmental Case
15 3 without Turkey Point units 6 and 7, total system fuel costs in 2067 are \$ 28
16 billion while total system emission costs are \$ 57 billion. Nitric oxide costs are
17 included in emission costs but are constant in real terms and it is carbon costs that
18 drive this result. In my opinion an analysis that shows total system emission costs
19 being double total system fuel costs (and remember this is the high fuel cost

1 scenario), is extreme and cannot be relied upon to support a finding of feasibility
2 without extensive probing of the reasonableness of the assumption leading to such
3 a result.

4
5 **16. Q. HAVE YOU PREPARED EXHIBITS THAT WOULD SHOW THE**
6 **IMPACT ON BREAKEVEN COST OF ALTERNATE ASSUMPTIONS**
7 **WITH RESPECT TO THE TRANSMISSION ADVANTAGE AND**
8 **CARBON COST ADVANTAGE?**

9 A. Yes. Exhibits ETM-2 and ETM-3 show the impact of alternate assumptions for
10 several different scenarios with respect to the transmission and carbon cost
11 advantages of Turkey Point units 6 and 7. I have used FP&L's assumptions for
12 all other factors and FP&L's methodology. In the vast majority of scenarios
13 assuming a forty year life, breakeven costs are below the bottom end of the non-
14 binding cost range. In the vast majority of scenarios assuming a sixty year life,
15 breakeven costs are within the non-binding cost range – the zone that FP&L
16 characterizes as “may” be economic. These exhibits clearly illustrate that
17 economic feasibility comes from a single source: the extreme assumptions made
18 with respect to carbon value.

19

1 **17. Q. WHAT CONCERNS DO YOU HAVE WITH THE NUMBER OF YEARS**
2 **REQUIRED FOR THE INVESTMENT TO PRODUCE A NET PRESENT**
3 **VALUE (“NPV”) BENEFIT?**

4 A. The difference between the 40 year and the 60 year projections raise significant
5 concerns in this regard. The time pattern of costs and benefits is difficult to
6 visualize as the cases with Turkey Point and without Turkey Point have radically
7 different rate impacts over time. Even assuming that costs and schedule are as
8 planned, FP&L customers will pay over \$2 billion toward Turkey Point units 6
9 and 7 before a single KWH is produced. With the gas alternative, the amounts
10 paid before the plant produces would be an order of magnitude lower as the plants
11 are much less capital intensive and have a much shorter construction period. I do
12 not question the likelihood that Turkey Point, if built would operate for 60 years.
13 However, the economic feasibility seems to rely on the 60 year case and in my
14 opinion, the fact the plant will likely operate for 60 years is not the largest issue.
15 The largest issue is: if an investment is not feasible over 40 years and requires 60
16 years to attain feasibility on a present value basis, does the investment present an
17 acceptable risk profile? In this case, we have an investment that will not produce
18 power until 2027, will require ratepayer funding of at least \$ 2 billion through
19 2027 and will only begin to breakeven on a present value basis 40 years after it

1 enters service, in the late 2060s or 50 years from today. Only a minority of
2 ratepayers who pay the \$ 2 billion in pre operation funding will ever receive a
3 present value payback and even they will have to wait over 50 years from today to
4 break even. That is a very long term view. A legitimate question for the
5 Commission to address is whether the time pattern of costs and benefits is
6 reasonable even if it finds that over a 60 year life or over 70 years from today the
7 investment is likely to eventually result in a present value benefit. A very
8 different set of ratepayers will pay than the set that will benefit.

