

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 100009-EI

In the Matter of:
NUCLEAR COST RECOVERY CLAUSE.

VOLUME 3

Pages 487 through 796

ELECTRONIC VERSIONS OF THIS TRANSCRIPT ARE
A CONVENIENCE COPY ONLY AND ARE NOT
THE OFFICIAL TRANSCRIPT OF THE HEARING,
THE .PDF VERSION INCLUDES PREFILED TESTIMONY.

PROCEEDINGS: HEARING

COMMISSIONERS
PARTICIPATING: CHAIRMAN NANCY ARGENZIANO
COMMISSIONER LISA POLAK EDGAR
COMMISSIONER NATHAN A. SKOP
COMMISSIONER ART GRAHAM
COMMISSIONER RONALD A. BRISÉ

DATE: Wednesday, August 25, 2010

TIME: Commenced at 9:39 a.m.

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

REPORTED BY: LINDA BOLES, RPR, CRR
Official FPSC Reporter
(850) 413-6734

APPEARANCES: (As heretofore noted.)

DOCUMENT NUMBER-DATE

07395 SEP-20

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

WITNESSES

NAME:	PAGE NO.
JON FRANKE	
Cross Examination by Ms. Kaufman	520
SUE HARDISON	
Direct Examination by Ms. Huhta	531
Prefiled Direct Testimony 3-1-10 Inserted	533
Prefiled Direct Testimony 4-30-10 Inserted	557
Cross Examination by Mr. Rehwinkel	574
KEN KARP	
Prefiled Direct Testimony 3-1-10 Inserted	595
Prefiled Direct Testimony 4-30-10 Inserted	616
DR. MARK COOPER	
Prefiled Direct Testimony Inserted	634
ARNOLD GUNDERSON	
Prefiled Direct Testimony Inserted	673
WILLIAM R. JACOBS, JR., Ph.D.	
Direct Examination by Mr. Rehwinkel	699
Prefiled Direct Testimony Inserted	702
Cross Examination by Mr. Walls	727
Cross Examination by Mr. Davis	737
Redirect Examination by Mr. Rehwinkel	739
WILLIAM COSTON and KEVIN CARPENTER	
Direct Examination by Mr. Young	745
Prefiled Direct Testimony Inserted	748
Cross Examination by Mr. Rehwinkel	757
Cross Examination by Mr. Brew	774
Cross Examination by Ms. Kaufman	782
Cross Examination by Mr. Jacobs	784

	EXHIBITS		
	NUMBER:	ID.	ADMTD.
1			
2			
3	19		529
4	20		529
5	31 WRJ (PEF) -1	701	742
6	32 WRJ (PEF) -2	701	742
7	33 WRJ (PEF) -3	701	742
8	34 MNC-1	632	633
9	35 MNC-2	632	633
10	36 MNC-3	632	633
11	37 MNC-4	632	633
12	38 MNC-5	632	633
13	39 MNC-6	632	633
14	40 MNC-7	632	633
15	41 MNC-8	632	633
16	42 MNC-9	632	633
17	43 MNC-10	632	633
18	44 MNC-11	632	633
19	45 MNC-12	632	633
20	46 MNC-13	632	633
21	47 MNC-14	632	633
22	48 MNC-15	632	633
23	49 MNC-16	632	633
24	50 MNC-17	632	633
25	51 MNC-18	632	633

	EXHIBITS		
	NUMBER:	ID.	ADMTD.
1			
2			
3	52 MNC-19	632	633
4	53 MNC-20	632	633
5	54 AG-1	672	672
6	55 AG-2	672	672
7	56 AG-3	672	672
8	57 AG-4	672	672
9	58 AG-5	672	672
10	59 AG-6	672	672
11	60 AG-7	672	672
12	77 Revised CC-1	747	793
13	191		530
14	193		530
15	194		530
16	195		530
17	196		530
18	197		530
19	198 PRG Minutes and EPV Variance Reports	514	530
20			
21	199 2009 CR3 Audit	514	530
22	200 2009 CR3 Audit	515	530
23	201 March 2009 Uprate Presentation	515	530
24	202 July 2009 Uprate Presentation	515	530
25	203 October 2009 Uprate Presentation	515	530

	EXHIBITS		
	NUMBER:	ID.	ADMTD.
1			
2			
3	204	Response to DR-3	515 530
4	205	Depo Exhibit 2 (Late-Filed)	515 530
5	206	(Confidential) 8-10-10 Depo of Jon Franke	515 530
6	207	Depo Exhibit 1 (Late-Filed)	519 530
7	208	Janus Interview	574 592
8	209	LNP Master Plan	574 592
9	210	Staff Response to PCS ROGs	744 794
10	211	Staff Response to PCS Request for POD	744 794
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

P R O C E E D I N G S

1
2 (Transcript follows in sequence from
3 Volume 3.)

4 **CHAIRMAN ARGENZIANO:** Okay. We'll call our
5 meeting to order for this morning, and we will pick up
6 with, I guess, preliminary matters before we go back to
7 our point in our agenda where we left.

8 **MR. YOUNG:** Yes, ma'am. We'll pick up with
9 the preliminary matters as relates to Commissioner
10 Skop's request. And I think Ms. Helton had, our General
11 Counsel, Mr. Kiser, is here to respond to those
12 requests, Commissioner.

13 **CHAIRMAN ARGENZIANO:** Yes.

14 **MR. KISER:** Chairman, we did get a phone call
15 this morning, and the, Florida Power & Light will have
16 someone here to respond to the questions that were
17 raised at the end of the meeting regarding making
18 Mr. Olivera available for answering some questions. So
19 if they have someone, I would recommend we hear from
20 them first off.

21 **CHAIRMAN ARGENZIANO:** Okay. Why don't we do
22 that now. I'm going to shift everybody around I guess.
23 Well, we're in place. Okay. Very good.

24 **MR. ANDERSON:** Yes. I believe we're ready to
25 proceed.

1 **CHAIRMAN ARGENZIANO:** Okay. If you would.

2 **MR. ANDERSON:** FPL has been asked to provide
3 its position with respect to a request by Commissioner
4 Skop late yesterday in the middle of Progress's case to
5 have our Chief Executive Officer appear at this hearing.
6 The purpose of this appearance is apparently to answer
7 the Commissioner's questions on matters that, to the
8 limited extent they were described by Commissioner Skop
9 yesterday afternoon, appear nowhere on the issues list
10 in the Prehearing Order.

11 As you are all well aware, the issues in the
12 Prehearing Order govern the disposition of this case.
13 This is a highly irregular request, it has no legal
14 basis, and would provide a very poor precedent for the
15 Commission.

16 Permit me to remind the Commission that a week
17 ago FPL filed with the Commission a stipulation to defer
18 consideration of this year's issues into the
19 2011 proceeding. That stipulation is fully consistent
20 with Commission practice and properly addresses the
21 issues stated in the Prehearing Order. It is a
22 stipulation which has been filed on behalf of FPL and
23 the Office of Public Counsel and the Florida Industrial
24 Power Users Group. In addition, the only other
25 Intervenor, the Southern Alliance for Clean Energy, has

1 no objection to the stipulation.

2 So if that stipulation is approved, to be
3 clear, there is no reason for any questions of any
4 witnesses as a legal matter. But we will come to that
5 stipulation in due course, as I understand, after the
6 conclusion of Progress's case.

7 Now let me address our concerns with the
8 request by Commissioner Skop to have our Chief Executive
9 Officer appear.

10 The Administrative Procedure Act and the
11 Commission's rules provide for notice to parties as to
12 the issues in each case. The Commission has a
13 long-standing procedure for filing prefiled testimony
14 identifying the issues and witnesses that provides a
15 clear roadmap for adjudication of issues before the
16 Commission. This process implements the requirements of
17 the Administrative Procedure Act to provide notice to
18 parties prior to adjudicatory hearings, which promotes
19 fundamental fairness to all parties.

20 The purpose of hearings before the Commission
21 is to develop a record and provide information to the
22 Commissioners to inform decision-making. This
23 Commission has always focused on what is being said and
24 not who is saying it.

25 Now without the benefit of a specifically

1 identified issue, FPL assumes for purposes of this
2 discussion that the issue raised by Commissioner Skop
3 deals with the Concentric report we've talked about.
4 The simple fact is that the Concentric report was
5 provided to audit staff, the Commission and the parties
6 two months ago. At all times Commissioner Skop has had
7 full and unfettered access to this information.

8 For the past two months, no party, including
9 Commissioner Skop, has raised any issues regarding the
10 Concentric report. Moreover, no issue was raised by any
11 party, the staff, Commissioner Skop, prior to or during
12 the Prehearing Conference regarding the report, as
13 required by Commissioner Skop's own Order Establishing
14 Procedure. Consequently, it should be no surprise that
15 there's no mention of the Concentric report in the
16 August 20, 2010, Prehearing Order issued by Commissioner
17 Skop.

18 FPL has not been provided notice as to any
19 issue or even the subject of questioning of Mr. Olivera,
20 as required under the law and fundamental principles of
21 due process and fairness. The complete lack of notice
22 is self-evident.

23 We'd also point out there is a formal legal
24 process for the issuance of subpoenas by law. The
25 subpoena would have to be properly served on the

1 witness, FPL would have the right to object and litigate
2 at a minimum the relevancy and scope of the subpoena at
3 the Commission and in the appellate courts. If this
4 route is followed, it would be weeks, if not months,
5 even beyond the balance of the year, before a subpoena
6 could be enforced. Based on these considerations, it is
7 unlikely that an enforceable subpoena could be issued to
8 compel the appearance of a witness during this week's
9 proceedings.

10 One could also easily conclude by some of the
11 comments that FPL has been prejudged on the issues
12 without the benefit of testimony or evidence. I think
13 everyone would agree that the appearance of prejudgment
14 is not good for this Commission or for the reputation of
15 the State of Florida.

16 Without minimizing the concerns that I've
17 expressed, I wish to also emphasize that FPL places
18 great value in having a cooperative and constructive
19 approach to these important matters before this
20 Commission. Therefore, we believe there is no need for
21 the Commission to issue a subpoena to compel the
22 appearance of FPL's Chief Executive Officer.

23 As acknowledged just a few days ago, Friday,
24 by Commissioner Skop, FPL has gone, quote, over and
25 above in good faith, close quote, to add, and I quote,

1 transparency, close quote, with respect to FPL's
2 documents for which it had a legitimate claim of
3 confidentiality.

4 Given the extraordinary nature of this
5 request, we believe it appropriate for the full
6 Commission to provide direction. If it is the will of
7 the full Commission, then, in the spirit of cooperation
8 and good faith, FPL will have Mr. Olivera appear before
9 the Commission to answer questions germane to this
10 proceeding.

11 To facilitate that appearance, if it's the
12 will of the full Commission, FPL requests a list as to
13 the specific subjects on which questions will be asked
14 so that Mr. Olivera can adequately prepare. FPL is
15 making this offer as a good faith gesture in a
16 cooperative spirit and reserves all of its legal
17 arguments, rights and remedies.

18 **CHAIRMAN ARGENZIANO:** If you'd like to, you're
19 recognized.

20 **COMMISSIONER SKOP:** Thank you, Madam Chairman.
21 And thank you, Mr. Anderson, for your thoughts that you
22 shared with the Commission this morning.

23 Just some brief comments. The assumptions
24 that you made are inaccurate. With respect to
25 questioning the impartiality of the Prehearing Officer

1 and me as Commissioner, as a member of the Florida Bar,
2 I take extreme exception to your comments.

3 The question that I presented yesterday was a
4 simple request propounded upon your company. Your
5 company will either honor the request in good faith or
6 they won't. So, again, I think that at the end of the
7 day the questions I have are constructive, they're not
8 meant to be inflammatory. Due process is a two-way
9 street. And if we want to debate the fine points of due
10 process, I certainly have some concerns that I will get
11 into.

12 Again, at the end of the day, leadership is
13 set by example, and accountability starts at the top of
14 any organization. You're fully aware of the documents
15 that were only disclosed as of Friday, and there are
16 other documents that are at issue. Each of my questions
17 pertain to live issues related to this proceeding and
18 the documentation of the data that's been provided in
19 the, in this proceeding.

20 So, again, I'm going to leave it as a request.
21 But, again, certainly, you know, from a corporate
22 perspective, it would have been simple enough to just
23 merely honor the request. But either the company will
24 choose to honor it or they won't. And if I believe I
25 heard Mr. Anderson correctly, notwithstanding making a

1 case to get into the stipulations in this matter, which
2 were filed, if my memory serves me correctly, on the
3 18th or 17th of this month, and I need to check that
4 date, you know, certainly we can get into that.

5 But what I heard from the company is now
6 they've asked the full Commission to render a decision
7 as to the appropriateness of my questions. And not only
8 that, prior to producing or making Mr. Olivera
9 available, it's conditioned or predicated upon a
10 specific list of questions. Again, different companies
11 approach, you know, their interaction with the
12 Commission in different ways.

13 Knowing some of the issues in this docket,
14 again, if I were similarly situated, I would probably
15 proactively make myself available to this Commission to
16 answer questions. So I respect FPL's legal position.
17 I'm prepared to, you know, do what the will of the
18 Commission is on this matter. But I think it's, it was
19 a very simple, reasonable request that apparently got
20 blown out of proportion unnecessarily through additional
21 questioning.

22 Again, I'm an attorney, I'm a Commissioner, a
23 member of the Bar. I know, you know, the appropriate
24 questions to ask, and those questions would have been
25 asked with the respect afforded to a person in that

1 position. But at the end of the day, they're fair
2 questions. And that's basically all I have to say,
3 Madam Chair. Thank you.

4 **CHAIRMAN ARGENZIANO:** Where does that leave
5 us?

6 **MR. KISER:** Madam Chairman, I take the
7 response from the company is that if the will of the
8 Commission is to have him appear, under the conditions
9 that were stated, they would. Without that, then they
10 would choose not to present him. So I think it's a
11 question for the Commission to --

12 **CHAIRMAN ARGENZIANO:** Well, let me ask this
13 question then of Commissioner Skop. Knowing that the
14 company wants the full Commission to vote on that, does
15 that make a difference to you? Do you want to just
16 forget it? Do you want to pursue it? Let's find out
17 what you would like to do.

18 **COMMISSIONER SKOP:** Again, I have concerns. I
19 usually, you know, try and show deference to my
20 colleagues. Obviously, procedurally they've attempted
21 to, you know, basically shift the scales and put the
22 burden on the full Commission vote as to whether they
23 will choose to make him available and which conditions
24 they will make him available under. And really I didn't
25 really feel that this would get down to a negotiation.

1 It was a simple request that should have been honored.
2 You know, I think that, you know, it comes down to, you
3 know, respect for the regulatory process or lack
4 thereof.

5 So I understand the due process concerns that
6 are raised, but the issues are highly relevant and
7 highly germane to the issues here. If it is the will of
8 the Commission -- and, again, I apologize to Progress,
9 because, again, under the Order Establishing Procedure,
10 Progress's case in chief was to go first.

11 I brought this up, correcting what
12 Mr. Anderson represented to the Commission, I brought
13 this up at the end of the day, not in the middle of
14 PEF's case, but as a closing matter for planning
15 purposes. So that's another exception I take.

16 But, you know, if it's the will of the
17 Commission, we can take up the stipulation, I can say my
18 piece, the vote will be what it will be, but, or we can
19 address the issue with respect to my request to make
20 Mr. Olivera, you know, ask and see whether he wants to
21 appear. But apparently that seems to be bogging down
22 into a protracted reluctance on FPL's part to honor what
23 typically would be a simple request. And I'm reasonably
24 certain if I made the same request upon Progress or
25 another regulated IOU, I wouldn't have this resistance

1 under the circumstances.

2 **CHAIRMAN ARGENZIANO:** I'm still not sure where
3 that leaves us.

4 **COMMISSIONER SKOP:** Why don't, why don't we
5 take up the, if it's the will of the Commission, why
6 don't we take up -- because Mr. Anderson, you know, when
7 he spoke, it was supposed to be about my request, but he
8 managed to make a big hoo-ha about this stipulation. So
9 if we need to have that discussion, we can have it. And
10 if the Commission decides to approve the FPL
11 stipulations, then I guess it denies me the ability to
12 even ask Mr. Olivera those questions. So that's
13 probably the better predicate. And if -- at the Chair's
14 discretion, I'll look to the Chair to figure out what we
15 want to do with respect to proposed stipulations.
16 Because I see this going nowhere and I don't, I don't
17 want to waste Progress's time.

18 **CHAIRMAN ARGENZIANO:** Well, if it's up to me,
19 and everybody else chime in here, what I'd rather do is
20 just continue with Progress's case right now and just
21 move forward.

22 **COMMISSIONER SKOP:** All right. Very well.
23 And I reserve my rights. Again, I've made a request. I
24 guess it's incumbent upon FPL as to whether they choose
25 to honor it or not. I'll let them make that decision.

1 **CHAIRMAN ARGENZIANO:** And then we'll --
2 Commissioner Graham.

3 **COMMISSIONER GRAHAM:** I move that we lay the
4 stipulation on the table and retake up Progress where we
5 left off, and then we can come back and address the
6 stipulation when we're done with Progress.

7 **COMMISSIONER SKOP:** Second.

8 **CHAIRMAN ARGENZIANO:** All those in favor?

9 (Unanimous affirmative vote.)

10 Okay. And I believe that at that time we have
11 a right of, each Commissioner has a right to hear or ask
12 questions that they want to ask, and we'll take it from
13 there. So let's move on. Thank you. Back to our
14 agenda, where we were.

15 Mr. Rehwinkel?

16 **MR. REHWINKEL:** Yes. Madam Chairman, after we
17 spent the day going through the testimony and the
18 significant amount of documents, I spent some time last
19 night reviewing the questions that I have for the, for
20 the rest of the case, and I'm fully aware that my
21 questions are probably the real time contributor to us
22 being here.

23 About two weeks ago I took three depositions,
24 one of Mr. Franke, one of Mr. Lyash, and one of
25 Mr. Elnitsky, and between myself and the other parties,

1 we spent most of the day with each witness. And so
2 there are significant depositions that, testimony that
3 has been provided.

4 I have approached the parties and the, and the
5 staff about maybe taking a few minutes to sit down and
6 try to work out some protocols for streamlining the rest
7 of the hearing. And I think everyone is kind of in
8 agreement that if we do so, we could save, we could save
9 a lot of testimony time here.

10 We're not talking about completely stipulating
11 witnesses in, but narrowing the testimony and the
12 cross-examination and the answers. And so we would, I
13 think with the consent of everyone, we would ask if we
14 could have maybe 30 minutes to sit down and try to work
15 that out. To save 30 minutes today, right now would
16 potentially save a lot of time the rest of the day.

17 **CHAIRMAN ARGENZIANO:** I don't see any, any
18 reason why not to. Why don't we, why don't we do that.
19 Now make sure, because we all get paid a lot of money to
20 sit here and listen, so we'll stay. If you need to ask,
21 there should be no rush. But if you feel like you can,
22 you can do that and accommodate, you know, the questions
23 that you have and get it out where you need to get it
24 to, to our ears too, then why don't we just, why don't
25 we just do that, take 30 minutes. And if you need a few

1 more, just --

2 **MR. REHWINKEL:** And let me assure you, I felt
3 no pressure by anyone, the Commission or the other
4 parties, to limit what I'm doing.

5 **CHAIRMAN ARGENZIANO:** Sure.

6 **MR. REHWINKEL:** I just know the nature of
7 these issues are highly technical. The documentation
8 we're going through is highly technical. There reaches
9 a point of diminishing returns about what can be
10 explicated in live testimony with technical documents
11 like this.

12 **CHAIRMAN ARGENZIANO:** Sure.

13 **MR. REHWINKEL:** So being aware of that, we're
14 going to try to kind of narrow things down.

15 **CHAIRMAN ARGENZIANO:** Certainly. And let me
16 just reassure you that I'm just making that comment so
17 you knew that none of us were telling you you had to
18 hurry up.

19 **MR. REHWINKEL:** Thank you.

20 **CHAIRMAN ARGENZIANO:** Okay. All right. Let's
21 do that. Let's take at least 30 minutes. We'll be
22 back. Thank you.

23 (Recess taken.)

24 Okay. Let's start her back up. Commissioner
25 Skop, you're recognized.

1 **COMMISSIONER SKOP:** Thank you, Madam Chair.
2 And I apologize for the interruption, but I do believe
3 it's important to correct a prior statement that was
4 made to this Commission.

5 Mr. Anderson, in his lengthy discussion
6 previously, asserted something, and I would ask the
7 court reporter if she might be so kind to read back four
8 lines that were represented to the Commission by
9 Mr. Anderson. And that would begin on page 3, lines 24
10 and 25, continuing on to page 4, lines 1 and 2, please.

11 (Foregoing excerpt read by court reporter.)

12 Thank you. And if I may, Madam Chair, to
13 properly rebut that statement that was made to the
14 Commission, I would look to Ms. Harvey from Commission
15 audit staff to speak to when audit staff was provided
16 with the Concentric report and some of the instances
17 surrounding that, as well as my access to that report at
18 that time.

19 **MS. HARVEY:** Commissioners, audit staff
20 requested the Concentric report on May 8th, 2010, and
21 the staff received a copy of the Concentric report on
22 June 23rd, 2010.

23 **COMMISSIONER SKOP:** And, Ms. Harvey, with
24 respect to Commission audit staff receiving such report,
25 I would not have had access to that report at that time;

1 is that correct?

2 **MS. HARVEY:** That's correct.

3 **COMMISSIONER SKOP:** Okay. And I would not
4 have had access to it as a Commissioner until it was
5 properly filed in the docket; is that correct?

6 **MS. HARVEY:** Correct.

7 **COMMISSIONER SKOP:** Okay. And subject to
8 check, and, Ms. Harvey, if you're not comfortable with
9 this, I'll ask Ms. Bennett from our legal department,
10 but subject to check, the Concentric report was
11 requested by Commission staff in staff's fourth request
12 for production of documents, specifically Document
13 Number 25; is that correct?

14 **MS. HARVEY:** I was not involved in that
15 request.

16 **COMMISSIONER SKOP:** All right. Thank you,
17 Ms. Harvey.

18 Ms. Bennett?

19 **MS. BENNETT:** It was, and it was provided on
20 August 17th.

21 **COMMISSIONER SKOP:** Okay. So I guess what we
22 could reasonably conclude from this, notwithstanding the
23 statements represented to the Commission by
24 Mr. Anderson, was that I indeed did not have full and
25 unfettered access to this report two months ago; is that

1 correct?

2 **MS. BENNETT:** The Commissioners are not, don't
3 have access to staff's audit work papers until that's
4 made part of the docket file.

5 **COMMISSIONER SKOP:** Thank you, ma'am.

6 Thank you, Madam Chair.

7 **CHAIRMAN ARGENZIANO:** Well, let's go one step
8 further. When was it made part of the docket, what
9 date?

10 **MS. BENNETT:** The, my recollection is that on
11 the day before the prehearing, on August 17 -- 16th --
12 it may have been August 15th, something like that, there
13 was a copy of staff's audit work paper on the Concentric
14 report filed in the docket file. A few days later,
15 August 16th, 17th, and, again, I would have to go back
16 into CMS to give you the exact dates, but --

17 **CHAIRMAN ARGENZIANO:** Well, can I ask staff a
18 question? Would someone like Mr. Anderson know that
19 Commissioners don't have access to that? Because that
20 makes a big difference about what his statement meant.
21 If he doesn't know, then that's a different story. But
22 if he should know, then that tells me something else.

23 **MS. BENNETT:** I'm not certain what outside
24 parties' understanding of our audit process is and who
25 would have knowledge of Commission staff -- or

1 Commissioners' access to staff's work papers. I don't
2 know that.

3 **CHAIRMAN ARGENZIANO:** So then I guess without
4 asking, it's just an assumption on Mr. Anderson's part
5 that we would have that information.

6 **MS. BENNETT:** Yes.

7 **CHAIRMAN ARGENZIANO:** Okay. Commissioner
8 Skop, you're recognized.

9 **COMMISSIONER SKOP:** Thank you, Madam Chair.
10 And I'll just make this brief. Again, it's not at issue
11 is what Mr. Anderson knew. It's the breadth and
12 cavaliness of the statements made as it pertains to
13 what I knew, which I take again great exception to some
14 of the comments that were made earlier this morning.

15 And, Ms. Bennett, just one follow-up to the
16 question. Not to belabor the point, but it's my
17 understanding that the actual Concentric report itself
18 was agreed to be declassified at the evidentiary hearing
19 on the 20th; is that correct?

20 **MS. BENNETT:** That's correct.

21 **COMMISSIONER SKOP:** So until, until the
22 evidentiary hearing on the 20th, the majority of the
23 staff audit report, the Concentric report and the
24 underlying letter were all claimed to be confidential by
25 FPL; is that correct?

1 **MS. BENNETT:** Yes.

2 **COMMISSIONER SKOP:** And that was the first
3 time that they were disclosed publicly was August 20th;
4 is that correct?

5 **MS. BENNETT:** Yes.

6 **COMMISSIONER SKOP:** Thank you.

7 **CHAIRMAN ARGENZIANO:** Commissioner Skop, while
8 it may not have been important to you, and I understand
9 the reasons why and I understand what is important to
10 you, but it is important to me of whether he knew or
11 not. If someone knows that the Commissioners do not
12 have that access, then that was an intentional whatever,
13 and maybe they don't know because -- and that's the
14 reason I asked. It makes a big difference to me if
15 someone knows ahead of time and then makes that
16 statement while knowing that we don't have that
17 information. That sends a very, very loud message to
18 me, and it may answer a lot of things that I've seen
19 here and while I've been here. I'm not sure that's the
20 case though. That's why I asked the question. It is
21 important, it is significant. Okay.

22 **COMMISSIONER SKOP:** Thank you, Madam Chair.

23 **CHAIRMAN ARGENZIANO:** Commissioner Skop, did
24 you --

25 **COMMISSIONER SKOP:** Thank you, Madam Chair.

1 **CHAIRMAN ARGENZIANO:** Okay. Let's, let's put
2 ourselves in the proper posture. Now that we've, we've
3 gotten this taken care of, I guess, to whatever degree
4 we are and you have corrected that assumption, I guess
5 we are now back on our Progress.

6 Mr. Rehwinkel.

7 **MR. REHWINKEL:** Thank you, Madam Chairman and
8 Commissioners. I appreciate your willingness to let us
9 talk because I think it paid off. I will defer to
10 Ms. Bennett to describe the agreement that the parties
11 have come to to streamline the remaining portions of the
12 Progress segment of the hearing.

13 **CHAIRMAN ARGENZIANO:** Okay. And I thank all
14 parties for being able to do so.

15 Ms. Bennett?

16 **MS. BENNETT:** Yes. We met, and it was
17 actually at the suggestion of OPC to streamline. The
18 parties have agreed, and if it's at your pleasure,
19 Commissioners, that we finish with Jon Franke, who's on
20 the stand now, his direct only. Then Sue Hardison,
21 who's also of Progress Energy, will come and provide
22 direct testimony. I understand that there's limited
23 cross remaining for Ms. Hardison.

24 Mr. Karp is a Progress witness and he's
25 previously been excused, so all you would need to do is

1 admit his testimony and exhibits into the record.

2 Mr. Elnitsky and Mr. Lyash, Lyash appear next
3 as direct witnesses, but both Progress and the parties
4 have agreed that, instead of putting them on as direct,
5 that they will reserve them until rebuttal and put the
6 direct and rebuttal on together.

7 So the next witness would be Dr. Mark Cooper
8 from SACE. And, again, he's been excused, so you would
9 admit his direct testimony and exhibits into the record.
10 Mr. Gunderson is also a SACE witness. And, again, he's
11 been excused, so you would just admit testimony and
12 exhibits.

13 Then Dr. William Jacobs, who is OPC's witness,
14 and I understand that there's limited cross, Progress I
15 think has indicated maybe 15 minutes. Joint testimony
16 of staff witnesses Coston and Carpenter will be next.
17 Again, I think the parties have agreed that there's
18 limited cross, but there is cross-examination of those
19 witnesses.

20 Then we would move into the PEF rebuttal, with
21 Mr. Franke coming up again for rebuttal, then John
22 Elnitsky for direct and rebuttal together, and finally
23 Jeff Lyash with direct and rebuttal together.

24 **MR. REHWINKEL:** Madam Chairman, I would just
25 add that the Public Counsel's cross-examination of

1 Mr. Franke will cease upon the admission of agreed-to
2 exhibits and his deposition and we would go through
3 that. But I would have no further questions for Mr.
4 Franke, and I think that there would be limited cross
5 from the other parties.

6 I am not certain whether the cross-examination
7 was intended to occur now or when he came back on
8 rebuttal, but my assumption was it would be now.

9 **CHAIRMAN ARGENZIANO:** Now. Okay. Then why
10 don't we just move forward then. Thank you.

11 **MR. REHWINKEL:** Madam Chairman, I have passed
12 out a set of documents that I would just like to
13 identify for the record and get an exhibit number. The
14 company is -- while the hearing progresses to
15 conclusion, they will be reviewing the agreed-upon
16 exhibits for confidentiality and will submit to the
17 court reporter -- the, the official record version will
18 be properly highlighted for confidentiality. But we
19 thought what we'd do is identify for the record the
20 documents, give them a number, and then the
21 administrative work of confidentiality would be taken
22 care of as we go today.

23 **CHAIRMAN ARGENZIANO:** Okay. Then I believe
24 we're on 198. Am I correct? Okay. 198.

25 **MR. YOUNG:** Yes, ma'am.

1 **CHAIRMAN ARGENZIANO:** Okay. And then we can
2 go ahead and do that. And did you give it a name? I'm
3 sorry.

4 **MR. REHWINKEL:** Yeah. So 198 would be, a
5 short title would be PRG Minutes.

6 (Exhibit 198 marked for identification.)

7 **CHAIRMAN ARGENZIANO:** Okay.

8 **MR. REHWINKEL:** Okay. The next document would
9 be, I guess, 199, and this would be 2009 CR3 Audit.
10 This is an excerpt from some audit and audit work
11 papers.

12 **CHAIRMAN ARGENZIANO:** Mr. Rehwinkel, are they
13 all to be reviewed for confidentiality?

14 **MR. REHWINKEL:** Yes.

15 **CHAIRMAN ARGENZIANO:** Okay.

16 **MR. REHWINKEL:** Yes, Commissioner.

17 (Exhibit 199 marked for identification.)

18 **CHAIRMAN ARGENZIANO:** Okay.

19 **MR. REHWINKEL:** The next, 200 would be CR3 EPU
20 IPP.

21 **CHAIRMAN ARGENZIANO:** Eight, was that? Did
22 you say IP8?

23 **MR. REHWINKEL:** IPP.

24 **CHAIRMAN ARGENZIANO:** IPP. I'm sorry. Okay.
25 Thank you.

1 (Exhibit 200 marked for identification.)

2 **MR. REHWINKEL:** And the next one, 201, would
3 be March 2009 Uprate Presentation.

4 (Exhibit 201 marked for identification.)

5 **CHAIRMAN ARGENZIANO:** Okay.

6 **MR. REHWINKEL:** And for 202, July 2009 Uprate
7 Presentation.

8 (Exhibit 202 marked for identification.)

9 **CHAIRMAN ARGENZIANO:** Okay.

10 **MR. REHWINKEL:** And for 203, October 2009
11 Uprate Presentation.

12 (Exhibit 203 marked for identification.)

13 **CHAIRMAN ARGENZIANO:** Okay.

14 **MR. REHWINKEL:** 204, response to DR3.

15 (Exhibit 204 marked for identification.)

16 **CHAIRMAN ARGENZIANO:** Okay.

17 **MR. REHWINKEL:** And 205, deposition Exhibit 2.

18 (Exhibit 205 marked for identification.)

19 **CHAIRMAN ARGENZIANO:** Okay.

20 **MR. REHWINKEL:** And, Madam Chairman, those
21 are, that is the extent of the exhibits that we have
22 agreed to with the parties on Mr. Franke. I guess we
23 would need a deposition exhibit for Mr. Franke's July 29
24 deposition. That would be 206. So Franke deposition.

25 (Exhibit 206 marked for identification.)

1 Madam Chairman, this document was taken
2 pursuant to notice as a confidential deposition. The
3 company has provided confidential designations. Because
4 of the, the timing between when the, the document was,
5 the court reporter provided the document and their
6 opportunity to do the confidentiality designation, that
7 has just recently happened. My understanding is they
8 will make redacted copies available shortly today and
9 confidentially designated copies available if needed.

10 So what we have agreed upon is the full
11 confidential designation, confidentially designated
12 deposition will be what is moved into the record, but
13 they will provide that with the appropriate yellow
14 highlighting and justifications.

15 Am I correct with that, Mr. Walls?

16 **MR. WALLS:** Yes, you are.

17 **MR. REHWINKEL:** Okay. So with that, with
18 these documents, with these exhibits identified, Public
19 Counsel's cross-examination of Mr. Franke is over.

20 **CHAIRMAN ARGENZIANO:** Thank you. That was,
21 I'm sorry, Mr. Rehwinkel, that was 198 to, let me make
22 sure I got it right, 206. Okay.

23 **COMMISSIONER SKOP:** Thank you, Madam Chair.
24 Just a point of clarification. Mr. Rehwinkel,
25 exhibit, what's been marked for Exhibit Number 206 is

1 the actual deposition; is that correct?

2 **MR. REHWINKEL:** Yes.

3 **COMMISSIONER SKOP:** Okay. Thank you.

4 **MR. DAVIS:** Also for point of clarification,
5 did the deposition have any exhibits to it?

6 **MR. REHWINKEL:** Yes. Mr. Franke's deposition
7 had two late-filed deposition exhibits. Actually --
8 yes. And two late-filed deposition exhibits.

9 **COMMISSIONER SKOP:** Will we need numbers for
10 those, or will that be included within the depo?

11 **MR. REHWINKEL:** My -- those had already been
12 provided by the company. So I think it would be, if
13 it's okay, they could be provided all as one.

14 **COMMISSIONER SKOP:** Mr. Walls?

15 **MR. WALLS:** May I have one moment?

16 **COMMISSIONER SKOP:** Yes, you may.

17 **MR. REHWINKEL:** If that was to be done, then
18 we could -- then we wouldn't need 205, which was
19 Exhibit 2.

20 **MR. WALLS:** Ms. Huhta is probably the best
21 person to speak to this, but my understanding is we
22 filed our notice of confidential classification for the
23 deposition of Mr. Franke with respect to the deposition
24 itself, and then the late-filed exhibits came later and
25 were served on the parties. So the late-filed exhibits

1 were not part of the request for confidential
2 classification for the depo, the deposition.

3 **MS. HUHTA:** Yes. But they were part of a
4 separate request, all which has already been filed. And
5 just a point of clarification, August 10th for the
6 deposition of Jon Franke of 2010. But the parties
7 should have a copy received on Monday, but we will also
8 provide additional copies. We're having them made as we
9 speak.

10 **COMMISSIONER SKOP:** Very well. Thank you.

11 **MR. REHWINKEL:** The cover page, she put the
12 wrong date on there. I didn't realize that. I was just
13 reading it, but that's correct.

14 **COMMISSIONER SKOP:** All right. So,
15 Mr. Rehwinkel, in summation, exhibits that have been
16 marked for identification are 198, 199, 200 and 201
17 through 206, which is the depo, and those are fine.

18 **MR. REHWINKEL:** Yes.

19 **COMMISSIONER SKOP:** With no modification
20 required or deletion of 205.

21 **MR. REHWINKEL:** I guess what I'm just pausing
22 on is, is whether we should just make a 207, which would
23 be late-filed deposition Exhibit Number 1.

24 **COMMISSIONER SKOP:** All right. Very well.

25 **MR. WALLS:** I actually think that probably

1 would work better, Charles.

2 **MR. REHWINKEL:** Okay. Then 207 will be, and I
3 have not provided that, but it's a single piece of
4 paper. It would be easy to provide to the parties.

5 **COMMISSIONER SKOP:** Ms. Bradley is not here
6 with us today. Otherwise, she might be objecting to
7 late-filed exhibits. All right. So we have what's been
8 marked for identification, Exhibits 198 through 207, as
9 I understand it.

10 **MR. REHWINKEL:** That's correct.

11 (Exhibit 207 marked for identification.)

12 **COMMISSIONER SKOP:** Very well. And are you
13 intending to move those in at this time?

14 **MR. REHWINKEL:** I would move those at the, at
15 the conclusion of Mr. Franke's testimony after the
16 cross-examination.

17 **COMMISSIONER SKOP:** All right. Very well. So
18 that ends your cross-examination. I guess we'll look to
19 the next Intervenor.

20 Mr. Brew, you're recognized.

21 **MR. BREW:** Thank you. I have no questions for
22 Mr. Franke.

23 **COMMISSIONER SKOP:** Very well.

24 Ms. Kaufman?

25 **MS. KAUFMAN:** I do have a few questions, Mr.

1 Chairman.

2 **COMMISSIONER SKOP:** Please proceed.

3 **CROSS EXAMINATION**

4 **BY MS. KAUFMAN:**

5 **Q.** Good morning, Mr. Franke.

6 **A.** Good morning.

7 **Q.** It's a little bit hard to see you. I just
8 have a couple of questions. I just want to understand
9 the relationship between the uprate project and the
10 current Crystal River 3 outage. And if I understood
11 your testimony, it had been your plan to complete Phase
12 3 of the uprate during the time that Crystal River came
13 back for its refueling in 2011; is that correct?

14 **A.** That is correct. Yes, ma'am. The Phase 3 of
15 the uprate included modifications that were being
16 performed in conjunction with our 2011 refueling outage.
17 That outage is now delayed due to the delay and restart
18 from our current outage.

19 **Q.** You're anticipating where I'm going. So
20 because of the outage, the delayed, the prolonged outage
21 at Crystal River 3, you're now still wanting to do it in
22 conjunction with the refueling, but that's going to be,
23 right now as you know it, in 2012?

24 **A.** Yes, ma'am.

25 **Q.** In the fall; is that what you had said?

1 **A.** It is scheduled for fall of 2012.

2 **Q.** Okay. If you have your April 30th testimony,
3 if you would turn to page 8.

4 **A.** Yes, ma'am.

5 **Q.** Okay. And if you look on lines 5 and 6, you
6 say there, "As we complete the current outage, this
7 decision will continue to be evaluated." Correct?

8 **A.** Yes, ma'am.

9 **Q.** So fall 2012 is a ways away. Is it possible
10 that the refueling in 2012 will be pushed further out
11 and thus the uprate will be pushed further out?

12 **A.** Anything is possible, but that is very
13 unlikely.

14 **Q.** Okay.

15 **A.** Right now we understand what the repairs are
16 to the current containment and we'll continue to work
17 through the issues surrounding that containment, and we
18 expect the plant to return during the fourth quarter.
19 With a return of the plant in the fourth quarter, my
20 next outage will be fall of 2012.

21 **Q.** But if additional issues arise that you're not
22 aware of right now with the Crystal River 3 outage, then
23 it's certainly possible, isn't it, that the uprate
24 project would be pushed out to another refueling?

25 **A.** It would not be pushed out to another

1 refueling. It will be performed during our next
2 refueling.

3 Q. Right. But my point being is if for some
4 reason the Crystal 3 outage is longer and the plant
5 doesn't come back as you currently expect, that's also
6 going to push out the uprate project.

7 A. Yes, ma'am.

8 MS. KAUFMAN: Thank you. Thank you, Mr.
9 Franke.

10 COMMISSIONER SKOP: Thank you, Ms. Kaufman.
11 Any further questions from SACE?

12 MR. DAVIS: No.

13 COMMISSIONER SKOP: Okay. Any questions from
14 the bench? Okay. I do, I do have some quick ones, and
15 I'll try and make this very brief.

16 Good afternoon, or is it afternoon? Good
17 morning, Mr. Franke.

18 THE WITNESS: Yes, sir.

19 COMMISSIONER SKOP: All right. In his opening
20 statement, Mr. Glenn was very candid about Progress's
21 concerns on the LAR, and you were very open about that
22 yesterday during your testimony, your extensive
23 testimony.

24 In your opinion, what are two of the biggest
25 challenges currently faced in this CR3 EPU in terms of

1 getting it into service?

2 **THE WITNESS:** Is your question with regard to
3 the LAR specifically or to other issues?

4 **COMMISSIONER SKOP:** Just as a whole, licensing
5 as well as the remaining work scope that needs to be
6 done.

7 **THE WITNESS:** I, I have no concerns about the
8 feasibility of if the project can be successful and
9 eventual uprate of the project.

10 As I have discussed, we are working through
11 with the NRC on the licensing for the digital
12 instruments. I think our digital instrument licensing
13 is as about as simple as you can get, but we need to
14 work through that process with the NRC to best
15 understand that schedule and any potential impact on
16 cost and when we'll actually achieve the increase in
17 power, should that be at the conclusion of the next
18 refueling outage or possibly a little bit after that
19 based on the receipt of the licensing application.

20 **COMMISSIONER SKOP:** All right. Very well.
21 And just so I can be sure what I'm approving, I just
22 want to go quickly through some elements of your
23 testimony; a nutshell summary, if you will.

24 But on page 7 of your prefiled testimony, I
25 believe you testified that the remaining EPU work scope

1 during the next refueling outage will be approximately
2 45 days, subject to any additional changes; is that
3 correct?

4 **THE WITNESS:** I believe you're talking about
5 my, my April 30th testimony?

6 **COMMISSIONER SKOP:** Yes, sir. Your direct
7 filed testimony.

8 **THE WITNESS:** Yes, sir. That's the current
9 estimate for that schedule, for that outage.

10 **COMMISSIONER SKOP:** Okay. And then continuing
11 on to page 8, with respect to the current refueling
12 outage and the delay resulting from the delamination of
13 the concrete in the containment wall building. On line
14 12 on page 8 you talk about the steam generator
15 replacement. Those steam generators had to be replaced;
16 is that correct?