9
10 **18. Q. WHAT CONCERNS DO YOU HAVE WITH THE COST AND SCHEDULE**
11 **ASSUMPTIONS?**

12 A. Cost and schedule are always a concern with a major construction project. It is
13 likely that if the Commission were to require a thorough examination of the
14 transmission and carbon advantage of Turkey Point 6 and 7, that achieving
15 ultimate construction on schedule and near the low end of the non-binding cost
16 range will be critical to feasibility. FP&L's economic feasibility analyses make it
17 appear that the project is robust to the final cost. I do not believe this is correct.
18 If a thorough examination were to confirm feasibility through breakeven costs in
19 the range of the non-binding costs estimate, the finding of feasibility would be

1 contingent on the plant coming in on schedule and on budget. Hence, in my
2 opinion a more complete review of construction costs and schedule is needed.

3
4 **19. Q. DO YOU BELIEVE IT IS LIKELY THAT THE VALUE OF FUEL**
5 **DIVERSITY PROVIDED BY TURKEY POINT UNITS 6 AND 7 COULD**
6 **OUTWEIGH POTENTIAL SHORTCOMINGS IN THE ANALYSIS WITH**
7 **RESPECT TO CARBON COST ASSUMPTIONS?**

8 A. In my opinion, that would be unlikely. If feasibility is to be justified based on fuel
9 diversity, the value of that diversity should be quantified. FP&L has not quantified
10 the value to ratepayers of increased fuel diversity.

11
12 **20. Q. PLEASE SUMMARIZE YOUR FINDINGS.**

13 A. The investment in Turkey Point units 6 and 7 was approved at a time when the
14 natural gas supply and price outlook was much less optimistic than it is today.
15 Since the time that the investment in Turkey Point units 6 and 7 was approved, the
16 need for capacity from the units has slipped to 2027. FP&L's analyses in this
17 proceeding show that there is an alternative plan that would and could be
18 implemented if Turkey Point units 6 and 7 were cancelled. FP&L's analyses also
19 provide data that clearly demonstrates that Turkey Point units 6 and 7 are only

1 economically feasible at the current time because of FP&L's assumptions with
2 respect to the incremental transmission costs associated with the alternative and
3 the carbon costs savings alleged by FP&L from Turkey Point units 6 and 7.
4 Believing those assumptions requires believing that, in 2067, FP&L's total system
5 emission costs will be twice FP&L's total system fuel costs in a high fuel cost
6 scenario. Nuclear plants that were planned on a merchant basis around the time
7 that Turkey Point units 6 and 7 were approved are not moving forward. The Plant
8 Vogtle expansion in Georgia that was also approved in a similar time frame is
9 well behind schedule and is being challenged after having expended over \$ 2
10 billion. Even assuming that FP&L's assumptions and analyses were all perfect,
11 present value benefits in many cases are not achieved until 50 years from now,
12 while customers pay \$ 2 billion toward construction financing over the next 12
13 years. This constitutes a very long payback period and many current customers
14 will never be paid back. Currently, only \$ 250 million has been invested in
15 Turkey Point units 6 and 7. Prior to approving any significant additional
16 expenditures or commitments it would be prudent for the Commission to require
17 an in-depth investigation that, at a minimum, examines the reasonableness of the
18 transmission costs advantage attributed to Turkey Point units 6 and 7, the
19 reasonableness of the magnitude of the carbon cost advantage attributed to Turkey

1 Point units 6 and 7, the degree of confidence in the non-binding construction cost
2 range and the construction schedule and the reasonableness of proceeding with an
3 investment that may only achieve a present value breakeven over 50 years from
4 today. The time is opportune for such an investigation because the level of sunk
5 investment that would need to be recovered is manageable. While the record and
6 schedule in this proceeding does not allow for such in depth examinations, FP&L
7 is not intending to make significant additional investments or commitments over
8 the next year. The Commission would be prudent to require a more in depth
9 examination of Turkey Point units 6 and 7 before any such investments or
10 commitments are made.