17 **THE WITNESS:** Yes, sir. That was a separate
18 project, and those steam generators have been replaced.

19 **COMMISSIONER SKOP:** Okay. Very well. And
20 continuing on to page 9, you talk about the low pressure
21 turbine installation deferral and how that's been
22 shifted from refueling 16 to refueling 17.

23 **THE WITNESS:** Yes, sir.

24 **COMMISSIONER SKOP:** Okay. And that was
25 resulted, I think, from the blade row disk slipped

1 during some testing. And then subsequent to that,
2 Progress, in your opinion, prudently exercised all of
3 its contractual rights, not only to protect its
4 ratepayers, but to ensure that the equipment provided
5 would protect and maintain the desired uprate output at
6 the plant; is that correct?

7 **THE WITNESS:** Absolutely. We studied
8 carefully other options other than these turbines and
9 came to a technical and financial decision that lined up
10 in agreement that these were the right turbines for the
11 uprate, provided the best benefit to the customer. And
12 we have strongly taken advantage of our contractual
13 rights to, to ensure that a cost increase did not occur
14 to the customer, and we're planning on installing those
15 turbines now with confidence.

16 **COMMISSIONER SKOP:** Okay. And there are some,
17 some -- there is some information that still remains
18 confidential on this issue that I think generally deals
19 with the business acumen that went into making that
20 decision in the best interest of ratepayers and to
21 preserve the uprate option. Do you see any problem with
22 that coming to fruition in terms of what's been
23 presented?

24 **THE WITNESS:** No. We're confident that --
25 you're talking about the low pressure turbines?

1 **COMMISSIONER SKOP:** Yes, sir.

2 **THE WITNESS:** Yes, sir. Yes. I have high
3 confidence that we'll be successful with completion of
4 that contract in, in time for the next outage. The
5 material's all but manufactured. There's some more
6 testing to put in place. But from a contract
7 standpoint, we're in very good condition. We have the
8 right necessary angles covered in legal space as well.

9 **COMMISSIONER SKOP:** Okay. And just two or
10 three final questions. Page 26 of the prefiled
11 testimony. Progress performed an updated feasibility
12 analysis on the CR3 uprate and it still shows positive
13 economic benefit based on the current state of the
14 project; is that correct?

15 **THE WITNESS:** Yes, sir. And obviously the
16 factors shift around, but it's in the neighborhood of
17 \$800 million of net value to the customer.

18 **COMMISSIONER SKOP:** Positive benefit to the
19 customer?

20 **THE WITNESS:** Yes, sir.

21 **COMMISSIONER SKOP:** Okay. And that's over the
22 life of the project; is that correct?

23 **THE WITNESS:** That's correct. It's still a
24 cost saving in fuel to the customer for the uprate of
25 something north of \$2 billion and in the neighborhood of

1 800 million net present value.

2 **COMMISSIONER SKOP:** Okay. And on page 27, and
3 I think this is my second to last question, I think you
4 previously stated the project in your professional
5 opinion is still technically feasible and achievable to
6 the uprate.

7 **THE WITNESS:** Yes, sir.

8 **COMMISSIONER SKOP:** Okay. And from a
9 regulatory and legal perspective, on pages 28 and 29 you
10 speak about lessons learned regarding LARs. And, you
11 know, certainly in response to some of the
12 cross-examination you had as well as questions from the
13 bench, again, very candid. You told us the good and the
14 bad in terms of what was happening, and I think that's a
15 constructive part of the review process here.

16 But in terms of the lessons learned on Point
17 Beach, again, I think you mentioned that's, that's not a
18 Progress project, it's another company's project, and
19 that application for the LAR was denied. And at this
20 point in the game you're still looking at what the NRC
21 requires in terms of, of specking out the LAR to gain
22 successful NRC approvals. Is that generally correct of
23 what I've heard your testimony to be?

24 **THE WITNESS:** That is correct. And if you'll
25 give me just a second. The Point Beach application

1 right now is targeted for approval soon. But we
2 certainly have been able to apply those lessons to our
3 application, did cost, a cost and scope increase
4 associated with that. But we're confident we've
5 incorporated in there, we have the Point Beach lessons
6 learned in our application as verified by my expert
7 panel and our own company review.

8 **COMMISSIONER SKOP:** Very well. Thank you.

9 And any additional questions from the bench?

10 Seeing none, staff?

11 **MR. YOUNG:** Staff has no questions at this
12 time.

13 **COMMISSIONER SKOP:** All right. Very well.

14 And will Mr. Franke be -- I guess he's going to be a
15 rebuttal witness. So, Mr. Franke, you may step down and
16 we'll recall you at the appropriate time.

17 All right. If --

18 **MR. YOUNG:** Mr. Chairman?

19 **COMMISSIONER SKOP:** Yes.

20 **MR. YOUNG:** At this time I think the company
21 would like to request that Mr. Franke's exhibits be
22 moved in. I know OPC has some exhibits also.

23 **COMMISSIONER SKOP:** Yeah. I was going, I was
24 going to get to that next, but I just wanted to let him
25 step down, if that's appropriate, which I believe it is.

1 Okay. I'll take up exhibits.

2 **MR. WALLS:** Yes. Mr. Franke has two direct
3 exhibits, JF-1 and JF-2, that are identified as staff
4 exhibits on the staff exhibit list, 19 and 20.

5 **COMMISSIONER SKOP:** Okay. Any objection to
6 entering exhibits 19 and 20 into the record? Seeing
7 none, show it done.

8 (Exhibits 19 and 20 admitted into the record.)

9 **MR. REHWINKEL:** Public Counsel would move 198
10 through 207.

11 **COMMISSIONER SKOP:** Okay. Any objection?

12 **MR. WALLS:** No.

13 **COMMISSIONER SKOP:** Okay.

14 **MR. YOUNG:** No objection. What about 193
15 through 194, 195, 196 and 197?

16 **COMMISSIONER SKOP:** That was my next point. I
17 was going to get to that. So why don't we slow down a
18 little bit there.

19 Mr. Rehwinkel, it seems when you began your
20 cross-examination --

21 **MR. REHWINKEL:** I apologize. I was --

22 **COMMISSIONER SKOP:** I think it started with
23 193.

24 **MR. REHWINKEL:** Actually I need to move 191.

25 **MR. YOUNG:** Yes.

1 **COMMISSIONER SKOP:** Okay.

2 **MR. REHWINKEL:** And then 193.

3 **COMMISSIONER SKOP:** Hold on. Any objection to
4 191?

5 **MR. WALLS:** No.

6 **COMMISSIONER SKOP:** Hearing none, show it
7 entered.

8 (Exhibit 191 admitted into the record.)

9 **MR. REHWINKEL:** And then 193 through 197.

10 **COMMISSIONER SKOP:** Okay.

11 **MR. WALLS:** No objection.

12 **COMMISSIONER SKOP:** All right. No objection
13 on 193 through 197. Show that done.

14 (Exhibits 193 through 197 admitted into the
15 record.)

16 And that leaves us with Exhibits 198 through
17 207, I believe, are the remaining exhibits.

18 **MR. REHWINKEL:** Yes, I would move those.

19 **COMMISSIONER SKOP:** All right. Any objection?

20 **MR. WALLS:** No.

21 **COMMISSIONER SKOP:** Okay. Hearing none, show
22 Exhibits 198 through 207 entered into the record.

23 (Exhibits 198 through 207 admitted into the
24 record.)

25 And I believe that will allow us to call the

1 next witness.

2 **MS. HUHTA:** Progress calls Sue Hardison.

3 **COMMISSIONER SKOP:** All right. Very well.

4 And has Ms. Hardison been previously sworn?

5 **THE WITNESS:** Yes, I have.

6 **COMMISSIONER SKOP:** All right. Thank you.

7 **SUE HARDISON**

8 was called as a witness on behalf of Progress Energy
9 Florida and, having been duly sworn, testified as
10 follows:

11 **DIRECT EXAMINATION**

12 **BY MS. HUHTA:**

13 **Q.** Good morning, Ms. Hardison. Will you please
14 introduce yourself to the Commission and provide your
15 business address.

16 **A.** Yes. Good morning. My name is Sue Hardison.
17 My business address is 410 South Wilmington Street in
18 Raleigh, North Carolina.

19 **Q.** And you have already been sworn in; correct?

20 **A.** Yes, I have.

21 **Q.** And who do you work for and what is your
22 position?

23 **A.** I work for Progress Energy Carolina. I'm
24 employed by them as the General Manager, Business
25 Services Corporate Development Group.

1 Q. Have you filed direct testimony on March 1st,
2 2010, and April 30th, 2010, in this proceeding?

3 A. Yes, I have.

4 Q. Do you have copies with you?

5 A. I have copies of both my testimony and
6 exhibits that I cosponsor with Witness Garrett, and
7 exhibits that I cosponsor with Witness Foster.

8 Q. Okay. Thank you. Do you have any changes to
9 make to your prefiled testimony and exhibits?

10 A. Yes. Actually I do have one change to make to
11 my March 1 testimony. It is on page 22. The sentence
12 that begins on line 5, "The COLA was docketed by the NRC
13 in 2009." I apologize. That is a typo. It should be
14 2008.

15 Q. Other than this one correction, Ms. Hardison,
16 if I asked you the same questions in your prefiled
17 testimony today, would you give the same answers that
18 are in your testimony?

19 A. Yes, I would.

20 **MS. HUHTA:** We request that the prefiled
21 testimony from March 1st, 2010, and April 30th, 2010, of
22 Ms. Hardison be moved into evidence today as if read.

23 **COMMISSIONER SKOP:** All right. The prefiled
24 testimony of witness Hardison will be entered into the
25 record as though read. Thank you.

IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 100009****DIRECT TESTIMONY OF SUE HARDISON****I. INTRODUCTION AND QUALIFICATIONS**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Q. Please state your name and business address.

A. My name is Sue Hardison. My business address is 410 South Wilmington Street, Raleigh, North Carolina.

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

A. I am employed by Progress Energy Carolinas ("PEC") in the capacity of General Manager – Corporate Development Group Business Services.

Q. What are your responsibilities as the General Manager – Corporate Development Group Business Services.

A. This is a new position, created in November of 2009. In this role, I am responsible for financial services for the Corporate Development Group, including budgeting, capital planning and cost management. I am also responsible for project controls and contract administration for the Corporate Development Group. Although the position was not formally in

REDACTED

1 place until November, I assumed responsibility for much of this work in
2 June of 2009.

3
4 **Q. Please summarize your educational background and work experience.**

5 **A.** I have BA degrees in both Economics and Accounting from North
6 Carolina State University, and a Masters in Business Administration from
7 East Carolina University. I am licensed as a Certified Public Accountant
8 in the State of North Carolina. I have been with Progress Energy – and
9 formerly Carolina Power & Light – for nearly 23 years. I have held
10 various accounting, business management and support services roles in
11 several departments in the Company, including Treasury, Accounting,
12 Nuclear Generation, Energy Delivery and Plant Construction. I have been
13 a manager in the Company since 1995. Prior to joining the Company, I
14 spent five years in public accounting, holding staff positions in both a
15 local firm and a ‘Big 8’ firm.

16
17 **II. PURPOSE AND SUMMARY OF TESTIMONY**

18 **Q. What is the purpose of your direct testimony?**

19 **A.** My direct testimony supports the Company’s request for cost recovery and
20 a prudence determination, pursuant to the Nuclear Cost Recovery Rule, for
21 its Levy Nuclear Project (“LNP”) costs incurred from January 2009
22 through December 2009. Overall, LNP costs were [REDACTED] less than PEF’s
23 estimated projection costs for 2009. I will also explain the major variances

1 between actual LNP costs and those that were projected in the May 1,
2 2009 filings.

3
4 **Q. Do you have any exhibits to your testimony?**

5 **A.** No. I am, however, sponsoring the cost portions of Schedules T-4, T-4A,
6 T-6, T-6A, T-6B, and Appendix B, as well as portions of Schedules T-7,
7 T-7A, and T-7B of the Nuclear Filing Requirements ("NFRs"), which are
8 included as part of the exhibits to Will Garrett's testimony. I am
9 sponsoring the generation portions of Schedule T-6, T-6A, T-6B, and
10 Appendix B, which provide actual monthly expenditures and variances to
11 projection for site selection, preconstruction and construction costs.
12 Schedule T-7 is a list of the contracts executed in excess of \$1.0M and
13 Schedule T-7A provides details for those contracts. Schedule T-7B
14 reflects details pertaining to contracts executed in excess of \$250K, but
15 less than \$1.0M. I am supporting the Generation contracts listed on T-7
16 (Lines 1 – 9), T-7A (Pages 40 – 47), and T-7B (Lines 1 – 10). Kenneth
17 Karp, the Transmission witness for PEF, is supporting the Transmission
18 contracts.

19 All of these schedules are true and accurate.

20
21 **Q. Please summarize your testimony.**

22 **A.** PEF requests a prudence determination and approval of the recovery of its
23 2009 actual LNP costs. These 2009 LNP costs, in general, were incurred
24 in connection with LNP licensing, engineering, and procurement

1 activities. As demonstrated in my testimony and the attached NFR
2 schedules, PEF took adequate steps to ensure that these preconstruction
3 and construction costs were reasonable and prudent. PEF negotiated all
4 contract terms under the then-current market conditions and
5 circumstances. Therefore, the Commission should approve PEF's 2009
6 costs as reasonable and prudent pursuant to the Nuclear Cost Recovery
7 Rule. These costs were necessary to the LNP for the completion and
8 operation of Levy Units 1 and 2.

10 III. CAPITAL COSTS INCURRED IN 2009 FOR LEVY NUCLEAR PLANT

11 **Q. Before describing what costs were incurred, can you please describe**
12 **the licensing work and activities that were performed for the Levy**
13 **Nuclear Plant in 2009 to generate the licensing activity costs?**

14 **A.** Yes. PEF performed work for the following licensing activities for the
15 LNP in 2009:

16 (1) PEF completed responses to U.S. Nuclear Regulatory Commission
17 ("NRC") Requests for Additional Information ("RAIs") on Safety Issues
18 and Environmental Issues throughout 2009;

19 (2) PEF provided testimony and support for the Florida Department of
20 Environmental Protection ("DEP") Site Certification Application ("SCA")
21 hearings. The Governor and Cabinet, sitting as the Florida Siting Board,
22 approved the Company's SCA on August 11, 2009 and issued the Levy
23 Site Certification on August 26, 2009;

1 (3) PEF completed the SCA Conditions of Certification Reports, which
2 were due 90 days after SCA approval. PEF will complete the
3 Environmental Monitoring Plan and Aquifer Performance Test Plan later
4 in the project prior to construction commencement;

5 (4) The NRC requires that PEF submit an annual update to its Combined
6 Operating License Application ("COLA"). The Company prepared and
7 submitted this annual update (Revision 1 to the Levy COLA) to the NRC
8 on October 2, 2009;

9 (5) On February 6, 2009, three private, anti-nuclear groups, the Nuclear
10 Information and Resource Service ("NIRS"), the Ecology Party of Florida
11 ("EPF"), and the Green Party of Florida ("GPF") petitioned to intervene
12 and requested a formal hearing in PEF's NRC COLA docket. The
13 interveners also submitted 12 "contentions" (or technical issues) to be
14 considered by the NRC Atomic Safety and Licensing Board ("ASLB") at
15 a formal hearing. PEF responded to this petition and the contentions. On
16 April 6, 2009, the NRC ASLB granted the groups' motion to intervene and
17 request for a formal hearing. On July 8, 2009, the NRC ASLB also ruled
18 to admit parts of three contentions;

19 (6) PEF completed the conceptual Environmental Mitigation Plan, filed it
20 with the DEP, and provided responses to DEP RAIs;

21 (7) PEF continued work on Federal permitting, the Wetland Mitigation
22 Plan and the Baseline Ecological Survey;

23 (8) PEF supported NRC site reviews of geotechnical work activities and
24 technical evaluations; and

1 (9) As a member of Nustart, PEF provided support to the licensing
2 activities associated with the AP1000 Design Control Document ("DCD")
3 revisions and the standard sections of the Reference Plant COLA ("R-
4 COLA").

5
6 **Q. What engineering activities and work were performed in 2009 for the
7 engineering costs on the Levy Nuclear Plant?**

8 **A.** LNP engineering activities and work included the following:

9 (1) A Grout Test Program was conducted to validate the COL foundation
10 dewatering design concept. This also supported NRC review of COLA
11 Final Safety Analysis Report "FSAR" Section 2.5.4; associated with
12 dewatering, excavation and foundation design.

13 (2) Completion of multiple document reviews in support of the Levy
14 Project, primarily related to early site infrastructure and construction
15 activities in the vicinity of the Barge Slip and Heavy Haul Road and
16 NuStart reviews of the AP 1000 standard Plant design.

17 (3) Completion of an offset Boring Program required to support specific
18 NRC RAI questions associated with site characterization.

19 (4) Engineering support required to respond to NRC RAIs.

20
21 **Q. Did the Company incur any generation-related Site Selection and
22 Preconstruction costs for the Levy Nuclear Plant in 2009?**

23 **A.** While the Company did not incur any new capital spend in 2009 in the site
24 selection category, as reflected on Schedule T-6, the Company did incur

REDACTED

1 Preconstruction costs in the categories of License Application,
2 Engineering, Design and Procurement, and On-Site Construction
3 Facilities.

4
5 **Q. For the License Application costs, please identify what those costs are
6 and why the Company had to incur them.**

7 **A.** As reflected on line 3 of Schedule T-6.2, the Company incurred License
8 Application costs of \$26.4M. Costs incurred related to:
9 (i) the completion of Revision 1 to the Levy COLA, which was submitted
10 to the NRC on October 2, 2009,
11 (ii) support for the Site Certification hearings,
12 (iii) completion of SCA Conditions of Certification,
13 (iv) completion of a conceptual Environmental Mitigation Plan,
14 (v) responses to contentions filed and admitted in the LNP NRC COLA
15 proceedings,
16 (vi) responses to regulatory agency RAIs related to the SCA and COLA,
17 and
18 (vii) support for Nustart licensing activities associated with the AP1000
19 DCD and R-COLA.

20
21 **Q. For the Engineering, Design and Procurement costs, please identify
22 what those costs are and why the Company had to incur them.**

23 **A.** As reflected on line 4 of Schedule T-6.2, the Company incurred
24 Engineering, Design, and Procurement costs of [REDACTED] in 2009. The

REDACTED

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

majority of these costs were incurred pursuant to the terms of the Engineering, Procurement & Construction ("EPC") agreement. The Company executed the EPC agreement with Westinghouse and Shaw Stone & Webster (the "Consortium") on December 31, 2008. In the 2009 NRC docket, the Commission determined that the timing of PEF's decision to execute the EPC agreement when it did was reasonable. Upon executing the EPC agreement, [REDACTED]

[REDACTED]

In late January 2009, the NRC determined that the Company's Limited Work Authorization ("LWA") would be reviewed on the same schedule as the Company's COLA for the LNP precluding issuance of the LWA prior to COL issuance. This determination was reflected in the LNP review schedule the NRC issued in late February 2009. The result of this determination was a minimum 20 month shift in the LNP schedule. Discussions with the NRC did not yield a different result or sufficient modification and, as a result, the Company withdrew its LWA application. PEF formally notified the Consortium on April 30, 2009 of the change

REDACTED

1 pursuant to the contract and requested schedule analyses for potential
2 amendment of the EPC agreement. During the January through April
3 2009 time period PEF incurred approximately [REDACTED] pursuant to the EPC
4 contract for progress payments, long lead equipment, and other associated
5 contractual work.

6 The Consortium formally responded to PEF's notice of change
7 request in August 2009. From May through August 2009 when PEF
8 received the Consortium's response, PEF and the Consortium analyzed the
9 impacts of the schedule shift in 2009 on the LNP work, deferring
10 engineering and the majority of certain procurement activities and project
11 staffing where economical, while continuing the necessary support work
12 for the SCA, the COLA, and the AP1000 design certification. As a result,
13 PEF continued to make certain payments totaling approximately [REDACTED] for
14 the LNP work under the EPC contract during this period.

15 The Consortium's formal response to PEF's notice of change
16 request included schedule shift analyses for negotiations between PEF and
17 the Consortium. From late August through October, PEF analyzed and
18 evaluated the schedule shift proposals and, based on that evaluation, PEF
19 requested additional schedule analysis impacts from the Consortium.
20 From September through the end of the year, PEF incurred about [REDACTED]
21 for the LNP under the EPC agreement. These costs were necessary for the
22 LNP for milestone payments on long lead equipment, engineering and
23 design work, and associated project management and development, [REDACTED]

1

2

3

4

Q. For the On-Site Construction Facilities costs reflected on Schedule T-6, please identify what those costs are and why the Company had to incur them.

5

6

7

A. As reflected on line 7 of Schedule T-6.2, the Company incurred On-Site Construction Facilities costs of (\$274K). PEF recorded the On-Site Construction Facility credit to transfer costs associated with a construction trailer and related computer equipment and furniture to the Crystal River Extended Power Uprate ("EPU"). These assets were originally to be used for the LNP, but after a reorganization of the Nuclear Generation Group in early 2009, they were transferred for utilization by the Crystal River EPU personnel.

8

9

10

11

12

13

14

15

16

Q. How did actual capital expenditures for January 2009 through December 2009 compare to PEF's estimated/actual projection costs for 2009?

17

18

19

A. Overall, total LNP costs were [REDACTED] less than PEF's estimated projection costs for 2009. The reasons for the major (more than \$1.0M) variances are provided below.

20

21

22

23

24

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

License Application:

License Application capital expenditures were \$26.6M, which was \$12.4M lower than the estimated/actual projection. This variance is primarily driven by lower than anticipated project scope change requests related to required field work associated with RAI responses for geotechnical and hydrological NRC requests and lower than expected legal expenses and NRC fees.

Engineering, Design & Procurement:

As discussed, Engineering, Design & Procurement capital expenditures were [REDACTED], which was [REDACTED] higher than the estimated/actual projection. The Company's original estimate of this work was based on initial efforts to determine the impact in 2009 resulting from the minimum 20-month schedule shift as a result of the NRC LWA determination. This variance is driven by the completion of material orders for long-lead item work in process by the Consortium before the schedule shift that was not anticipated in the Company's estimate of actual/estimated 2009 costs.

IV. O&M COSTS INCURRED IN 2009 FOR LEVY NUCLEAR PLANT

Q. Did the Company incur any Operation & Maintenance (O&M) costs for the Levy Nuclear Plant in 2009?

A. Yes, as reflected on Schedule T-4, the Company incurred O&M expenditures in the amount of \$4.5M related to internal labor and expenses, legal costs, the NuStart Energy Development LLC program, and

1 financing retainer fees. The explanations for major variances are provided
2 below.

3 **Legal:** O&M expenditures for Legal were \$833K or \$1.2M lower than
4 projected. This variance was primarily attributable to lower than expected
5 outside legal counsel services.

6
7 **Generation:** O&M expenditures for Generation were \$1.7M or \$743K
8 higher than projected. This variance is primarily due to internal costs
9 related to the formation of the Operational Readiness Group and retainer
10 fees for firms evaluating project financing options that were not previously
11 included.

12
13 **Q. To summarize, were all the costs that the Company incurred in 2009
14 for the Levy Nuclear Project reasonable and prudent?**

15 **A.** Yes, the specific cost amounts for the LNP contained in the NFR
16 schedules, which are attached as exhibits to Mr. Garrett's testimony,
17 reflect the reasonable and prudent costs PEF incurred for work in 2009.
18 All of these costs were necessary for the LNP.

19
20 **V. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT**

21 **Q. Has the Company implemented project management and cost control
22 oversight mechanisms for the Levy project?**

23 **A.** Yes. The Company continues to utilize applicable policies and procedures
24 to ensure that the costs for the LNP are reasonably and prudently incurred.

1 New corporate procedures introduced in 2009 for project and program
2 management governance are now being utilized on the LNP. As described
3 further in the testimony of Kenneth Karp, a new Real Estate Governance
4 document was approved in 2009. In addition, existing procedures in the
5 areas of contract management, procurement, and accounting were revised
6 to incorporate improvement updates in 2009. The Integrated Project Plan
7 (“IPP”) procedure and several quality-related nuclear specific procedures
8 were also revised in 2009.

9 In addition, the LNP is being undertaken by the Company
10 consistent with the project standards established and implemented by
11 Progress Energy’s Project Management Center of Excellence organization
12 (“PMCoE”). The PMCoE was chartered in 2008 to establish enterprise
13 wide project standards. These standards are based on principles from the
14 internationally recognized Project Management Institute Project
15 Management Body of Knowledge and establish a standardized project
16 management approach that spans tools, templates and processes; training
17 and qualification programs; and adoption of best practices. Training and
18 roll out of these standards was completed in 2009 with fifteen procedures
19 approved. The approved procedures implement best practices for all
20 aspects of Project Management.

21 The Company maintains an IPP procedure to provide guidance
22 regarding evaluation and funding authorization for major projects. The
23 Company adheres to this procedure, along with numerous other policies,
24 procedures, and controls to effectively manage the LNP. In December

REDACTED

1 2009, Progress Energy Senior Management approved an interim IPP
2 update for the LNP effective through March ■, 2010. The interim IPP
3 approves work scope funding to support COLA, SCA Conditions of
4 Certification, strategic land purchases, and continued EPC negotiations,
5 which analyze potential schedule revisions to amend the EPC contract.
6 Also, in June 2009, management approved the Levy Program Governance
7 Policy to establish a sound governance framework with well-defined roles
8 and responsibilities designed to enable timely decision making and ensure
9 rigorous project execution and control. This procedure was revised in
10 2009 to incorporate updates in the areas of quality and nuclear safety.

11 The Records Management System ("RMS") is also used to manage
12 the documents associated with the LNP generation work. To maintain
13 control over the COLA and related work, baseline schedules were
14 completed for projects contained in the program.

15 Nuclear Plant Development ("NPD") continues to work under
16 Nuclear Generation Group ("NGG") and Corporate procedures, as
17 applicable. In 2009, PEF developed and issued multiple EPC procedures,
18 including, Consortium Sub-contracting, Contract Change Control, and
19 Invoice Analysis & Processing. Additional EPC procedures will be issued
20 as the project moves forward. These EPC procedures, along with pending
21 Consortium Project Execution Plans, will be in place to help ensure that
22 effective contractor engagement and oversight is implemented and that all
23 project related activities are performed safely and effectively to achieve
24 goals and objectives. The Company also employs rigorous corrective

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

action programs to assess any adverse conditions, or identify enhancements to policies, procedures and processes.

Other corporate tools are used to support the management of the Levy work. The Oracle Financial Systems/Business Objects reporting tool provides monthly corporate budget comparisons to actual cost information, as well as detailed transaction information. This information, along with other financial accounting data, allows PEF to regularly monitor the costs of the generation work compared to budgets and projections, and make decisions to ensure that the costs incurred are reasonable and prudent for the work obtained.

Q. Can you describe some of the project management and cost control policies or procedures in the Company's project management documents that are being used to manage the Levy project and control project costs?

A. Yes. PEF has several control mechanisms in place to manage the LNP and the costs incurred on the project. By utilizing these controls, PEF is able to effectively manage the LNP and ensure that costs incurred for approved work are reasonable and prudent. For example, the LNP management team has regular, internal meetings. These regular meetings allow the project management team to monitor progress and key performance metrics of the LNP. The collective knowledge and experience of the project team is utilized to address critical aspects of a capital project, including cost, engineering and construction

1 implementation, identified risk, safety and schedule performance. The
2 status of work on the COLA and SCA applications is discussed, as well as
3 other projects in the Levy Program such as environmental mitigation and
4 strategic land acquisition. Finally, project management expectations are
5 communicated and implemented by the LNP management team. To
6 facilitate these discussions, the Project Managers provide input to the NPD
7 Weekly Program report that is issued to the NPD team and reviewed on an
8 ongoing basis.

9 PEF's LNP management team also meets regularly with outside
10 contract vendors working on the Levy Project to review issues around
11 contract scope of work, safety, technical items, production progress and
12 the work schedule that falls under the vendor contracts. Open change
13 orders, contract requisitions and invoice status are also discussed. To
14 better facilitate contractor oversight, large contracted scopes such as the
15 COLA and SCA are divided into individual tasks that can be more closely
16 managed and monitored. Project management expectations are
17 communicated to the outside vendors. By maintaining supervision over
18 the project, PEF is able to anticipate and manage scope changes, if any,
19 and project expenditure cash flows. The Company also meets regularly
20 with the Consortium to review the status of approved work. Financial
21 Services personnel prepare monthly Cost Management Reports that
22 include all contract, labor, equipment, material and other project cost
23 transactions recorded to the LNP. As stated above, financials included in
24 the report include comparison of actual costs to budget, with explanations

1 for any variances. These reports are regularly reviewed by the LNP
2 management team.

3 PEF also has regular PEF Finance Committee meetings, in which
4 management reviews the LNP project costs. Prior to these meetings,
5 Project Managers and Finance Management responsible for the
6 organization review various monthly cost and variance analysis reports for
7 the capital budget. Variances from project budget or projections are
8 reviewed, any discrepancies are identified, and corrections are made as
9 needed. In addition to the monthly Finance Committee meetings, Senior
10 Management reviews the LNP to monitor progress.

11
12 **Q. Has the Company developed a separate organization to specifically**
13 **oversee and manage the Levy project?**

14 **A.** Yes, to effectively manage the EPC contract and the entire Levy project,
15 Progress Energy formed the Nuclear Plant Development (“NPD”) group,
16 which reports to Mr. John Elnitsky, the Vice President of the NPD group.
17 Mr. Elnitsky joined Progress Energy in November 2007 as Vice President
18 of Generation and Transmission Construction (“G&TC”). Mr. Elnitsky is
19 a project Management Institute certified Project Management Professional
20 and a member of the American Nuclear Society and American Society of
21 Mechanical Engineers. Before joining Progress Energy, Mr. Elnitsky
22 served for more than 27 years in the United States Navy rising to the rank
23 of Rear Admiral and holding such positions as Director of Undersea
24 Technology and Atlantic Submarine Force Chief Nuclear Power Officer.

1 He has extensive experience managing the construction and operation of
2 nuclear submarines. The NPD group effectively supports the state-of-the-
3 art plant portion of the Company's balanced solution and provides a
4 concentrated leadership focus on the LNP.

5 In August 2009, Progress Energy formed the Corporate
6 Development Group ("CDG") to bring a more focused review,
7 management, and control of large capital investments. The new
8 Department reports directly to Mr. Jeff Lyash, the Executive Vice
9 President of the Corporate Development Group, and former President and
10 CEO of PEF. The NPD Project Controls organization has been
11 reorganized and reports to the General Manager of CDG, Business
12 Services. This reorganization provides dedicated support in the areas of
13 financial, contracts, and project controls management for NPD and other
14 CDG projects and programs.

15
16 **Q. Does PEF continually review and revise its policies and procedures for**
17 **the Levy project?**

18 **A.** Yes, company procedures are reviewed and revised on an ongoing basis.
19 In 2009, approximately 47 corporate and NGG procedures that apply to
20 the LNP were revised. As stated earlier, existing procedures in the areas
21 of contract management, procurement, and accounting were revised in
22 2009 to incorporate updates and improvements. The IPP procedure and
23 several nuclear specific procedures that focused on the areas of quality
24 assurance and self assessment were also revised in 2009. The Company

1 continuously reviews and updates all applicable project procedures. In
2 addition to the revised procedures, approximately 19 new procedures were
3 developed in 2009. Most of these new procedures were related to PMCoE
4 procedures previously discussed.

5
6 **Q. Are employees involved in the Levy Project trained in the Company's
7 project management and cost control policies and procedures?**

8 **A.** Yes, they are. PEF's project management team for the Levy project has
9 been trained in these Company policies. Our employees with
10 responsibilities for managing capital projects receive training on the
11 Company's project management and cost control policies and procedures.
12 Also, when the Company decides to commence a major capital project like
13 the Levy project, additional training is provided to reinforce the
14 Company's policies and procedures. Also, members of the Levy project
15 management team have experience implementing these project
16 management and cost control policies and procedures successfully on
17 other Progress Energy projects.

18
19 **Q. How does the Company ensure that its selection and management of
20 outside vendors is reasonable and prudent?**

21 **A.** When selecting vendors for the LNP, PEF utilizes bidding procedures
22 through a Request for Proposal ("RFP") when possible for the particular
23 services or materials needed to ensure that the chosen vendors provide the
24 best value for PEF's customers. Once proposals are submitted by

1 potential vendors, formal bid evaluations are completed and a final
2 selection is determined and documented.

3 When an RFP cannot be used, PEF ensures that the contracts with
4 the sole source vendors contain reasonable and prudent contract terms
5 with adequate pricing provisions (including fixed price and/or firm price,
6 escalated according to indexes, where possible). When deciding to use a
7 sole source vendor, PEF documents a sole source justification for not
8 doing an RFP for the particular work. Both Corporate and Nuclear
9 Generation contracting procedures contain guidance on what justifies
10 using a sole source or single source vendor. The Company requires that
11 all sole or single source contract activity must be justified on the contract
12 requisition and must be approved by the appropriate management level for
13 the dollar value of the contract. This justification for the sole or single
14 source vendor must describe in detail why a sole or single source vendor
15 approach is being taken.

16 The contract development process starts when a requisition is
17 created in the Passport Contracts module for the purchase of services. The
18 requisition is reviewed by the appropriate Contract Specialist in Corporate
19 Services and appropriate technical and management personnel on the Levy
20 project, to ensure sufficient data has been provided to process the contract
21 requisition. The Contract Specialist prepares the appropriate contract
22 document from pre-approved contract templates in accordance with the
23 requirements stated on the contract requisition.

1 Once the contract is ready to be executed, it is approved online by
2 the appropriate levels of the management approval matrix as per the
3 Approval Level Policy, and a contract is created. Contract invoices are
4 received by the LNP Support Services. The invoices are validated by the
5 project managers and Support Services Team. Payment Authorizations
6 approving payment of the contract invoices are entered and approved.

7
8 **Q. Are the Company's project management and cost control policies and**
9 **procedures on the Levy project reasonable and prudent?**

10 **A.** Yes, they are. These project management policies and procedures reflect
11 the collective experience and knowledge of the Company. As a result,
12 Company employees have, in preparing the policies and procedures
13 reflected in the Company's major capital project management documents
14 that I have identified above, incorporated their experience and knowledge
15 of project management policies and procedures that work within the
16 Company and within the industry. These policies and procedures have
17 also been tested by the Company on other capital projects. Any lessons
18 learned from those projects have been incorporated in the current policies
19 and procedures. We believe, therefore, that our project management
20 policies and procedures are consistent with best practices for capital
21 project management in the industry.

1 **Q. Did the Company prudently implement these project management**
2 **and cost control policies and procedures on the LNP in 2009?**

3 **A.** Yes. The Company has managed the LNP in 2009 consistent with the
4 Company's project management and cost control policies and procedures.
5 The LNP is in the licensing and permitting phase. The COLA was
6 docketed by the NRC in ~~2009~~ ²⁰⁰⁸ and is under NRC review. The LNP SCA
7 was obtained in 2009 and the DEP and the Army Corps of Engineers are
8 conducting their review of the LNP site wetlands mitigation program.
9 PEF is performing engineering, environmental and project management
10 activities to support this licensing and permitting process.

11 With the NRC LWA determination in 2009, however, the NRC
12 will not authorize excavation and foundation preparation work until the
13 COL is issued. PEF management reasonably examined possible
14 modifications of this determination with the NRC without success.
15 Without an LWA to perform excavation and foundation preparation work
16 prior to COL issuance there is a minimum 20 month shift in the original
17 LNP schedule. PEF management, accordingly, issued a notice of change
18 to the Consortium consistent with the EPC agreement and requested the
19 Consortium to perform schedule shift scenario analyses. The results of
20 these analyses are necessary for PEF to make an informed decision during
21 negotiations for an EPC contract change order or amendment.

22 PEF negotiated change orders in accordance with the EPC
23 agreement for the schedule analyses work. PEF also negotiated change
24 orders consistent with the EPC agreement to evaluate the deferral of long

1 lead procurements in an economical manner and, where appropriate, took
2 action to defer procurements and other LNP work in response to the
3 schedule shift that occurred as a result of the NRC LWA determination.
4 These change orders were reviewed and approved by PEF management
5 consistent with PEF's project management and cost control policies and
6 procedures.

7 PEF has adjusted the LNP work in 2009 to continue the
8 engineering and other work activities necessary to obtain the required
9 federal and state permits and licenses for the LNP while limiting
10 preconstruction and procurement activities as a result of the minimum 20-
11 month schedule shift. Throughout this process in 2009 PEF continued to
12 manage the licensing, permitting, and change order work, administer the
13 contracts, change orders, and work authorizations, and monitor the project
14 costs for this work consistent with its LNP project management and cost
15 control procedures.

16
17 **Q. Does the Company verify that the Company's project management**
18 **and cost control policies and procedures are followed?**

19 **A.** Yes, it does. PEF uses internal audits to verify that its program
20 management and oversight controls are in place and being implemented.
21 Internal audits are also conducted on outside vendors. During 2009
22 multiple planned audits were completed, including the EPC Contract
23 Audit, Levy County Governance and Controls Audit, and Cost Recovery
24 Rule Compliance Audit. Based on the results of the audits, Audit Services

1 opinion was that the EPC Contract, Cost Recovery Rule Compliance and
2 Levy County Governance and Controls audits were determined to be
3 effective. Process improvement recommendations were noted to promote
4 continuous business excellence and enhanced accountability. Action plans
5 were created to incorporate the recommendations listed in each audit. The
6 Company's project management policies themselves, included in the
7 Company project management documents that I have described above,
8 also contain their own mechanisms to ensure that they are followed and
9 effectively implemented.

10
11 **Q. Does this conclude your testimony?**

12 **A. Yes, it does.**

IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 100009****DIRECT TESTIMONY OF SUE HARDISON****1 I. INTRODUCTION AND QUALIFICATIONS****2 Q. Please state your name and business address.**

3 A. My name is Sue Hardison. My business address is 100 East Davie Street, TPP
4 11A1, Raleigh, NC 27601.

5

6 Q. By whom are you employed and in what capacity?

7 A. I am employed by Progress Energy Carolinas ("PEC") in the capacity of General
8 Manager – Corporate Development Group Business Services.

9

10 **Q. What are your responsibilities as the General Manager – Corporate**
11 **Development Group Business Services?**

12 A. As General Manager, I am responsible for providing business support for the
13 Corporate Development Group, including budgeting, capital planning and cost
14 management. I am also responsible for project controls and contract
15 administration for the Corporate Development Group.

16

17

1 **Q. Please summarize your educational background and work experience.**

2 A. I have a Bachelor of Arts degree in both Economics and Accounting from North
3 Carolina State University. I am a licensed Certified Public Accountant in the
4 State of North Carolina. I have been with Progress Energy – and formerly
5 Carolina Power & Light – for nearly 23 years. I have held various accounting,
6 business management and support services roles in several departments in the
7 Company, including Treasury, Accounting, Nuclear Generation, Energy Delivery
8 and Plant Construction. I have been a manager in the Company since 1995. Prior
9 to joining the Company, I spent five years in public accounting, holding staff
10 positions in both a local firm and a ‘Big 8’ firm.

11
12 **II. PURPOSE AND SUMMARY OF TESTIMONY**

13 **Q. What is the purpose of your direct testimony?**

14 A. The purpose of my direct testimony is to support the Company’s request for cost
15 recovery pursuant to the Nuclear Cost Recovery Rule, for the costs it incurred for
16 the Levy Nuclear Project (“LNP”). My testimony supports the Company’s
17 actual/estimated and projected costs for 2010 and 2011.

18
19 **Q. Have you previously filed testimony in this docket?**

20 A. Yes, I filed testimony on March 1, 2010 in support of the actual costs incurred in
21 2009 for the LNP.

22
23

1 **Q. Do you have any exhibits to your testimony?**

2 A. No, however, I am sponsoring portions of the schedules attached to Thomas G.
3 Foster's testimony. Specifically, I am co-sponsoring portions of Schedules AE-4,
4 AE-4A, and AE-6 and sponsoring Schedules AE-6A through AE-7B of the
5 Nuclear Filing Requirements ("NFRs"), included as part of Exhibit No. ___ (TGF-
6 1) to Thomas G. Foster's testimony. I will also be co-sponsoring portions of
7 Schedules P-4 and P-6 and sponsoring Schedules P-6A through P-7B included as
8 part of Exhibit No. ___ (TGF-2) to Mr. Foster's testimony, and co-sponsoring
9 Schedules TOR-4, TOR-6, and TOR-6A which is Exhibit No. ___ (TGF-3) to Mr.
10 Foster's testimony. A description of these Schedules follows:

- 11 • Schedule AE-4 reflects Capacity Cost Recovery Clause ("CCRC") recoverable
12 Operations and Maintenance ("O&M") expenditures for the period.
- 13 • Schedule AE-4A reflects CCRC recoverable O&M expenditure variance
14 explanations for the period.
- 15 • Schedule AE-6 reflects actual/estimated monthly expenditures for site selection,
16 preconstruction and construction cost for the period.
- 17 • Schedule AE-6A reflects descriptions of the major tasks.
- 18 • Schedule AE-6B reflects annual variance explanations.
- 19 • Schedule AE-7 reflects contracts executed in excess of \$1.0 million.
- 20 • Schedule AE-7A reflects details pertaining to the contracts executed in excess of
21 \$1.0 million.
- 22 • Schedule AE-7B reflects contracts executed in excess of \$250,000, yet less than
23 \$1.0 million.