11
12 **21. Q. DOES THIS COMPLETE YOUR TESTIMONY?**

13 A. Yes.

1 BY MR. HABER:

2 Q Mr. Meehan, are you sponsoring any exhibits
3 today?

4 A Yes, I'm sponsoring three exhibits,
5 Exhibit ETM-1, ETM-2 and ETM-3.

6 Q Do you have any changes to make to these
7 exhibits?

8 A I do not.

9 MR. HABER: We request that the
10 Exhibits ETM-1 through ETM-3, marked Numbers 44,
11 45 and 46 on Staff's Comprehensive Exhibit List
12 filed on June 22nd, 2015 be moved into the record
13 or at the appropriate time.

14 CHAIRMAN GRAHAM: We will duly note it.

15 MR. HABER: Thank you.

16 BY MR. HABER:

17 Q Mr. Meehan, do you have a summary of your
18 prefiled testimony?

19 A I do.

20 Q Would you please provide that summary to the
21 Commission.

22 A Yes. I have 35 years of experience advising
23 electric utilities with respect to the development of
24 long-range generation plans, especially plans involving
25 investment in nuclear generating facilities. My work

1 in this area has been conducted primarily for utilities
2 that were developing new nuclear power plants or
3 examining the operation or life extension of existing
4 plants. I've directed or been involved in feasibility
5 analysis of nuclear investments on over five occasions,
6 including, for example, advising the Tennessee Valley
7 Authority with respect to a review of its multi-unit
8 nuclear program.

9 After reviewing FP&L's feasibility analysis,
10 I believe that it should be rejected by the Commission.
11 I believe FP&L's analysis is flawed as it rests on
12 speculative and implausible assumptions. Specifically,
13 FP&L's analysis rests on two assumptions that I
14 consider implausible. And without these assumptions,
15 constructing and operating Turkey Point 6 and 7 would
16 not allow FP&L to avoid the costs that make the project
17 appear potentially cost effective.

18 The first assumption is the carbon price
19 forecast. FP&L predicts that the cost of carbon
20 emissions will be drastically higher than its fuel
21 costs in the future. In fact, the Turkey Point
22 Feasibility Analysis is based on scenarios where in the
23 long run emission costs are two to five times greater
24 than fuel cost. Effectively, this is like a 200 or
25 500 percent tax on the cost of energy.

1 Second, I believe FP&L unjustifiably burdened
2 the scenario that it uses as a comparison with Turkey
3 Point 6 and 7 to determine cost effectiveness by
4 arbitrarily adding 1.7 billion in incremental
5 transmission costs to the hypothetical natural gas
6 combined cycle alternative.

7 FP&L artificially made Turkey Point 6 and 7
8 appear more competitive with these assumptions. FP&L
9 alleges that the added cost is reasonable with respect
10 to transmission because gas capacity would be located
11 outside of south Florida, but FP&L has not provided a
12 reason why the alternative gas-fired capacity, like the
13 nuclear reactors, could not be locate in south Florida.
14 Neither assumption appears reasonable nor has been
15 adequately supported by FP&L.

16 I have two additional concerns worth noting.
17 One is that the carbon price forecast used by FP&L is
18 three years old. With an investment of 13 to
19 \$20 billion required for the plant, it's hard to
20 understand why a new forecast was not commissioned and
21 utilized.

22 Another concern is that the economic
23 feasibility of Turkey Point 6 and 7 relies on a 60-year
24 life instead of a 40-year life; hence, the proposed
25 benefits are speculations as to what could happen over

1 52 and even 72 years from now. FP&L will recover over
2 \$2 billion from customers before a single kilowatt hour
3 is generated; hence, it's necessary to analyze this
4 investment on a present value basis.

5 Finally, the development of Turkey Point 6
6 and 7 is reaching a critical juncture. Before
7 committing significant additional investment, the
8 economic feasibility of the plant must be thoroughly
9 examined and demonstrated. As more is invested in the
10 plant, sunk costs will grow. Ratepayers will bear
11 these sunk costs, whether the plant is completed or
12 not. Allowing sunk costs to grow without a convincing
13 demonstration of economic feasibility is unwise.