- 1 • Schedule P-4 reflects CCRC recoverable O&M expenditures for the projected
 - 2 period.
 - 3 • Schedule P-6 reflects projected monthly expenditures for preconstruction and
 - 4 construction costs for the period.
 - 5 • Schedule P-6A reflects descriptions of the major tasks.
 - 6 • Schedule P-7 reflects contracts executed in excess of \$1.0 million.
 - 7 • Schedule P-7A reflects details pertaining to the contracts executed in excess of
 - 8 \$1.0 million.
 - 9 • Schedule P-7B reflects contracts executed in excess of \$250,000, yet less than
 - 10 \$1.0 million.
 - 11 • Schedule TOR-4 reflects CCRC recoverable actual to date and projected O&M
 - 12 expenditures for the duration of the project.
 - 13 • Schedule TOR-6 reflects actual to date and projected annual expenditures for site
 - 14 selection, preconstruction and construction costs for the duration of the project.
 - 15 • Schedule TOR-6A reflects descriptions of the major tasks.
- 16 These schedules are true and accurate.

17

18 **Q. Please summarize your testimony.**

- 19 **A.** In 2010, PEF has incurred and will continue to incur reasonable costs for work on
- 20 its Combined Operating License Application (“COLA”) to the Nuclear
- 21 Regulatory Commission (“NRC”) and work related to the conditions for its Site
- 22 Certification Application (“SCA”), which was approved by the Governor and
- 23 Cabinet sitting as the Siting Board. This work is necessary to obtain the required

1 licenses and permits for the LNP. In addition, under its Engineering, Procurement
2 and Construction Agreement ("EPC Agreement") entered into with Westinghouse
3 and Shaw, Stone and Webster (the "Consortium"), PEF incurred and will continue
4 to incur various costs for long lead material items and purchase order
5 management and disposition as discussed in the testimony of Mr. John Elnitsky
6 filed in this docket.

7 As demonstrated in my testimony and the NFRs filed as exhibits to Mr.
8 Foster's testimony, PEF took adequate steps to ensure that the costs it incurred
9 were reasonable and prudent. PEF has also provided reasonable projections for
10 costs to be incurred during the remainder of 2010 and all of 2011. These costs
11 include owner scope of work for continued COLA and SCA-related license and
12 permit activities for the LNP. This also includes continued work with the
13 Consortium under Amendment 3 to the EPC Agreement to efficiently address
14 long lead material items and other purchase orders, work to support the AP1000
15 design, certain land acquisitions, and to continue project management through the
16 period before the LNP Combined Operating License ("COL") is obtained for the
17 project from the NRC. The costs of this work are necessary for the LNP and
18 therefore reasonable.

19
20 **Q. Please briefly describe the Levy Nuclear Project.**

21 **A.** The LNP involves the planned construction of two state-of-the-art Westinghouse
22 AP1000 Advanced Passive nuclear power plants in Levy County, Florida and
23 associated transmission facilities to meet the Company's generation capacity

1 needs. The LNP will provide needed base load generation from a clean, carbon-
2 free generation resource that enhances the Company's fuel diversity and reduces
3 PEF's and the State of Florida's dependence on fuel oil and natural gas to
4 generate electricity.

5
6 **Q. What are the Company's current plans for the LNP?**

7 **A.** The Company's current plans for the LNP are discussed in detail in the testimony
8 of Mr. Lyash and Mr. Elnitsky filed contemporaneously with my testimony. As
9 they explain, the Company worked extensively throughout the end of 2009 and
10 into 2010 negotiating with the Consortium to amend the EPC Agreement to
11 reflect the schedule shift and the decision to focus on obtaining the Levy COL.
12 The Company's costs for the LNP in 2010 and 2011 reflect this Company
13 decision.

14
15 **III. 2010 ACTUAL/ESTIMATED AND 2011 PROJECTED PERIODS**

16 **Q. Can you generally explain what the LNP costs are for 2010 and 2011?**

17 **A.** Yes. As I indicated above, the LNP costs for 2010 and 2011 reflect the
18 Company's decision to focus work on obtaining the COL and other permits for
19 the project and defer most work and capital investment in the project until after
20 the COL is obtained. As a result, PEF has incurred and will continue to incur
21 reasonable costs under the EPC Agreement for purchase order and long lead
22 material disposition management and associated support costs because of the
23 schedule shift in the project. PEF receives and analyzes detailed vendor cost

1 information on an individual purchase order basis to determine optimal
2 disposition by minimizing near-term cost and customer price impact and
3 maintaining supply chain flexibility and then issues a change order as appropriate.
4 PEF also continues its licensing and permit work for the LNP, with Consortium
5 support, including the AP1000 design and engineering, the COLA review with the
6 NRC, the SCA conditions and associated activities with the Florida Department of
7 Environmental Protection ("DEP"), and further related work with other state and
8 federal agencies.

9 More specifically, for the remainder of 2010 and for 2011, PEF will incur
10 costs related to: (1) continuing COLA activities with the NRC; (2) executing near-
11 term wetland mitigation activities working with the DEP and the United States
12 Army Corps of Engineers ("USACE"); (3) ongoing Consortium and vendor
13 support for open long-lead material purchase orders and disposition activities; (4)
14 continuing project management and federal and state regulatory support from the
15 Consortium and the Company; (5) managing and supervising continuing long lead
16 material vendor work; (6) continuing AP1000 design support and work; (7)
17 continuing design finalization payments in 2010 under the EPC Agreement; and
18 (8) investigating, managing, and acquiring certain land for roads and wetlands
19 mitigation. All of this work is necessary to the LNP under the current
20 management decision and LNP schedule.
21
22
23

REDACTED

1 **Q. Does PEF have nuclear generation pre-construction costs?**

2 A. Yes. PEF has 2010 actual/estimated and 2011 projected preconstruction costs for
3 the LNP. PEF's total estimated 2010 costs associated with the LNP, excluding
4 transmission costs, are approximately \$[REDACTED] million. PEF projects its 2011 costs
5 for the LNP, excluding transmission costs, to be approximately [REDACTED] million.

6 Schedule AE-6 of Exhibit No. ___ (TGF-1) to Mr. Foster's testimony,
7 shows generation preconstruction costs for 2010 actual/estimated in the following
8 categories: License Application development costs of [REDACTED] million and
9 Engineering, Design & Procurement costs of [REDACTED] million.

10 Schedule P-6 of Exhibit No. ___ (TGF-2) to Mr. Foster's testimony breaks
11 down the 2011 projected generation pre-construction costs into the following
12 categories: License Application costs of [REDACTED] million and Engineering, Design &
13 Procurement costs of [REDACTED] million.

14
15 **Q. Please describe what the License Application costs are, and why the
16 Company has to incur them.**

17 A. These License Application costs are necessary to support the on-going licensing
18 and permit activities for the LNP. This includes the COLA pending before the
19 NRC, the conditions of certification under the LNP SCA, and additional,
20 necessary environmental and other permits for the LNP.

21 The LNP COLA was submitted July 30, 2008 and docketed by the NRC
22 on October 6, 2008. A review schedule for the LNP was issued on February 18,
23 2009 for the three parts of the NRC review leading up to the issuance of the LNP

1 COL: (1) the Final Safety Evaluation Report ("FSER"); (2) the Final
2 Environmental Impact Statement ("FEIS"); and (3) the conclusion of the
3 mandatory hearing and any contested hearing on the LNP COLA before the NRC
4 Atomic Safety and Licensing Board ("ASLB"). The review schedule also
5 provided a schedule for obtaining additional information through Requests for
6 Additional Information ("RAIs") through February 11, 2010. The RAI period
7 was later extended to May 5, 2010, but the RAI process was completed before this
8 new RAI date on March 24, 2010. Since its COLA was docketed, PEF has
9 supported the NRC review process through formally responding to the NRC RAIs
10 and otherwise working with the NRC towards the review and approval of the LNP
11 COLA. For example, the Company is currently supporting a NRC audit in 2010
12 following completion of the formal RAI process. The work supporting the NRC
13 COLA review will continue in 2010 and 2011. Even though the formal RAI
14 process concluded, the NRC may still require additional information prior to
15 issuance of the FSER and FEIS, which are now scheduled for July 2011, and
16 issuance of the COL, which is now expected at the end of 2012 at the earliest.
17 PEF will continue to reasonably incur costs in 2010 and 2011 to support the
18 NRC's review and issuance of the FSER, FEIS, and, ultimately, the COL for the
19 LNP.

20 Additionally, PEF will incur costs to prepare for and participate in the
21 ASLB hearings. A mandatory hearing before the ASLB is required before the
22 COL is issued. Also, there will be a contested hearing since the ASLB allowed
23 three private, anti-nuclear groups to intervene in the LNP NRC COLA docket and

1 admitted parts of three of twelve contentions they raised for hearing. As a result,
2 PEF will reasonably incur costs in 2010 and in 2011 to prepare for and participate
3 in these hearings.

4 PEF is also required to complete Conditions of Certification Reports for
5 the LNP during this period. They include the Barge Canal and Withlacoochee
6 River Monitoring Plan, Crystal Bay Surface Water Monitoring Plan, Discharge
7 Monitoring Plan, and the Wetland Mitigation Plan. We also chose to perform the
8 Floodplain Compensation Plan during this period. Additionally, PEF is involved
9 in the execution of near-term wetland mitigation activities in 2010 and 2011, as
10 well as associated environmental and other permit activities for the LNP. PEF
11 will continue to reasonably incur costs related to these licensing and permit
12 activities.

13 These License Application costs are necessary for the LNP. PEF
14 developed the preconstruction License Application cost estimates on a reasonable
15 licensing and engineering basis, using the best available information to the
16 Company, and consistent with utility industry and PEF practices. For the costs
17 associated with the COLA review and other permit processes, PEF used the terms
18 of its existing contracts as well as updated forecasts, which are provided on a
19 monthly basis by the contractors, to estimate the costs they will incur for the
20 technical and engineering support necessary for these license and permit review
21 processes. In addition, PEF based its projections on known project milestones
22 necessary to obtain the requisite NRC, USACE, and DEP approvals. Because

REDACTED

1 PEF is using actual or expected contract costs, NRC estimates, its own experience
2 and lessons learned, and relevant utility industry insight, PEF's cost estimates for
3 the preconstruction License Application work are reasonable.

4
5 **Q. Please describe what the Engineering, Design & Procurement costs are, and**
6 **explain why the Company has to incur them.**

7 A. PEF must incur certain Engineering, Design & Procurements costs in 2010 and
8 2011 to move forward with the LNP even with the Company's decision
9 addressing the schedule shift in the project. Key work scope in 2010 and 2011 by
10 the Consortium and the Company includes ongoing support for open long lead
11 material purchase orders and disposition activities, design finalization payments
12 to the Consortium, project management office support, and closure status reports
13 for site specific engineering packages. In addition there will be some shared
14 construction program development work such as module design and construction
15 initiatives. With the approval of Amendment 3 to the EPC Agreement, the
16 estimated costs for the Consortium's cost of this work under the EPC Agreement
17 is between [REDACTED] million per year.

18 PEF developed the preconstruction Engineering, Design & Procurement
19 cost estimates on a reasonable engineering basis, using the best available
20 information. To develop the costs, PEF utilized cost information from the EPC
21 Agreement and information obtained through negotiations with the Consortium.
22 Because PEF is using actual or expected contract costs, its own experience, and

REDACTED

1 utility industry practice, PEF's cost estimates for the preconstruction Engineering,
2 Design & Procurement work are reasonable.

3
4 **Q. Does PEF have generation construction costs?**

5 **A.** Yes. PEF will have 2010 and 2011 projected Construction costs for nuclear
6 generation for the LNP. Schedule AE-6 of Exhibit No. __ (TGF-1) to Mr.
7 Foster's testimony breaks down the 2010 projected generation construction costs
8 into the following categories: Real Estate Acquisition costs of [REDACTED] million and
9 Power Block Engineering and Procurement costs of [REDACTED] million. Schedule P-6
10 of Exhibit No. __ (TGF-2) to Mr. Foster's testimony breaks down the 2011
11 projected generation construction costs into the following categories: Real Estate
12 Acquisition costs of [REDACTED] million and Power Block Engineering and Procurement
13 costs of [REDACTED] million.

14
15 **Q. Please describe what the Real Estate Acquisitions costs are, and explain why**
16 **the Company has to incur them.**

17 **A.** Real estate acquisition costs for 2010 will be incurred to purchase property for the
18 Levy plants access road and barge easement, and for wetland mitigation activities
19 related to the Waccassa Watershed. For 2011, real estate acquisition costs will be
20 incurred for periodic payments on the barge easement.

21 Effective December 2009, the Nuclear Plant Development ("NPD") Real
22 Estate Governance Document (REI-NPDF-00001) was approved. This document
23 provides guidance for the acquisition of land needed for PEF's nuclear plant

1 development. This document identifies participants; outlines the acquisition
2 procedure and payment process; outlines document tracking, approval, filing,
3 reporting and document management and retention procedures. It was developed
4 to define and formalize the management and execution of acquiring land and land
5 rights and to provide for oversight and management concerning land acquisition.

6 Utilizing these procedures, PEF developed these construction Real Estate
7 Acquisition cost estimates on a reasonable basis, using the best available
8 information, consistent with utility industry and PEF practice.

9
10 **Q. Please describe what the Power Block Engineering and Procurement costs**
11 **are, and explain why the Company has to incur them.**

12 **A.** Power Block Engineering and Procurement costs in both 2010 and 2011 are for
13 contractual progress payments on select long lead material items and associated
14 support work from the Consortium. These long lead materials include Squib
15 Valves, Reactor Coolant Loop Piping, and Variable Frequency Drives. As
16 previously discussed in my March 1, 2010 testimony, each of these items of
17 equipment was individually assessed and a decision was made to move forward
18 on the procurement of the equipment only after determining that the procurement
19 was the most efficient method of addressing the long lead material item given the
20 LNP schedule shift.

21 PEF developed these cost estimates utilizing cost information from the
22 EPC Agreement and from information obtained directly through extensive

1 negotiations with the Consortium. PEF's cost estimates for the construction
2 Power Block Engineering and Procurement work are reasonable.

3
4 **IV. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT**

5 **Q. Has the Company implemented any additional project management and cost**
6 **control oversight mechanisms for the Levy project, since the testimony you**
7 **filed on March 1, 2010?**

8 **A.** Yes. Corporate Development Group Business Services will issue its first NPD
9 Project Controls Report in April 2010. The report will be utilized during the
10 partial suspension period until work is restarted and a more robust reporting
11 process will be implemented. The NPD Project Controls Business Services
12 Report provides a summary level status in four key areas: Cost Performance,
13 Schedule, Contract Performance, and Employee Incentive Goal updates. This
14 report contains information that was previously provided in the NPD Performance
15 Report that is now being issued on a quarterly basis. As discussed in my March 1,
16 2010 testimony, in August 2009, PEF formed the Corporate Development Group
17 ("CDG") to bring more focused attention to the review, management, and control
18 of large capital investments, such as the LNP. The NPD Project Controls
19 organization has been reorganized and reports to the General Manager of CDG,
20 Business Services. This reorganization provides dedicated support in the areas of
21 financial, contracts, and project controls management for NPD and other CDG
22 projects and programs. No other new controls have been issued since my March
23 1, 2010 testimony.

1 As discussed in my March 1, 2010 testimony, the Company utilizes
2 several policies and procedures to ensure that costs for the LNP project are
3 reasonably and prudently incurred. For example, procedures in the areas of
4 contract management, procurement, and accounting were revised to incorporate
5 improvement updates in 2009. The Integrated Project Plan (“IPP”) procedure and
6 several quality-related nuclear specific procedures were also revised in 2009.

7 In addition, the LNP is being undertaken by the Company consistent with
8 the project standards established and implemented by Progress Energy’s Project
9 Management Center of Excellence organization (“PMCoE”). The approved
10 procedures implement best practices for all aspects of Project Management.

11 Other corporate tools are used to support the management of the Levy
12 work. The Oracle Financial Systems/Business Objects reporting tool provides
13 monthly corporate budget comparisons to actual cost information, as well as
14 detailed transaction information, which allows PEF to regularly monitor the costs
15 of the generation work compared to budgets and projections.

16 PEF also has several control mechanisms in place to manage the LNP and
17 the costs incurred on the project. For example, the LNP management team has
18 regular, internal meetings. These regular meetings allow the project management
19 team to monitor progress and key performance metrics of the LNP. PEF’s LNP
20 management team also meets regularly with outside contract vendors working on
21 the Levy Project to review issues around contract scope of work, safety, technical
22 items, production progress and the work schedule that falls under the vendor
23 contracts. Financial Services personnel prepare monthly Cost Management

1 Reports that include all contract, labor, equipment, material and other project cost
2 transactions recorded to the LNP. These reports are regularly reviewed by the
3 LNP management team.

4 The Company's procedures are reviewed and revised on an ongoing
5 basis. PEF also uses internal audits to verify that its program management and
6 oversight controls are in place and being implemented. Internal audits are also
7 conducted on outside vendors.

8 These project management policies and procedures reflect the collective
9 experience and knowledge of the Company. These policies and procedures have
10 also been tested by the Company on other capital projects. Any lessons learned
11 from those projects have been incorporated in the current policies and procedures.
12 We believe, therefore, that our project management policies and procedures are
13 consistent with best practices for capital project management in the industry.

14
15 **Q. Does this conclude your testimony?**

16 **A. Yes, it does.**
17

1 **BY MS. HUHTA:**

2 Q. Thank you. Ms. Hardison, do you have a
3 summary of your prefiled testimony?

4 A. Yes, I do.

5 Q. Will you please provide that summary to the
6 Commission?

7 A. Certainly.

8 My name is Sue Hardison. My direct testimony
9 filed March 1, 2010, explains the prudence of the
10 company's Levy nuclear project, or LNP, actual costs
11 incurred in 2009, and its project management,
12 contracting and cost oversight controls for 2009.

13 I also filed direct testimony on April 30,
14 2010, explaining the reasonableness of the LNP actual
15 estimated cost for 2010 and projected cost for 2011.

16 I am available to answer questions regarding
17 my testimony.

18 **MS. HUHTA:** We tender Ms. Hardison for cross.

19 **COMMISSIONER SKOP:** Very well. Thank you.

20 Mr. Rehwinkel, you're recognized for
21 cross-examination.

22 **MR. REHWINKEL:** Thank you, Mr. Chairman. I
23 would like to -- I'm going to pass out two exhibits at
24 this point in time.

25 **COMMISSIONER SKOP:** All right. Those, do

1 those need to be marked?

2 **MR. REHWINKEL:** Yes.

3 **COMMISSIONER SKOP:** That would be Number 208
4 and 209.

5 **MR. REHWINKEL:** 208 would be, on the cover it
6 says James, but it should say Janus, J-A-N-U-S, Janus
7 Interview. And 209 would be LNP Master Plan.

8 **COMMISSIONER SKOP:** It sounds like something
9 out of a Mad Max movie.

10 **MR. REHWINKEL:** That is the LNP Integrated
11 Master Plan.

12 **COMMISSIONER SKOP:** All right. Those have
13 been marked.

14 (Exhibits 208 and 209 marked for
15 identification.)

16 **CROSS EXAMINATION**

17 **BY MR. REHWINKEL:**

18 **Q.** Good morning, Ms. Hardison.

19 **A.** Good morning, sir.

20 **Q.** Just a few questions about your testimony.
21 You are an accountant by training?

22 **A.** Yes, sir, I am.

23 **Q.** Okay. You are a CPA?

24 **A.** Yes, sir, in North Carolina.

25 **Q.** Okay. And do you have any -- are you an

1 engineer in any way?

2 **A.** No, sir, I am not.

3 **Q.** Okay. You have not overseen the construction
4 of a nuclear plant.

5 **A.** No, sir, I have not.

6 **Q.** Have you overseen the construction of an
7 electric generation facility?

8 **A.** I have not overseen it, sir, but I have
9 provided project control support for the construction of
10 combined cycle plants.

11 **Q.** Okay. And does project control support
12 involve the administration of contracts governing the
13 contractors?

14 **A.** We typically do contract administration
15 regarding change order management as part of the
16 process, and ensuring that the invoices are paid in
17 accordance with the terms and conditions of the
18 contract.

19 **Q.** Okay. In your role, your current role with
20 regard to the Levy project, did you have a predecessor?

21 **A.** The information under Levy financial services,
22 sir, previously was managed by another organization, so
23 I did have a predecessor.

24 **Q.** Okay. With respect to your role of the
25 nuclear, of the Levy nuclear plant project, would you

1 say that you are in, more in the role of contract
2 administration and oversight than construction
3 oversight?

4 **A.** Contract administration and support, sir, is
5 one of the support services I provide. We are currently
6 not in a construction phase for the Levy plant. We have
7 been in certain phases of the transmission side. But,
8 no, I am not doing -- at this point there is no
9 construction.

10 **Q.** Okay. Would it ever be contemplated that you
11 would oversee the construction of the nuclear plant if,
12 if it ever comes to pass?

13 **A.** When the nuclear plant is constructed, sir, I
14 will provide project control support at the site, but I
15 will not be overseeing direct construction. That's not
16 my expectation.

17 **Q.** Okay. Do you have what's been identified as
18 Exhibit 208?

19 **A.** There's not a number. I apologize, sir. Can
20 you provide me a --

21 **Q.** It's the Janus interview with Mr. Doughty's --

22 **A.** Yes, sir, I do have a copy of that.

23 **Q.** Have you had a chance to review this document?

24 **A.** I just received this document this week, sir.

25 **Q.** Okay.

1 **A.** It's the first time I had seen it.

2 **Q.** Before you took the stand today, have you had
3 a chance to review it?

4 **A.** I had a chance to go over it. Yes, sir.

5 **Q.** And this is a, a draft of interview notes that
6 Janus and Mr. Doughty's team conducted of yourself; is
7 that correct?

8 **A.** That is correct, sir.

9 **Q.** On February 9th of this year?

10 **A.** Yes.

11 **Q.** Is there anything in these notes that you
12 would consider to be incorrect with respect to the way
13 they're presented?

14 **A.** It's difficult to say, sir, because the notes
15 seem to be just a transcript of someone's thoughts, and
16 it's difficult to tell without a question and answer
17 format what the context was. And some of the words and
18 phrases, sir, frankly were not familiar to me.

19 **Q.** Okay. Is there anything in here that you
20 believe is a mischaracterization of the discussion that
21 you had with Mr. Doughty?

22 **A.** Well, again, sir, without it being in a Q and
23 A format and a topic, some of the things seem
24 inconsistent. If you look at one line, the next line
25 actually doesn't make much sense. So if you have a

1 specific area, sir, you'd like to address, I can look at
2 that.

3 Q. Okay. Well, could you give me an example of
4 what you think is inconsistent?

5 A. Yes, sir. If you'll refer to page 3.

6 Q. Yes.

7 A. From the bottom there's a section called Using
8 Probabilistic Estimates. And the gist of the discussion
9 seems to be probabilistic risk assessment. We don't use
10 probabilistic estimates, so that was confusing to me.
11 I'm not sure what the original topic was.

12 Q. Okay.

13 A. And there is an area there, sir, where they've
14 typed that I referred to a person as a master of
15 something. I sincerely hope my words were manager.

16 Q. Okay.

17 A. But there are numerous examples like that
18 actually, sir. So, again, if you could direct me to
19 specifically what you're looking at, that would help.

20 Q. Okay. On the second page.

21 A. Yes, sir.

22 Q. Page 2 of 4, in the, near the middle, above
23 the bold, there's a heading that says Major Recent
24 Initiatives Accounting/Finance.

25 A. Oh, yes, sir.

1 **Q.** Is this essentially, is this a high level
2 description of kind of the way you've approached the EPC
3 contract as it relates to the EP -- to the Levy plant?

4 **A.** Yes, sir. The context of this discussion was
5 that we applied -- my group had been providing financial
6 services support for other major projects in the
7 company. One of our lessons learned, sir, is that it's
8 very helpful for us to look at the actual assets that
9 are going to be constructed at a very detailed level,
10 and to break the project down into those types of
11 discrete elements. It allows us better tracking for our
12 project managers and it allows us better variance
13 explanations, if you will. So we did apply that lesson
14 learned when we moved into merging the Levy plant as
15 part of our responsibilities.

16 **Q.** Okay. This, this would be in the event that
17 construction actually occurs at that site?

18 **A.** It would be when construction occurs. Yes,
19 sir.

20 **Q.** Okay. Well, you're not testifying that
21 construction will occur, are you?

22 **A.** No, sir. I am testifying that we subdivided
23 the accounting projects to be consistent with the assets
24 to be built.

25 **Q.** Okay. If they are built.

1 **A.** Well, sir, my, my work is to look at it in the
2 context of where it is now, and that is my assumption,
3 sir, is that they will be built.

4 **Q.** Okay. Do you have a copy of Exhibit 209,
5 which is the only other, which is the Levy nuclear
6 project integrated master, integrated master plan?

7 **A.** Yes, sir, I do.

8 **Q.** Are you familiar with this document?

9 **A.** Yes, sir, I am.

10 **Q.** Now the first, actually what I have passed
11 out, is it fair to represent, are involving iterations
12 of this document?

13 **A.** Yes, sir. The iterations, as I understand
14 them from this document, were we received a set of
15 information of schedule detail from the consortium, and
16 we did supply on the front side our licensing and
17 permitting scheduling evolution and our, at the bottom
18 our transmission. The middle part would have come from
19 the consortium per their requirements.

20 **Q.** Okay. And when you say the middle part, is
21 that the part that is in, that is in yellow
22 highlighting?

23 **A.** Yes, sir. It's difficult for me to see yellow
24 highlighting on this one. I apologize.

25 **Q.** Well, I'll just, all I want to do is kind of

1 understand what this document says. Now on the first
2 page of the exhibit, up in the upper right-hand side, it
3 says REV:0 11/1/07. Do you see that?

4 **A.** Yes, sir.

5 **Q.** And this would have been the very first
6 iteration of this document; correct?

7 **A.** This would have been.

8 **Q.** And before your time?

9 **A.** Well before my time, sir.

10 **Q.** Okay. And this basically shows the
11 anticipated times at, time frames in November of 2007?

12 **A.** Yes, sir.

13 **Q.** Okay. The next page is, upper right-hand
14 corner, REV:1, and it shows January 3rd, 2008.

15 **A.** Yes, sir.

16 **Q.** And there are some changes between REV:0 and
17 REV:1 to the document. For instance, on the startup --
18 I guess I should not mention anything in that.

19 **A.** No, sir.

20 **Q.** In the -- we see the difference, I guess, in
21 2016 column. If we look down, there's a March 8th date
22 on the first page, in the far right-hand, year 2016.

23 **A.** Yes, sir.

24 **Q.** Okay. And if we look to the second page, that
25 date is now March -- is June 2nd, June 6th.

1 **A.** June 6th. Yes, sir. I see that.

2 **Q.** Okay. All right. And then if we turn to the
3 next page, it is March 7th.

4 **A.** I believe it's July 7th, sir; is that correct?

5 **Q.** I'm looking -- this is the one that says
6 REV:2.

7 **A.** Oh, I'm sorry. The date of the REV.

8 **Q.** Oh, I'm looking -- this is the date of the
9 document.

10 **A.** Yes, sir. Yes, sir.

11 **Q.** Okay. And this says, "Approved Garry Miller,
12 General Manager, MPD."

13 **A.** Yes, sir. Yes, sir.

14 **Q.** Okay. Now was Garry Miller your predecessor
15 in any regard?

16 **A.** No, sir, he was not.

17 **Q.** Okay. But he approved this document. And in
18 the -- now the year is 2017, and the corresponding dates
19 that we looked at on the prior two pages is July 7th of
20 2017; is that right? That's for a unit, that's for a --
21 I'm sorry. If we look in 2016, the date is, is, the
22 corresponding date is June 30th.

23 **A.** Yes, sir.

24 **Q.** Okay.

25 **A.** For the previous dates, let me go back, sir,

1 that you were looking at for that same item?

2 Q. Yes.

3 A. Let me just take a moment.

4 Q. Just so -- the area we're talking about here,
5 the dates and identified activities are confidential; is
6 that correct?

7 A. Yes, sir. And you'll see there has been a
8 further definition for the one Garry Miller has signed
9 on March 7th.

10 Q. Okay. And -- all right. So when we move past
11 this date -- the date of the third integrated master
12 plan is March 7, 2008. And then if we turn to the next
13 page, it still says REV:2, but it says June 1st, 2009;
14 is that correct?

15 A. It is correct, sir.

16 Q. And it says, "Approved," it says, "June 1st,
17 2009 update/analysis," and it says, "Approved Garry
18 Miller/Lew" --

19 A. Lewis Spragins. Yes, sir.

20 Q. Right. Okay. And what is Lewis Spragins?

21 A. Mr. Spragins was previously, until actually
22 just at this date when we came over was the Project
23 Controls Manager. When we merged at midyear we replaced
24 Mr. Spragins with a different Project Controls Manager.

25 Q. Okay. But now what's different about this

1 document from the prior in a material way would be a red
2 dotted line here; is that correct? A red dotted box
3 that, that encircles these activities.

4 **A.** Yes, sir.

5 **Q.** And what, what does that represent?

6 **A.** We have a note on here, sir, because what
7 we've done is frozen this portion of the schedule. This
8 REV would have been after the partial suspension
9 notification. And so really this block was frozen until
10 the negotiations and schedule analysis.

11 **Q.** Okay. All right. And then we start to see
12 above that in the first line licensing and permitting.
13 These blue dates and descriptions are NRC activities.

14 **A.** Yes, sir. For internal.

15 **Q.** With the expected dates at these, at this
16 time.

17 **A.** At the time this was prepared. Yes, sir.

18 **Q.** Okay. So we see a draft environmental impact
19 statement expected in October of 2009, a final
20 environmental impact statement in September of 2010, and
21 then in May 5th, 2011, a final safety evaluation report.

22 **A.** Yes, sir. I think the point that you're
23 getting to are these dates have shifted and we do
24 prepare the schedule. But if you're looking at an
25 understanding, sir, of the date shifts in our NRC, I

1 would have to defer you to Mr. Elnitsky.

2 Q. I understand.

3 A. Thank you.

4 Q. The next page, the, it says REV:2 12/31/2009.

5 A. Yes, sir.

6 Q. Now this is one that it appears that you --

7 A. Yes, sir.

8 Q. -- signed or you initialed in your role. It
9 says, "General Manager."

10 A. CDG Business Services.

11 Q. Okay. And Lee Formanek?

12 A. Lee Formanek is the Project Controls Manager.

13 Q. Okay. And this shows some revisions to the
14 dates that we just talked about with respect to the NRC.

15 A. Yes, it does.

16 Q. And it still says, "Note, EPC and transmission
17 project schedules on hold," and it has your initials
18 inside the box.

19 A. Yes, sir.

20 Q. Okay. Now the next page says REV:2,
21 February 26th, 2010, update.

22 A. Yes, sir.

23 Q. And it says, "Note," inside the red box, your
24 initials, it says, "EPC and transmission project
25 schedules on hold until in-service dates are

1 determined."

2 **A.** Yes, sir.

3 **Q.** Now has this document been revised?

4 **A.** We have not revised this yet, sir, because we
5 require the consortium to provide us sequencing. And
6 Mr. Elnitsky could speak to one of the primary drivers
7 right now is the sequencing with our long-lead material,
8 and that is in negotiation. Rather than spend efforts,
9 sir, we would wait until we got that information data.

10 **Q.** So --

11 **A.** The changes though, however, sir, if you will
12 allow me, we do continue to track our internal schedules
13 related to our work with the NRC, and these dates
14 referenced here are not any different right now than
15 they are here.

16 **Q.** When you say these dates --

17 **A.** Well, I apologize, sir. Our licensing and
18 permitting line at the top.

19 **Q.** Okay. So there have been changes from, if I
20 compare the December 31, 2009, estimates of the NRC
21 activities to the February 2010 activities, there were
22 changes there. But you're saying the, the dates that
23 you have projected for the February 2010 master plan are
24 your best estimate at this point.

25 **A.** The key dates in there, sir, would be the

1 issuance of the final environmental impact statement and
2 the final safety evaluation report, which are still
3 expected to be issued in July. I can't quite read. I
4 see the, I see them sort of on top of each other, sir.
5 Do you see the FEIS on the top of the line?

6 Q. Yes.

7 A. And the FSER (phonetic) on the bottom?

8 Q. Yes.

9 A. Those are still the dates that we're showing.
10 And we are still showing, sir, expecting the COLA, and,
11 again, Mr. Elnitsky's testimony addresses this more
12 thoroughly and technically, in the fourth quarter of
13 2012.

14 Q. Okay. Thank you. And I appreciate that
15 clarification. I want to ask you to go back to the
16 REV:1, which is the January 3rd, 2008.

17 A. Yes, sir.

18 Q. And the next to the last line item in this
19 master plan says, "Plant Operation Staffing." Do you
20 see that?

21 A. Yes, sir, I do.

22 Q. And that's, that's -- this is not
23 confidential, this line.

24 A. No, it's not.

25 Q. Okay. And we see a January 3rd, 2011,

1 starting point for this dark blue line; is that correct?

2 A. Yes, sir, we do.

3 Q. Now the activities that are covered by that
4 line, are, are they generally five years in advance of
5 what was at this time the anticipated in-service date of
6 Levy Unit 1?

7 A. For the timing of when you bring licensed
8 operators and staff on, sir, I would have to refer to a
9 nuclear engineer. So I would have to defer that, sir,
10 to Mr. Elnitsky.

11 Q. Okay. So you don't know about this?

12 A. We would have to talk to engineering when we
13 staff that line. And since I didn't prepare this
14 particular one, sir, I'm sure there were discussions
15 with the appropriate personnel.

16 Q. Okay. Well, let me ask you this. In the
17 documents that we get to in the last part of the exhibit
18 that are signed off by you, are you familiar with the
19 plant operations staffing aspect on those pages?

20 A. Yes, I am, sir. But if you'll look, the red
21 dotted line that says all of these elements are on hold
22 until we get the rest of the schedule updated, we have
23 also frozen those.

24 Q. Okay. So are you familiar with an issue
25 that's been raised in this docket in the staff audit

1 report about the operational readiness group?

2 A. Oh, yes, sir, I have.

3 Q. Would the operational readiness group have any
4 relationship to this blue line here?

5 A. Operational readiness for full staffing, sir,
6 would be related. But in the context of what's been
7 asked and answered in, I believe, interrogatories with
8 operational readiness, those costs that we're currently
9 incurring now, sir, are not so much staffing as they are
10 activities with our AP 1000 owners group, which is also
11 known as APOG. Again, Mr. Elnitsky sits on that
12 committee and can speak to it. But the two primary
13 activities are the development of training and
14 operational manuals, which will be necessary for the
15 AP 1000 fleet, and we are, sir, actively engaged in
16 those activities. So we characterize that under
17 operational readiness. But there is no staffing at this
18 point. I believe it's two individuals and a part-time
19 contractor.

20 Q. Now when that group was initially established,
21 it was, it was in the time frame where it would have
22 been five years in advance of the then in-service date
23 estimate; correct?

24 A. Again, sir, it is laid out that way on the
25 schedule. But as to the timing of when you have to

1 bring on the full staff for an operating plant, I would
2 have to defer to Mr. Elnitsky.

3 Q. Okay. And I appreciate that, and I will.

4 A. You're welcome, sir.

5 Q. With respect to this, you mentioned there's
6 two individuals now. Is that -- has there been a change
7 in the staffing level of that group since 2009?

8 A. There's been a change in the level. We had a
9 vice president retire, sir. And I believe it was
10 earlier -- I can't remember honestly, sir, if it was
11 earlier this year or last year. So there's no longer a
12 vice president for that organization, but there are two
13 different individuals.

14 Q. Now do you expect there to be in 2011 and 2012
15 that the operational readiness group will be --

16 A. I don't expect any expansion of staff, sir, in
17 the next 24 months.

18 Q. Do you expect any contracting of staff in the
19 next --

20 A. I wouldn't expect so, sir. But I would defer
21 to Mr. Elnitsky and the working group for the AP 1000.

22 Q. Okay.

23 A. He would know more about what our activities
24 will be in the next couple of years.

25 Q. Okay. Thank you for your, your answers.

1 **A.** You're welcome, sir.

2 **MR. REHWINKEL:** I have no further questions.

3 **COMMISSIONER SKOP:** Thank you.

4 Mr. Brew?

5 **MR. BREW:** Thank you. I have nothing for this
6 witness.

7 **COMMISSIONER SKOP:** Very well.

8 Ms. Kaufman?

9 **MS. KAUFMAN:** Thank you, Mr. Chairman. I have
10 no questions.

11 **COMMISSIONER SKOP:** Very well.

12 SACE?

13 **MR. DAVIS:** No questions.

14 **COMMISSIONER SKOP:** Very well. Any questions
15 from the bench?

16 Hearing none, staff?

17 **MR. YOUNG:** No questions.

18 **COMMISSIONER SKOP:** Okay. Can we take up
19 exhibits --

20 **MR. YOUNG:** Actually redirect, if any.

21 **MS. HUHTA:** No redirect.

22 **COMMISSIONER SKOP:** All right. Exhibits then?

23 **MS. HUHTA:** Ms. Hardison didn't have any
24 exhibits attached to her prefiled testimony.

25 **COMMISSIONER SKOP:** Okay.

1 Mr. Rehwinkel?

2 **MR. REHWINKEL:** Public Counsel would move
3 2,000 -- I mean 208 and 209.

4 **COMMISSIONER SKOP:** Any objection?

5 Hearing -- Mr. Burnett?

6 **MR. BURNETT:** Thank you, Commissioner Skop.
7 No objection. I just did want to note I appreciate
8 Mr. Rehwinkel's caution, but on Exhibit 209, the only
9 elements that remain confidential are the last three
10 pages that we blocked out by a pink box.

11 **COMMISSIONER SKOP:** Yes.

12 **MR. BURNETT:** Those are the only remaining
13 confidential portions. So I just wanted to make sure
14 that all, that it was clear all the other portions may
15 be entered into the record unredacted.

16 **COMMISSIONER SKOP:** Okay. Very well.

17 And, staff, you're aware of that, based on
18 Mr. Burnett's representations.

19 So hearing no objection, Exhibits 208 and 209
20 will be entered.

21 (Exhibits 208 and 209 admitted into the
22 record.)

23 And at this point, this may be a good breaking
24 point for lunch, unless we want to move forward briefly.
25 Is there concern?

1 **MS. HUHTA:** I just wanted to ask, Ms. Hardison
2 does not have any rebuttal. May she be excused from the
3 remainder?

4 **COMMISSIONER SKOP:** Yes, she may be excused.
5 Yes, I was planning on doing that.

6 **MS. HUHTA:** Thank you.

7 **THE WITNESS:** Thank you. Thank you,
8 Commissioners.

9 **COMMISSIONER SKOP:** Thank you.

10 **MR. WALLS:** Commissioner Skop, I think our
11 next witness is Ken Karp. And he's a stipulated
12 witness, so we could go --

13 **COMMISSIONER SKOP:** Yes. Let's take care of
14 that while we have a few minutes. So if you could move
15 forward with that on Mr. Karp.

16 **MS. HUHTA:** Certainly, Commissioner Skop.
17 PEF's next witness is Mr. Kenneth Karp, and the parties
18 have agreed to waive cross and to stipulate to the
19 entrance of his testimony. He had two sets of prefiled
20 testimony dated March 1st, 2010, and April 30th, 2010,
21 and we would request that those two prefiled sets of
22 testimony be entered into the record as though read.

23 **COMMISSIONER SKOP:** All right. Very well.
24 The two sets of prefiled testimony, upon agreement for
25 the parties for Mr. Karp, will be entered into the

1 record as though read.

2 And are there any exhibits that we need to
3 take up for Mr. Karp?

4 **MS. HUHTA:** No exhibits from Progress.

5 **COMMISSIONER SKOP:** All right. Very well.

6 All right. Show that done.

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 100009****DIRECT TESTIMONY OF KENNETH KARP
IN SUPPORT OF ACTUAL COSTS****I. INTRODUCTION AND QUALIFICATIONS**

1

2

Q. Please state your name and business address.

3

**A. My name is Kenneth Karp. My business address is 3300 Exchange Place,
Lake Mary, FL 32746.**

4

5

6

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

7

**A. I am employed by Progress Energy Florida, Inc. ("PEF" or the
"Company") and my title is General Manager of Levy Baseload
Transmission Projects. In this role, I am responsible for leading a cross-
functional, multi-disciplinary team in the development and execution of
the transmission projects associated with the Levy Nuclear Plant.**

8

9

10

11

12

13

Q. Please summarize your educational background and work experience.

14

**A. I have a bachelor's degree in civil engineering from the Old Dominion
University in 1982 and a MBA degree from the University of North
Carolina in 2000. I have been working in the electric utility industry for
over 27 years in various generation, transmission and distribution roles.
Prior to assuming my current role in January 2009, I was the General
Manager of Distribution for the eastern region of North Carolina for the**

15

16

17

18

19

1 Company. From 2004 to 2006, I was the Distribution Operations Manager
2 for the southern region in the Carolinas. From 2002 to 2004, I was the
3 Transmission Substation Maintenance Supervisor for the eastern
4 transmission area in North Carolina. Prior to this, I held a number of
5 supervisory, project management and engineering positions within the
6 Company and in consulting roles in the industry.
7

8 II. PURPOSE AND SUMMARY OF TESTIMONY

9 **Q. What is the purpose of your direct testimony?**

10 **A.** The purpose of my direct testimony is to support the Company's request
11 for cost recovery, including the prudence of those costs, pursuant to the
12 nuclear cost recovery rule for the transmission portion of the costs
13 incurred from January 2009 through December 2009 that were related to
14 the construction of the Company's proposed Levy Nuclear Power Plants.
15

16 **Q. Do you have any exhibits to your testimony?**

17 **A.** No. I am, however, sponsoring the cost portions of Schedules T-4, T-4A,
18 T-6, T-6A, T-6B, and Appendix B, as well as portions of Schedules T-7,
19 T-7A, and T-7B of the Nuclear Filing Requirements ("NFRs"), which are
20 included as part of the exhibits to Will Garrett's testimony. Specifically, I
21 am sponsoring those portions, related to transmission, of Schedule T-6,
22 which provide actual monthly expenditures for site selection,
23 preconstruction and construction costs. I also sponsor the transmission
24 portion (Lines 10 - 15) of Schedule T-7, which lists the contracts executed

1 in excess of \$1.0 million through the end of 2009. Accordingly, I sponsor
2 pages 48 to 53 of Schedule T-7A, which reflects details pertaining to the
3 contracts executed in excess of \$1.0 million. I am also sponsoring the
4 transmission portion (Lines 11 – 14) of Schedule T-7B which lists the
5 contracts between \$250,000 and \$1.0 million that were executed through
6 the end of 2009.

7 All of the portions of these schedules, which I sponsor, are true and
8 accurate.

9
10 **Q. Please summarize your testimony.**

11 **A.** PEF incurred pre-construction and construction costs from January 2009
12 to December 2009 to complete the work required to site the proposed
13 transmission lines and substations and to complete the necessary analysis
14 and design work required for the Levy Nuclear Project (“LNP”). More
15 specifically, the Levy Transmission Project Team worked on establishing
16 State and Federal licensing, program and project schedules and cost
17 estimates, staffing and resource plans, external outreach and
18 communications, project designs, transmission line route selection, land
19 acquisition, and permitting activities. As demonstrated in my testimony
20 and the NFR schedules attached to Mr. Garrett’s testimony, PEF took
21 steps to ensure that the preconstruction and construction costs for these
22 LNP transmission activities were reasonable and prudent. Accordingly,
23 for all the reasons provided in my testimony and in the NFR schedules, the
24 Commission should approve PEF’s transmission preconstruction and

1 construction costs incurred in 2009 as reasonable and prudent pursuant to
2 the nuclear cost recovery rule.

3
4 **III. CAPITAL COSTS INCURRED IN 2009 FOR LEVY NUCLEAR PLANT**

5 **Q. Before describing what costs were incurred in 2009, can you describe**
6 **what transmission work and activities were performed in 2009 to**
7 **generate these costs?**

8 **A.** Yes. The 2009 LNP transmission work and activities included the
9 following:

10 **Regulatory and Licensing**

11 PEF submitted the transmission line portion of the Florida State
12 Site Certification Application ("SCA") to the Florida Department of
13 Environmental Protection ("FDEP") in June of 2008. PEF and other
14 parties submitted testimony, and the licensing hearings and public hearing
15 were completed in March 2009. The State Siting Board granted
16 certification of the project on August 11, 2009.

17 In July of 2008, PEF submitted the Combined Operating License
18 application ("COLA") to the Nuclear Regulatory Commission ("NRC").
19 In March of 2009, the U.S. Army Corp of Engineers ("USACOE") issued
20 Public Notice of the project. Levy Transmission Project Team has
21 assisted in responding to several requests for information from the NRC
22 and USACOE during 2009.

1 **Project Management and Execution**

2 During 2009, PEF completed baseline schedules and costs
3 estimates for the program and some of the projects contained in the
4 program. PEF also established project control metrics which included
5 cost, schedule, safety, compliance and risk metrics. The project managers
6 and project team continuously reviewed these metrics and presented them
7 to senior management on a monthly basis. In addition, PEF established
8 policy and governance procedures for right-of-way acquisition activities.

9 The Company completed laser mapping (“LiDAR”) of the
10 proposed rights of way, and incorporated this data as the base map for the
11 project Geographic Information System (“GIS”).

12 **Construction**

13 PEF completed construction on the first phase of the Crystal River
14 Energy Complex (“CREC”) Substation upgrades. Specifically, PEF
15 finished designs, issued and awarded bids, and installed the three (3) new
16 Extra High Voltage (“EHV”) 500 kV switches in the existing CREC 500
17 kV switchyard during the fall 2009 planned outage.

18 **Outreach and External Communications**

19 In addition to the numerous public meetings held in 2008, PEF
20 conducted six (6) community “Open House” sessions in early 2009.
21 These sessions presented information about the projects and the proposed
22 transmission line routes in nine (9) counties. The Company sent
23 approximately twenty-thousand direct mailings inviting local residents,

1 elected officials, community leaders, agencies and other stakeholders to
2 these sessions.

3 PEF established a web site that allows the public to obtain
4 information and status of the projects. The web site also has an interactive
5 mapping feature that allows the public to determine the proximity of their
6 property to the proposed transmission corridors and routes. The Company
7 also maintained multiple customer communication channels dedicated to
8 allowing customers to ask and receive responses to any public issues,
9 questions and concerns. Customers could call into a toll free number and
10 speak to a trained associate or use email. Throughout 2009 the external
11 relations team received and responded to phone calls, emails and letters
12 requesting information about the projects.

13 The external relations team held numerous meetings and made
14 presentations to many key stakeholders, including home owner
15 associations, affected property owners and special interest groups.

16 **Engineering and Design**

17 PEF performed the analysis for the Levy Nuclear Plant and its
18 impact on the Florida bulk transmission system in accordance with NRC
19 regulations, Federal Energy Regulatory Commission ("FERC") Large
20 Generation Interconnection rules, North American Electric Reliability
21 Corporation ("NERC") / Florida Reliability Coordinating Council
22 ("FRCC") Reliability Standards, and Progress Energy Florida
23 Interconnection Requirements. The resulting report and FRCC

1 concurrence confirmed the scope requirements for the Levy Transmission
2 program.

3 The engineering team completed a conductor study and a structure
4 study. The conductor study provided technical analyses to support the
5 selection of the 500kV and 230kV conductors for the Levy Baseload
6 Transmission program. The structure study provided an engineering
7 analysis of technical, cost, maintenance considerations to assist in
8 selecting a 500kV structure type. The team also completed Specifications
9 for the EHV equipment and standard design criteria for the proposed EHV
10 systems.

11 PEF completed preliminary design packages (that is, design packages
12 in which designs are considered 30% complete) for several projects including:

- 13 1. The 50 mile long 230 kV line that runs from Pinellas to Polk
14 County.
- 15 2. The two 69/13 kV substations and associated line interconnect
16 work that will be constructed on the Levy Plant site.
- 17 3. The layout and construction sequencing plans for the work
18 required at the existing Crystal River Energy Complex.
- 19 4. The verification of existing protection systems at the Crystal River
20 Energy Complex switchyards.

21 **Right of Way ("ROW") and Land Acquisition**

22 PEF completed the route selection studies and received
23 management approval on the preferred transmission routes and the final
24 report. These studies identify the best evaluated and preferred rights of

1 way for the proposed transmission lines. The route selection process
2 included a systematic evaluation of potential routes within the certified
3 corridors. This evaluation used siting criteria that incorporated
4 environmental, land use, design, safety and cost considerations. The
5 evaluation included quantitative measures of twenty-two (22) criteria
6 including the number of adjacent residential dwellings, acres of wetlands
7 potentially affected by the route, and other factors. Quantitative
8 evaluations were used to identify and rank candidate routes. After the
9 quantitative evaluation was complete, the project team conducted a
10 qualitative evaluation on the highest ranking routes. The qualitative
11 evaluation was conducted to take into account other factors not previously
12 measured quantitatively, such as an assessment of potential impacts to
13 property, compliance with health and safety requirements, reliability, and
14 consistency with information gathered through the public outreach
15 process. After the quantitative and qualitative analyses were complete, the
16 final preferred routes were identified. In 2009, PEF acquired
17 approximately two miles of new transmission line ROW connecting the
18 Levy plant site and the proposed substation in Sumter County.

19 The Company completed wetland, habitat and cultural resource
20 surveys on the substation sites and the majority of the preferred
21 transmission ROWs identified in the route study. This was done in order
22 to support data requirements for the State Conditions of Certification and
23 the USACOE permitting. These surveys were completed on public and

1 private lands. In addition, the Company approved parcel maps for the
2 proposed right of ways to support the strategic land rights acquisition plan.

3
4 **Q. Did the Company incur transmission-related Site Selection/Pre-**
5 **construction costs for this transmission work and activity for the Levy**
6 **Nuclear Plant in 2009?**

7 **A.** Yes, as reflected on Schedule T-6, the Company incurred Site
8 Selection/Preconstruction costs in the categories of Line Engineering,
9 Substation Engineering, and Other.

10
11 **Q. For the Line Engineering costs, please identify what those costs are**
12 **and why the Company had to incur them.**

13 **A.** As reflected on line 17 of Schedule T-6.2, the Company incurred Line
14 Engineering costs of \$3,501,699. These costs include the preliminary
15 engineering design of the transmission lines and facilities. This
16 engineering work identified the typical size, type, and general locations of
17 various options for the transmission lines and substation facilities
18 necessary to successfully and reliably accommodate the additional power
19 from Levy Units 1 and 2 on PEF's system and to reliably incorporate the
20 plants into the PEF transmission system and the state-wide electric grid.
21 As stated above, PEF completed preliminary design packages on a number
22 of transmission line projects. PEF also completed engineering studies and
23 specifications for the EHV equipment and standard design criteria for the
24 proposed EHV systems. The Company also incurred Line Engineering

1 costs in 2009 for engineering services to support the review, analysis and
2 revisions as needed to refine associated scopes, cost estimates, and
3 schedules for the Levy Transmission Program's discrete line projects.
4 This work included the review and analysis to support the development of
5 design criteria and specifications for the Levy Transmission Program and
6 engineering support for addressing external and internal Requests for
7 Information ("RFI") or Requests for Proposals ("RFP") by providing
8 documentation, figures, drawings, and reports. This work allowed the
9 Company to refine the scope, expected schedules, and costs of the
10 proposed system facilities and facility upgrades.

11
12 **Q. For the Substation Engineering costs, please identify what those costs**
13 **are and why the Company had to incur them.**

14 **A.** As reflected on line 18 of Schedule T-6.2, the Company incurred
15 Substation Engineering costs of \$2,638,838.

16 These costs included the preliminary engineering design and
17 engineering detail work for substations. This work was necessary to
18 identify the number of substations, their general location, size and
19 equipment needs required to incorporate the Levy nuclear power plants
20 into the PEF transmission system and the state-wide electric grid. PEF
21 completed preliminary design packages on a number of substation projects
22 during 2009.

23 Substation engineering costs in 2009 included engineering services
24 to support the review, analysis, and revisions to all associated scopes, cost

1 estimates, and schedules for the Levy Transmission program's individual
2 substation and relay and protection projects, particularly design work
3 associated with the CREC substation expansion and ultimate layout
4 design. This work also included the review, analysis, and implementation
5 of technical studies to support the development of design criteria and
6 specifications and to provide assistance for the Levy Transmission
7 program's engineering quantitative and qualitative efforts to support
8 external and internal RFIs or RFPs by providing documentation, figures,
9 drawings and reports.

10
11 **Q. For the "Other" costs, please identify what those costs are and why**
12 **the Company had to incur them.**

13 **A.** As reflected on line 20 of Schedule T-6.2, the Company incurred "Other"
14 costs of \$4,870,120. These costs included project management, project
15 scheduling, development of contracting strategies and related overhead,
16 public outreach/open house activities, legal services, and other
17 miscellaneous costs associated with planning and siting the transmission
18 projects for the LNP.

19 To explain further, the Company incurred these costs: (1) working
20 with the public and governmental agencies to incorporate their comments
21 into the corridor and route selection studies and include their input in the
22 selection of the proposed transmission corridors; (2) reviewing and
23 providing input to the corridor and routing selection processes and the
24 SCA and COLA applications; and (3) performing project management and

1 scheduling activities, external and community relations support, and
2 consulting support for the development of contracting strategies, which
3 could not be directly attributable to Line Engineering or Substation
4 Engineering.

5
6 **Q. How did actual Site Selection/Pre-construction capital expenditures**
7 **for January 2009 through December 2009 compare to PEF's**
8 **estimated/actual projection for 2009?**

9 **A.** Line Engineering and Substation Engineering costs were lower than PEF
10 projected while Other costs were slightly higher than PEF projected.
11 Other costs were \$218,937 over the estimated/actual projection. Clearing
12 was \$8,853 under. I will explain the reasons for the major (more than \$1
13 million) variances below.

14 **Line Engineering:**

15 Line Engineering capital expenditures were \$3,501,699 which was
16 \$2,629,712 under the estimated/actual projection. This variance was
17 primarily driven by the May 2009 shift in the Levy Project schedule by a
18 minimum of 20 months. This schedule shift resulted in a change in project
19 scope and re-sequencing of line engineering activities and project staffing
20 requirements. Engineering work was also deferred to align with schedule
21 activity/refinement and coordination with the planned completion of
22 environmental licensing activities. This resulted in lower than projected
23 costs.

1 **Substation Engineering:**

2 Substation Engineering capital expenditures were \$2,638,838 which was
3 \$2,581,688 under the estimated/actual projection. This variance was
4 primarily driven by the May 2009 shift in the Levy Project schedule by a
5 minimum of 20 months. This schedule shift resulted in expected
6 engineering work and project staffing requirements to support work on the
7 Levy Plant Administrative substations and other existing substations being
8 re-sequenced and deferred to align with schedule activity/refinements and
9 coordination with the planned completion of environmental licensing
10 activities. This resulted in lower than projected costs.

11
12 **Q. Did the Company incur any transmission-related Construction costs**
13 **for the transmission work and activities you identified for the Levy**
14 **Nuclear Plant in 2009?**

15 **A.** Yes, as reflected on Schedule T-6.3, the Company incurred Construction
16 costs in the categories of Real Estate Acquisition, Substation Construction,
17 Substation Engineering and Other.

18
19 **Q. For the Real Estate Acquisition costs, please identify what those costs**
20 **are and why the Company had to incur them.**

21 **A.** As reflected on line 21 of Schedule T-6.3, the Company incurred Real
22 Estate Acquisition costs of \$1,783,996. These costs included acquisition
23 of approximately two miles of new transmission line right of way
24 connecting the Levy plant site and the proposed substation in Sumter

1 County. These real estate acquisition costs included the siting, survey,
2 appraisals, title commitments, permitting, ordinance review, legal and
3 related costs.

4
5 **Q. For the Substation Construction costs, please identify what those costs**
6 **are and why the Company had to incur them.**

7 **A.** As reflected on line 23 of Schedule T-6.3, the Company incurred
8 Substation Construction costs of \$938,615. These costs included contract
9 labor and procurement of equipment and materials to install three (3) new
10 EHV 500 kV switches into the existing CREC 500 kV switchyard during
11 the last unit outage of 2009. These costs were necessary based on
12 discussions with Crystal River plant and planning personnel that
13 construction activity at the CREC site could only occur during certain
14 plant outages. This resulted in phasing of the planned work to correspond
15 with the last CREC plant unit outage in 2009.

16
17 **Q. For the Other costs, please identify what those costs are and why the**
18 **Company had to incur them.**

19 **A.** As reflected on line 24 of Schedule T-6.3, the Company incurred Other
20 costs of \$570,758. These costs include company and contract labor,
21 expenses and related indirect and overhead costs needed to support the
22 Levy Transmission Program.
23

1 **Q. How did actual Construction capital expenditures for January 2009**
2 **through December 2009 compare to PEF's estimated/actual**
3 **projection for 2009 costs?**

4 **A.** Real Estate Acquisition and Substation Construction costs were lower than
5 PEF projected, while Substation Engineering and Other costs were higher
6 than PEF projected. I will explain the reasons for the major (more than \$1
7 million) variances below.

8 **Real Estate Acquisition:**

9 Real Estate Acquisition capital expenditures were \$1,783,996 which was
10 \$21,161,939 under the estimated/actual projection. This variance was
11 primarily driven by the May 2009 shift in the Levy Project schedule by a
12 minimum of 20 months. The land acquisition plan was re-evaluated in
13 light of the schedule shift changes. With an increase in the time available
14 to procure the necessary land associated with the proposed transmission
15 routes, the Company elected to use a self-managed land acquisition
16 approach versus the planned "turnkey" contracted approach. The schedule
17 shift and related contracting change resulted in a significant reduction of
18 land acquisition and siting expenditures in 2009.

19
20 **Q. To summarize, were all the costs that the Company incurred in 2009**
21 **for the Levy Nuclear Project reasonable and prudent?**

22 **A.** Yes. The specific cost amounts for the transmission portion of the LNP
23 contained in the NFR schedules, which are attached as exhibits to Mr.
24 Garrett's testimony, reflect the reasonable and prudent costs PEF incurred

1 for the LNP transmission work in 2009. PEF worked on establishing State
2 and Federal licensing, program and project schedules and cost estimates,
3 staffing and resource plans, external outreach and communications, project
4 designs, transmission line route selection, land acquisition, and permitting
5 activities. All of these costs were necessary for the LNP transmission
6 projects.

7
8 **IV. PROJECT MANAGEMENT AND COST CONTROL OVERSIGHT**

9 **Q. Has the Company implemented any project management or cost**
10 **control oversight mechanisms for the transmission portion of the Levy**
11 **Nuclear project?**

12 **A.** Yes. The Company is using applicable policies and procedures to ensure
13 that the transmission costs for the LNP are prudently incurred, managed,
14 and controlled. The transmission projects associated with the LNP are
15 subject to the same overall Company management as the generation side
16 of the LNP. Ms. Hardison describes the LNP management in some detail
17 in her testimony. LNP management is accomplished by adherence to the
18 Company's Integrated Project Plan ("IPP") for the LNP. The Company's
19 Project Governance Policy, Execution of Large Construction Projects and
20 Programs Procedure, along with numerous other policies, procedures and
21 controls, also apply to the Levy Transmission projects.

22 To further promote best practices for project management, the
23 Company has created the Project Management Center of Excellence
24 ("PMCoE"), which will standardize best practices of project management

1 across the Company. Each standard crafted by the PMCoE was based on
2 the Project Management Institute Project Management Body of
3 Knowledge. The roll out of each standard was accomplished through the
4 creation of procedures that became effective at various times throughout
5 2009.

6 The PMCoE will enhance the Company's project management
7 approach so that it is more efficient, flexible, and cost effective.
8 Specifically, its goals are to standardize processes, establish a project
9 management career path, provide common training and qualification
10 programs, and adopt best practices from both internal and industry groups.
11 The processes developed by PMCoE will ultimately apply to all Progress
12 Energy projects.

13 In the later part of 2009, Levy Transmission finalized a Real Estate
14 Governance Document. This document provides guidance for the
15 acquisition of land needed for Levy Transmission. It identifies
16 participants, outlines the acquisition procedure and payment process,
17 document tracking, approval, filing, reporting, and document management
18 and retention.

19 The Company also finalized a Levy Program Governance Policy in
20 2009. This policy describes the program oversight and enterprise
21 governance of development, planning, construction and system turnover
22 for the LNP. The LNP oversight structure enables timely decisions and
23 encourages sufficient rigor in project and construction management and
24 execution consistent with existing regulatory and legislative requirements.
25

1 Similar to the Generation side of the LNP, the Records
2 Management System ("RMS") is used to manage the documents
3 associated with the LNP transmission work.

4 To maintain control over the transmission projects and related
5 work, baseline schedules were completed for the program and some of the
6 projects contained in the program. The schedule defines the transmission
7 task order, specific time frame allocated to the task, and the task start and
8 finish dates. The schedule is used to provide management with timely
9 information necessary to make decisions related to the LNP transmission
10 work. The schedule also allows the Company to coordinate LNP
11 transmission work with internal Company departments such as Planning,
12 Engineering, Construction, Energy Control, and the Generating Stations,
13 among others. The schedule further serves as a link between the Company
14 and the Company's contractors and as a management tool with the outside
15 contractors. Various levels of supporting schedules are also developed
16 and used throughout the course of the Levy Transmission projects.

17 Other corporate tools are used to support the management of the
18 Levy Transmission work. The Oracle Financial Systems/Business Objects
19 reporting tool provides monthly corporate budget comparisons to actual
20 cost information, as well as detailed transaction information. This
21 information, along with other financial accounting data, allows PEF to
22 regularly monitor the costs of the transmission work compared to budgets
23 and projections and make decisions accordingly to ensure that the costs
24 incurred are reasonable and prudent for the work obtained. Similarly, the

1 PassPort system is used under the Contract Development and
2 Administration Policy to manage contracts for Levy transmission work.
3 This system routes contracts for approval, including contract amendments
4 and work authorizations, and facilitates routing and approval of contractor
5 invoices and payments in accordance with Company policies and
6 procedures.

7
8 **Q. What procedures are used by PEF to ensure the reasonable and**
9 **prudent selection of contractors and vendors for the transmission**
10 **projects for the Levy Units?**

11 **A.** PEF typically uses RFP bidding procedures to ensure that the selected
12 contractors and vendors provide the best value for PEF's customers. In
13 2009, the RFP process was utilized for the LiDAR Study contract, the
14 CREC Switchyard design and engineering contract, the CREC Switchyard
15 phase one construction contract, the CREC materials purchase contract,
16 the CREC insulators contract, the cultural archaeological consulting
17 contract, the environmental resource consulting contract, and the title and
18 closing contract.

19 RFPs cannot always be used, however, to obtain services or
20 materials. When deciding to use a sole/single source contractor or vendor,
21 PEF provides sole/single source justifications for not using an RFP for the
22 particular work or material. When PEF contracts with sole/single source
23 contractors or vendors, PEF further ensures that the contracts contain
24 reasonable and prudent contract terms with adequate pricing provisions

1 (including fixed price and/or firm price escalated according to indexes,
2 where possible).

3 Sole/single source contractor or vendor relationships are
4 sometimes necessary to provide the services or materials at all or at the
5 most reasonable cost under the circumstance. To illustrate, in some
6 instances, the particular contractor or vendor has particular experience
7 with the plant or the work required, thus making it advantageous for that
8 vendor to accomplish the work.

9
10 **Q. Does PEF have any mechanisms in place to ensure that the policies
11 and procedures described above are effective?**

12 **A.** Yes, PEF uses internal auditing to verify that its program management and
13 cost oversight controls are effective. These internal audits occur regularly
14 for large projects like the Levy Transmission Program. Recommendations
15 and results from Internal Audit reviews are provided to management as
16 well as members of the project team for continuous improvement.

17
18 **Q. Do PEF's policies provide for senior management review of project
19 costs and schedules?**

20 **A.** Yes, the Levy team provides a monthly summary report to members of
21 Progress Energy Senior Management that highlights financial, schedule,
22 and current issue information. This information is provided in summary
23 format to the Company's Board of Directors on a periodic basis.

1 On-going funding and project review for the transmission projects
2 in the LNP is prepared on a periodic basis for members of Senior
3 Management and presented as an IPP in accordance with the Company's
4 Capital Projects guidance. Detailed project cost and schedule information
5 is monitored regularly by the project management and cost management
6 personnel within the functional department, and monthly reviews of the
7 project status are presented to the Department Vice President.

8
9 **Q. Does this conclude your testimony?**

10 **A. Yes, it does.**

IN RE: NUCLEAR COST RECOVERY CLAUSE**BY PROGRESS ENERGY FLORIDA****FPSC DOCKET NO. 100009-EI****DIRECT TESTIMONY OF KENNETH KARP****I. INTRODUCTION AND QUALIFICATIONS**

1

Q. Please state your name and business address.

2

**A. My name is Kenneth Karp. My business address is 3300 Exchange Place,
Lake Mary, FL 32746.**

3

4

5

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

6

**A. I am employed by Progress Energy Florida, Inc. ("PEF" or the
"Company") and my title is General Manager of Levy Baseload
Transmission Projects. In this role, I am responsible for leading a cross-
functional, multi-disciplinary team in the development and execution of
the transmission line projects associated with the Levy Nuclear Plant.**

7

8

9

10

11

12

Q. Please summarize your educational background and work experience.

13

**A. I have a Bachelor's degree in civil engineering from the Old Dominion
University in 1982 and a MBA degree from the University of North
Carolina in 2000. I have been working in the electric utility industry for
over 27 years in various generation, transmission and distribution roles.**

14

15

16

17

1 Prior to assuming my current role, I was the General Manager of
2 Distribution for the eastern region of North Carolina for the Company.
3 From 2004 to 2006, I was the Distribution Operations Manager for the
4 southern region in the Carolinas. From 2002 to 2004, I was the
5 Transmission Substation Maintenance Supervisor for the eastern
6 transmission area in North Carolina. Prior to this, I held a number of
7 supervisory, project management and engineering positions within the
8 Company and in consulting roles in the industry.
9

10 II. PURPOSE AND SUMMARY OF TESTIMONY

11 **Q. What is the purpose of your direct testimony?**

12 **A.** The purpose of my direct testimony is to support the Company's request
13 for cost recovery pursuant to the Nuclear Cost Recovery Rule for
14 transmission work in support of the Levy Nuclear Project ("LNP"). My
15 testimony supports the reasonableness of the Company's actual/estimated
16 costs for 2010 and the projected costs for 2011.
17

18 **Q. Have you previously filed testimony in this docket?**

19 **A.** Yes, I filed testimony on March 1, 2010 in support of the prudence of the
20 actual costs incurred from January 2009 through December 2009 for the
21 transmission work necessitated by construction of the Company's Levy
22 Nuclear Power Plants.
23
24

1 **Q. Do you have any exhibits to your testimony?**

2 **A.** No, however, I am sponsoring portions of the schedules attached to
3 Thomas G. Foster's testimony. Specifically, I am co-sponsoring portions
4 of Schedules AE-4, AE-4A, and AE-6 and sponsoring Schedules AE-6A
5 through AE-7B of the Nuclear Filing Requirements ("NFRs"), included as
6 part of Exhibit No. __ (TGF-1) to Thomas G. Foster's testimony. I will
7 also be co-sponsoring portions of Schedules P-4 and P-6 and
8 sponsoring Schedules P-6A through P-7B included as part of Exhibit No.
9 _ (TGF-2) to Mr. Foster's testimony, and co-sponsoring Schedules TOR-
10 4, TOR-6, and TOR-6A which is Exhibit No. ___ (TGF-3) to Mr. Foster's
11 testimony. A description of these Schedules follows:

- 12 • Schedule AE-4 reflects Capacity Cost Recovery Clause ("CCRC")
13 recoverable Operations and Maintenance ("O&M") expenditures for the
14 period.
- 15 • Schedule AE-4A reflects CCRC recoverable O&M expenditure variance
16 explanations for the period.
- 17 • Schedule AE-6 reflects actual/estimated monthly expenditures for site
18 selection, preconstruction and construction cost for the period.
- 19 • Schedule AE-6A reflects descriptions of the major tasks.
- 20 • Schedule AE-6B reflects annual variance explanations.
- 21 • Schedule AE-7 reflects contracts executed in excess of \$1.0 million.
- 22 • Schedule AE-7A reflects details pertaining to the contracts executed in
23 excess of \$1.0 million.

- 1 • Schedule AE-7B reflects contracts executed in excess of \$250,000, yet
2 less than \$1.0 million.
- 3 • Schedule P-4 reflects CCRC recoverable O&M expenditures for the
4 projected period.
- 5 • Schedule P-6 reflects projected monthly expenditures for
6 preconstruction and construction costs for the period.
- 7 • Schedule P-6A reflects descriptions of the major tasks.
- 8 • Schedule P-7 reflects contracts executed in excess of \$1.0 million.
- 9 • Schedule P-7A reflects details pertaining to the contracts executed in
10 excess of \$1.0 million.
- 11 • Schedule P-7B reflects contracts executed in excess of \$250,000, yet
12 less than \$1.0 million.
- 13 • Schedule TOR-4 reflects CCRC recoverable actual to date and projected
14 O&M expenditures for the duration of the project.
- 15 • Schedule TOR-6 reflects actual to date and projected annual
16 expenditures for site selection, preconstruction and construction costs for
17 the duration of the project.
- 18 • Schedule TOR-6A reflects descriptions of the major tasks.

19 These schedules are true and accurate.

20

21 **Q. Please summarize your testimony.**

22 **A.** Based on the LNP schedule shift, explained in more detail in the testimony
23 of Mr. Jeff Lyash and Mr. John Elnitsky, the Company revised its base

1 load transmission schedule, scope, budget and work plan to align with
2 LNP schedule activities. This resulted in a decrease in work and cost for
3 2009 as explained in my March 1, 2010 testimony, and in a re-sequencing
4 and deferral of 2010 work and planned 2011 work as will be discussed in
5 more detail below.

6 From January to February 2010, PEF incurred reasonable and
7 prudent costs on construction expenditures for the transmission line
8 relocation and upgrade due to the Sunshine Grove Road widening project
9 in Hernando County, for continuing wetlands delineation and survey
10 work, and for the associated labor and related indirects, overheads and
11 contingency to perform general project management, project scheduling
12 and cost estimating, legal services, and external community relations
13 efforts related to Levy transmission projects.

14 During the remainder of 2010 and 2011, costs will be incurred for
15 environmental permitting and engineering design work continued on the
16 Crystal River Switchyard expansion, land acquisition costs associated with
17 strategic Right of Ways ("ROWS"), environmental impacts analysis,
18 transmission wetland mitigation planning and implementation, and for the
19 associated labor and related indirects, overheads and contingency to
20 perform general project management, project scheduling and cost
21 estimating, legal services, and external community relations efforts in
22 support of the activities listed above.
23

1 PEF has provided reasonable projections for costs that will be
2 incurred during the remainder of 2010 and all of 2011. These projected
3 costs were developed using the best available information to the Company
4 at this time and taking into consideration the LNP schedule shift. The
5 Commission should approve PEF's projections as reasonable.

6
7 **Q. What is the status of the base load transmission activities for the Levy**
8 **Nuclear Project?**

9 **A.** As explained in Mr. Elnitsky and Mr. Lyash's testimony, based on various
10 factors including the Nuclear Regulatory Commission ("NRC") licensing
11 timeline, there will be a partial suspension of pre-construction and
12 construction activity under the Company's Engineering, Procurement and
13 Construction Agreement ("EPC Agreement") and a schedule shift for the
14 completion of the LNP. As a result, PEF continues to review the impact
15 of the schedule shift on the transmission portion of the LNP continuing
16 into 2010. Most of the LNP transmission activities will be deferred past
17 the receipt of the Combined Operating License ("COL") and will be
18 rescheduled based on new in-service dates for the Levy plants. The overall
19 scope of the pre-construction and construction transmission activities
20 planned for the LNP have not materially changed. Rather, the schedule
21 within which this work will be performed has been adjusted to account for
22 the schedule shift.

23

1 **Q. What impact, if any, will the schedule shift have on PEF's 2010 and**
2 **2011 transmission costs?**

3 **A. The schedule shift will result in a decrease in the amount of planned**
4 **engineering and construction costs for the project in 2010 and 2011**
5 **primarily related to land acquisition and transmission line and substation**
6 **engineering construction labor, material, and equipment costs. The**
7 **actual/estimated and projected figures for both 2010 and 2011, explained**
8 **in more detail below, reflect these reductions in costs. Although we will**
9 **be decreasing our LNP transmission engineering and construction**
10 **spending in 2010 and 2011 resulting in minimized cash flows in the near**
11 **term, we plan to focus on continued Crystal River Switchyard expansion**
12 **engineering design and permitting, environmental impacts analysis,**
13 **transmission wetland mitigation planning and implementation, strategic**
14 **land acquisition, project management, project scheduling and cost**
15 **estimating, legal services, and external community relations activities for**
16 **the project, which we believe is a reasonable and prudent course of action**
17 **at this time.**

18
19 **III. TRANSMISSION PRE-CONSTRUCTION ACTIVITIES**

20 **Q. What pre-construction activities are you undertaking in 2010 and**
21 **2011?**

22 **A. The principal pre-construction activities to be performed in 2010 and 2011**
23 **include (i) environmental permitting and engineering design work on the**
24

REDACTED

1 Crystal River Switchyard expansion, (ii) environmental impacts analysis,
2 (iii) transmission wetland mitigation planning and implementation, and
3 (iv) general project management, project scheduling and cost estimating,
4 legal services, and external community relations activities such as
5 responding to customer inquiries via telephone and email and web and
6 outreach to local, state and federal agencies. These efforts are required to
7 manage the overall transmission work necessitated by the LNP.
8

9 **Q. What costs has PEF included in this filing for transmission pre-**
10 **construction costs?**

11 **A.** PEF has filed actual/estimated 2010 and projected 2011 pre-construction
12 costs for transmission for the LNP. Schedule AE-6 of Exhibit No. ____
13 (TGF-1) to Mr. Foster's testimony shows total actual/estimated
14 transmission pre-construction costs for 2010 to be ■■■ million in the
15 following categories: Substation Engineering ■■■ million; and Other ■■■
16 million.

17 Projected transmission pre-construction costs for 2011 are ■■■
18 million. Schedule P-6 of Exhibit No. ____ (TGF-2) to Mr. Foster's
19 testimony breaks down the 2011 projected transmission pre-construction
20 costs into the following categories: Substation Engineering \$■■■ million;
21 and Other \$■■■ million.
22
23

1 **Q. Please describe what the pre-construction Substation Engineering**
2 **costs are and explain why the Company has to incur them.**

3 **A.** For 2010, these costs include design and engineering work on the Crystal
4 River Switchyard Substation expansion project and costs for
5 environmental permitting work. Costs for design and engineering on the
6 Crystal River Switchyard expansion project and environmental
7 permitting costs will continue into 2011 and also make up the 2011
8 projected costs. As previously discussed, PEF is in the beginning stages of
9 this long-term expansion project which is a necessary addition to improve
10 grid stability and system capacity based on the addition of the Levy units.

11
12 **Q. Please describe what the Other category of transmission pre-**
13 **construction costs include and explain why the Company needs to**
14 **incur them.**

15 **A.** For 2010 and 2011 these costs include labor and related indirects,
16 overheads and contingency in support of permitting and engineering
17 design work for Crystal River Switchyard expansion project,
18 environmental impacts analysis, transmission wetland mitigation planning
19 and implementation. They also include general project management,
20 project scheduling and cost estimating, and legal services and external
21 community activities. All of these pre-construction costs are necessary to
22 support the LNP transmission work.

23

1 **Q. Please describe how the transmission pre-construction cost estimates**
2 **were prepared.**

3 **A.** PEF developed the Substation Engineering and Other pre-construction
4 cost estimates on a reasonable engineering basis, in accordance with
5 Association for the Advancement of Cost Engineering International
6 ("AAACEI") standards, using the best available engineering and utility
7 market information at the time, consistent with utility industry and PEF
8 practice. The substation portion of the estimate, based on conceptual and
9 preliminary designs, was done on a site-by-site basis for the equipment
10 required. The management and indirect costs within the project estimates
11 were developed based on the project schedule and staffing requirements.
12 Costs include PGN labor and related overheads and indirects, contingency
13 and escalation related to the inherent risk associated with a conceptual and
14 preliminary design. These cost estimates used preliminary transmission
15 project plans and project schedules to determine what transmission pre-
16 construction work will be done and when it will be done to ensure that the
17 transmission facilities will be ready and necessary project milestones are
18 met consistent with the LNP schedule shift. These costs were prepared
19 with the best available information PEF has to date taking into
20 consideration the shift in the schedule of the COL receipt and the in-
21 service dates for the Levy nuclear plants.
22

REDACTED

1 **IV. TRANSMISSION CONSTRUCTION ACTIVITIES**

2 **Q. What costs has PEF included in this filing for transmission**
3 **construction costs?**

4 **A.** PEF has actual/estimated 2010 and projected 2011 Construction costs for
5 transmission for the LNP. Schedule AE-6 of Exhibit No. ___ (TGF-1)
6 shows actual/estimated transmission construction costs for 2010 in the
7 total amount of \$█ million in the following categories: Real Estate
8 Acquisition \$█ million; Line Construction \$█ million; and Other \$█
9 million.

10 The total projected transmission construction costs for 2011 are
11 \$█ million. Schedule P-6 of Exhibit No. ___ (TGF-2) breaks down the
12 2011 projected transmission construction costs into the following
13 categories: Real Estate Acquisition \$█ million; Substation Construction
14 \$█ million; and Other \$█ million.

15
16 **Q. Please describe the Real Estate Acquisition costs and explain why the**
17 **Company needs to incur them.**

18 **A.** For 2010, these costs include acquisition of strategic ROWs and
19 associated costs necessary for the transmission facilities to support the
20 addition of the Levy Units to PEF's system. These costs are necessary to
21 ensure that the ROW and other land upon which the transmission facilities
22 will be located are available for the LNP. In addition, PEF finalized and
23 plans to submit its Wetland Mitigation Plan to the Florida Department of

1 Environmental Protection (“FDEP”) and began negotiations with local and
2 state government entities and private parties over use of the land.

3 Thereafter the plan will be submitted to the U.S. Army Corps of Engineers
4 (“USACE”) for review and comment. PEF anticipates that costs will be
5 incurred for the review with the FDEP and the USACE.

6 In 2011, PEF projects activity to revolve around ongoing costs
7 related to strategic ROW acquisition and continuing wetland mitigation
8 plan submittal negotiations and other associated activities.

9
10 **Q. Please describe the Line Construction costs and explain why the**
11 **Company needs to incur them.**

12 **A.** For 2010, these costs include expenditures for the construction of a portion
13 of the Brookridge to Brooksville West 230kV line project. As part of the
14 LNP Transmission Project, a new circuit between the existing Brookridge
15 and Brooksville West substations is required. Hernando County is
16 performing a road widening project along Sunshine Grove Road making it
17 necessary for the PEF Transmission, Operations, and Planning Department
18 (“TOPD”) to relocate the existing 115kV wood structure line out of the
19 path of the wider roadway. The relocation of the existing transmission
20 line structures provided the opportunity for LNP to gain efficiencies by
21 installing new structures that will accommodate the existing 115kV
22 transmission line and the new 230kV transmission line needed for the
23 LNP Transmission Project. The LNP Transmission team funded the

1 incremental costs associated with installing structures large enough to
2 accommodate the planned future addition of the Brookridge to Brooksville
3 West 230 kV line to the existing 115kV transmission line. The joint
4 project work with TOPD, completed in early 2010, minimized the impact
5 on the community and the environment, and negated the need to replace
6 these structures when the new Levy-required circuit is installed.

7 PEF has not projected any Line Construction costs for 2011 at this
8 time.

9
10 **Q. Please describe the Substation Construction costs and explain why the**
11 **Company needs to incur them.**

12 **A.** PEF has not estimated any Substation Construction costs for 2010. For
13 2011, projected costs include (i) Crystal River Switchyard expansion
14 work, (ii) work on the vehicle barrier system expansion modifications, and
15 (iii) construction activities for a storm water retention pond required due
16 to increasing the impervious surface area.

17
18 **Q. Please describe what the Other transmission construction costs are**
19 **and explain why the Company needs to incur them.**

20 **A.** For 2010 and into 2011, these costs include labor and related indirects,
21 overheads and contingency in support of construction of a portion of the
22 Brookridge to Brooksville West 230kV transmission line project, Crystal
23 River Switchyard expansion construction activities, and strategic

1 transmission ROWs and wetlands acquisition activities. They also include
2 general project management, project scheduling and cost estimating, legal
3 services and external community relations outreach to local, state and
4 federal agencies. These construction costs are necessary for the LNP
5 transmission project work.

6
7 **Q. Please describe briefly how the transmission construction cost**
8 **estimates were prepared.**

9 **A.** PEF developed these Line Construction, Substation Construction, Real
10 Estate Acquisition, and Other transmission construction cost estimates on
11 a reasonable engineering basis, in accordance with AACEI standards,
12 using the best available construction and utility market information at the
13 time, consistent with utility industry and PEF practice. The transmission
14 construction portion of the estimate, based on conceptual and preliminary
15 designs, was developed on a cost per mile basis. Various rates were used
16 based on voltage of the proposed lines. Real estate costs within the project
17 estimates are based on an expected dollar per acre amount based on the
18 type and location of the property using current route selection analysis.
19 The substation construction portion of the estimate, based on conceptual
20 and preliminary designs, was done on a site-by-site basis for the
21 equipment required. The management and indirect costs within the
22 project estimates were developed based on the project schedule and
23 staffing requirements. Costs include PGN labor and related overheads and

1 indirects, contingency and escalation related to the inherent risk associated
2 with a conceptual and preliminary design. These estimates reasonably
3 reflect the necessary LNP transmission project work taking into account
4 the shift in the LNP schedule. Because transmission facilities must be
5 designed, constructed, and operational in time for the expected
6 commercial in-service of the LNP, we have assessed the work plan based
7 on the schedule shift and preliminarily identified what work must be done
8 to ensure the transmission facilities will be ready and necessary project
9 milestones met with this schedule shift. The construction costs included
10 for 2010 and 2011 in this filing reasonably reflect that preliminary
11 assessment.

12
13 **Q.** **Does this conclude your testimony?**

14 **A.** Yes, it does.

1 **COMMISSIONER SKOP:** And at this point,
2 Commissioners, I think it's a good breaking point for
3 lunch. And why don't we reconvene at 1:15. So we'll
4 stand on recess until 1:15.

5 (Recess taken.)

6 **COMMISSIONER SKOP:** Okay. At this point we're
7 going to go back on the record. And Mr. Karp's, where
8 we left off, we had admitted his testimony and exhibits,
9 which he had none, into evidence. And I believe that
10 concludes Progress's case in chief without the rebuttal
11 testimony that'll come later. So at this point it takes
12 us to the Intervenor and staff direct testimony.

13 And my understanding, based on the order of
14 remaining witnesses, is that Dr. Cooper from SACE,
15 Mr. Gundersen both have testimony that will be, and
16 exhibits will be admitted with no questions. So I'd
17 look to SACE at this time to make those admissions in
18 evidence.