14 This year FP&L has failed to demonstrate that
15 Turkey Point 6 and 7 is economically feasible.

16 MR. HABER: The City of Miami tenders
17 Mr. Meehan for cross examination at this time.

18 CHAIRMAN GRAHAM: Okay. Who am I starting
19 with, OPC?

20 MS. CHRISTENSEN: We have no questions.

21 MR. LAVIA: No questions.

22 MR. MOYLE: I just have one or two.

23 EXAMINATION

24 BY MR. MOYLE:

25 Q You had criticized, I think, the future

1 **projection of carbon; is that right?**

2 A Yes.

3 Q Okay. Would you agree that for any
4 projections for a plant where the construction is not
5 going to -- where it is not going to be operational --

6 MS. CANO: Objection. Any questioning by
7 Mr. Moyle is friendly cross at this point.

8 MR. MOYLE: She hasn't even heard it. I
9 mean, I think that's --

10 MS. CANO: I don't think I need to.

11 MR. MOYLE: -- presumptuous.

12 CHAIRMAN GRAHAM: Go ahead and ask the
13 question.

14 BY MR. MOYLE:

15 Q Would you agree that with respect to
16 projections, that any projection for a plant where it's
17 not going to be operational in ten years is lacking in
18 confidence?

19 MS. CANO: Objection.

20 CHAIRMAN GRAHAM: That's friendly cross.

21 THE WITNESS: I wouldn't go so far as to say
22 any --

23 CHAIRMAN GRAHAM: Sir, it's okay.

24 THE WITNESS: Okay. Sorry.

25 MR. MOYLE: He came all the way from Utah, I

1 was trying to help him out.

2 CHAIRMAN GRAHAM: SACE?

3 MR. CAVROS: At the risk of not falling into
4 the same trap, I have no questions for this
5 witness.

6 CHAIRMAN GRAHAM: Okay. Florida Power &
7 Light?

8 MS. CANO: No questions.

9 CHAIRMAN GRAHAM: Staff?

10 MS. MAPP: Thank you, Mr. Chairman, we just
11 have a few questions.

12 EXAMINATION

13 BY MS. MAPP:

14 Q If you could turn with me to Page 23 of your
15 filed direct testimony. On Line 4 you state that "The
16 time is opportune for such an investigation because the
17 level of sunk investment that would need to be
18 recovered is manageable."

19 What is your current understandings of the
20 level of FPL's unrecovered investment in Turkey Point
21 Unit 6 and 7 at this time?

22 A I believe it is about \$250 million.

23 Q So it is your understanding that FPL has 200
24 and -- I'm sorry, what was the number again?

25 A 250 million.

1 **Q \$250 million unrecovered at this time?**

2 A Yes, or 250 million invested. I don't know
3 that I've looked at what's been recovered, but I
4 assumed that that was largely outstanding.

5 **Q So you have no understanding of how much of**
6 **FPL's investment is recovered at this time?**

7 A I'm not sure how much of that 250 million
8 they may have already recovered, that is correct.

9 **Q Now, if you could turn to Page 13 of your**
10 **testimony. Here you discuss your concerns with FPL's**
11 **carbon cost assumptions.**

12 Do you know the extent of any differences in
13 the carbon price forecasts FPL relied on for purposes
14 of this proceeding compared to any carbon price
15 forecasts FPL may have used for other filings with this
16 Commission, such as the company's annual site plan or
17 any other resource planning work?

18 A No, I am not familiar with what FP&L may have
19 used in other analyses.

20 **Q Now, if you could turn to Page 20 of your**
21 **testimony.**

22 A Yes, I'm there.

23 **Q Okay. Here you discuss your concerns with**
24 **the current estimated costs and projected schedule for**
25 **the project. And continued onto the top of Page 21,**

1 **you state that a more complete review of construction**
2 **costs and schedules are needed.**

3 Is the thrust of your testimony that before a
4 decision to make significant investments or
5 commitments, a further analysis and study of costs,
6 likely benefits and project schedule is needed?