19 **MR. DAVIS:** Thank you, Commissioner. I would
20 state for the record that Dr. Mark Cooper's testimony
21 has been stipulated to by the parties, and we would move
22 that it be admitted into the record as if read.

23 **COMMISSIONER SKOP:** All right. Very well.
24 The prefiled testimony of Dr. Mark Cooper will be
25 entered into the record as though read.

1 And do we have any exhibits or rebuttal
2 testimony for Dr. Cooper?

3 **MR. DAVIS:** There will be rebuttal
4 testimony -- no, not by Dr. Cooper. No.

5 **COMMISSIONER SKOP:** Okay. All right.

6 **MR. DAVIS:** But he has exhibits. He has
7 MNC-1 through MNC-20.

8 **COMMISSIONER SKOP:** Okay.

9 **MR. DAVIS:** Which were part of the
10 stipulation, so we would move those.

11 **COMMISSIONER SKOP:** Okay. Can you repeat
12 those again for me, please?

13 **MR. DAVIS:** Yes. Thank you. MNC-1 through
14 MNC-20.

15 **COMMISSIONER SKOP:** Very well. Those have
16 been marked for hearing ID as Exhibits 34 through 50.

17 **MR. DAVIS:** I'm sorry. I apologize. Yes.

18 **COMMISSIONER SKOP:** Okay. Those have been
19 marked for ID as hearing Exhibits 34 through 53, I
20 believe.

21 **MR. DAVIS:** That's correct.

22 (Exhibits 34 through 53 marked for
23 identification.)

24 **COMMISSIONER SKOP:** Okay. Are there any
25 objections to entering those into the record?

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Okay. Hearing none, show those entered.
(Exhibits 34 through 53 admitted into the
record.)

1 **IN RE: NUCLEAR PLANT COST RECOVERY CLAUSE**
2 **BY THE SOUTHERN ALLIANCE FOR CLEAN ENERGY**
3 **FPSC DOCKET NO. 100009-EI**
4 **DIRECT TESTIMONY OF**
5 **DR. MARK COOPER**

6 **INTRODUCTION AND QUALIFICATIONS**

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

8 A. My name is Dr. Mark Cooper. I reside at 504 Highgate Terrace, Silver Spring, Maryland.

9
10 **Q. Briefly describe your qualifications**

11 A. I have a Ph.D. from Yale University and have been providing economic and policy analysis
12 for energy and telecom for almost thirty years. I have been the Director of Energy and the Director
13 of Research at the Consumer Federation of America for 27 years, although the opinions I express in
14 this testimony are my personal opinions and not those of the Consumer Federation. I am a Fellow at
15 various universities on specific issues, including the Institute for Energy and the Environment at
16 Vermont Law School. I have testified over 100 times before public utility commissions in 44
17 jurisdictions in the U.S. and Canada on energy and telecommunications issues and about twice as
18 many times before federal agencies and Congress on a variety of issues, including energy and
19 electricity. A copy of my resume with energy related activities is attached as Exhibit MNC- 20.

20
21 **PURPOSE, OVERVIEW AND SUMMARY OF TESTIMONY**

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

1 A. I have been asked by the Southern Alliance for Clean Energy (“SACE”) to examine the
2 long-term feasibility of completion of Florida Power & Light’s (“FPL”) Turkey Point 6 & 7
3 Reactors (“Turkey Point”) and Progress Energy Florida’s (“PEF” or “Progress”) Levy Nuclear
4 Reactors (“Levy”) (collectively “reactors” or “projects”), and to determine whether or not it is
5 reasonable and/or prudent for FPL and PEF to incur any additional costs on these proposed reactors
6 given current economic and other uncertainties.

7

8 **Q. Please provide a general overview of your testimony.**

9 A. In a mere four years since the passage the Florida Renewable Energy Technologies and
10 Energy Efficiency Act of 2006, which sought to promote nuclear power in the state, the “nuclear
11 renaissance” in Florida has been reduced to the largest investor - owned utilities in the state, PEF and
12 FPL, urging the Commission to allow them to charge ratepayers hundreds of millions of dollars to
13 do nothing more than hold their place in a line of proposed nuclear projects at the Nuclear
14 Regulatory Commission. The number of utilities in the line has shrunk dramatically as other
15 proposed new nuclear projects have been cancelled around the country. For PEF and FPL, the
16 movement of the line has slowed to a crawl, and reserving their place in the line has little if any
17 value to the Florida ratepayers because the line is almost certainly leading nowhere any time soon.

18 Ironically, this sad state of affairs represents significant progress from last year. In contrast
19 to the utilities’ testimony in last year’s cost recovery docket (Docket No. 090009-EI), PEF and FPL
20 now admit that the economics of nuclear reactor construction are highly uncertain. For FPL the
21 uncertainty is so great and the risks so high that they now say they have not determined whether they
22 will actually build these proposed new reactors in the state.

1 Progress hopes that a five-year delay will resolve the uncertainty, but maintains that it is still
2 committed to construction.

3 The movement in the utility positions is in the direction I pointed them in my testimony last year, but
4 they have not moved far enough, and as a result, additional millions of ratepayer dollars have been
5 wasted and more is proposed to be wasted over the coming years. Furthermore, while PEF and FPL
6 promise a thorough economic review before they make the momentous decision to proceed with
7 construction of these proposed reactors, in the interim they continue to ask that the Florida
8 ratepayers foot the bill, without a well-grounded showing that completion of these reactors is
9 feasible in the long-term. In my opinion, it is not reasonable or prudent to allow PEF and FPL to
10 incur additional costs of these proposed reactors from Florida ratepayers so that the utilities can do
11 nothing more than sit in line until they themselves determine if completion of the reactors is feasible.
12 This is a decision that the Commission can and should make now.

13 In light of these developments, in my testimony I repeat two of my primary
14 recommendations that I made in my testimony last year. First, the Commission should not allow the
15 recovery of the line-sitting fee from ratepayers. If anything, the Commission should only allow a
16 small sum to allow FPL and PEF to continue to monitor and study the nuclear option.

17 Second, the Commission should develop a comprehensive and careful template for
18 evaluating the build-no-build decision, when, if ever, it is presented to the Commission.

19

20 **Q. Please summarize your findings.**

21 A. In the 2009 nuclear cost recovery proceeding, Docket 090009-EI, I presented evidence that
22 the fundamental economics of nuclear reactor construction no longer supported the construction of

1 new reactors in Florida, if they ever did. I emphasized the dramatic changes, for the worse, in key
2 variables that affect the economics of nuclear reactors:

- 3 ● declining natural gas costs,
- 4 ● declining estimates of carbon prices,
- 5 ● declining demand due to the economic slowdown,
- 6 ● reduced need for nonrenewable generation due to likely efficiency and renewable
7 mandates in climate change legislation,
- 8 ● rising projections of nuclear construction costs, and
- 9 ● the high degree of uncertainty in the economic environment that new reactors face.

10 All of these factors are still at work and many have continued to develop in a manner that further
11 undermines the long-term feasibility of ever completing these proposed nuclear reactors in Florida.

12 As a result, it is neither reasonable nor prudent to incur additional costs for these proposed reactors.

13 The decisions by Progress and FPL to seek to build these proposed nuclear reactors were
14 based on a number of important assumptions that have been called into question in the time since the
15 evidence was filed in their petitions for determination of need (“Need Docket”), as well as the
16 evidence filed in Docket 090009-EI. More specifically:

17 (1) They assumed a high rate of demand growth. While the utilities have lowered their demand
18 projections in testimony filed this year, they still have not recognized the full implications of
19 lowered demand in the evaluation of the proposed reactors in the timing and pattern of need
20 for new generation assets.

21 (2) They downplayed the contribution that efficiency and renewables can make to meet the need
22 for electricity. The utilities continue to fail to incorporate the impact of these policies on

- 1 demand growth and the need for non-renewable generation in the evaluation of the proposed
2 reactors.
- 3 (3) They assumed high prices for fossil fuels based on high commodity prices. While they have
4 lowered those projections in testimony filed this year, they have not lowered the price
5 projections to accord with reality.
- 6 (4) Based on the belief that public policy would put a high price on carbon, they assumed natural
7 gas would be much more costly than the latest analysis prepared by the EPA indicates.
8 While they have lowered their estimates of the price of carbon, they are still too high and
9 have not dealt with the possibility that carbon taxes may be delayed, or that flexibility may
10 be built into the allowance regime to keep costs low and make emissions allowances
11 available.
- 12 (5) They used a low estimate of the cost of nuclear reactors. Although they have raised these
13 estimates in testimony filed this year as compared to last year, both PEF's and FPL's
14 estimates remain well below estimates of other analysts. Furthermore, PEF and FPL have
15 not offered a firm, fixed cost estimate or proposed any mechanism to insulate ratepayers
16 from future cost increases.
- 17 (6) They assumed that the design review of the AP-1000 reactor technology would proceed
18 quickly, but that has proven to not be the case. The 17th revision is still unresolved, while
19 contentions have been admitted at the Nuclear Regulatory Commission.¹
- 20 (7) They use an approach to modeling the need for generation that systematically biases the
21 results in favor of construction of nuclear reactors. Slowing demand growth makes it even

¹ Lyash, p. 9, notes that the Atomic Safety Licensing Board, "ruled on their contentions and admitted parts of three contentions to the LNP COL.

1 more important to properly value the flexibility of generation resources, including, but not
 2 limited to, natural gas generation, that can add needed increments to capacity but do not
 3 require long lead times like nuclear reactors.

4 The impact of the changed factors on these assumptions that have developed since the Need
 5 Docket and Docket 090009-EI can be summarized as follows:

6 **Market Factors**

7 Declining Demand Eliminates need for large quantity of new generation

8 Falling price of natural gas Makes natural gas more attractive

9 **Policy**

10 Uncertainty Federal carbon policy is not defined

11 State policies supporting nuclear or alternative resources

12 remain uncertain

13 **Regulatory Factors**

14 Efficiency/renewable standards Reduces need for non-renewable generation, such as nuclear

15 Carbon cost reduction Makes low carbon resources less attractive

16 **Technological Factors**

17 Nuclear cost uncertainties Raises prospects of cost overruns

18 Growing confidence in Makes alternatives more attractive

19 cost and availability of
 20 alternatives

21 **Financial Factors**

22 Tight Financial markets Makes finance more difficult

23 Increasing concerns on Makes finance more expensive

24 Wall Street about
 25 nuclear reactors

1 **Execution Risk**

2 Design problems Raises questions about the ability to execute and
3 Increasing cost estimates the long-term feasibility of completing these proposed reactors

4 In Mr. Lyash's testimony, Progress identifies many of these risks lumped together as
5 "enterprise risk." Whatever we call them, they combine to make it clear that the construction of the
6 proposed new nuclear reactors is not feasible, and incurring substantial costs to continue to pursue
7 these projects at this time is imprudent. Exhibit MNC-1 defines the six categories of risk I use in the
8 evaluation of nuclear reactors and identifies over three dozen specific risks. Exhibit MNC-2 notes
9 how the early assumptions made generally to justify nuclear reactor construction and create the
10 illusion of a nuclear renaissance have proven to be incorrect. Exhibit MNC-3 identifies the risks and
11 uncertainties that Progress now cites as reason to delay the project. These are the same factors that
12 have led FPL to defer the decision to build Turkey Point 6 and 7.

13 Any of these changed factors alone could demonstrate that completion of these reactors is not
14 feasible in the long term, and that incurring additional costs on these proposed reactors is neither
15 reasonable nor prudent. However, taken together, these factors thoroughly undermine the case that
16 the companies have tried to make to demonstrate (1) the long-term feasibility of these nuclear
17 reactors at this time and (2) the prudence of incurring additional costs on these proposed reactors.
18 The evidence presented by the companies to the Commission does not take these changed factors
19 fully into account and does not reflect the highly uncertain future that nuclear reactors face.

20 If the Commission were to merely conclude that the changes in conditions make the future
21 highly uncertain, that conclusion alone would argue strongly against continuing to invest ratepayer's
22 money for these reactors. In an uncertain environment, the assets a prudent person acquires should
23 be flexible, have short lead times, come in small increments and not involve the sinking of large

1 capital costs. The characteristics of nuclear reactors are the antithesis of those best suited to an
2 uncertain environment. They are large, “lumpy” investments that require extremely long lead times
3 and sink massive amounts of capital. Therefore, it would be imprudent to allow the companies to
4 recover any more costs from ratepayers at this time because the companies have failed to
5 demonstrate the long-term feasibility of completing the reactors.

6 There are other factors that will be documented by other witnesses that reinforce the
7 conclusion that these reactors are not feasible in the long-term, and that as a result it is not prudent to
8 incur additional costs, including the failure of some of the projects to obtain regulatory approvals,
9 which were being counted on to stay on schedule and uncertainties and delays in the Nuclear
10 Regulatory Commission (“NRC”) licensing process. While one can point to some positive
11 developments for the construction of nuclear power plants, such as the possibility of the creation by
12 the U.S. Congress of a Clean Energy Development Authority, these are vastly outweighed by the
13 negative developments.

14

15 **Q. Are you sponsoring any exhibits to your testimony?**

16 **A. Yes, I am sponsoring the following exhibits:**

17 Exhibit MNC-1: Risk Factors Facing Construction Of New Nuclear Reactors

18 Exhibit MNC-2: Unrealistic Assumptions Masking The Real Economics Of Nuclear Reactors

19 Exhibit MNC-3: Increasing Risks Facing Nuclear Reactor Construction Projects

20 Exhibit MNC-4: Negative Events In The Nuclear Renaissance

21 Exhibit MNC-5: Exelon’s View Of The Deteriorating Nuclear As A Carbon Abatement Option

22 Exhibit MNC-6: Projected Natural Gas Prices Compared To EIA Projections

- 1 Exhibit MNC-7: The Decade Of Volatile Natural Gas Prices May Have Been The Exception, Not
2 The Rule
- 3 Exhibit MNC-8: Declining Peak Load Projections: Progress
- 4 Exhibit MNC-9: Declining Peak Load And Capacity Needs Progress
- 5 Exhibit MNC-10: Declining Peak Load Projections: FPL
- 6 Exhibit MNC-11 Declining Peak Load And Capacity Needs: FPL
- 7 Exhibit MNC-12: Projections Of Carbon Compliance Costs
- 8 Exhibit MNC-13: Projections Of Overnight Construction Costs
- 9 Exhibit MNC-14; Declining Cost Of Renewables
- 10 Exhibit MNC-15: Flexible Gas Additions Lower Revenue Requirements
- 11 Exhibit MNC-16: Cumulative Cost Difference: Flexible v. Lumpy Treatment of Natural Gas
12 Generation Additions
- 13 Exhibit MNC-17: Nuclear Construction Pressures Capital Requirements
- 14 Exhibit MNC-18: Overnight Costs As A Predictor Of Net Savings: FPL
- 15 Exhibit MNC-19: The Risk of Nuclear Reactors in the Eyes of Industry Analysts
- 16 Exhibit MNC-20: C.V. of Dr. Mark Cooper

17

18 **Q. How is your testimony organized?**

19 A. First, I briefly summarize my testimony from Docket 090009-EI. I then discuss the
20 changing approaches of both PEF and FPL from Docket 090009-EI to the current docket due to the
21 profound and fundamental changes in the economic landscape facing new nuclear reactor
22 construction, and the fact that, although the approaches have changed, PEF and FPL continue to
23 utilized flawed analyses to reach the conclusion that building these proposed new nuclear reactors

1 remains feasible and prudent. Next, I discuss and rely upon the opinions that other experts,
2 specifically Wall Street analysts and other electric utility executives, have in regards to new nuclear
3 construction. I then proceed to reevaluate the risk factors that I identified in my testimony in
4 Docket 090009-EI and update my 2009 analysis with a focus on recent developments. Finally, I
5 quantify the benefits of retaining flexibility in generation resources rather than continuing to
6 imprudently spend money on these proposed nuclear reactors which are not feasible in the long term.

7

8 **Q. Please briefly summarize your testimony in Docket 090009-EI.**

9 A. In my testimony in the 2009 Nuclear Cost Recovery proceeding I concluded that the
10 proposed new nuclear reactor construction is uneconomic, uncertain and risky. I presented evidence
11 on the marketplace, policy, regulatory, technological, execution and financial risks of these reactors
12 proposed for construction in Florida by Progress and FPL. I showed that, whatever the
13 circumstances might have been in the 2008 Need Determination Proceeding, circumstances had
14 dramatically changed since affirmative determinations of need were made by this Commission for
15 these reactors. These changed circumstances and resulting risks led me to conclude that completion
16 of the Turkey Point and Levy reactors was no longer feasible in the long term and that incurring
17 additional costs on these reactors would not be prudent.

18

19 **Q. Have your conclusions regarding long-term feasibility and the prudence of incurring**
20 **additional costs on these reactors changed since the time of your testimony last year?**

21 A. No. In fact, my conclusions have been only been further substantiated by developments
22 occurring since my testimony last year. In fact, PEF and FPL have now been forced to admit the
23 extreme uncertainty surrounding construction of new nuclear reactors, and, as a result, the utilities

1 have resorted to mere “line sitting” in the hopes that the Commission will continue to approve costs
2 for these proposed reactors until the utilities are in fact ready to decide whether or not it would be
3 beneficial to their bottom lines to actually construct the reactors.

4

5 **Q. Have the utilities changed their approach from Docket 090009-EI?**

6 A. Yes, but not enough. In Docket 090009-EI, the companies rejected the suggestion that they
7 be required to update their economic analyses for purposes of demonstrating long-term feasibility,
8 claiming that it did not make sense to let short-term changes in economic projections affect long-
9 term decisions. However, both FPL and PEF underestimated the profound and fundamental changes
10 in the economic landscape facing new nuclear reactor construction. As the adverse economic
11 evidence continued to mount, the utilities have had to belatedly concede that their approach in 2009
12 could not be credible in 2010. When shifts in key economic variables appear to be permanent, or at
13 least long-term, it would be imprudent and irrational for the utilities not to adjust the economic
14 analyses on which they base their decisions. This year PEF and FPL have modified their economic
15 analyses and both now admit that building a new nuclear reactor today would be imprudent. The
16 Commission should acknowledge this admission as progress.

17 Unfortunately, the progress stops short of the correct conclusion. The utilities continue to
18 recommend the imprudent expenditure of ratepayer funds, and the methodology they apply to
19 evaluate the long-term feasibility of these reactors is fundamentally flawed. For example, FPL states
20 in its Petition for Approval of Nuclear Power Plant Cost Recovery (May 3, 2010, p. 8):

21 The developments at the national level, state level and project level needed for a clear
22 path to construction have not achieved a high level of predictability. Therefore
23 expenditures beyond those required to obtain the necessary licenses, permits and
24 approvals would be premature in 2010 and 2011.

1 By continuing to seek the necessary licenses, permits and approvals, FPL is
2 maintaining progress toward delivering the benefits of new nuclear generation to
3 FPL's customers without experiencing unnecessary costs or schedule risks. Once this
4 phase of the project is complete, FPL will be able to review the then-existing
5 economics, the accumulated experience of other new nuclear projects and the state
6 and federal energy policy environment in its consideration of project next steps

7

8 **Q. Do you agree with FPL's assessment?**

9 A. I whole heartedly agree with the first and last sentences, but thoroughly disagree with the
10 middle two sentences. FPL is correct in stating that now is not the time to be committing resources
11 to the construction of nuclear reactors. However, FPL is incorrect in stating that it would be prudent
12 to continue to expend funds to seek permits, licenses and other approvals. The expenditure of over
13 \$28 million for FPL in 2010 and 2011 for those purposes is a total waste of ratepayer money and
14 therefore imprudent. FPL does not need to be seeking these licenses in 2010 and 2011 in order to
15 bring the reactors on line in 2022, when they might be needed, if they are ever needed.

16

17 **Q. What about Progress Energy Florida?**

18 A. Progress takes a somewhat different view. Having signed an EPC contract very early in the
19 overall process, it has chosen to remain fully committed to building the proposed LNP reactors,
20 although on a much longer time schedule, "deferring significant capital expenditures to a later time
21 period when the Company may benefit from, among other things, additional certainty with respect to
22 federal and state energy policy, plant licensing, and improved financial conditions. More
23 importantly, our decision moves forward with the EPC agreement, and thus preserves the long-term
24 benefits of nuclear generation for the Company and its customers in Florida." (Testimony of Lyash,
25 p. 6). While FPL states "the developments at the national levels, state level and project level needed

1 for a clear path to construction have not achieved a level of predictability” to create “a clear path to
2 construction,” Progress hopes the uncertainties will resolve themselves in time to validate its
3 conclusion that the nuclear reactor is beneficial. Progress and its shareholders should bear the risk of
4 this ill-considered gamble, not ratepayers. Meanwhile, Progress is seeking to have ratepayer pay in
5 excess of \$164 million to keep its place in line.

6 The difference between the FPL and the Progress positions may be the result of the fact that
7 Progress has signed an EPC and is liable for penalties if it backs out of the contract. If the risks and
8 uncertainties surrounding nuclear generation that have become so clear lead the Commission to
9 conclude that these proposed reactors are no longer feasible, the cancellation fees should certainly
10 not be recoverable from ratepayers. The Commission should make this clear immediately.

11

12 **Q. What aspects of the analysis do PEF and FPL have in common?**

13 A. While the two utilities take different positions with respect to whether they are moving ahead
14 with actual construction of the proposed reactors, both FPL and PEF’s analyses continue to make
15 erroneous assumptions, all of which favor nuclear reactors. These erroneous assumptions lead them
16 to erroneously conclude that nuclear power will be needed in the mid-term and will be less
17 expensive than meeting demand with combined-cycle gas plants. These erroneous assumptions in
18 the 2010 analyses include, but are not limited to, the following:

- 19 • The cost of natural gas used in the analyses is still higher than projections by the U.S.
20 Department of Energy Information Administration (“EIA”).
- 21 • The cost of carbon is still higher than the U.S. Environmental Protection Agency
22 projects from the energy bill that has passed one house of Congress.

- 1 • The utilities have also failed to take the full implications of climate change policy into
2 account. Both FPL and PEF assume a price of carbon is going to be imposed, but at
3 the same time ignore the efficiency and renewable mandates that are likely to be
4 included in any climate change legislation. As a result, they propose to build new
5 reactors well before there will be a need for them to meet system reserve margin
6 requirements if climate change policy is enacted.

- 7 • Their electricity and financial models do not reflect the problem of excess capacity
8 and the value of being able to add natural gas generation resources in smaller
9 increments and with shorter lead times than large central station facilities like nuclear
10 reactors.

11

12 **Q. What conclusions can you draw based on these erroneous assumptions made by PEF**
13 **and FPL?**

- 14 • A. Taking these erroneous assumptions into account, I reach two specific
15 conclusions about the long-term feasibility of the proposed FPL and PEF reactors:
16 First, contrary to the utility findings that nuclear reactors are a little less costly than
17 natural gas – saving ratepayers about \$ 5 billion in discounted 2010 dollars in the
18 base case – my analysis demonstrates that they are likely to be more expensive,
19 costing ratepayers \$10 to \$20 billion more in discounted, 2010 dollars.

- 20 • Second, because of the high cost and other inherently unattractive economic
21 characteristics of new nuclear reactors (long-lead time, sunk costs), it will be at least a
22 decade, probably two, and maybe even more, before nuclear generation can

1 potentially become cost competitive with the other options available in a carbon
2 constrained world. During this long time frame, the economics of other options can
3 change dramatically. Therefore, it is imprudent to spend ratepayer funds on nuclear
4 reactors at present, especially given that the utilities are at present merely line sitting
5 as I discuss in more detail below.

6 These two findings reinforce my overall conclusion, that spending hundreds of millions of
7 dollars of ratepayer funds today so that PEF and FPL can continue to sit in the line waiting to build
8 new nuclear reactors is imprudent, unreasonable, and wasteful. In fact, the imprudence of
9 continuing to spend ratepayer money on these projects is symbolized by the fact that the generation
10 resources that these projects would bring on line would not even appear in the utility's ten year site
11 plan for another two years, if then.

12

13 **Q. If the reactors will not be needed for such a long time, why are the utilities continuing to**
14 **seek ratepayer funds to develop them?**

15 A. For both utilities the primary concern now is line sitting. For example, Progress Energy
16 Florida claims to need to stay in line because of the activity in the industry.

17 If we terminated the EPC agreement and cancelled the project, the nuclear option will
18 be lost for the foreseeable future as both private (the Consortium and other vendors)
19 and federal (the NRC) resources shift to nuclear projects under development
20 elsewhere in the country or around the world. Our decision therefore preserves for
21 our customers and the Company the long term benefits of fuel portfolio diversity,
22 reduced reliance on fossil fuels for energy production, carbon free energy generation,
23 and base load capacity at a low cost fuel source that nuclear generation provides
24 (Lyash, p. 6).

1 FPL makes a similar argument, claiming that the decision to move forward is just around the
2 corner, based in part, on a fiction that the nuclear industry is thriving and therefore FPL must move
3 ahead quickly, or lose its place in line.

4 The input representing the greatest risk for the Company is skilled labor trained to
5 construct advanced nuclear facilities. At this time, however, FPL does not anticipate
6 any major problems with respect to procurement of raw materials, long lead
7 components, or skilled workers. Nevertheless, with development in the nuclear
8 industry gaining steam, competition for these resources will increase (Testimony of
9 Reed, p. 49).

10 The suggestion that the vendors are in the driver's seat and the utilities will lose their chance
11 if they do not continue to spend ratepayer funds does not accord with reality. The vast majority of
12 projects in the U.S. have been delayed or cancelled, as summarized in Exhibit MNC-4. There is
13 little demand for the technology the Florida utilities have chosen.² Frankly, if the supply-train is
14 stretched as thin as the utilities suggest, the danger of delays and escalating costs is probably much
15 greater than being bumped out of the line because once the project starts, delays escalate, which is
16 what drove cost escalation during the first nuclear building cycle.

17

18 **Q. Do other experts share your view of the economics of nuclear reactors have continued**
19 **to deteriorate?**

20 A. Yes. Both FPL and Progress claim that the economics of nuclear reactors have improved
21 dramatically since the Need Determination two years ago. The analysis of FPL claims that the break
22 even capital cost – the amount of money FPL could spend on nuclear construction in overnight costs

² The number of reactors under construction outside of Russia and China has been basically flat increasing from 21 to 24 since the certificate of need was issued, <http://www.world-nuclear.org/info/reactors.html>. The vendor for both FPL and Progress appears to have a total of 4 units under construction, all in China, http://ap1000.westinghousenuclear.com/ap1000_nui_ic.html. In the U.S. two projects using this technology appear to be ahead of the Florida reactors (Georgia and South Carolina), but there does not appear to be a crowd behind them. One AP-1000 has been delayed, the other abandoned.

1 – has increased by more than one-third since the need determination in 2008.³ For Progress, the mid
2 fuel, no CO2 scenario has gone from a negative \$3 billion to a positive \$1 billion.⁴ However, this is
3 the opposite of what most analyses say, including those of Wall Street utility analysts and other
4 utilities.

5 My review of utility industry analysts on Wall Street and elsewhere finds that they generally
6 see the economics of new nuclear reactors moving in the opposite direction than what PEF and FPL
7 claim, as demonstrated by Exhibit MNC-19. They definitely do not see an improvement. Some of
8 the biggest nuclear utilities have also concluded that the economics have become so unfavorable that
9 they have abandoned their plans for new nuclear reactors at present. A most stunning example was
10 provided in a recent analysis from the CEO of Exelon. See Exhibit MNC-5. In his evaluation the
11 cost of nuclear has more than doubled, and nuclear has moved well down in the list of options for
12 carbon abatement. In the 2008 view, new natural gas was somewhat less costly than nuclear, but by
13 2010, gas was seen as much less costly. The CEO of Entergy, another major nuclear utility, has
14 expressed similar sentiments.⁵ The service territory conditions that J. Wayne Leonard indicates led
15 him to the conclusion that “no same [sic] businessman would currently build a nuclear power plant”
16 – plentiful reserves and slow growth – are exactly the conditions in which the Florida utilities now
17 find themselves. Cushioned by the promise of cost recovery from the ratepayers, PEF and FPL have
18 simply failed to adjust adequately to the new reality.

19

20 **ANALYSIS OF RISK FACTORS**

³ Sim, 2009, Table 45, inflated at 1.03 per year to \$5456, compared to Sim 2010, Ex. SRS-1.

⁴ Progress Energy Florida, *Levy Nuclear Project NCRC Updated Life-Cycle Net Present Worth (CPVRR) Assessment*, Exhibit JL-3, 2007 results inflated at 2 percent per year.

⁵ Thomson Reuters, *Entergy at Thomson Reuters Global Energy Summit-Houston*, May 24, 2010.

1 **Q. Have you updated your analysis of the risk factors since you prepared your testimony**
2 **in Docket 090009-EI based on recent developments?**

3 A. Yes. I have reevaluated how each of the categories of risk that affects new nuclear
4 construction in Florida, with an emphasis on the importance of recent developments. In each case I
5 also show the benefits of waiting to make the build-no build decision and the folly of incurring costs
6 while we are waiting. While FPL has decided to wait, Progress has declared it is going ahead with
7 the construction decision, just on a slower time line. The self-serving economic analysis of nuclear
8 reactors that both utilities present still indicate that these proposed new reactors are the preferred
9 option. My analysis indicates otherwise.

10

11 **MARKETPLACE RISK**

12 **Natural Gas Prices**

13 **Q. Are the utilities' projected natural gas prices still a concern to you?**

14 A. Yes. There are two key components of gas costs in this analysis – the commodity cost and
15 the compliance cost. Both are overestimated by both FPL and PEF.

16 In regards to commodity cost, the reality of lower natural gas prices is slowly sinking in.
17 However, both utilities continue to overestimate the price of natural gas. As shown in Exhibit MNC-
18 6, using the EIA long-term projection of wellhead natural gas prices and adding in the cost of
19 transportation, I find that the utilities have projected prices that are higher than indicated by EIA by
20 about 13 percent (14 percent undiscounted, 12 percent discounted). Since natural gas prices account
21 for two-thirds or more of the total cost of gas generation, this represents almost a nine percent
22 overestimation of the cost of the project. That difference alone is large enough to reverse the
23 conclusion that gas is more expensive in most of the scenarios analyzed by the utilities.

1 I discuss compliance costs below under the analysis of policy risk.

2

3 **Demand**

4 **Q. Have there been changes in demand that affect the long-term feasibility of these nuclear**
5 **reactors and the prudence of incurring additional costs on the proposed reactors?**

6 A. Yes. There has been a dramatic change in the marketplace, and demand more specifically,
7 since the companies prepared their need analyses in the respective need dockets and the testimony in
8 Docket 090009-EI. The nation has plunged into the worst recession since the Great Depression.
9 Some even call it a depression. Moreover, there is a growing recognition that this change is not
10 simply a severe dip in the business cycle, but rather a major shift in the economy. The spending
11 binge on which the U.S. embarked for a decade, in which households and business became highly
12 leveraged, is likely over. A massive amount of household wealth was destroyed when the housing
13 market bubble burst. Retirement accounts have been devastated by the collapse of the stock market.

14 Ironically, the decade on which the projections were based in the Need Determination
15 coincided almost exactly with the decade in which the housing and consumption bubbles were
16 pumped up by excessive leverage. That level of growth was unsustainable. It is my opinion that the
17 shift in consumption is permanent and signals slower growth in the future. However, even if this
18 were just a severe downturn in the business cycle, it would affect the demand for electricity
19 sufficiently to raise questions about the long-term feasibility of these new nuclear reactors.

20 A reduction in the growth rate of demand has two implications for large central station
21 facilities like nuclear reactors. Since both FPL and Progress have excess capacity at present,
22 slowing demand growth pushes the date at which new generation will be needed farther into the

1 future. In my 2009 testimony I estimated that the need for the nuclear reactors was at least half a
2 decade away.

3 In 2017, which is a crucial year in the 2008 analysis because that was the year the reserve
4 margin hit the limit of 20 percent, the 2009-projected peak is 11 percent lower than the peak
5 projected in 2008. Under the 2009 projection, the FPL does not reach the 2017 peak
6 projected in 2008 until 2022, five years later.⁶

7
8 In the current proceeding the utilities affirm my calculations, having pushed the in-service dates to
9 the 2021-2023 period.

10 Slower demand growth has a second effect. It makes smaller increments to capacity
11 preferable since lumpy generation additions create excess capacity. Excess capacity that is capital
12 intensive imposes unnecessary costs on consumers. To avoid this excess capacity, I later
13 demonstrate that it is preferable for PEF and FPL to build a series of natural gas-fired power plants
14 instead of these proposed nuclear reactors.

15

16 **Q. Have the utilities reflected this change in demand in their analysis?**

17 A. Yes, they have pushed their expected in-service dates out by about four or five years. The
18 online dates for these reactors are now more than a decade away, beyond the ten-year plan, 2021 and
19 2022 for Progress, 2022 and 2023 for FPL. That delay makes it unnecessary, imprudent and
20 unreasonable to continue incurring the costs of licensing today. This becomes even more apparent
21 when the impact of likely energy efficiency and renewable energy mandates are taken into account,
22 as I discuss below in the policy risk section.

23

24 **Q. How does waiting to make a build-no-build decision reduce marketplace risk?**

⁶ Cooper, 2009, p. 9 line 51.

1 A. The uncertainty about both natural gas prices and demand growth are likely to diminish. In
2 both of these areas we are coming off of unprecedented events. The decade of growth in demand
3 prior to the need determination was extremely high. Repairing the economy and learning whether it
4 is on a whole new trajectory will take time, and continuing to incur costs on these proposed nuclear
5 reactors during this time is in my opinion unreasonable and imprudent.

6 Similarly, the volatile natural gas prices were unique to the past decade. That decade may be
7 the exception, rather than the rule, as Exhibit MNC-7 suggests.

8

9 **POLICY RISK**

10 **Need for Non-renewable Resources**

11 **Q. Should policy considerations enter into the Commission's evaluation of the long-term**
12 **feasibility of these reactors and the prudence of incurring additional costs for these reactors?**

13 A. Yes. The companies' economic feasibility analyses were driven by assumptions about
14 federal regulatory policy. The companies have put a high price on carbon in their economic
15 analyses. Without the high price on carbon, the economics of nuclear reactors would look very
16 different. To my knowledge, the state of Florida has not put a price on carbon, nor is it
17 contemplating doing so. Thus, the companies have decided to pursue these projects and the
18 Commission has allowed cost recovery based, in part, on assumptions about federal climate change
19 policy.

20

21 **Q. Are you suggesting that the Commission should not take future climate change policy**
22 **into account when considering the long-term feasibility of these reactors?**

1 A. Quite the contrary. I believe the Commission should take federal policy into account when
2 considering the long-term feasibility of these reactors, since that is a major source of regulatory risk
3 to state decisions. However, I believe the Commission must take the entirety of projected federal
4 policy into account. The idea of putting a price on carbon is only a part of the legislation that is
5 moving through the Congress. H.R. 2454, the American Clean Energy and Security Act, the first
6 piece of climate change policy legislation to pass a house of Congress, does not simply put a price
7 on carbon directly. Rather, it establishes an elaborate scheme of allowances to emit carbon, which
8 will indirectly set a price on carbon. Moreover, policies other than putting a price on carbon,
9 particularly policies to promote efficiency and renewables, play a large role as well.

10
11 **Q. Please describe the full suite of federal policies that affect the long-term feasibility of**
12 **these nuclear reactors.**

13 A. On the supply-side, the legislation that has passed the House has a renewable energy standard
14 that would require utilities to meet an increasing part of their load with renewables. Within a
15 decade, they would be required to get 20 percent of their generation from renewables, with as much
16 as 8 percent of that total coming from efficiency. At the same time, the legislation includes a
17 number of provisions that have sharply lowered projections of the cost of carbon credits, such as
18 efficiency and renewable mandates, subsidies for carbon control technologies and domestic and
19 international offsets. All of these lower the demand for allowances and therefore the price of
20 allowances. This means that the assumed compliance costs of fossil fuels are lower than projected
21 by the companies in prior proceedings and this proceeding.

22 On the demand side, there is a substantial mandate for energy efficiency. This is embodied,
23 in part, in the ability to meet two-fifths of the renewable resource standard with efficiency and, in

1 part, in dramatic improvements in building codes and appliance standards. Mandates to improve the
2 energy efficiency of new buildings by 30 percent in the near term and 50 percent in the longer term
3 will have a substantial impact on energy demand over the life of the reactors being considered in this
4 proceeding. Funds from certain allowances are set-aside to improved efficiency, particularly for
5 natural gas. Similarly, the American Recovery and Reinvestment Act of 2009 includes a huge
6 increase in funding to improve the energy efficiency of existing buildings. As the efficiency of
7 buildings and appliances improves, the demand for electricity and natural gas declines.

8 These regulatory factors – increased renewables, lower demand through efficiency, and a
9 lower price on carbon – must be considered in the evaluation of alternative scenarios for future
10 supply of electricity. Extracting only the price of carbon from the policy landscape and inserting it
11 in the economic analysis, while ignoring the other aspects of policies, distorts the picture being
12 presented to the Commission. Factoring in these other policies would further undercut the claim that
13 nuclear reactors are feasible in the long-term. Many of these other aspects have been part of the
14 climate change policy debate for quite some time. Taken together, these changes on the demand
15 side, as well as the renewable standard, will have a substantial impact on the need for new non-
16 renewable generation and undermine the long-term feasibility of building these reactors.

17

18 **Q. What impact does including the efficiency and renewable policies in HR 2454 have on**
19 **projections for load growth and demand for nonrenewable resources such as nuclear reactors?**

20 A. They would have a major impact. Exhibits MNC-8 and MNC-9 set forth demand scenarios
21 that model the impact of the efficiency and renewable mandates in HR 2454 on the need for non-
22 renewable generation in the Progress territory.. It applies the national average results estimated in
23 the EPA analysis of the legislation to Florida. I have factored in planned retirements in this

1 calculation. The results are similar to the analyses I provided in the 2009 Nuclear Cost Recovery
2 Proceeding. As shown in Exhibit MNC-9, under this scenario, Progress does not reach the peak
3 demand projected in the Need Docket for 2017 until 2040.

4 Exhibits MNC-10 and MNC-11 present a similar analysis for FPL. New resources to meet
5 the reserve margin requirement are not needed by FPL until 2037. Simply put, with the efficiency
6 and renewables factored in on top of the declining growth rate of demand, neither utility needs new
7 capacity to cover the reserve requirement out until well past 2030.

8

9 **Q. Are there constraints, other than the reserve margin requirement, that might affect the**
10 **utilities?**

11 A. Yes. In modeling the full impact of the climate legislation we must pay attention to the
12 mandates to reduce greenhouse gas emissions. Doing the minimum under HR 2454 is not enough
13 for long-term compliance. In the mid-term, allowances can be purchased to keep compliance costs
14 under control and economically attractive options are available beyond the minimum. Buying time
15 in the current environment, at least a decade, perhaps a quarter of a century, to develop the next
16 generation of low cost, low carbon resources is the key strategy.

17 Under the pending legislation, the entire industry will be working on the problem, as will the
18 public sector institutions. A full range of alternatives will be examined including more efficiency
19 and renewables, whose costs are projected to decline, new forms of storage, which will make
20 renewables more cost effective, expanded transmission that improves access to out of territory
21 renewables, carbon capture and storage, and nuclear generation. Using the maximum amount of time
22 possible to gather information before making these decisions is very valuable because it keeps
23 options open. National policy will be promoting the development of low cost, low carbon options.

1 Florida ratepayers can benefit by keeping their options open rather than committing to a high cost,
2 long lead-time approach like nuclear reactors.

3

4 **Compliance Costs**

5 **Q. Are there other ways in which delaying the build/no-build decision is valuable in this**
6 **uncertain regulatory environment?**

7 A. Yes, several. First, and most obviously, the contours of climate policy will become clearer. It
8 is unclear that Congress will pass any climate legislation this year or that any legislation that passes
9 will put a price on carbon. Emphasis seems to be shifting to complementary policies that promote
10 or require efficiency and renewable, and this will have an impact on the need for non-renewable
11 generation and the cost of carbon, as well as the cost of natural gas. The targets and timing, as well
12 as the mechanisms for setting the price will have a big impact on the cost of carbon. However,
13 Commission approval of costs necessary for PEF and FPL to sit in line, as the utilities are
14 requesting, is simply a waste of ratepayers' money at this time and is not necessary in order to delay
15 the build/no-build decision.

16

17 **Q. Are the utility estimates of compliance costs still a concern?**

18 A. Yes. The analyses continue to be centered on compliance costs that are higher than those
19 projected by EPA, as shown in Exhibit MNC-12. FPL has dropped its highest cost compliance
20 scenario, but its mid case is still above the EPA estimate for HR 2454 and the Kerry Lieberman bill
21 in the Senate. Progress has a zero carbon cost analysis, but its mid-range estimate is still 30 percent
22 above the EPA estimate.

23

1 **Q. How does waiting to spend ratepayer moneys on these reactors reduce the policy risk?**

2 A. The uncertainty about federal policy is likely to diminish. With the need for generation
3 resources now farther out in the future and the large impact that federal policy can have on the need
4 for non-renewable resources, it would be prudent to wait to see what course federal policy takes
5 before committing any more resources to the reactors, especially resources which are only necessary
6 to allow PEF and FPL to continue to line sit, and certainly the resources that would be committed
7 with the build/no-build decision. The issues that will affect the need for the reactors in the federal
8 legislation include targets and timing of carbon reductions, mandates for alternatives and flexibility
9 in approaches, including the ability to purchase allowances at lower costs than building reactors.

10

11 **REGULATORY RISK**

12 **Q. What regulatory risks do nuclear reactors face?**

13 A. The major regulatory policy risk remains at the Nuclear Regulatory Commission. There are
14 continuing issues with the licensing of the generic design of the AP-1000 technology, as discussed in
15 more detail by Arnold Gundersen on behalf of SACE in this proceeding. The certification of a
16 standard design was supposed to be a key to speeding up the process. The design proposed by the
17 utilities/vendors has encountered numerous problems. Therefore, allowing PEF and FPL to spend
18 ratepayers' money to stand in line while the regulatory hurdles are passed provides no benefit
19 whatsoever to the ratepayers.

20

21 **Q. How can taking the maximum time possible to make the build, no-build decision lower**
22 **regulatory risk?**

1 A. The AP-1000 design will possibly have been certified and the licensing process at the NRC
2 may have become more routine after the initial plants have gone through the process. Later plants
3 will benefit from the smoother certification process.

4

5 **TECHNOLOGICAL RISK**

6 **Nuclear Reactor Costs**

7 **Q. Have the utilities increased their estimates of nuclear construction costs?**

8 A. Yes, but I still have the opinion that they are underestimating the costs. Furthermore, they have
9 still not offered firm, fixed prices. Therefore, these reactors are likely subject to ongoing future
10 increases, putting ratepayers at risk.

11

12 **Q. Please describe the uncertainties about the cost of nuclear reactors.**

13 A. As described in Exhibit MNC-13, early in this decade vendors and contractors at the
14 Department of Energy produced very low estimates of the cost of nuclear reactors, claiming that
15 things had changed since the first generation of reactors. In the eight years since those initial,
16 promotional studies were released, the estimates of the cost of nuclear reactors has increased
17 dramatically, especially among Wall Street and independent analysts. As long as the costs placed
18 before the Commission are “non-binding,” the Commission must be aware of the growing
19 uncertainty about the cost of nuclear reactors. As long as they are “non-binding,” the prospect of
20 cost escalation places ratepayers at risk, especially where costs for construction work in progress is
21 being granted.

22 In fact, the extreme uncertainty about nuclear reactor costs has caused FPL to create a whole
23 new framework for evaluating options. As FPL stated in the Need Docket:

1 The second difference in the economic analysis approach step that developed the
2 CPVRR costs for the resource plans is that no generation or transmission capital costs
3 associated with Turkey Point 6 & 7 were included in the analysis. The reason for this
4 is that *FPL does not believe it is currently possible to develop a precise projection of*
5 *the capital cost associated with new nuclear units with in-service dates of 2018-on.*
6 Consequently, FPL's economic analysis approach normally used to evaluate
7 generation options has been modified to include a second economic analysis step."
8 ("Need Study for Electrical Power, Docket No. 07-0650-EI, Florida Power and Light
9 Company, October 16, 2007, pp. 104-105, emphasis added).

10
11 Similarly, Progress has recently increased the cost estimate previously placed before the commission
12 for construction of the LNP.

13 In the 33 months since that statement was made, there have been dozens of studies of the
14 projected costs of nuclear reactors. The cost in 2008 \$ have ranged from a low of just under
15 \$2400/kW to a high of just over \$10,000/kW. The Florida utilities' estimates are still in the low end
16 of the range of estimates. Recent cost trends in generation construction suggest that the utility cost
17 projections did not incorporate the run up in nuclear construction costs. Moreover, the cost of
18 construction for non-nuclear generation rose more slowly during the recent phase of price increases
19 and has fallen more quickly in recent months.

20 The two conclusions I would draw from this analysis are (1) the range of costs considered by
21 FPL and PEF is too narrow and too low, and (2) the uncertainty is huge. This only reinforces my
22 opinion that the prudent course would be to avoid rigid, expensive choices, especially if there is time
23 to let the uncertainties diminish before decisions must be made. The Commission should not allow
24 ratepayer funds to be spent to hold the utilities place in line or to fund a build, no build decision
25 made prematurely.

26
27 **Efficiency and Renewables**

1 **Q. Should changing technological conditions factor into the analysis of the long-term**
2 **feasibility of these reactors?**

3 A. Yes. While climate policy is seen as giving a direct advantage to reactors by putting a price
4 on carbon, that policy does much the same for other technologies. In fact, there are ways in which
5 the alternative technologies are likely to receive an even larger boost. There are also many programs
6 targeted at various technologies that are in earlier stages of development that may enjoy larger cost
7 reductions as the science advances and the scale of production ramps up.

8 I believe there are two technological developments that are shifting the terrain in ways that
9 disfavor nuclear reactors, in addition to the uncertainties about nuclear technology discussed above --
10 the availability and cost of conserved energy and the availability and cost of renewables.

11

12 **Q. Please describe the emerging terrain for efficiency technologies.**

13 A. There is a growing consensus that the cost of many alternatives is lower than that of nuclear
14 reactors. For efficiency, the change in the terrain is largely a matter of increasing confidence that
15 substantial increases in efficiency are achievable at relatively low cost. The detailed analysis of
16 potential measures and the success of some states at reducing demand through energy policies have
17 increased the confidence that efficiency is a reliable option for meeting future needs for electricity
18 by lowering demand. At the same time that the policy process has opened a range of uncertainty and
19 flexibility, studies from three major national research institutions have sent a strong signal indicating
20 the direction that the effort to meet energy needs in a carbon-constrained environment must follow.

21 In fact, since I filed testimony in the 2009 cost recovery proceeding, three major national
22 research organizations have affirmed the potential of efficiency to contribute to an affordable, low
23 carbon future. The National Research Council (NRC), relying on a study by the Lawrence Berkeley

1 National Laboratory (LBL),⁷ and McKinsey and Company⁸ concluded that efficiency could cut
2 energy consumption by 25 percent to 30 percent at costs that are far below the current and projected
3 future cost of new energy generation. The American Council for an Energy-Efficient Economy
4 (ACEEE) took a somewhat different approach by modeling the energy efficiency provisions of the
5 House bill. It found that, as passed, ACES would result in an 8 percent reduction in energy use
6 nationwide by 2030, relative to the *Annual Energy Outlook 2009* forecast.⁹ At the same time, the
7 ACEEE study found that more aggressive efficiency policies would save a great deal more energy,
8 approximately 27 percent, and produce much larger dollar savings. Another ACEEE that was done
9 specifically for Florida found that aggressive policies to reduce energy consumption could lower
10 demand by 20 percent at a cost of less than 3.5 cents per kWh.¹⁰

11 Thus, independently of any regulatory mandate, as the technology of efficiency is proven out,
12 the Commission should consider greater reliance on it as part of the least cost approach to meeting
13 the need for electricity. The combination of regulatory and technological changes will drive
14 efficiency into the electricity sector, undermining the long-term feasibility of the reactors and the
15 prudence of spending ratepayer money on these proposed reactors at this time.

16

17 **Q. Please describe the emerging terrain of renewables.**

⁷ National Research Council of the National Academies, *America's Energy Future*, August 2009. The National Research Council relied on a study from Lawrence Berkeley National Laboratory (Brown, Richard, Sam Borgeson, Jon Koomey and Peter Biermayer, *U.S. Building-Sector Energy Efficiency Potential*, September 2008).

⁸ McKinsey & Company, *Unlocking Energy Efficiency in the U.S. Economy*, July 2009.

⁹ Gold, Rachel, Laura, et al., *Energy Efficiency in the American Clean Energy and Security Act of 2009: Impact of Current Provisions and Opportunities to Enhance the Legislation*, American Council for an Energy Efficient Economy, September 2009), page 5.

¹⁰ Elliott, R. Neal, et al. *Potential for Energy Efficiency and Renewable Energy to Meet Florida's Growing Energy Demands*, American Council for an Energy-Efficient Economy, June 2007

1 A. The concern with climate change has sharpened the focus on the cost and availability
2 of renewable technologies. For renewables, the change is in strong cost reductions that are expected
3 as new technologies ramp up production, as shown in Exhibit MNC-14. The combination of
4 regulatory and technological changes will drive renewables into the electricity sector, undermining
5 the long-term feasibility of these proposed nuclear reactors and the prudence of spending ratepayer
6 money on these proposed reactors at this time.

7

8 **Execution Risk**

9 **Q. What is Execution Risk?**

10 A. This is the risk that the project will not be implemented on time and on budget. It focuses on
11 the internal management of the project by the companies. On the one hand, utilities tend to deny that
12 execution risk exists. On the other hand, they tend to blame the slippage in execution of the project
13 on other factors or actors, insisting that causes were beyond their control. This is most evident in the
14 case of Progress, which is attempting to explain a five-year delay in the LNP.

15 I believe the Commission should look back at PEF's decision to move forward with the
16 project to ensure that a similarly flawed analysis is not used this year to determine whether or not
17 completion of the LNP is feasible. Rushing ahead with the wrong project using models that distort
18 the decision are execution problems from the broader perspective of least cost planning

19

20 **Q. Can you quantify the benefits of making flexible investments in generating resources, as** 21 **compared to nuclear power plants?**

22 A. In my 2009 testimony I emphasized the importance of factoring excess capacity into the
23 analysis when I stated.

1 The operating cost estimates should not include excess production and the variable
2 costs associated with that production. If capacity is idled because of excess, then the
3 carrying cost of that excess should be subtracted from the savings. These are costs
4 that would not be incurred if the system were "right" sized. Because nuclear reactors
5 come in larger units and have higher capital costs, while natural gas units are small,
6 lower in capital cost and have higher operating costs, ensuring that the model takes
7 these differences into account become more important when demand declines and
8 excess capacity increases....

9 Over a long time horizon, the ability to match supply and demand (plus the reserve
10 margin requirement) should be rewarded....

11 While the excess capacity is a few percentage points spread over a number of years, it
12 can make a difference if it is handled properly. The economic advantage claimed for
13 nuclear is actually quite small, when compared to the total costs of the system.¹¹

14 Having concluded that the need to meet the reserve margin should not be the driver of
15 generation investments with demand growth slowing, developing approaches that allow the
16 Commission to consider the differences between large, lumpy additions of capacity and smaller
17 more flexible additions becomes critical. This is one area where the utilities have done nothing, so I
18 have worked up an example of how important this consideration can be.

19
20 **Q. What data did you use to develop this example?**

21 A. I have used the detailed data on the CVPRR of the individual cost components provided by
22 FPL in the 2009 docket, since this is the only such detail that has been provided in any of the
23 dockets.¹² I use the high capital cost estimate from 2009, since that is close to the reference cases
24 used in this docket. I have adjusted the discount rate since that has a large impact on the present
25 value of costs. To make the adjustment, I inflated the 2009 PV numbers by the 2009 discount rate to
26 arrive at a real, undiscounted estimate of the revenue requirement. I discounted those costs at the
27 2010 discount rate. I have also adjusted the natural gas costs to the 2010 estimates. By using these

¹¹ Cooper Testimony in Docket 090009-EI, pp. 34-36.

¹² Response to Staff Seventh Set of Interrogatories Question 64, attachment 1, page 7 of 9.

1 data provided by FPL, I am not agreeing with the cost inputs assumed by FPL in 2009 or 2010. This
2 example is used to show the relative overall costs of a different scenario of adding natural gas
3 generating capacity.

4 I used the 2009 capital costs as originally stated because several factors offset one another.
5 The weighted average cost of capital has been reduced from 10.2 percent to 8.4 percent, but the
6 capital cost of the project has been increased by 9 percent. Since I am focusing on the relative cost
7 of nuclear and gas, not the absolute numbers, the example provides good insight into the impact of
8 treating gas generation flexibly. In the 2009 analysis in the mid-gas, mid-compliance cost case, FPL
9 calculated gas as 7.5 percent more costly than nuclear (without the capital cost of the new reactors).
10 In the 2010 analysis, the difference was 7.7 percent.¹³

11

12 **Q. How do you model the impact of installing smaller gas fired units incrementally?**

13 A. FPL assumes that natural gas must be added in large increments that are roughly the same
14 size at roughly the same time. Ironically, they sequence two nuclear reactors (about 18 months
15 apart), but they do not sequence three combined cycle natural gas units to gain the economics of
16 sequencing. If gas is treated as a more flexible source of generation, which it is, the Commission
17 gets a very different picture of the relative economics.

18 Since FPL assumes three combined cycle units added at one time, Exhibit MNC-15 contrasts
19 a scenario in which gas plants are added in three separate steps five years apart. Progress adds
20 combined cycle units two at a time, suggesting there is some flexibility.

21 Exhibit MNC – 15 shows the small advantage that nuclear has in the FPL base case, because
22 FPL projects that the large capital costs are eventually offset by rising natural gas prices. However,

¹³ Compares Response to Staff Second Set of Interrogatories Question 45, attachment 1, to Sim Ex. SRS-10.

1 the net effect of treating gas as a more flexible resource is to lower the cost of gas by 17 percent,
2 giving natural gas a cost advantage over nuclear that is larger than the base case advantage claimed
3 for nuclear.

4 Exhibit MNC-15 also shows the effect of flexible gas additions with gas prices set at EIA gas
5 projections. The combination of treating gas a resource that can be added in small increments and
6 using a more reasonable projected price of gas lowers the gas cost by almost one-quarter.

7 Finally, MNC-15 shows the impact of a ten-year delay in the online operation of the
8 proposed nuclear reactors. This would be consistent with the scenario in which climate policy
9 reduced need for non-renewable resources as discussed above. The gas scenario would be almost 40
10 percent less costly than the scenarios that bring these reactors on line in the early 2020s.

11

12 **Q. Do these results apply to Progress?**

13 A. The reference cases for the two utilities are quite similar. As noted above, the gas price and
14 carbon cost assumptions are similar. Progress has a slightly lower weighted average cost of capital
15 because of assumed lower borrowing costs and a slightly lower discount rate. In the end, their base
16 case results are quite similar, although that similarity is obscured by the methodology adopted by
17 FPL to back into the capital cost number. FPL calculates how much it could spend on the nuclear
18 project and still have it be less costly than gas. Progress estimates how much the nuclear project
19 would cost if it spent a specific amount on the nuclear project and then asks how much consumers
20 would save at the assumed cost of nuclear.

21 Using the data from the FPL scenarios, we can reconcile the two approaches. Exhibit MNC-
22 16 shows that for every \$1000/KW of overnight costs added to the nuclear project, the CVPRR of
23 the nuclear project increases by \$2.81 billion. Using FPL's high-end estimate of overnight costs of

1 \$4950, which appears to be in the middle of the range considered by Progress, I calculate that FPL
2 claims the nuclear project saves consumers \$4.511 billion. This is quite close to the Progress mid-
3 fuel, mid- carbon cost case reference capital cost case, which claims consumers would save \$4.77
4 billion.

5 There are differences, however. Progress adds gas facilities in smaller increments. It has
6 more excess capacity in the early years and is retiring gas plants, which could be put into inactive
7 reserve. Moreover, Progress claims a very large cost savings by adding the two nuclear units in a
8 year apart (i.e. the first unit costs almost twice as much as the second, (Updated Life-Cycle Net
9 Present Works Assessment, JL -3, p. 3), which makes the increase in generation capacity from the
10 nuclear project extremely large in an environment with more slowly growing demand.

11 The purpose of this example is not to offer a precise estimate of the costs, but to impress
12 upon the Commission the importance of looking at the excess capacity issue and the value of the
13 addition of smaller and more flexible increments. The specific parameters and assumptions that are
14 applicable will affect the outcome of the analysis, but the order of magnitude of these effects
15 indicate that they are extremely important for the Commission to consider.

16

17 **Financial Risk**

18 **Q. Are there other quantifiable benefits of deferring the decision on nuclear construction**
19 **further than the time proposed by PEF and FPL?**

20 A. Yes. Utilities face capital constraints in the current environment and pursuing nuclear
21 projects will make them worse, as shown in Exhibit MNC-17. The near-term capital requirements of
22 nuclear reactors are much larger than those of gas plants. The financial ratios of the utilities can be

1 analyzed with and without the nuclear project and the impact of the weaker ratios of the cost of
2 capital can be estimated.

3

4 **Q. Are there other capital cost issues that the Commission needs to aware of?**

5 A. Yes. The Commission must be careful not to establish a “Catch 22” that could ultimately
6 costs ratepayers billions. It recently lowered the return on equity allowed for FPL. This has the
7 effect of lowering the cost of capital-intensive project like nuclear reactors. FPL also uses the lower
8 ROE to lower the discount rate in its analysis of long-term feasibility in this docket. This has the
9 effect of increasing the net present value cost of alternatives with rising fuel prices, like natural gas.

10 However, FPL claims that the ROE set by the Commission may not be high enough to enable
11 it to attract capital for nuclear reactors.¹⁴ If the utility has trouble raising capital and the Commission
12 is convinced to increase the ROE, then the long-term feasibility analysis required as part of this
13 docket should be revisited, because both the changed ROE and discount rates will affect the results.
14 This is not just an accounting question. Nuclear reactors have a higher cost of capital because they
15 are more risky. It may be appropriate to use different costs of capital to assess different types of
16 projects. Alternatively, the Commission could estimate the cost to consumers of the increase in the
17 overall cost of capital resulting form the pursuit of the riskier project.

18 The Commission also needs to examine the discount rate used in the analysis. The utility is
19 conducting the analysis from the utility point of view, decreasing the discount rate when the ROE is
20 reduced. This has the anomalous effect of lowering the overall cost of both the nuclear and natural
21 gas projects at the higher cost of capital. The higher the return on equity, the higher the nominal

¹⁴ FPL response to OPC’s Third Set of Interrogatories, Interrogatory No. 40, p.1.

1 value of the revenue requirement, but the lower the present value because the entire revenue
2 requirement (not just the capital cost revenue requirement) is being discounted at a higher rate.

3 A case can be made that the investments should be viewed through the eyes of the ratepayer,
4 not the utility. The ultimate objective of public utility regulation is to deliver reliable electricity at
5 the least cost to consumers. If we take least cost to mean to the consumer, then an argument can be
6 made that the consumer discount rate should be used. The utility cost of capital already reflects the
7 primary utility concern about the revenue requirement. The consumer discount rate and the utility
8 discount rate may or may not move in tandem. Moreover, utilities make choices that affect their cost
9 of capital, but not the consumer discount rate.

10

11 **Q. Please summarize your conclusions.**

12 A. As I predicted in Docket 090009-EI, dramatically changed circumstances surrounding the
13 licensing and construction of new nuclear reactors has forced PEF and FPL to push the possible
14 construction of these proposed nuclear reactors off into the future beyond the time horizon of the
15 ten-year planning process and even the extremely long lead time that they originally claimed was
16 needed to construct new reactors. Nevertheless, despite even more uncertainty at this point in time,
17 both PEF and FPL want to continue to spend ratepayer funds in the near term, even though those
18 expenditures would provide little benefit to ratepayers. Put simply, the near term expenditure of
19 funds to allow PEF and FPL to sit in line at the NRC is not only unnecessary, but also unreasonable
20 and imprudent. Ultimately, neither PEF nor FPL can demonstrate the long-term feasibility of these
21 proposed nuclear reactors if realistic assumptions are made about future demand and the cost of
22 various alternatives as I have discussed above.

1 Instead of forcing ratepayers to pay for PEF and FPL to sit in line, the time that recent
2 developments afford the utilities and the Commission should be used to study the landscape and
3 gather information, as opposed to plowing ahead and continuing to spend ratepayer funds on
4 proposed reactors that increasingly look like bad decisions. Over the next few years the high degree
5 of uncertainty regarding all of the key parameters that affect the decision may be sharply reduced:

- 6 • Market factors including demand growth after the recession and gas prices.
- 7 • Federal climate policy including targets and timing of emission reductions, efficiency and
8 renewable mandates affecting the need for non-renewable generation, the existence,
9 mechanism and level of a price on carbon, flexibility in the purchase of allowances.
- 10 • Regulatory uncertainty in the NRC design certification and reactor licensing
- 11 • Technology factors including the cost of nuclear, particularly, first of a kind v. later costs,
12 and alternatives
- 13 • Financial pressures on the utility balance sheets may alleviate

14 The Commission can, and should, use this time to require the utilities to build and test
15 models that reflect a broader view of least cost generation supply.

16 Ultimately, spending valuable ratepayer dollars in the near term to advance projects that are
17 not feasible in the long-term is imprudent. The delays in projected online operation of these
18 proposed reactors should provide a respite from these spending of funds until the utilities can
19 demonstrate that completion of these proposed reactors is feasible in the long-term and that
20 continuing to incur costs on the reactors is reasonable and prudent.

21

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

23 A. Yes.

1 **COMMISSIONER SKOP:** And I believe that takes
2 care of Dr. Cooper. And if you could proceed with
3 Mr. Gundersen.

4 **MR. DAVIS:** Yes. Commissioner. We have
5 stipulations from the parties to the admission of the
6 testimony of Mr. Gundersen, and we would move that it be
7 admitted into the record as if read.

8 **COMMISSIONER SKOP:** Okay. Any objection? All
9 right. The prefiled testimony of Mr. Gundersen will be
10 entered into the record as though read.

11 And are there any exhibits or rebuttal
12 testimony for Mr. Gundersen?

13 **MR. DAVIS:** Yes. Mr. Gundersen has Exhibit 54
14 through Exhibit 60.

15 **COMMISSIONER SKOP:** Okay. All right. Any
16 objections to moving Exhibit 54 through 60 into the
17 record at this time? All right. Hearing none, show
18 that done. And I believe that takes care of
19 Mr. Gundersen.

20 (Exhibits 54 through 60 marked for
21 identification and admitted into the record.)
22
23
24
25

1 **IN RE: NUCLEAR PLANT COST RECOVERY CLAUSE**

2 **THE SOUTHERN ALLIANCE FOR CLEAN ENERGY**

3 **FPSC DOCKET NO. 100009-EI**

4

5 **DIRECT TESTIMONY OF**

6 **ARNOLD GUNDERSEN**

7

8 **I. INTRODUCTION AND QUALIFICATIONS**

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

10 **A.** My name is Arnold Gundersen. My business address is Fairewinds Associates, Inc,
11 376 Appletree Point Road, Burlington, VT 05408.

12

13 **Q. Please tell us how you are employed and describe your background.**

14 **A.** I am employed as a nuclear engineer with Fairewinds Associates, Inc and as a part-
15 time college professor with Community College of Vermont. I have a Bachelor's and
16 a Master's Degree in Nuclear Engineering from Rensselaer Polytechnic Institute
17 (RPI) cum laude. I began my career as a reactor operator and instructor in 1971 and
18 progressed to the position of Senior Vice President for a nuclear licensee. A copy of
19 my Curriculum Vitae is attached as Exhibit AG-1. I have qualified as an expert
20 witness before the NRC ASLB and ACRS, in Federal Court, before the State of
21 Vermont Public Service Board and the State of Vermont Environmental Court. I
22 have also given testimony in cases in Canada and the Czech Republic. I am an author
23 of the first edition of the Department of Energy (DOE) Decommissioning Handbook.
24 I have more than 39-years of professional nuclear experience including and not
25 limited to: Nuclear Plant Operation, Nuclear Management, Nuclear Safety

1 Assessments, Reliability Engineering, In-service Inspection, Criticality Analysis,
2 Licensing, Engineering Management, Thermohydraulics, Radioactive Waste
3 Processes, Decommissioning, Waste Disposal, Structural Engineering Assessments,
4 Cooling Tower Operation, Cooling Tower Plumes, Consumptive Water Loss, Nuclear
5 Fuel Rack Design and Manufacturing, Nuclear Equipment Design and
6 Manufacturing, Prudency Defense, Employee Awareness Programs, Public Relations,
7 Contract Administration, Technical Patents, Archival Storage and Document Control,
8 Source Term Reconstruction, Dose Assessment, Whistleblower Protection, and NRC
9 Regulations and Enforcement.

10

11

II. PURPOSE AND SUMMARY OF TESTIMONY

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

13 **A.** I have been retained by the Southern Alliance for Clean Energy (SACE) to evaluate
14 the potential for continuing scheduling delays and resulting uncertainty and cost
15 overruns in the licensing of four AP1000 reactors proposed for construction in Florida
16 by Progress Energy Florida (PEF) (Levy Units 1 and 2 or LNP) and Florida Power
17 and Light (FPL) (Turkey Point Units 6 and 7 or TP 6&7), and the effect of these
18 delays and uncertainty on the long-term feasibility of completion of these reactors, as
19 well as the reasonableness and prudence of incurring additional costs on these
20 reactors at this time.

1

2 **Q. Please summarize your testimony.**

3 **A.** My review and evaluation of the testimony and other materials filed by PEF and FPL
4 in this docket clearly demonstrates that my previous 2009 testimony to the FPSC in
5 Docket 090009-EI accurately predicted schedule delays and cost overruns that have
6 now occurred at both PEF and FPL in their attempts at licensing and constructing four
7 new nuclear reactors in Florida. I also discuss how the new strategy of delaying
8 possible construction while continuing to attempt to license the proposed reactor sites
9 (“site banking”) that is being applied by both PEF and FPL does nothing more than
10 impose additional costs upon the ratepayers in the State of Florida with no end in
11 sight. As a result, I offer my opinion that incurring these site banking costs is
12 unreasonable and imprudent. Next, I offer my opinion that further licensing delays,
13 and resulting cost overruns, are likely for several reasons, including generic AP1000
14 issues as well as site specific geological issues at both the Levy County and the
15 Turkey Point sites. The ultimate conclusion of my analysis is that neither PEF nor
16 FPL have demonstrated that completion of these reactors is feasible, and as a result
17 incurring additional costs for site banking is unreasonable and imprudent.

18

19 **Q. Are you sponsoring any exhibits to your testimony?**

20 **A.** Yes, I am sponsoring the following exhibits:

- 1 AG-1. Arnie Gundersen CV 2010 July
2 AG-2 Sun Sentinel FPL Olivera
3 AG-3 FPL Press Release 01-2010
4 AG-4 NRC to Westinghouse 10-09
5 AG-5 Westinghouse Schedule 6-21-2010
6 AG-6 2010-05-28 FPL-TPN-NRC
7 AG-7 Petition to ACRS re: AP1000

8

9 **Q. Please describe how your testimony is organized.**

10 **A.** First, I briefly summarize my testimony in Docket 090009-EI and then evaluate the
11 conclusions that I came to in that testimony in light of recent developments. Next, in
12 the context of the “site banking” approach that both PEF and FPL have resorted to in
13 this docket, I discuss my opinions relating to the long-term feasibility of completing
14 these proposed new nuclear reactors, and the imprudence of incurring additional costs
15 on the proposed reactors at this time given all of the uncertainty surrounding new
16 nuclear generation. I then analyze the potential for further licensing delays and
17 resulting cost overruns for these proposed new nuclear reactors in light of unresolved
18 issues with the generic AP1000 design chosen by PEF and FPL. Next, I briefly
19 discuss geological issues with both the Levy County site and the Turkey Point site

1 and the potential for these geological issues to delay licensing even further. Finally, I
2 offer my conclusions about how the commission should proceed in this docket.

3

4

III. TESTIMONY IN DOCKET 090009-EI

5

**Q. Did you provide testimony on behalf of SACE in Docket 090009-EI regarding
6 concerns you held about the potential licensing and construction of PEF's Levy
7 Units 1 & 2 and FPL's Turkey Point Units 6 & 7?**

8

A. I did. I provided prefiled testimony on July 15, 2009, and also testified in-person
9 before the Florida Public Service Commission ("FPSC") in August of 2009 in regards
10 to these proposed four new AP1000 reactors.

11

12

**Q. Could you briefly summarize the substance of your testimony in Docket 090009-
13 EI?**

14

A. In both my prefiled and in-person testimony, I offered my opinion that there were
15 numerous scheduling obstacles in both the licensing and construction phases of these
16 proposed reactors, and that these obstacles would likely result in significant
17 scheduling delays and great uncertainty, as well as increasing total project costs.
18 Further, I observed that neither PEF nor FPL had adequately acknowledged these
19 obstacles and the resulting delays and uncertainty in their planning processes or in
20 their testimony to the FPSC.

1

2 **Q. Based on these obstacles and the resulting scheduling delays, uncertainty, and**
3 **increasing project costs, coupled with PEF and FPL's failure to adequately**
4 **acknowledge the same, what conclusions, if any, did you reach?**

5 **A.** First, I reached the conclusion that because PEF and FPL did not adequately address
6 the impact of probable licensing delays and other uncertainties in their planning
7 processes, the licensing and construction schedules proposed by PEF and FPL were
8 overly optimistic and in my opinion impossible to meet. Second, as a result of my
9 conclusion that the proposed licensing and construction schedules were impossible to
10 meet, I concluded that significant project cost overruns would be unavoidable and
11 that the total project cost of these proposed reactors was going to increase
12 significantly. Finally, based upon my construction and licensing analysis, I
13 concluded that neither PEF nor FPL had successfully demonstrated the long-term
14 feasibility of completing construction of the four proposed new nuclear power plants
15 at issue.

16

17 **Q. Have any of these conclusions been confirmed since the time of your testimony in**
18 **Docket 090009-EI?**

19 **A.** Yes. As my detailed analysis predicted, the licensing and construction schedules for
20 both PEF and FPL have been significantly delayed. PEF originally anticipated the

1 issuance of its COL for both Levy Nuclear Plants (LNP) in 2011. However, PEF now
2 concedes that the timeframe for issuance of the COL has been pushed back to late
3 2012 at the earliest, due to NRC scheduling delays and other uncertainties. I
4 delineated and addressed most of these anticipated scheduling delays in my Docket
5 090009-EI testimony. Moreover, in May 2010 PEF announced that the soonest
6 possible in-service (operational) dates for the LNP units have been delayed by at least
7 five (5) years to 2021 and 2022 from their original anticipated operational dates of
8 2016 and 2017. Likewise, FPL now projects that the in-service dates for the Turkey
9 Point 6 & 7 Units will be delayed by at least four (4) years to 2022 and 2023 from
10 their original anticipated operation in 2018 and 2020 due to project uncertainties at
11 the state, national and project levels. In fact, the delays that PEF and FPL address in
12 this current proceeding were identifiable more than one year ago as evidenced by my
13 previous testimony to this Commission.

14
15 **Q. You noted earlier that you concluded in your Docket 090009-EI testimony that**
16 **these scheduling delays would cause the capital costs of these potential reactors**
17 **to increase. Have these scheduling delays affected the cost of these proposed**
18 **reactors?**

19 **A. Yes. As a result of the scheduling delays and uncertainties, the cost of these proposed**
20 **nuclear reactors has increased dramatically. PEF now projects a cost of at least 22.5**

1 billion dollars to complete the LNP units, as compared to its much lower 2009
2 estimate of 17.2 billion dollars. Likewise, FPL now estimates a cost increase of at
3 least 1 billion dollars in the total cost of TP 6 & 7 due to scheduling delays and other
4 uncertainties. Again, the significant capital cost increases now acknowledged by PEF
5 and FPL were identifiable more than one year ago as evidenced by my 2009
6 testimony to this Commission.

7

8 **Q. In Docket 090009-EI you stated your opinion that PEF and FPL had not**
9 **demonstrated that completion of these reactors was feasible in the long-term.**
10 **Has your conclusion changed in light of the recent schedule delays and cost**
11 **increases acknowledged by PEF and FPL in this current docket?**

12 **A.** No, my opinion still remains the same in 2010 as it was in 2009 testimony. I continue
13 to believe that neither PEF nor FPL have conducted a realistic analysis that is
14 required in order to demonstrate that completion of these reactors is feasible in the
15 long-term. Although both PEF and FPL now claim to acknowledge all of the
16 uncertainties that both Dr. Mark Cooper and I testified to in Docket 090009-EI, they
17 have in this year's cost recovery docket simply spread out the inevitable cost
18 increases Dr. Cooper and I predicted in Docket 090009-EI. Therefore, the ratepayers
19 of both PEF and FPL are simply spending more money over a much longer period of
20 time.

1 More specifically, both PEF and FPL are now using an approach which I refer to as
2 “site banking” in an attempt to ensure that both utilities will recover their individual
3 corporate investment costs without having to make a bona fide showing of long-term
4 feasibility in regards to completion of these reactors. In other words, ratepayers will
5 pay for all these investment costs even if none of the reactors are actually constructed
6 and the ratepayers never receive the benefit of this proposed new electric generation.

7
8 **Q. Explain what you mean by “site banking?”**

9 **A.** When PEF and FPL announced plans for the AP1000 reactors, it appeared that their
10 goal was to actually construct and operate these proposed nuclear power plants.

11 However, the data in the 2010 PEF and FPL testimony and other submittals indicate
12 that the wrong assumptions have been applied by both PEF and FPL in order to
13 determine the feasibility of licensing and constructing these proposed nuclear power
14 plants. To date, almost every significant schedule milestone has been delayed and
15 every cost estimate has been exceeded by both FPL and PEF. This year, due to both
16 PEF and FPL’s belated recognition of all the uncertainties inherent in the licensing
17 and construction of these proposed reactors, PEF and FPL have changed their
18 strategies and now seem entirely focused upon funding only the necessary NRC
19 requirements for obtaining a COL without any real demonstrated commitment to
20 actually constructing these proposed new reactors. I call this “site banking.” Quite

1 simply, it is not a foregone conclusion that either PEF or FPL will be able to obtain a
2 COL for the LNP or TP 6&7 utilizing the newly designed AP1000 reactors. I discuss
3 the current problems surrounding the generic AP1000 design, as well as the site
4 viability of the LNP and TP 6&7 for location of these proposed reactors in more
5 detail below. If the NRC does in fact grant a COL to either PEF or FPL for the LNP
6 or TP 6&7, each utility will then decide whether or not it benefits their respective
7 bottom lines to actually construct these proposed new reactors. This possibility once
8 again will leave Florida ratepayers and businesses bearing the unreasonably and
9 imprudently incurred up-front financial burden of these unrealistic projects that may
10 never produce electricity.

11

12 **Q. How have PEF and FPL reached this point where they are resorting to simply**
13 **trying to obtain a COL from the NRC without any real demonstrated**
14 **commitment to actual completion of these proposed new nuclear reactors?**

15 **A.** There are several reasons why PEF and FPL have resorted to this position. First, the
16 original construction schedules and costs presented by PEF and FPL for these
17 proposed AP1000 nuclear plants have been shown to be dramatically unrealistic, and,
18 as discussed in more detail by SACE witness Dr. Mark Cooper, neither company has
19 attempted to conduct a realistic feasibility assessment that takes into account new
20 additional costs and increased risks, amongst other uncertainties. Second, it is not

1 clear that either site, LNP or TP 6&7, is licensable. Third, it is not clear that the
2 ultimate busbar cost for nuclear power electricity could ever be justified. Fourth, it
3 does not appear that Florida's current load growth even warrants the construction of
4 these plants. And, lastly, it also does not appear that either utility has the financial
5 wherewithal to construct these reactors, even at some point in the distant future.
6 Thus, due to these uncertainties, both PEF and FPL are simply trying to reserve these
7 sites for *possible* construction of new nuclear reactors (site banking), while at the
8 same time ensuring that all costs for this site banking are borne by their Florida
9 ratepayers and no costs are carried by the utilities or passed on to their
10 stockholders/investors.

11

12 Ultimately, because neither FPL nor PEF can demonstrate that completion of these
13 reactors is feasible in the long-term, or that expending large sums of capital on these
14 reactors is reasonable and/or prudent at the current time, the utilities have resorted to
15 this site banking approach in an attempt to recover some amount of money from their
16 ratepayers in 2010-2011. However, I do not believe that these site-banking costs are
17 reasonably or prudently incurred, and as a result the FPSC should not award these
18 costs to PEF or FPL.

19

1 **Q. Given the licensing and construction problems that you identified last year,**
2 **coupled with events that have occurred since that time, is Florida Power and**
3 **Light still convinced that the Turkey Point units would ultimately be**
4 **constructed?**

5 A. No, FPL is not at all convinced that these reactors will ultimately be constructed, and
6 FPL has actually stated so publicly. FPL President Armando Olivera stated as early
7 as January of 2010 in an FPL press release¹ [Exhibit AG-2] that FPL would be
8 immediately suspending all activities on the proposed TP 6&7 reactors beyond what
9 is required to obtain a NRC license due to the fact that the FPSC denied its rate
10 increase proposal. See [Exhibit AG-3] *FPL President addresses criticism of the*
11 *utility and renewable and nuclear energy*. Further, Mr. Olivera met with
12 the Florida's *Sun Sentinel* editorial board on June 29, 2010, and said in his interview
13 that FPL may never build these new nuclear units due to licensing and economic
14 concerns.²

15 FPL is moving forward with getting permits for building of two
16 new reactors at Turkey Point as well *but it's unclear if that project*
17 *will ultimately get done*, Olivera said. "Natural gas prices are down
18 so the economics... are not as attractive," he said. Plus, he noted
19 that the design FPL and other utilities are using hasn't been

¹ *Citing deteriorating regulatory environment, FPL halts dollars in capital expenditures in Florida*,
FPL Press Release, 1-13-2010, <http://www.fpl.com/news/2010/011310.shtml>

² *FPL President addresses criticism of the utility and renewable and nuclear energy*
http://weblogs.sun-sentinel.com/business/realestate/housekeys/blog/2010/06/fpl_president_armando_olivera.html

1 approved; the Nuclear Regulatory Commission has concerns about
2 its resistance to hurricanes. [Emphasis Added]
3

4 Given that FPL is so uncertain that the Turkey Point reactors will actually ever be
5 constructed, site banking is simply a vehicle by which to transfer costs incurred by
6 FPL for imprudent exploration back to Florida's ratepayers. The FPSC should not
7 allow FPL, or PEF for that matter, to pass on these site banking costs to their
8 respective ratepayers, because, quite simply, the costs clearly are not reasonable
9 and/or prudently incurred especially when their own president says that it is unclear if
10 that project will ultimately be built. The FPSC cannot ignore these comments when
11 considering whether or not completion of these reactors is feasible in the long-term.
12

13 **Q. Have other energy corporations or utilities expressed doubts similar to Mr.
14 Olivera's regarding the feasibility of building these new AP1000 reactors?**

15 **A.** During the past two months, the CEO's of two of the largest nuclear operating
16 utilities in the United States have also expressed significant concern about building
17 these new AP1000 reactors. In fact, FPL is not the only southern utility to
18 acknowledge that contemplating construction of an AP1000 reactor at this time is not
19 a reasonable business decision. According to Reuters on May 25, 2010, Entergy CEO
20 J. Wayne Leonard said that building new nuclear plants remains too risky.³

³ <http://uk.reuters.com/article/idUSTRE64N5S420100524>

1 Utilities do not want to take that risk," Leonard said at the Reuters
2 Global Energy Summit in Houston. "It's risk we don't control." ...
3 New Orleans-based Entergy suspended two license applications
4 filed with the Nuclear Regulatory Commission for proposed new
5 reactors to be built either in Louisiana or Mississippi in 2008 after
6 being unable to negotiate a favorable construction contract. ...
7 Nuclear vendors don't want to assume the risk of a cost overrun
8 and have put construction costs too high for most companies,
9 Leonard said. "You have to have a darn good reason at those prices
10 to build," he said. ... "Everybody's going to price the risk
11 differently," Leonard said. "When we price the risk appropriately...
12 the numbers just don't work." *"I've wondered how Southern -- how*
13 *anybody -- makes the numbers work. Sitting on the outside looking*
14 *in, they have some reason we don't see," he said. [Emphasis*
15 *Added].*

16
17 Another utility Chief Executive Officer, Exelon Chairman John W. Rowe, has
18 reached the same conclusion as Entergy's Leonard. CEO Rowe argued that
19 building new nuclear units was not an economically justified solution to creating
20 additional electric supplies when he said,

21 ... we must have a market-based solution to the problem. Picking
22 our favorite technologies in 2008 would have led to some good
23 decisions, like energy efficiency and uprates and some very large,
24 very expensive ones, like new nuclear plants and clean coal.⁴
25
26

⁴ *Fixing the Carbon Problem Without Breaking the Economy* John W. Rowe, Chairman & CEO
Exelon May 12, 2010, Resources for the Future Policy Leadership Forum, Washington, DC.
Exelon CEO John W. <http://www.exeloncorp.com/Newsroom/speeches/speeches.aspx>

1

IV. LICENSING DELAYS

2

A. GENERIC AP1000 ISSUES

3

Q. When do PEF and FPL anticipate receiving COLs for the LNP units and TP 6 & 7 units from the NRC?

4

5

A. As I anticipated in my 2009 testimony, both PEF and FPL have experienced licensing delays. PEF does not anticipate issuance of a COL for the LNP units until late 2012 at the earliest, and the recently issued NRC review schedule for FPL indicates that the issuance of a COL may not be possible until at least late 2013 for the TP 6 & 7 units.

6

7

8

9

10

Q. On a national level, does the potential exist for further licensing delays on the generic AP1000 design due to unresolved issues with the design?

11

12

A. Yes, there are several unresolved technical issues regarding the AP1000 design that are currently being assessed by the NRC and which are likely to further delay licensing approval(s). In October 2009 the NRC sent a letter to Westinghouse requiring it to provide more detailed information regarding the AP1000 shield building [Exhibit AG-4]. During the past year, the NRC has asked a series of probing questions relating to the structural integrity of the AP1000 shield building. Responses by Westinghouse to critical NRC information requests were frequently late, thereby further delaying an already problematic and overly optimistic licensing schedule. Finally on June 21, 2010, the NRC issued a letter to Westinghouse stating

13

14

15

16

17

18

19

20

1 that the NRC may finally be able to complete the NRC review of the AP-1000
2 technical design by September of 2011 *if* critical milestones to correct technical and
3 design issues are met in a timely manner by Westinghouse [Exhibit AG-5].
4 Specifically, the NRC noted the difficulty in meeting these milestones, stating,

5 The NRC has established an aggressive goal of completing the
6 AP1000 design certification rulemaking by the end of fiscal year
7 2011 to support the needs of the Vogtle and Summer combined
8 license (COL) applications and their associated construction plans.
9 Completion of the rulemaking by the end of September 2011 will
10 not be easy. A number of technical issues remain on the
11 application and it will require substantial commitment of resources
12 and the attention of senior management by both Westinghouse and
13 the COL applicants to drive technical issues to closure in a time
14 frame that would support the schedule below. ...There is no
15 margin in this schedule that would permit movement of these
16 critical milestones and still achieve the goal of completing the
17 rulemaking by the end of September 2011.