7 A Yes. And I think I would expand to say
8 before really reaching a conclusion on feasibility,
9 those things are needed also.

10 **Q And is it also your assertion that FPL is not**
11 **intending to make any significant investments or**
12 **commitments in the next year?**

13 A I don't believe I have addressed that in my
14 testimony, but my understanding, based on what I've
15 heard today, is that FP&L is investing relatively
16 modest amounts over the next year.

17 **Q Okay. If you can turn to Page 23 of your**
18 **testimony, Lines 4 through 10. Is it not your**
19 **statement here that FPL is not intending to make**
20 **significant additional investments or commitments over**
21 **the next year?**

22 A Yes, that is my understanding.

23 **Q Do you believe that during 2015 and 2016 FPL**
24 **will incur substantial commitments and investments if**
25 **the Commission approves FPL's 2015 feasibility**

1 **analysis?**

2 A No, I don't believe -- I think it's correct
3 what I say here, they're not intending to make those
4 investments. I don't think that's sufficient reason
5 for approving an analysis that has the flaws that I've
6 described in it. But I do not think a consequence of
7 approving it would be significant additional
8 investment.

9 **Q Mr. Meehan, excuse me one second.**

10 MS. MAPP: I have an exhibit that I would
11 like to pass out. This will be -- what is being
12 handed out now is the City of Miami's First
13 Response to Interrogatory Number 11.

14 BY MS. MAPP:

15 **Q Have you seen this response prior to today?**

16 A I have not.

17 **Q Are you aware that -- all right. Can you
18 please read the response and answer to the question
19 that was given to the City of Miami and please let me
20 know when you're finished reading the answer.**

21 MS. MAPP: And I'll just let it be known for
22 the record that this has already been entered into
23 the record. This is Exhibit Number 39.

24 THE WITNESS: Yes, I've read it.

25 BY MS. MAPP:

1 **Q You were asked about -- sorry. You were**
2 **asked about the amounts that FPL has sought to recover**
3 **in the past and how much it has recovered up to this**
4 **point through the NCRC proceeding.**

5 How did that impact the purpose of your
6 testimony?

7 **A It really doesn't impact the purpose of my**
8 testimony at all.

9 **Q Does it have any relationship on the flaws**
10 **that you noted in FPL's feasibility analysis?**

11 **A No.**

12 **Q Thank you.**

13 MR. HABER: No further questions.

14 CHAIRMAN GRAHAM: Okay. Exhibits that we're
15 entering into the record.

16 MR. HABER: The City of Miami requests that
17 Exhibits 44, 45 and 46 be entered into the record.

18 CHAIRMAN GRAHAM: Forty-four, 45 and 46 will
19 be entered into the record, if there's no
20 objections.

21 (Exhibit Nos. 44, 45 and 46 were received in
22 evidence.)

23 CHAIRMAN GRAHAM: Okay. And I think that's
24 the only exhibit that we have.

25 Would you like for your witness to be

1 excused?

2 MR. HABER: I would, please.

3 CHAIRMAN GRAHAM: Sure.

4 MR. HABER: Thank you.

5 CHAIRMAN GRAHAM: Mr. Meehan, safe travels
6 home.

7 THE WITNESS: Thank you.

8 (Proceedings continued in Volume 5.)

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CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

I, MICHELLE SUBIA, Registered Professional Reporter, certify that the foregoing proceedings were taken before me at the time and place therein designated; that my shorthand notes were thereafter translated under my supervision; and the foregoing pages, numbered 495 through 629, are a true and correct record of the aforesaid proceedings.

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

DATED this 25th day of August, 2015.

Michelle Subia

MICHELLE SUBIA, CCR, RPR
NOTARY PUBLIC
COMMISSION #FF127508
EXPIRES JUNE 7, 2018