18
19 The impact of these generic licensing risks upon the Levy County and Turkey
20 Point AP1000 units were also identified by NRC Director Mathews, of the
21 Division of New Reactor Licensing, to FPL Sr. VP Nazar in a letter⁵ dated May
22 28, 2010 [Exhibit AG-6] that said,

23 The Turkey Point Units 6 and 7 COLA incorporates by reference
24 the AP1000 Design Control Document (DCD) submitted by
25 Westinghouse to the NRC on May 26, 2007, as Revision 16 and
26 updated by DCD Revision 17 on September 22, 2008. As allowed
27 by 10 CFR 52.55(c), at your own risk, you have referenced a
28 design certification application that has been docketed but not
29 granted. Therefore, your COLA review schedule is dependent on

⁵ *Turkey Point Units 6 And 7 Nuclear Power Plants Combined License Application Review Schedule*, 5-28-2010, Page 1.

1 the review schedule for the design certification. In addition, as a
2 subsequent combined license applicant referencing the AP1000
3 design, your COLA review schedule is also dependent on the
4 review schedule for the Vogtle Electric Generating Plant COLA
5 (the reference COL [RCOL] application for the AP1000 design
6 center). Because it utilizes the standard content contained in the
7 RCOL application, it is incumbent upon FPL to remain cognizant
8 of the resolution of the standard technical issues that will be
9 addressed during the NRC review of the Vogtle Electric
10 Generating Plant RCOL application.

11
12 Mathews clearly states the NRC position that any site-specific licensing review
13 for either LNP or TP 6&7 is dependent upon at least two factors. First, approval
14 of the AP1000 generic design, and second, the approval of the reference plant
15 COLA at Vogtle. The NRC letter by the Director of New Reactor Licensing also
16 makes it quite clear that both PEF and FPL are moving ahead with the attempted
17 licensing of the LNP and TP 6&7 at their own risk.

18
19 **Q. Are there other unresolved issues with the generic AP1000 technology that could**
20 **further delay the potential licensing of the LNP and TP 6&7?**

21 A. Yes. In addition to the problems with the AP1000 shield building, the NRC is also
22 reviewing a potential and significant safety problem with the AP1000 containment
23 itself. In a letter to the NRC dated April 21, 2010, the AP1000 Oversight Group
24 provided the NRC with a report entitled *Post Accident AP1000 Containment Leakage,*
25 *an Unreviewed Safety Issue* [AG-Exhibit 7]. As the primary author of that expert

1 report, which was peer reviewed by Dr. Rudolph Hausler, I was invited to appear
2 with Oversight Group counsel John Runkle before the NRC Advisory Committee on
3 Reactor Safeguards (ACRS) on June 25, 2010. The NRC ACRS considers the issues
4 raised in my technical report to be so significant that the ACRS asked me to make a
5 one-hour and fifteen-minute presentation to the ACRS AP1000 subcommittee.

6
7 To summarize the key issues of both the Fairewinds Report and the presentation to
8 the ACRS, it is my opinion that there is an unreviewed safety issue associated with
9 the unique passive containment structure that is integral to the AP1000 design. Past
10 nuclear industry experience on steel reactor containment liners and containment
11 vessels shows me that they are susceptible to corrosion and cracking. Neither
12 protective coatings nor ASME XI inspection programs have prevented nor detected
13 these failures. Should a failure of this nature occur in the AP1000 design, the
14 uniqueness of the containment and shield building would cause excessive amounts of
15 radiation to be released in the event of an accident. NRC action on this safety issue
16 may result in design modifications to the AP1000 design that may impact not only its
17 licensing schedule but also the ultimate cost of the reactor.

18
19 The presentation to the ACRS was lengthy, lasting one hour and fifteen minutes, an
20 abnormally large amount of time for the ACRS to grant for such a presentation. At

1 the end of the presentation, the ACRS took the comments under advisement. ACRS
2 sub-committee chairman Harold B. Ray, a retired chairman of Southern California
3 Edison, told me that, "Your input to us is helpful in focusing attention." ACRS sub-
4 committee chairman Ray also stated that he believed that the concerns Fairewinds
5 raised related to coatings and ASME inspections should also be addressed as new
6 contentions on each specific AP1000 docket. Additional contentions will
7 undoubtedly also further delay the R-COLA Vogtle licensing process.

8
9 **Q. What conclusions can you draw due to these unresolved technical issues with the**
10 **generic AP1000 design that PEF and FPL have chosen for the LNP and TP 6&7?**

11 A. Ultimately, as there are at least two unresolved problems with the technical design of
12 the AP1000, more specifically problems in the Shield Building and in the Reactor
13 Containment, there remains a significant schedule risk of continuing scheduling
14 delays and the likelihood of corresponding cost increases to the generic AP1000
15 license.

16
17 **B. SITE SPECIFIC CONCERNS**

18 **Q. Based on current circumstances, do you anticipate additional scheduling delays**
19 **in the licensing of these reactors due to site-specific concerns?**

1 A. Yes. I addressed some unique site-specific licensing issues for both Levy County
2 and Turkey Point in my 2009 testimony. Those issues remain unresolved.
3 Furthermore, it appears that the geologic issue(s) I discussed in 2009 need further
4 evaluation and elaboration in 2010 due to NRC emphasis on specific criteria.
5

6 **Q. In your 2009 testimony you stated that there were risks associated with the**
7 **geology of the Levy County site. Did PEF agree with that assessment at that**
8 **time?**

9 A. No. Less than three weeks before the 2009 hearings, PEF stated that the NRC had no
10 “serious doubts or concerns” about the geology of the Levy County site. Specifically,
11 on pages 15-17 of the “Rebuttal Testimony of Jeff Lyash On Behalf of Progress
12 Energy Florida” dated August 10, 2009, Lyash stated,

13 **Q. The intervenors also reference the NRC’s statements about the**
14 **complexity of the site characteristics in this October 6, 2008**
15 **letter and the NRC’s request for additional information as**
16 **reasons for concern regarding the Company’s LWA request.**
17 **Do you agree?**

18 A. No. ...the NRC will focus its review of the PEF COLA on the site
19 characteristics to determine how that AP1000 design for the
20 nuclear power plants will actually be built on the Levy site. This
21 review requires the NRC to ask geotechnical questions through
22 RAIs. The fact that the NRC issues RAIs means the NRC is doing
23 its job. It does not mean the NRC has “doubts” or “concerns” --- or
24 that there were problems with the Company’s COLA or LWA ---
25 in the way the intervenor witnesses seem to use these words. The
26 mere fact that the NRC was asking geotechnical questions and
27 questions about the site characteristics does not mean that the NRC

1 was not going to issue the LWA. ...The NRC would not have
2 docketed the PEF COLA if the NRC had “serious doubts” or
3 “concerns” about building the AP1000 nuclear power plants on the
4 Levy site because of the site geology or other site characteristics.
5 The fact that the NRC acknowledged the complexity of the site
6 also does not mean there was a problem with PEF’s COLA or
7 LWA.
8

9 **Q. Has Progress Energy changed its testimony in 2010 to now reflect your 2009**
10 **testimony concerning geologic concerns?**

11 A. Yes, PEF completely reverses its 2009 testimony and now in 2010 acknowledges that
12 there are “risks” associated with the geology of the LNP site. Specifically, in his
13 April 30, 2010 testimony on behalf of PEF, Mr. Lyash completely reverses his 2009
14 testimony and admits that there are “risks” and that not all of the NRC’s geologic
15 concerns have been addressed. Furthermore, Mr. Lyash now acknowledges that the
16 both the PEF and the NRC were aware of these “risks” while PEF was testifying
17 before the FPSC in Docket 090009-0EI to the effect that the NRC had no “serious
18 doubts or concerns” about the geology of the LNP site. Specifically, in his April 30,
19 2010 testimony, Mr. Lyash said,

20 Many of the questions the NRC had regarding the site that were
21 discussed during the nuclear cost recovery proceeding last year are
22 being resolved. Following a NRC audit in late September 2009,
23 the NRC staff indicated that new results from field investigations
24 appear to resolve many of their previous geotechnical questions
25 related to karsts and the foundation support at the site. [The NRC]
26 requests for additional information (“RAIs”) following that site
27 audit support the NRC staff comments at the audit. The karst

1 related and other geotechnical site risks are receding.⁶

2

3 For the same reasons that I testified about in 2009, it is my current opinion that the

4

LNP site may not even be licensable due to its geologic risks.

5 **Q. Are there potential geologic problems at Turkey Point that can affect licensing?**

6 **A. Yes.** On May 28, 2010 the NRC highlighted its concerns over seismic risks at Turkey

7

Point in a letter from NRC's Mathews, Director of the Division of New Reactor

8

Licensing to FPL's Sr. VP Nazar [Exhibit AG-6]. In part, the letter said,

9

10 As stated in the staff letter dated September 4, 2009,
11 (ML092380248) we have a concern that we have still not received
12 the additional information related to Final Safety Analysis Report
13 (FSAR) Section 2.5. We cannot initiate our review of Section 2.5
14 until the information requests identified under the headings of
15 Geology and Seismology and Geotechnical are provided.
16 Therefore, this can introduce uncertainty in the proposed schedule
17 and the schedule may be revised based on the availability of the
18 requested information.

19 In fact, the generic AP1000 design may not even be licensable for any locations in

20 Florida due to geological considerations.⁷ The NRC clearly states that not all

21 geologic locations are capable of accommodating the AP1000 design. Section

22 2.5.4.2.5 relating to Subsurface Uniformity is but one example of where the generic

23 AP1000 design might encounter geologic problems in certain siting locations.

24 Section 2.5.4.5 of the DCD states that, although the design and

⁶ *Direct Testimony of Jeff Lyash on behalf of Progress Energy Florida*, April 30, 2010, Page 45

⁷ NRC generic AP1000 Design Certification Amendment *ADVANCED FINAL SAFETY EVALUATION REPORT FOR CHAPTER 2 TITLED SITE ENVELOPE OF NUREG-1793* (ML101540170-1), page 31, June 29, 2010

1 analysis of the AP1000 was based on soil or rock conditions with
2 uniform properties within horizontal layers, provisions and design
3 margins to accommodate many nonuniform sites were also included.
4 The applicant described, in detail, the types of site investigation that
5 would be sufficient for a “uniform” site or a “nonuniform” site. The
6 applicant indicated that the acceptability of a nonuniform site would
7 be based on an individual site evaluation. The applicant concluded
8 that, for uniform sites whose site parameters fall within the site
9 profiles evaluated as part of the DC, no further action will be needed.
10 However, for nonuniform sites, or other sites whose parameters do not
11 fall within the site profiles, a site-specific evaluation will need to be
12 performed. For nonuniform sites, Sections 2.5.1 and 2.5.4.6.1 of the
13 DCD outline the geological investigations for the extended
14 investigation effort to determine whether the site is acceptable for
15 construction of an AP1000 reactor.
16

17 Therefore, it is important for the FPSC to take into account the fact that geologic
18 issues may persist for both the Levy County and Turkey Point sites since both sites
19 are not “based on soil or rock conditions with uniform properties within horizontal
20 layers”.

21
22 **Q. Have geologic or seismic conditions ever impacted the construction of a**
23 **nuclear power plant?**

24 **A.** Yes. While the record is unclear as to how many reactor sites have been considered
25 and rejected prior to authorization for Construction Permits, at least three reactors in
26 the United States were forced to terminate all activities due to geologic concerns that
27 became apparent after construction had begun. Those reactors were Bodega Bay in
28 California and Midland 1 & 2 in Michigan. Midland 1 was 85% complete when

1 foundation settling caused such severe cracking that the project was terminated at a
2 loss of several billion dollars.

3

4 **Q. Given the generic and site specific licensing uncertainties, is the 2010 site**
5 **banking strategy developed by FPL and PEF feasible and prudent?**

6 **A. No.** It would be more feasible and prudent for FPL and PEF to immediately
7 terminate both the Levy and Turkey Point projects. There is a great risk that the
8 generic or site-specific license will not be approved. Put simply, site banking is an
9 unnecessary expense until all AP1000 issues are resolved. In my opinion, the generic
10 licensing issues that are presently being reviewed on the AP1000 R-COLA design
11 will change the weight, seismic responses, building designs, and costs of the AP1000.
12 Therefore, these changes will adversely impact FPL and PEF seismic and structural
13 analyses and lead to expensive redesign. Furthermore, it is not clear that Florida's
14 unique geologic composition will allow the site-specific licenses to ever be approved
15 due to weight and seismic concerns even when the generic AP1000 design is
16 approved.

17

18 **Q. Would terminating all activities be costly to the ratepayers of the State of**
19 **Florida?**

20 **A. No.** In my opinion, immediately terminating all work on these projects would result

1 in the lowest costs to the ratepayers of the State of Florida. Site banking is
2 considerably more costly than termination. My opinion is confirmed by the April 30,
3 2010, testimony of Progress Energy, Inc. Vice President of Nuclear Plant
4 Development (“NPD”) John Elnitsky (see Confidential version).

5

6

IV. CONCLUSION

7

Q. Please briefly summarize your conclusions.

8

A. PEF and FPL have belatedly adopted my opinions, as well as those of Dr. Mark

9

Cooper and others regarding the uncertainties surrounding the licensing of new

10

nuclear reactors, and the resulting delays and corresponding cost overruns. However,

11

both PEF and FPL have failed to go far enough and are now simply engaging in site

12

banking in an attempt to recover the costs of licensing from their respective

13

ratepayers while making no real showing of the long-term feasibility of ever

14

completing these proposed reactors. At least three separate utility executives,

15

including FPL’s president, have acknowledged the uncertainties surrounding attempts

16

at licensing and constructing new nuclear generation. Furthermore, it is my opinion

17

that there will be additional delays and more cost overruns in PEF and FPL’s attempts

18

at licensing these proposed reactors. Therefore, the least cost option would be the

19

immediate cancellation of these units, rather than the site banking approach that the

20

utilities have resorted to. For these reasons, I do not believe that the FPSC should

1 allow PEF and FPL to recover these site banking costs from their ratepayers, as the
2 costs are not reasonably and/or prudently incurred costs given the fact that completion
3 of these reactors is not feasible in the long-term.

4

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

6 A. Yes.

1 **MR. DAVIS:** That takes care of the SACE
2 witnesses. Thank you.

3 **COMMISSIONER SKOP:** All right. Very well. So
4 I believe now we'll look to Public Counsel to call their
5 witness, and I believe that's Dr. Jacobs.

6 **MR. YOUNG:** Mr. Chairman, it's my
7 understanding that Mr. Rehwinkel just stepped out for a
8 second. He, he brought the wrong testimony as regards
9 to --

10 **COMMISSIONER SKOP:** All right. We will hold
11 in place then.

12 **MR. YOUNG:** -- Mr. Jacobs. And here he is
13 right now walking in.

14 **MR. REHWINKEL:** The Citizens call Dr. William
15 Jacobs.

16 **COMMISSIONER SKOP:** And, Mr. Jacobs, have you
17 been previously sworn?

18 **THE WITNESS:** Yes, I have.

19 **COMMISSIONER SKOP:** All right. Very well.
20 You may proceed.

21 **WILLIAM R. JACOBS, JR., Ph.D.**
22 was called as a witness on behalf of the Citizens of the
23 State of Florida and, having been duly sworn, testified
24 as follows:

25 **DIRECT EXAMINATION**

1 **BY MR. REHWINKEL:**

2 Q. Can you state your name?

3 A. My name is William Jacobs.

4 Q. And by whom are you employed?

5 A. By -- I'm Vice President of GDS Associates.

6 Q. And on whose behalf are you testifying here
7 today?

8 A. Testifying on behalf of the Florida Office of
9 Public Counsel.

10 Q. Dr. Jacobs, did you cause to be prepared 22
11 pages of prefiled direct testimony in this matter?

12 A. Yes, I did.

13 Q. Do you have any changes or corrections to make
14 to that testimony?

15 A. Yes, I have one minor typo correction on page
16 13, line 15. The second word, T-O, to, should be
17 changed to of, O-F, so the sentence would read,
18 "Downplaying the reality of the identified risks."
19 That's all.

20 Q. Thank you. Dr. Jacobs, if I, with that
21 correction, if I asked you the questions contained in
22 your prefiled direct testimony today, would your answers
23 be the same?

24 A. Yes, they would.

25 **MR. REHWINKEL:** Commissioners, I would move at

1 this time that Dr. Jacobs' prefiled direct testimony be
2 moved into the record.

3 **COMMISSIONER SKOP:** The prefiled testimony of
4 Dr. William Jacobs will be entered into the record as
5 though read.

6 **BY MR. REHWINKEL:**

7 **Q.** Dr. Jacobs, did you also prepare three
8 exhibits?

9 **A.** Yes, I did.

10 **Q.** Identified as WRJ(PEF)-1 through 3?

11 **A.** That's correct.

12 **MR. REHWINKEL:** And for the, for the record,
13 Exhibits 31 through 33.

14 (Exhibits 31 through 33 marked for
15 identification.)

16 **BY MR. REHWINKEL:**

17 **Q.** Do you have any changes or corrections to make
18 to those exhibits, Dr. Jacobs?

19 **A.** No, I do not.
20
21
22
23
24
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. 100009-EI

I. INTRODUCTION**Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

A. My name is William R. Jacobs, Jr., Ph.D. I am a Vice President of GDS Associates, Inc. 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 thirty years of experience in the electric power industry including more than twelve 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 Operations ("INPO"), I participated in the Construction Project

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

16
17 **Q. WERE YOU ASSISTED BY OTHER GDS PERSONNEL IN THIS EFFORT?**

18 A. Yes I was. The GDS team involved in the review and evaluation of the requests for
19 authorization to recover costs consisted of me, Mr. James P. McGaughy, Jr., a former
20 nuclear utility executive with over 37 years of experience and Mr. Cary Cook, a
21 Certified Public Account with extensive experience in utility regulation. The resumes
22 of Mr. McGaughy and Mr. Cook are attached to this testimony as Exhibit WRJ(PEF)-
23 2. I have reviewed the work of both and am familiar with their input and have
24 incorporated and adopted it as my own.

1 **Q. WHAT IS THE NATURE OF YOUR BUSINESS?**

2 A. GDS Associates, Inc. ("GDS") is an engineering and consulting firm with offices in
3 Marietta, Georgia; Austin, Texas; Corpus Christi, Texas; Manchester, New
4 Hampshire; Madison, Wisconsin; Manchester, Maine; and Auburn, Alabama. GDS
5 provides a variety of services to the electric utility industry including power supply
6 planning, generation support services, rates and regulatory consulting, financial
7 analysis, load forecasting and statistical services. Generation support services
8 provided by GDS include fossil and nuclear plant monitoring, plant ownership
9 feasibility studies, plant management audits, production cost modeling and expert
10 testimony on matters relating to plant management, construction, licensing and
11 performance issues in technical litigation and regulatory proceedings.

12

13 **Q. WHOM ARE YOU REPRESENTING IN THIS PROCEEDING?**

14 A. I am representing the Florida Office of Public Counsel who represents the ratepayers
15 of Progress Energy Florida.

16

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

18 A. I was asked to assist the Florida Office of Public Counsel to conduct a review and
19 evaluation of requests by Progress Energy Florida (PEF) for authority to collect
20 historical and projected costs associated with extended power uprate ("EPU") project
21 being pursued at Crystal River Unit 3, and historical and projected costs associated
22 with PEF's Levy County Units 1 and 2 project ("LNP") through the capacity cost
23 recovery clause.

1 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

2 A. Yes. I testified on behalf of the Florida Office of Public Counsel in the previous
3 NCRC proceedings in Dockets No. 080009-EI and 090009-EI.

4

5 **II. SUMMARY OF AUTHORIZATION TO COLLECT COSTS**

6 Q. PLEASE SUMMARIZE PEF'S REQUEST FOR COST RECOVERY IN THIS
7 DOCKET UNDER THE NUCLEAR COST RECOVERY CLAUSE.

8 A. PEF is requesting total revenue requirements to be collected in 2011 of \$147.7
9 million for the Levy Nuclear Project and \$16.0 million for the Crystal River 3 EPU
10 project.

11

12 **III. METHODOLOGY**

13 Q. PLEASE DESCRIBE THE METHODOLOGY THAT YOU USED TO
14 REVIEW AND EVALUATE THE REQUESTS FOR AUTHORIZATION TO
15 COLLECT COSTS SUBMITTED BY PEF UNDER THE NUCLEAR COST
16 RECOVERY CLAUSE.

17 A. I first reviewed the Company's filings in this docket and assisted in the issuance of
18 numerous interrogatories and requests for production of documents. To evaluate the
19 issues related to project schedule and risk management, I reviewed many internal
20 documents, status reports and correspondence with regulatory authorities. I reviewed
21 responses to discovery requests and issued additional discovery requests as needed.

1 **IV. ISSUES AND CONCERNS**

2 **Q. PLEASE DESCRIBE THE ISSUES AND CONCERNS THAT YOU**
3 **IDENTIFIED FROM YOUR REVIEW OF PEF'S REQUEST.**

4 A. I have identified concerns in both the LNP and the EPU projects that raise questions
5 concerning the sufficiency of PEF's demonstration that its decision making was
6 adequate under the circumstances.

7

8 **EVALUATION OF OPTIONS FOR THE LEVY COUNTY PROJECT**

9

10 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE RECENT HISTORY OF**
11 **THE LEVY NUCLEAR PROJECT FOR THE COMMISSION.**

12 A. On December 31, 2008, PEF signed an Engineering, Procurement and Construction
13 (EPC) contract with the Westinghouse – Shaw consortium (Consortium) to design
14 and construct two AP1000 nuclear power plants at the Levy County site. The
15 projected commercial operation dates for these two units was the summer of 2016 for
16 the first unit and the summer of 2017 for the second unit. The project schedule which
17 formed the basis for the EPC agreement was predicated on the project receiving a
18 limited work authorization (LWA) from the NRC which would allow certain safety
19 related work to proceed before the project was issued its Combined License (COL).

20

21 Approximately three weeks after signing the EPC contract, the Company received
22 notification from the NRC that the anticipated schedule for NRC approval of the
23 requested LWA would not be possible due primarily to the complex geology at the
24 Levy County site. Upon receipt of this notification, the EPC contract signed just
25 three weeks before was no longer viable. On May 1, 2009, the Company announced

1 a schedule shift of at least 20 months for the Levy project (See Exhibit WRJ(PEF)-3,
 2 pages1-2). The Company issued a letter to the Consortium requesting the Consortium
 3 to conduct six schedule and cash flow analyses for the project (See 10NC-OPCPOD1-
 4 3-000005). The results of these analyses formed the basis for the Company's
 5 announced plan going forward for the Levy Nuclear Project.

6

7 **Q. WHAT WERE THE COMPANY'S STATED STRATEGIC INTENT AND**
 8 **OBJECTIVES IN DEVELOPING THE GOING FORWARD PATH FOR THE**
 9 **PROJECT?**

10 A. As stated in the March 8, 2010, Senior Management Committee presentation, the
 11 strategic intent and objectives were to:

12 "...minimize near term cash flow requirements while maintaining long term
 13 flexibility to continue or pursue nuclear development projects." (See 10NC-
 14 OPCPOD1-1-000097.)

15

16 **Q. BRIEFLY DESCRIBE THE SCENARIOS ANALYZED BY THE COMPANY.**

17 A. In the Senior Management Committee presentation dated February 15, 2010 (see
 18 10NC-OPCPOD101-000057) the Company identified three possible options for the
 19 project:

20 • Option 1 - Full Speed Project Continuation: This option would lead to Unit 1
 21 Commercial Operation Date (COD) in late-2019. Estimated total cost for this
 22 option excluding AFUDC is [REDACTED]. Expenditures in 2010 – 2012 to
 23 support this option would be [REDACTED].

24 • Option 2 - Project Cancellation – This option would result in cancellation of
 25 the project and [REDACTED] for the base EPC contract plus

1 other payments as required by contractual obligations. Expenditures in 2010 –
 2 2012 for this option are estimated to be [REDACTED]. If cancelled, the total
 3 cost of the LNP that customers would be expected to bear would be [REDACTED]
 4 [REDACTED] through 2012 with possible additional costs pending the outcome of
 5 negotiations with the Consortium.

- 6 • Option 3 - Project Continuation with EPC Amendment – This option involves
 7 continuation of work needed to support COL issuance in late 2012. It
 8 assumes that a Notice to Proceed would be issued in 2013 with Unit 1 COD in
 9 2021. The estimated total cost for this option excluding AFUDC is [REDACTED]
 10 [REDACTED]. Expenditures in 2010 – 2012 for this option are estimated to be
 11 [REDACTED]

12
 13 **Q. WHICH OPTION HAS THE COMPANY SELECTED?**

14 A. The Company decided to proceed with Option 3 as described above.
 15

16 **Q. DID THE COMPANY ANALYZE ALL OF THE LIKELY SCENARIOS IN
 17 DECIDING THE PATH FORWARD FOR THE LEVY PROJECT?**

18 A. No, they did not. I believe that another reasonably possible outcome scenario is for
 19 the project to be cancelled after receipt of the COL in late 2012.
 20

21 **Q. DID YOU ASK THE COMPANY FOR THIS SCENARIO ANALYSIS?**

22 A. Yes, I did. In Interrogatory Question 46 I asked the Company if they had estimated
 23 the cost for the chosen alternative (continuation with COL and minimum continuation
 24 of the EPC contract) followed by cancellation after receipt of the COL. The
 25 Company responded:

1 As stated in the April 30, 2010 testimony of John Elnitsky at
2 pages 29 – 30, while the Company did evaluate a full project
3 cancellation scenario, continuation options provided the best fit
4 to the Company's stated objectives with regard to the Levy
5 Project, primarily:

- 6 a) Significant reduction of near term customer price impact;
7 b) Continuance of nuclear generation as a viable option for
8 future fuel and carbon emission cost savings as compared
9 to an all natural gas-fired generation plan;
10 c) Preservation of the beneficial terms and conditions of the
11 EPC contract; and
12 d) Movement of risk and significant cash outflow past COL
13 receipt.

14
15 The alternative presented in Question 46, project cancellation
16 after receipt of COL, would not have met these stated
17 objectives and as such, was not evaluated.
18

19 **Q. DID ANYTHING STRIKE YOU AS UNUSUAL ABOUT THE COMPANY'S**
20 **RESPONSE TO YOUR QUESTION REGARDING CANCELLATION OF**
21 **THE PROJECT AFTER RECEIPT OF THE COL?**

22 A. Yes. The Company's response did not state that they considered this scenario to be
23 unlikely or unreasonable. They merely stated that it would not have met their stated
24 objectives.

25
26 **Q. WHY DID YOU REQUEST THE COMPANY TO EVALUATE THE COST OF**
27 **THIS 4TH SCENARIO?**

28 A. Because in my opinion, it is a reasonably likely outcome for the project. Therefore,
29 the cost of this scenario should be estimated and compared to the cost of the other
30 scenarios evaluated by the Company to ensure that the chosen option provides the
31 most value for ratepayers. If the cost of this scenario is significantly greater than
32 immediate cancellation of the project, the Company should justify why the chosen
33 option is preferred over cancellation of the project since hundreds of millions of

1 dollars of ratepayer funds are required and at risk for up-front funding initial project
2 costs.

3

4 **Q. SPECIFICALLY, WHY DO YOU BELIEVE THAT CANCELLATION OF**
5 **THE LEVY PROJECT AFTER RECEIPT OF THE COL IS A REASONABLY**
6 **LIKELY SCENARIO?**

7 A. In his April 30, 2010 testimony in this docket, Progress Executive Vice President Jeff
8 Lyash spent over 30 pages describing various risks that could impact the project and
9 were considered by PEF in selecting their chosen path for the project. These risks
10 include:

- 11 • License and permitting activities that could impact the LNP COL;
- 12 • World economic conditions;
- 13 • Economic conditions in this country and Florida;
- 14 • Economic conditions for the Company including capital market reactions;
- 15 • Load growth impacts;
- 16 • Customer rates for nuclear generation;
- 17 • Continued state legislative support for nuclear generation;
- 18 • State energy efficiency policy and regulation;
- 19 • State energy policy and environmental policy and regulation;
- 20 • Federal energy and environmental policy and regulation; and
- 21 • Federal support for nuclear generation.

22

23 This is a lengthy list of risk factors for the Company to consider. The July and
24 September 2009 and March 2010 Board of Directors minutes, (see 10NC-OPCPOD1-
25 9-000135, 10NC-OPCPOD1-9-000153, 10NC-OPCPOD1-1-00023 and 10NC-

1 OPCPOD1-1-00039) statements to the Senior Management Committee (see 10NC-
2 OPCPOD1-1-000061) and statements to credit rating agencies (see 10NC-
3 OPCPOD1-9-000135) are all consistent with a major retrenchment from the original
4 project timeline and from what was then active pursuit of building nuclear generation
5 to a cautious option preservation tack that has a wary eye on the long list of
6 uncertainties. At this time the Company's consideration of these risks, along with
7 other factors, has caused the Company to conclude that the project schedule should be
8 delayed with a decision on going forward deferred until at least 2013. It should also
9 be noted that the Company has a hard deadline of January 1, 2014, to begin safety
10 related construction in order to be eligible for the EPACT tax credits. This date will
11 not change. Any slippage in the COL issue date and/or the lack of resolution of the
12 material risk uncertainties will place the continuation of the project further in
13 jeopardy.

14
15 It is possible by 2013 the Company will have gained sufficient clarity and certainty
16 on these many risks to support a decision to continue with the LNP. However, it can
17 reasonably be argued that 2013 will be just as likely not to bring sufficient clarity and
18 certainty that these risks are acceptable. Or 2013 might bring certainty that these
19 risks have not diminished and in fact have increased. Given the number and scope of
20 significant risks identified by Mr. Lyash, I believe it is reasonable that the Company
21 should have to consider the scenario in which the Company ends up concluding in
22 2013 that the risk and/or cost of continuing the project is too great and the project is
23 cancelled.

1 Q. DOES IT APPEAR THAT THE UNCERTAINTIES CREATING THE RISKS
2 IN THE AREAS IDENTIFIED BY MR. LYASH ARE BECOMING
3 CLEARER?

4 A. No it does not. An April 17, 2009 presentation to the Progress Energy Board of
5 Directors (see 09NC-OPCPOD3-61-000057) identifies the benefits of delaying the
6 LNP schedule including providing additional time for and certainty on:

- 7 • Obama Administration nuclear position
- 8 • Financial market and economic rebound
- 9 • Customer/policy maker support
- 10 • PEF rate case, first NCRC prudence hearing
- 11 • Federal policies on carbon, renewables and coal
- 12 • JO participation
- 13 • NRC COLA process
- 14 • Commodity/labor stabilization

15 Most of these risks existed and were known to PEF prior to the execution of the EPC
16 contract. Many of these same items are repeated or alluded to in the July 2009,
17 September 2009 and March 15 and 17, 2010, Board of Directors minutes (see
18 citations above), as well as in the list of risks identified in Mr. Lyash's testimony over
19 one year later. The past year has not resulted in additional clarity or certainty on
20 many of these items. PEF has not demonstrated that an additional 2 to 3 years will
21 provide the degree of certainty necessary for the Company to reach a decision to
22 proceed with the Levy project even if and when the COL is issued.

1 Q. IS THERE ANOTHER REASON THAT YOU BELIEVE THAT
 2 CANCELLATION OF THE LNP AFTER ISSUANCE OF THE COL IS AN
 3 OUTCOME THAT SHOULD BE EVALUATED BY THE COMPANY?

4 A. Yes, there is. The April 17, 2009 Board presentation identifies the following
 5 conditions to proceed with the Levy project (see 09NC-OPCPOD3-61-000053):

6 • Levy Project Success Factors

- 7 ○ [REDACTED]
- 8 ○ [REDACTED]
- 9 ○ [REDACTED]
- 10 ○ [REDACTED]

11 • Levy Project Must Support Our Financial Success Factors

- 12 ○ [REDACTED]
- 13 ○ [REDACTED]
- 14 ○ [REDACTED]
- 15 ○ [REDACTED]

16 Most of these conditions have not yet been met and may prove to be difficult to meet
 17 by 2013. Again, no improvement or clarity on these risks appears to be found in the
 18 July 2009, September 2009 or March 2010 Board of Directors minutes.

19
 20 Q. DO YOU BELIEVE THAT THE DECISION TO SIGN THE EPC CONTRACT
 21 FOR LEVY COUNTY ON DECEMBER 31, 2008 WAS A REASONABLE
 22 DECISION?

23 A. No, I do not. As I testified last year, in my opinion it was not reasonable for PEF to
 24 sign the EPC contract on December 31, 2008. PEF signed what is likely the largest
 25 contract in the history of the State of Florida without any assurance that the LWA

1 would be issued. Receipt of the LWA within the requested timeframe was a
2 requirement for implementation of the contract on the schedule contained in the EPC
3 contract. Not only did PEF not have any assurance that the LWA would be issued,
4 the NRC specifically told them in an October 6, 2008, letter (see 09NC-OPCPOD3-
5 64-000012) that it was unlikely that the requested timeline would be met. Under the
6 totality of the circumstances, PEF should have assumed that an LWA review schedule
7 different than the overall COLA review schedule would not have been adopted by the
8 NRC. To assume otherwise and sign the EPC contract with this cloud hanging over
9 this critical date was not reasonable.

10
11 Furthermore PEF signed the EPC contract while many of the uncertainties that are
12 creating the need to delay an additional 3 years (to a total of 5) were in existence (in
13 2008). I am concerned that PEF's assessment of these risks has not always
14 manifested concern for the upfront expenditure and recovery of ratepayer-provided
15 funds. Yet again, PEF appears to be downplaying the reality ^{of} to the identified risks in
16 proposing to proceed with the further expenditure and recovery of customer funds. I
17 believe that due to the tenuous nature of the LNP project and the lack of foreseeable
18 resolution of the uncertainties the Commission might want to consider placing some
19 of PEF's proposed expenditures at risk if they believe that PEF has not prudently
20 evaluated the options that involve spending customer funds for the next three to four
21 years.

22
23 **Q. DO YOU BELIEVE THAT THE COMPANY'S DECISION TO SIGN THE**
24 **EPC AGREEMENT IN DECEMBER 2008 WITHOUT THE LWA AND WITH**

1 **THE KNOWN UNCERTAINTIES DISCUSSED ABOVE RESULTED IN**
 2 **ADDITIONAL COSTS?**

3 A. Yes, I do. I believe that it was unreasonable to sign the EPC contract without
 4 knowing the LWA schedule and that signing the EPC contract would result in extra
 5 costs. The additional costs incurred by PEF can be seen by comparing the costs spent
 6 to date between Levy and Florida Power and Light's Turkey Point 6 and 7 project.
 7 Both of the projects are in essentially the same place from a schedule perspective with
 8 LNP Unit 1 scheduled COD in late 2021 and Turkey Point Unit 6 COD scheduled for
 9 2022. FPL has not signed an EPC contract for the new Turkey Point units but is
 10 continuing to pursue a COL for these units. The primary difference in the status of
 11 these projects is that PEF has committed to the procurement of long lead material and
 12 is now trying to determine the best way to dispose of this material. The difference in
 13 dollars spent between the two projects is striking. Through 2011, PEF will have spent
 14 ██████████ (PEF Exhibit JL-6, page 22) on LNP while FPL will have spent
 15 \$170.1 million on the Turkey Point project. PEF will have spent ██████████
 16 ██████████ due primarily to their unreasonable decision to sign the
 17 EPC contract in December 2008. If the projects are cancelled, ██████████
 18 ██████████.

19
 20 **Q. MS. GALLOWAY TESTIFIES EXTENSIVELY TO THE BENEFITS THAT**
 21 **PEF GAINED BY HAVING SIGNED THE EPC CONTRACT. DO YOU**
 22 **BELIEVE THAT THE COMPANY COULD HAVE ACHIEVED THE SAME**
 23 **CONTRACTUAL BENEFITS BY WAITING TO SIGN THE EPC**
 24 **CONTRACT UNTIL THE SCHEDULE FOR THE LWA WAS KNOWN?**

1 A. Yes, I do. The only AP1000 projects under construction in the United States at this
2 time are Georgia Power's Vogtle 3 and 4 project and South Carolina Electric and
3 Gas' Summer 2 and 3. The CODs for these projects are 2016 for the first units and
4 2017 for the second units at each site. Westinghouse and Shaw have invested
5 significant sums of money to develop the capabilities needed for the Vogtle and
6 Summer project. These capabilities include large expansions in staff and construction
7 of the Shaw Modular Systems facility in Lake Charles, Louisiana to construct
8 modules for these projects. It is my belief that PEF would have been in an excellent
9 position to negotiate an EPC contract at least as good as the current amended LNP
10 contract given Westinghouse and Shaw's need for an AP1000 project to utilize their
11 personnel and facilities following behind the Vogtle and Summer projects.

12

13 **CRYSTAL RIVER 3 EPU PROJECT**

14

15 **Q. PLEASE BRIEFLY DESCRIBE THE CRYSTAL RIVER UNIT 3 EXTENDED**
16 **POWER UPRATE PROJECT.**

17 A. The Crystal River 3 (CR3) extended power uprate project adds a total of 180 MWe to
18 the existing plant. This is accomplished by increasing reactor power output and thus
19 steam output, increasing the size and efficiency of the steam turbine and generator
20 and increasing the accuracy of instrumentation in the plant's steam system. The
21 project is being carried out in three phases. Phase 1 improved the steam plant
22 measurement accuracy of process parameters and allowed the power output to be
23 increased by about 12 MWe. These improvements were made in 2007 and were
24 placed in service on January 31, 2008.

1 According to the initial plans, Phase 1 was to be followed by a Phase 2 that would
2 increase the capacity and efficiency of the turbine-generator and other non-nuclear
3 parts of the plant in a 2009 outage. This would make the plant more efficient and
4 allow it to receive the 15.5% increase in steam flow that would become available
5 after the reactor upgrade planned for a Phase 3 to be implemented in a 2011 outage.
6 The efficiency increases in Phase 2 would increase the output 28 MWe, while using
7 only the current steam flow. Phase 3 would increase output by increasing reactor
8 power and steam flow adding 140 MWe for a total uprate of 180 MWe.

9 The initial plan has been modified because of two unplanned occurrences.

- 10 • The new low pressure turbines failed testing in the manufacturer's German
11 facilities necessitating repair and modification.
- 12 • The reactor containment building was damaged during the 2009 outage to replace
13 the steam generators. The steam generators are very large components that
14 required a large hole to be cut through the cylindrical, concrete containment
15 structure. In the process, the concrete separated from the rebar necessitating
16 extensive analysis, redesign and repair.

17 As a result, Phase 3 has been delayed until the spring of 2012 and the scope has been
18 modified to include the high and low pressure turbine modifications as well as the
19 nuclear reactor systems modifications. (Crystal River 3 Extended Power Uprate
20 Integrated Project Plan, May 2010; 10NC-OPCPOD3-54-000014)

21
22 **Q. WHAT IS THE CURRENT STATUS OF THE PROJECT?**

23 A. The Crystal River 3 nuclear plant is now in an extended outage to repair the damaged
24 containment building and to implement the reduced scope Phase 2 of the EPU project.
25 This outage is projected to be complete in September 2010 (see 10NC-OPCPOD3-54-

1 000014). The Company has projected that \$318.6 million (out of a total of \$479.4
2 million) will have been spent by the end of 2010 (see 10NC-OPCPOD3-54-000015).
3 Work currently underway includes an essentially new generator and a number of
4 larger steam cycle components.

5
6 **Q. HOW DOES THIS EPU PROJECT COMPARE WITH OTHER EPU**
7 **PROJECTS FOR PWRs IN THE UNITED STATES?**

8 A. In terms of reactor power (15.8% or 140 MWe), the CR3 uprate is by far the largest
9 ever approved for a U.S. PWR. Most have been in the 5% range. The Ginna plant
10 had a 17% increase, but on a much smaller plant netting about 85 MWe. (See Exhibit
11 WRJ(PEF)-3, pages 3-7.)

12
13 **Q. DOES THIS LARGE PERCENTAGE INCREASE RESULT IN A**
14 **TECHNICALLY CHALLENGING PROJECT?**

15 A. Yes, it does. For plants that increase power in the 5% range, the NRC calls these
16 uprates "stretch" uprates which generally indicates that the existing plant systems can
17 be used as is or with slight modification to marginally increase steam flows to
18 increase power. This would be a "stretch" of the existing plant. The CR3 uprate is
19 called an "extended" power uprate (EPU) by the NRC. In the extended uprates,
20 major plants components and systems have to be replaced to accommodate the new,
21 increased power levels. There have been 129 uprates approved by the NRC and only
22 five have been EPU's on PWR's. The largest of these five is 90 MWe at Waterford
23 (vs. 180 MWe at CR3) and none of these five are B&W plants.

24 The CR3 EPU project results in essentially a new, larger plant in the old plant
25 framework and building. There are new turbine generators and steam cycle

1 equipment. Safety systems that must function in an accident situation must be
2 reanalyzed and modified. A safety injection cross-tie has been installed. PEF will
3 install enlarged, safety related atmospheric dump valves and related systems to
4 depressurize the reactor after an accident to allow easier water flow into the core.

5
6 **Q. WHAT IS A LICENSE AMENDMENT REQUEST (LAR) AND WHEN IS AN**
7 **LAR NEEDED?**

8 A. A nuclear power plant undergoes an extensive safety analysis of its design and as-
9 built condition by the NRC in the issuance of an operating license. The NRC issues
10 an extensive set of technical specifications. Any change to a licensed plant that
11 would change or invalidate this safety analysis must be submitted to the NRC for
12 review and approval. This submittal is called a License Amendment Request or
13 LAR.

14
15 **Q. WILL THE CR3 EPU PROJECT REQUIRE AN LAR?**

16 A. Yes. PEF has been working with engineering contractors and consultants for several
17 years to prepare an LAR for the CR3 EPU project. It is my understanding that the
18 document will be over 2,000 pages (see PEF response to OPC Interrogatory Question
19 34). It will describe in detail the design changes to the plant, how these changes
20 modify the original plant safety analysis and how it affects the plant operation. Many
21 plant operating and maintenance procedures will have to be modified (see 10NC-
22 OPCPOD3-56-000063 to 66). All operators must be trained on the new procedures.

23
24 **Q. HAS THE CR3 LAR BEEN SUBMITTED TO THE NRC FOR REVIEW?**

1 A. No. In my testimony of last year, I noted that PEF planned to file the LAR in the fall
 2 of 2009. PEF was unable to meet that schedule. The CR3 Integrated Project Plan
 3 (IPP) of October 2009 stated that it was essential that the LAR be filed by March
 4 2010 (see 10NC-OPCPOD1-40-000521), but that was not accomplished. The current
 5 IPP states that the LAR was complete in March 2010. In his testimony of April 30,
 6 2010, Company witness Franke stated that the LAR would be filed by June 1, 2010,
 7 but the Company failed to make that date also. It is my understanding from the NRC
 8 that they expect a filing on July 15, but that is not a "firm date".
 9

10 **Q. WHAT WOULD BE THE RESULT IF THE CR3 LAR IS NOT APPROVED**
 11 **BY THE NRC?**

12 A. CR3 could not operate at the new power level and most of the benefits of the EPU
 13 project would be lost.
 14

15 **Q. WHAT ARE THE COSTS ASSOCIATED WITH THE CR3 EPU PROJECT?**

16 A. Costs from the May 2010 CR3 Integrated Project Plan are as follows:

17	<u>Year</u>	<u>Cost (millions \$ w/oAFUDC)</u>	<u>% of Total</u>	<u>Cumulative</u>
18	2006	\$2.3	0.5%	0.5%
19	2007	\$38.5	8.5%	8.5%
20	2008	\$65.1	13.2%	22.0%
21	2009	\$125.1	26.1%	48.1%
22	2010	\$87.6	18.3%	66.4%
23	2011	\$98.5	20.5%	86.9%
24	2012	\$62.2	13.0%	100.0%
25	Total	\$479.4		

1 **Q. HOW MUCH OF THE CR3 EPU BUDGET WILL HAVE BEEN SPENT**
2 **BEFORE THE COMPANY KNOWS WHETHER OR NOT THE NRC WILL**
3 **ISSUE A LICENSE FOR THE FULL UPRATE REACTOR POWER?**

4 A. According to the May 2010 IPP, the LAR is forecast by the Company for May 2012
5 when almost 100% of the money will have been spent (see 10NC-OPCPOD3-54-
6 000014). Essentially all the money will be spent before the Company knows if the
7 NRC will approve the uprate.

8

9 **Q. COULD THE COMPANY HAVE REDUCED THE RISK BY RESOLVING**
10 **THE NRC LICENSING ISSUES BEFORE SPENDING THE LARGE SUMS**
11 **TO MODIFY THE SECONDARY PLANT?**

12 A. Yes. If the Company had filed for their LAR in the fall of 2009 as had been planned,
13 the review could have been completed before the portion of Phase 2 was postponed
14 until 2012 and the Phase 3 work would have to be done. If problems with NRC
15 approval of the LAR occurred, the additional money would not need to be spent until
16 (and if) the questions were resolved.

17

18 **Q. WHAT ARE YOUR CONCLUSIONS CONCERNING THE EPU PROJECT?**

19 A. In my testimony of last year, it was my opinion that the Company should not have
20 proceeded with Phase 2 without knowing the outcome of the NRC's review of the
21 complicated LAR and any additional requirements that may result from the NRC's
22 review. At that time, the Company planned to file the LAR in September 2009.
23 Since that time, Phase 3 has been delayed by the CR3 containment concrete problem
24 and the scope of Phase 2 has been reduced and shifted in Phase 3 because of the low

1 pressure turbine test failures. If the LAR had been pursued as planned beginning in
2 September 2009, the Company would have had the opportunity to know of its success
3 or failure before spending the money for Phase 3. As plans now stand (according to
4 the May 2010 IPP), the Company will not receive the LAR until after essentially all
5 the money is spent.

6
7 **V. RECOMMENDATIONS**

8 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE LEVY**
9 **NUCLEAR PROJECT?**

10 A. I recommend that the Commission order the company to analyze a scenario in which
11 the LNP is cancelled after receipt of the COL. Based on the results of this analysis,
12 the Company should justify that the chosen path for the project to ensure that this
13 path is in the ratepayers' interests.

14
15 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE CRYSTAL**
16 **RIVER 3 EPU PROJECT?**

17 A. By the next NCRC hearing in 2011, the Company will have submitted the LAR to the
18 NRC and it could be approved. If it has not been approved, the Company should
19 have a good indication of any issues or concerns that the NRC has identified. I
20 recommend that the Company provide a full update of the status of the LAR at the
21 next NCRC hearing. If the NRC's review of the LAR results in an approved power
22 uprate of less than 140 Mw, the Commission should require the Company to
23 demonstrate that the project remains economically feasible and that its project
24 schedule was prudent.

1 Q. DOES THAT CONCLUDE YOUR TESTIMONY?

2 A. Yes, it does.

1 **BY MR. REHWINKEL:**

2 Q. Dr. Jacobs, do you have a summary of your
3 testimony less than five minutes?

4 A. Yes, I do.

5 Q. Could you give that at this time?

6 A. I'd be happy to.

7 Good afternoon, Madam Chairman and
8 Commissioners. Again, my name is William Jacobs. I'm
9 Vice President of GDS Associates, and I'm testifying
10 here this afternoon on behalf of the Florida Office of
11 Public Counsel. I will address two major issues, the
12 Levy County project and, or two major areas, excuse me,
13 and the Crystal River Unit 3 EPU.

14 Turning first to the Levy County project, I
15 reviewed the options that the company evaluated for the
16 Levy County project following the decision by the NRC
17 not to grant their limited work authorization as
18 requested. These options were to cancel the project
19 immediately, to proceed full speed ahead, or the third
20 option would be to delay the project by approximately
21 five years, with the first unit starting up in the year
22 2021.

23 Following my review of these options, I
24 believe that there was another scenario that should have
25 been evaluated by the company. This scenario involves

1 cancellation of the project following receipt of the
2 combined license, which is, the combined license is
3 anticipated to be received in late 2012, and at that
4 point I believe it is a reasonable scenario that the
5 company would conclude that the project should be
6 canceled at that point.

7 The reason I believe this is a possible
8 scenario is that there is no indication that the overall
9 enterprise risks that the company has evaluated are
10 declining. The company metrics required to continue
11 remain in question, and there is no sign of joint owners
12 flocking to join the project at this point. Therefore,
13 the fourth scenario that I identified must be evaluated
14 in order to make an informed decision.

15 It actually turns to, becomes a matter of risk
16 versus cost. If it is certain that the project would
17 continue, then the company's option would be the proper
18 one. If it is certain that the project would be
19 canceled, then it should be canceled sooner rather than
20 later.

21 However, if there is uncertainty, as there is,
22 there must be a balance between the risk and the cost to
23 the ratepayers. And, therefore, I recommend in my
24 testimony that the company be required to analyze the
25 fourth scenario that I have identified, and in light of

1 this analysis and the identified risks justify the
2 option that they have, they have chosen.

3 Turning to the Crystal River Unit 3 EPU
4 project, I believe that the company has chosen a
5 nonconservative approach for implementation of the
6 Crystal River Unit 3 EPU. They will spend most of the
7 money for the project before it is certain that they
8 will receive permission from the NRC to increase the
9 power level to gain the full 180 megawatts of additional
10 power that the project is intended to deliver. 140 of
11 the 180 megawatts comes from increased reactor power
12 that must be authorized by the NRC by approval of the
13 license amendment request.

14 They could have initiated the license
15 amendment requests earlier to ensure approval or at
16 least have a good indication of approval prior to
17 spending the bulk of the money. Many EPUs have been
18 accomplished in the past, but this is the first for a
19 Babcock & Wilcox project, and it is a very technically
20 challenging project.

21 I want to clarify here that the prudence of
22 their decision is not based on the decision that the NRC
23 makes. If full power is authorized by the NRC, then
24 there is no impact and the issue of prudence is moot.
25 However, if full power is not issued and there is

1 impact, then the prudence of the company's decisions
2 should be reviewed in detail.

3 That concludes my statement.

4 **MR. REHWINKEL:** Dr. Jacobs is tendered for
5 cross-examination.

6 **COMMISSIONER SKOP:** Very well.

7 Mr. Walls, you're recognized for
8 cross-examination.

9 **CROSS EXAMINATION**

10 **BY MR. WALLS:**

11 **Q.** Good afternoon, Dr. Jacobs.

12 **A.** Good afternoon.

13 **Q.** Dr. Jacobs, is it your opinion that Progress
14 Energy Florida should cancel the Levy nuclear project?

15 **A.** No, that's not my opinion at this time.

16 **Q.** And is it your opinion, Dr. Jacobs, that
17 Progress Energy Florida should terminate the EPC
18 agreement and cancel the Levy nuclear project?

19 **A.** No, it is not.

20 **Q.** And, Dr. Jacobs, you would agree that the
21 feasibility analysis that Progress Energy Florida
22 provided this year was sufficient to demonstrate the
23 feasibility of the Levy nuclear project; correct?

24 **A.** Yes, it does, given the assumptions that are
25 in here and in that analysis.

1 Q. And if you could turn to page 6, lines 7
2 through 14 of your direct testimony.

3 A. Okay.

4 Q. And there you reference the company's
5 strategic intent and objectives in developing the
6 going-forward path for the Levy nuclear project from a
7 March 8, 2010, senior management committee presentation;
8 correct?

9 A. That's correct.

10 Q. Do you have that presentation with you?

11 A. I do not.

12 Q. Okay.

13 **MS. HUHTA:** May I approach the witness?

14 Excuse me. May --

15 **COMMISSIONER SKOP:** Yes, you may.

16 **MS. HUHTA:** Thanks.

17 **BY MR. WALLS:**

18 Q. And this senior management presentation is
19 marked as Exhibit JE-2 in John Elnitsky's direct
20 testimony?

21 A. Yes. That's correct. I have it.

22 Q. Okay. And the reference in your testimony on
23 page 6 at lines 7 through 14 is to page 2 of 15 of
24 Exhibit Number JE-2; is that correct?

25 A. That's correct. Yes.

1 Q. Okay. And you would agree that given the
2 company's intent and given the objectives that they
3 state in this March 8, 2010, senior management committee
4 presentation that the company's actions were reasonable;
5 correct?

6 A. Yes, I believe they were reasonable.

7 Q. And you would agree with me that you expressed
8 no opinion in your testimony that the evaluation process
9 the company undertook to make its decision was
10 unreasonable or imprudent, you just believe they should
11 have evaluated another scenario; is that correct?

12 A. Yes. That's correct.

13 Q. Dr. Jacobs, your assignment included the
14 review and evaluation of Progress Energy Florida's
15 request to collect historical costs associated with the
16 Levy nuclear project; correct?

17 A. That's correct.

18 Q. And you would agree with me that nowhere in
19 your direct testimony do you express the opinion that
20 Progress Energy Florida's Levy nuclear project costs for
21 2009 are imprudent; correct?

22 A. That's correct.

23 Q. And you also indicate at page 3 of your direct
24 testimony, lines 21 to 23 --

25 A. Okay.

1 **Q.** -- that your assignment included reviewing and
2 evaluating Progress Energy Florida's request for
3 authority to collect projected costs associated with the
4 Levy nuclear project; correct?

5 **A.** Yes.

6 **Q.** And by projected costs, you mean Progress
7 Energy Florida's estimated 2010 and projected 2011 costs
8 associated with the Levy nuclear project; right?

9 **A.** That's correct.

10 **Q.** And would you agree with me that in your
11 testimony there is no opinion that any specific
12 estimated 2010 or projected 2011 Levy nuclear project
13 cost is unreasonable?

14 **A.** That's correct.

15 **Q.** And it's fair to say that you don't have an
16 opinion this year that Progress Energy Florida's project
17 management contracting and oversight controls for the
18 Levy nuclear project are imprudent; correct?

19 **A.** That's correct. I don't have an opinion that
20 they're imprudent. I don't -- I did not make an opinion
21 on those topics.

22 **Q.** And you didn't make an opinion this year about
23 the company's project management contracting oversight
24 controls because you reviewed them last year and did not
25 see any significant concerns with them; is that correct?

1 **A.** That's correct.

2 **Q.** And you would also agree with me that nowhere
3 in your testimony do you express the opinion that
4 Progress Energy Florida's 2009 accounting and cost
5 oversight controls for the Levy nuclear project are
6 unreasonable or imprudent.

7 **A.** That's correct.

8 **Q.** I want to turn to the CR3 uprate project. And
9 again at page 3, lines 18 to 21 of your direct testimony
10 you indicate your assignment included review and
11 evaluation of Progress Energy Florida's request to
12 collect historical costs for the Crystal River 3 unit
13 uprate project; correct?

14 **A.** Yes.

15 **Q.** And would you agree with me within your
16 testimony there is no expression of an opinion by you
17 that Progress Energy Florida's CR3 uprate costs for 2009
18 are imprudent?

19 **A.** Yes, I agree.

20 **Q.** You also indicate at page 3, lines 18 to 21 of
21 your testimony that your assignment included reviewing
22 and evaluating Progress Energy Florida's request for
23 authority to collect projected costs associated with the
24 CR3 uprate or EPU extended power uprate; correct?

25 **A.** Yes.

1 **Q.** And by projected costs, you mean Progress
2 Energy Florida's estimated 2010 and projected 2011 costs
3 associated with the uprate project; correct?

4 **A.** That's correct.

5 **Q.** And would you agree with me that in your
6 testimony there is no opinion that any specific
7 estimated 2010 or projected 2011 CR3 uprate cost is
8 unreasonable?

9 **A.** Yes.

10 **Q.** And you would also agree with me that nowhere
11 in your testimony do you express an opinion that
12 Progress Energy Florida's 2009 accounting and cost
13 oversight controls for the CR3 uprate project were
14 unreasonable or imprudent?

15 **A.** Yes, I agree.

16 **Q.** And it's true, Dr. Jacobs, that with respect
17 to the CR3 uprate schedule, you're not expressing an
18 opinion today that that uprate project schedule was
19 imprudent; correct?

20 **A.** That's correct. I have not done a detailed
21 prudence analysis of the schedule. If the NRC grants
22 the, the full requested power uprate for the reactor and
23 the full 180 power megawatts is achieved, then that
24 topic is, is moot and doesn't need to be evaluated.

25 **Q.** Okay. As you said, you're not expressing an

1 opinion today that their schedule is imprudent; correct?

2 **A.** That's correct.

3 **Q.** And you would also agree that you are not
4 expressing the opinion that Progress Energy Florida
5 should stop work on the Crystal River Unit 3 uprate
6 project; correct?

7 **A.** No. They should continue to work on it.

8 **MR. WALLS:** That's all the questions I have.

9 **COMMISSIONER SKOP:** Thank you.

10 Any questions from the bench?

11 Commissioner Edgar, you're recognized.

12 **COMMISSIONER EDGAR:** Thank you.

13 Good afternoon.

14 **THE WITNESS:** Good afternoon.

15 **COMMISSIONER EDGAR:** You mentioned in your
16 opening and in your prefiled testimony that you believe
17 another possible scenario is the cancellation of the
18 Levy County project after receipt of the combined
19 license in 2012.

20 **THE WITNESS:** That's correct, yes. There's,
21 there's a point, once they receive the combined license,
22 a decision must be made whether to continue, authorize
23 the EPC contractor to continue with the project or
24 cancel it at that point.

25 **COMMISSIONER EDGAR:** Okay. And I, and I

1 believe you also testified that in your opinion the risk
2 factors are not declining and that there is not at this
3 point in time a joint partner for the project.

4 **THE WITNESS:** That's correct.

5 **COMMISSIONER EDGAR:** Okay. Is the lack of a
6 joint partner at this time a risk factor, a risk factor,
7 one of the risk factors that you are mentioning? And if
8 so, how material is that point or fact?

9 **THE WITNESS:** Yes, it is. I know early on
10 attaining, achieving a joint partner, joint ownership
11 was very important to the company, and it continually
12 shows up in their internal documents as an important
13 factor that they're, that they're trying to achieve. I
14 think it would certainly help the economics from a
15 Progress Energy perspective if they could have a joint
16 ownership. So I think that's an important factor.

17 **COMMISSIONER EDGAR:** What other risk factors
18 do you deem material to support your statement that
19 cancellation after the combined license in 2012 is a
20 realistic scenario, or a scenario of great potential,
21 whatever would be your words?

22 **THE WITNESS:** Let me address that. You know,
23 Mr. Lyash spent about 30 pages going through these risk
24 factors, and we're kind of generally in agreement with
25 identification of them.

1 There are really three or four main factors I
2 think that are influencing development of new nuclear
3 power plants, and have changed significantly in the last
4 several years. And those are, one, due to the economic
5 recession, the load growth is not what was projected.
6 Another factor is the low cost of natural gas. It's low
7 and it's projected to be fairly low for the foreseeable
8 future. So that cuts against the benefits of nuclear
9 power. A third factor is the uncertainty in any type of
10 carbon cost or carbon tax on fossil fuel plants. And,
11 you know, a carbon tax on either gas or a coal-fired
12 plant helps nuclear. So those are some of the major
13 factors that are affecting the decision.

14 **COMMISSIONER EDGAR:** Okay. Thank you.

15 **THE WITNESS:** Okay. Thank you.

16 **COMMISSIONER SKOP:** Any additional questions
17 from the bench? Okay.

18 Mr. Jacobs, I just have one brief follow-up to
19 a line of questioning that Mr. Walls asked.

20 You testified that in considering, in making a
21 prudence determination, that in your opinion management
22 I guess in, as you stated, failed to consider one option
23 that involved termination of the entire project after
24 the combined operating license was issued. And if I
25 understand your testimony correct, I think the question

1 I would have in that regard, in rendering a prudency
2 determination, is it required for the Commission or
3 required for management to anticipate and fully evaluate
4 every possible alternative versus the reasonable
5 alternatives that management has, has chosen to pursue?

6 **THE WITNESS:** Well, I think they need to
7 evaluate all reasonable alternatives that a, that a
8 qualified utility manager should be anticipated would
9 identify, given their, what they knew at the time.

10 **COMMISSIONER SKOP:** Could there be, could
11 there perhaps exist contractual obligations or
12 conditions that would make choosing one course of action
13 more preferable than another in rendering that, or
14 considering such an option?

15 **THE WITNESS:** Yes. I mean, certainly the
16 contractual items would have an impact on that.

17 **COMMISSIONER SKOP:** Very well. Thank you.

18 **THE WITNESS:** Thank you.

19 **COMMISSIONER SKOP:** All right. Any questions
20 from staff before we go to redirect?

21 **MR. DAVIS:** I have one question.

22 **COMMISSIONER SKOP:** Okay.

23 **MR. YOUNG:** I think --

24 **COMMISSIONER SKOP:** SACE. Okay. Go down the
25 line. All right. Very well. SACE, you're recognized.

CROSS EXAMINATION

1
2 **BY MR. DAVIS:**

3 **Q.** Dr. Jacobs, Gary Davis representing SACE.
4 Just one question for you. You would agree that your
5 prefiled testimony expresses no opinion about the
6 feasibility of the Levy nuclear project; correct?

7 **A.** That's correct.

8 **Q.** And you would also agree that your prefiled
9 testimony expresses no opinion about whether or not
10 Progress's actions that were decided by the board on
11 March 8th, 2010, were reasonable.

12 **MR. WALLS:** I'm going to object to this. This
13 is not cross-examination.

14 **COMMISSIONER SKOP:** To the objection.

15 **MR. DAVIS:** Why is that? It certainly is
16 cross-examination. It's certainly not friendly cross,
17 because I'm just --

18 **COMMISSIONER SKOP:** Mr. Walls, can you be a
19 little bit more specific?

20 **MR. WALLS:** I believe it is friendly cross
21 because he's trying to establish a position consistent
22 with what SACE is taking, and OPC and them are aligned.

23 **COMMISSIONER SKOP:** Again, the Order
24 Establishing Procedure and the Prehearing Order, you
25 know, reflects that friendly cross should be limited.

1 Is there a way that perhaps you can reframe the question
2 so that it's not friendly cross?

3 **MR. DAVIS:** I can ask a more direct question
4 rather than a leading question.

5 **COMMISSIONER SKOP:** Okay. We'll see if that
6 will get us by the objection. If not, Mr. Walls, you're
7 free to object to the reframing of the question.

8 **BY MR. DAVIS:**

9 **Q.** Does your prefiled testimony, Dr. Jacobs,
10 contain any opinion about the reasonableness of the
11 conduct of Progress Energy with regard to the Levy
12 nuclear plant?

13 **A.** Well, it's in my testimony that I believe they
14 should have considered the fourth scenario that I have
15 identified.

16 **Q.** Other than that, there's no opinion about the,
17 the scenarios that were analyzed and the actions taken;
18 is that correct?

19 **MR. WALLS:** Objection.

20 **COMMISSIONER SKOP:** What's the basis for the
21 objection?

22 **MR. WALLS:** Again, friendly cross.

23 **COMMISSIONER SKOP:** Okay. To the objection.

24 **MR. DAVIS:** I'll withdraw the question. The
25 prefiled testimony speaks for itself.

1 **COMMISSIONER SKOP:** All right. Very well.
2 Any additional questions?

3 **MR. DAVIS:** No.

4 **COMMISSIONER SKOP:** Any other questions for
5 the witness before we go to redirect?

6 Okay. Mr. Rehwinkel.

7 **MR. REHWINKEL:** Thank you. Just a few. Thank
8 you, Mr. Chairman.

9 **REDIRECT EXAMINATION**

10 **BY MR. REHWINKEL:**

11 Q. Dr. Jacobs --

12 **MR. YOUNG:** Mr. Chairman, before we go to
13 Mr. Rehwinkel, staff has no questions.

14 **COMMISSIONER SKOP:** All right. Yeah. I asked
15 staff before. Okay. So, I mean, when we go one way,
16 it's real easy to follow. In reverse order you got to
17 kind of stop and think. So, all right, but I thought
18 that staff had said that previously, which is why I went
19 to the Intervenor. So I think we're on course.

20 Mr. Rehwinkel, you're recognized.

21 **MR. REHWINKEL:** Thank you, Mr. Chairman.

22 **BY MR. REHWINKEL:**

23 Q. Dr. Jacobs, does the silence in your testimony
24 on the Levy nuclear plant historical costs mean that you
25 are affirmatively agreeing with or making an affirmative

1 finding about those costs?

2 A. No, it does not.

3 Q. Does your silence on the Levy nuclear plant
4 projected costs mean that you're making an affirmative
5 agreement with those costs or making an affirmative
6 finding as to their appropriateness?

7 A. No. I have not issued an opinion on those.

8 Q. Does your silence on management controls and
9 oversight of the Levy nuclear plant mean that you are
10 making, you are affirmatively agreeing or making an
11 affirmative finding with respect to those oversight and
12 control activities?

13 A. No, it does not.

14 Q. Does your silence on the CR3 historical costs
15 mean that you are affirmatively agreeing with or making
16 an affirmative finding with respect to those costs?

17 A. No, it does not.

18 Q. Does your silence on the CR3 projected costs
19 mean that you're affirmatively agreeing with or making
20 an affirmative finding on those costs?

21 A. No.

22 Q. And finally, does your silence on the
23 management controls and oversight activities of Progress
24 with respect to the CR3 plant mean you are affirmatively
25 agreeing with or making an affirmative finding on those

1 activities?

2 A. No.

3 Q. Dr. Jacobs, you were asked the question about
4 joint owners.

5 A. Yes.

6 Q. Are you aware of any other AP 1000 projects
7 with joint owners?

8 A. Yes, I am. The two other projects that have
9 signed EPC contracts, one is the Vogtle Unit 3 and 4
10 project being managed by Georgia Power Company has joint
11 owners, and also the Summer Unit 2 and 3 project being
12 managed by South Carolina Electric & Gas also has joint
13 owners.

14 Q. Do you know the percentage of joint owners for
15 the Vogtle plant?

16 A. Yes. Vogtle, Georgia Power owns 45.7 percent,
17 a little under 50 percent of that project, and then
18 Oglethorpe Municipal Energy Authority, Electric
19 Authority of Georgia in the city of Dalton own the rest.
20 And I believe the Summer project is around a 50/50
21 split. I'm not precisely sure.

22 Q. Are you aware of the impact of joint ownership
23 on the projected customer bills for the Vogtle plant?

24 A. Yes, sir. For the, for the Vogtle project,
25 when both units are in service, which is projected to be

1 in 2016 and 2017 for both units, it's anticipated that
2 there would be about a \$9 per month per 1,000 kilowatt
3 impact on the average customer.

4 Q. Okay. You were asked a question about -- I'll
5 withdraw that.

6 Those are all the questions I have. Thank
7 you.

8 **COMMISSIONER SKOP:** Very well. Thank you. At
9 this point I guess we need to take up exhibits for
10 Dr. Jacobs. I believe that's Exhibit 31 through 33, if
11 my memory serves me correctly.

12 **MR. REHWINKEL:** We would move those.

13 **COMMISSIONER SKOP:** All right. Any
14 objections? Hearing none, show those Exhibits 31
15 through 33 entered into the record.

16 (Exhibits 31 through 33 admitted into the
17 record.)

18 **MR. REHWINKEL:** And may Dr. Jacobs be excused
19 from the hearing?

20 **COMMISSIONER SKOP:** He may. Thank you.

21 **MR. REHWINKEL:** He's -- I take that back.

22 **COMMISSIONER SKOP:** He's coming back for
23 rebuttal.

24 **MR. REHWINKEL:** Well, no. May he be excused
25 for the Progress portion of the hearing?

1 **COMMISSIONER SKOP:** Yes, you may be excused
2 for the Progress portion of the hearing. Thank you. I
3 knew there was something there.

4 **MR. REHWINKEL:** I almost got you out.

5 **COMMISSIONER SKOP:** Okay. I believe that
6 takes us now to the joint testimony of staff witnesses.
7 So, staff, you're recognized to call your witnesses.

8 **MR. YOUNG:** Thank you, Mr. Chairman. At this
9 time, staff would like to call William Coston and Kevin
10 Carpenter to the stand.

11 **COMMISSIONER SKOP:** And Mr. Coston and
12 Carpenter, have you been sworn, previously sworn? All
13 right. Very well. Thank you.

14 Mr. Young, you may proceed.

15 **MR. YOUNG:** Mr. Chairman, may we approach?

16 **COMMISSIONER SKOP:** You may.

17 **MR. YOUNG:** All right. And just a point of
18 information, Mr. Chairman. What is being handed out by
19 staff is the revised Exhibit CC-1, which is Number 77 on
20 staff's, on the, excuse me, on the Comprehensive Exhibit
21 List. Also it's my understanding that Mr. Brew has
22 given Ms. Bennett some documents to hand out for his
23 cross-examination of staff's witnesses. So --

24 **COMMISSIONER SKOP:** Okay. We'll take these up
25 one at a time at the appropriate time. Again, I believe

1 that staff's confidential document that they've handed
2 out is marked for identification as Exhibit 77, and that
3 is the review of Progress Energy Florida's progress --
4 project management internal controls for nuclear plant
5 uprate and construction projects.

6 **MR. YOUNG:** Yes, sir. And we will discuss
7 that in terms of the revisions during the appropriate
8 time.

9 **COMMISSIONER SKOP:** All right. Very well.
10 And, Mr. Brew, and for the purpose of expediency, do we
11 want to put a number on your two exhibits?

12 **MR. BREW:** Yes. Thank you, Mr. Chairman. I
13 thought by way of getting things out of the way early,
14 I've handed the witnesses two documents. One is labeled
15 Staff Response to PCS Interrogatories. The other is
16 labeled Staff Response to PCS Request for POD, and ask
17 that they be marked for identification as Exhibits
18 210 and 211.

19 **COMMISSIONER SKOP:** All right. Very well.
20 The first exhibit will be marked for identification as
21 Exhibit 210 and the second one as 211.

22 (Exhibits 210 and 211 marked for
23 identification.)

24 The first, Staff Response to PCS
25 Interrogatories has been marked for identification as

1 Exhibit 210, and the Staff Response to PCS Request for
2 POD is going to be marked for identification as Exhibit
3 211. All right.

4 And, Mr. Young, you may proceed.

5 **MR. YOUNG:** Thank you, sir.

6 **WILLIAM COSTON and KEVIN CARPENTER**

7 were called as witnesses on behalf of Florida Public
8 Service Commission Staff and, having been duly sworn,
9 testified as follows:

10 **DIRECT EXAMINATION**

11 **BY MR. YOUNG:**

12 **Q.** Good afternoon.

13 **A.** (By Mr. Coston) Good afternoon.

14 **A.** (By Mr. Carpenter) Good afternoon.

15 **Q.** Have you been sworn?

16 **A.** (By Mr. Coston) Yes.

17 **A.** (By Mr. Carpenter) yes.

18 **Q.** Can both of you please state your name and
19 business address for the record?

20 **A.** (By Mr. Coston) William Coston, 2540 Shumard
21 Oak Boulevard, Tallahassee, Florida 32399.

22 **A.** (By Mr. Carpenter) Kevin Carpenter, 2540
23 Shumard Oak Boulevard, Tallahassee, Florida 32399.

24 **Q.** By whom are you employed and in what capacity?

25 **A.** (By Mr. Coston) I'm employed by the Florida

1 Public Service Commission as a Government Analyst 2 in
2 the Office of Auditing and Performance Analysis.

3 Q. Have you jointly prefiled testimony consisting
4 of five pages in this case as it relates to Progress
5 Energy Florida?

6 A. (By Mr. Coston) Yes, we have.

7 A. (By Mr. Carpenter) Yes.

8 Q. Do you have any changes or corrections to that
9 testimony?

10 A. (By Mr. Coston) Staff notes that we have
11 refiled an updated Exhibit CC-1 to incorporate Progress
12 Energy Florida's revised confidentiality request and to
13 reflect Order No. PSC-10-0534-PCO-EI. In addition, in
14 our refiled Exhibit CC-1 we corrected the exhibit page
15 numbering in the top right-hand corner of each page and
16 corrected the page numbering. But I believe you asked
17 me about my testimony, did you not?

18 Q. All right. If I were to ask you the same
19 questions in your joint prefiled testimony today, would
20 your answers be the same?

21 A. (By Mr. Coston) Yes.

22 A. (By Mr. Carpenter) Yes.

23 **MR. YOUNG:** Mr. Chairman, at this time we ask
24 that the joint prefiled testimony of Mr. William Coston
25 and Kevin Carpenter be entered into the record as though

1 read.

2 **COMMISSIONER SKOP:** The joint prefiled
3 testimony of Mr. Coston and Carpenter will be entered
4 into the record as though read. You may proceed.

5 **BY MR. YOUNG:**

6 **Q.** Did you have one exhibit attached to your
7 testimony as relates to Progress Energy Florida, which
8 is labeled Progress Energy, which is the project
9 management internal controls relating to Progress Energy
10 Florida nuclear plant uprate and construction projects?

11 **A.** (By Mr. Coston) Yes, we do.

12 **Q.** Do you have any changes or corrections to that
13 exhibit other than the ones you've previously stated?

14 **A.** (By Mr. Coston) Not except for the ones I've
15 previously stated.

16 **MR. YOUNG:** Mr. Chairman, I ask that that
17 Exhibit CC-1, which is the revised CC-1, is, and is
18 marked as Number 77 on the Comprehensive Exhibit list be
19 identified as such.

20 **COMMISSIONER SKOP:** Okay. Show it done. And
21 that's not yet entered.

22 **MR. YOUNG:** No, sir.

23 **COMMISSIONER SKOP:** All right. Very well.

24 (Exhibit 77 marked for identification.)

25

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**
2 **COMMISSION STAFF**
3 **DIRECT JOINT TESTIMONY OF WILLIAM COSTON AND KEVIN CARPENTER**
4 **DOCKET NO. 100009-EI**
5 **JULY 20, 2010**

6
7 **Q. Mr. Coston, please state your name and business address.**

8 A. My name is William Coston. My business address is 2540 Shumard Oak Boulevard,
9 Tallahassee, Florida 32399-0850.

10 **Q. By whom are you employed?**

11 A. I am employed by the Florida Public Service Commission as a Government Analyst II,
12 within the Office of Auditing and Performance Analysis.

13 **Q. What are your current duties and responsibilities?**

14 A. I perform reviews and investigations of Commission-regulated utilities, focusing on
15 the effectiveness of management and company practices, adherence to company procedures,
16 and the adequacy of internal controls. Mr. Carpenter and I jointly conducted the 2010 review
17 of Progress Energy Florida's project management internal controls for the extended power
18 uprate project at the Crystal River Unit 3 and Levy Nuclear Project.

19 **Q. Please describe your educational and relevant experience.**

20 A. I earned Bachelor of Arts and Master of Public Administration degrees from Valdosta
21 State University in 1993 and 1995, respectively. I have worked for the Commission for seven
22 years conducting operations audits and investigations of regulated utilities. Prior to my
23 employment with the Commission, I worked for six years at Bank of America in the Global
24 Corporate and Investment Banking division.

25 **Q. Have you filed testimony in any other dockets before the Commission?**

DOCUMENT NUMBER DATE

05929 JUL 20 0

FPSC-COMMISSION CLERK

1 A. Yes. I filed testimony in Docket No. 090009-EI. This testimony concerned the 2009
2 audit of Progress Energy Florida's (PEF) project management internal controls for the nuclear
3 plant uprate at the Crystal River Unit 3 and Levy Nuclear Project. Additionally, in 2005 I
4 filed testimony in Docket No. 050078-EI. This testimony addressed an audit of distribution
5 electric service quality for Progress Energy Florida's vegetation management, lightning
6 protection, and pole inspection processes.

7 **Q. Mr. Carpenter, please state your name and business address.**

8 A. My name is Kevin Carpenter. My business address is 2540 Shumard Oak Boulevard,
9 Tallahassee, Florida 32399-0850.

10 **Q. By whom are you employed?**

11 A. I am employed by the Florida Public Service Commission, as a Regulatory Analyst II,
12 within the Office of Auditing and Performance Analysis.

13 **Q. What are your current duties and responsibilities?**

14 A. I perform reviews and investigations of Commission-regulated utilities, focusing on
15 the effectiveness of management and company practices, adherence to company procedures,
16 and the adequacy of internal controls. Mr. Coston and I jointly conducted the 2010 review of
17 Progress Energy Florida's project management internal controls for the nuclear plant uprate at
18 the Crystal River Unit 3 and new construction underway at the Levy site.

19 **Q. Please describe your educational and relevant experience.**

20 A. I earned a Bachelor of Science in Business Administration degree from Concord
21 University in 1981. I am currently enrolled as a graduate student at Florida State University,
22 seeking a Masters in Applied American Politics and Policy degree. My background includes
23 experience with the West Virginia State Tax Department and the Florida Department of
24 Business and Professional Regulation. I also worked as an Accountant with a public
25 accounting firm in Orlando, FL.

1 **Q. Have you filed testimony in any other dockets before the Commission?**

2 A. No.

3 **Q. Please describe the purpose of your testimony in this docket.**

4 A. Our testimony presents the attached audit report entitled *Review of Progress Energy*
5 *Florida's Project Management Internal Controls for Nuclear Plant Uprate and*
6 *Construction Projects* (Exhibit CC-1). This review was requested by the Commission's
7 Division of Economic Regulation to assist with the evaluations of nuclear cost recovery
8 filings. The report describes key project events and contract activities completed during mid-
9 2009 through May 2010 for the Crystal River 3 Uprate project and the Levy Nuclear Project.
10 The report also presents descriptions of the current project management internal controls
11 employed by Progress Energy Florida.

12 **Q. Please summarize the areas examined by your review.**

13 The Office of Auditing and Performance Analysis conducted a review of the internal
14 controls and management oversight of the nuclear projects underway at Progress Energy
15 Florida. This is an ongoing annual review that examines the organizations, processes, and
16 controls being used by the company to execute the Extended Power Uprate of Unit 3 at the
17 Crystal River Energy Complex and the construction of Levy Nuclear Plant Unit 1 and Unit 2.
18 This is the third review of the company's controls for its nuclear construction projects. The
19 first two reviews were filed in the 2008 and 2009 Nuclear Cost Recovery Clause Dockets
20 before the Commission.

21 The primary objective of this review was to document project key developments, along
22 with the organization, management, internal controls, and oversight that PEF has in place or
23 plans to employ for these projects. The internal controls examined were related to the
24 following key areas of project activity: planning, management and organization, cost and
25 schedule controls, contractor selection and management, and auditing and quality assurance.

1 **Q. Please summarize your conclusions regarding the Levy Nuclear Project.**

2 **A.** The company made a decision in 2010 to shift the project in-service dates out to at
3 least 2021 and 2022 for the two units. The company evaluated several options, including
4 cancelation, when considering the future of the project. We recognize that several internal and
5 external factors influenced the company's decision to shift its construction schedule for this
6 project. Given the uncertainties facing the company, keeping the project progressing without
7 further substantial investment is a reasonable approach at this point in time.

8 **Q. Please summarize your conclusions regarding the Extended Power Uprate**
9 **Project.**

10 **A.** In 2009, PEF completed Phase II of the Extended Power Uprate (EPU) project at
11 Crystal River Unit 3. Overall, the company anticipates the total EPU project cost to be \$479.4
12 million (excluding AFUDC and joint owner commitments); representing a 12 percent
13 increase from the original \$426.6 million estimates. During the fall 2009 outage, the company
14 discovered a delamination within the wall of the unit's containment vessel. This was
15 identified during the work to replace the unit's steam generators—a separate and independent
16 project from the EPU. However, the delamination repair has extended the original outage
17 through at least fall 2010 and will impact the EPU's phase III schedule—extending the project
18 until at least 2012. We recommend the Commission monitor the EPU project for potential
19 cost impacts resulting from scheduling delays caused by the delamination issue.

20 Also, in mid-2009, PEF made the decision to defer the installation of its two low
21 pressure turbines from Phase II to Phase III work scope. Two factors influenced this decision:
22 the turbines failing a quality assessment test, and the ability to adequately insure this turbine
23 model. The company is currently negotiating a resolution with Siemens, the turbine
24 manufacturer, to resolve the outstanding issues. We recommend that the Commission monitor
25 the results of the Siemens turbine negotiations to ensure that PEF recovers all the appropriate

1 costs, and excludes any costs resulting from a possible vendor error.

2 Additionally, if the company chooses not to move forward with its current Siemens
3 low pressure turbine selection, there will be a decrease in the final megawatt electrical (MWe)
4 output for the project. If this occurs, an evaluation may be necessary to assess the appropriate
5 handling of the reduction in planned versus achieved MWe output. In effect, the uprate would
6 then have cost more per additional MWe. We recommend that the Commission monitor the
7 appropriate handling of any reduction in planned versus achieved MWe output resulting from
8 any change to the original turbine design option.

9 Prior to the company implementing the EPU changes, PEF must receive approval from
10 the Nuclear Regulatory Commission to operate at the higher MWe output. This is achieved
11 through an amendment to the company's current operating license. The company initiated its
12 License Amendment Request application in 2007. In June 2009, PEF commissioned an
13 "Expert Panel" to review its *Final Draft-CR3 EPU Licensing Report*. The panel determined
14 that the application, as written, would not receive NRC approval, requiring the company to
15 expend resources to strengthen the submittal. The company contracted with AREVA to
16 complete the required restructuring/rewrite of the License Amendment Request (LAR) draft,
17 and to complete additional engineering scope-related work for the LAR application. We
18 recommend that the Commission consider whether the additional costs for the LAR
19 restructuring/rewrite and the additional engineering scope by AREVA resulted from
20 inadequate management oversight. This topic is discussed in greater detail in sections 3.1.1
21 and 3.1.2 of Exhibit CC-1 included in our testimony.

22 **Q. Are you sponsoring any exhibits?**

23 A. Yes, our audit report is attached as Exhibit Numbers CC-1.

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

25 A. Yes.

1 **BY MR. YOUNG:**

2 Q. Do you have a summary of your testimony?

3 A. (By Mr. Coston) Yes, we do.

4 Q. Can you please provide a summary of your
5 testimony as it relates to Progress Energy Florida?

6 A. (By Mr. Coston) Yes. Good afternoon,
7 Commissioners. Our testimony presents a management
8 audit review of the project management internal controls
9 that Progress Energy is using in managing the Crystal
10 River nuclear unit uprate and the construction of its
11 Levy nuclear project.

12 The primary objective of this review was to
13 document and assess the key developments for both
14 projects. Our review included examining the
15 organizational, management, internal controls and
16 oversight that Progress Energy Florida has in place for
17 these projects.

18 The internal controls examined were related to
19 the following key areas of project activity: Planning
20 and project management oversight, management and
21 organization, cost controls and schedule controls,
22 contractor selection and management, and auditing and
23 quality assurance.

24 For the Levy nuclear project, in 2009 the
25 company evaluated the project's future and made the

1 decision to extend the schedule by at least 60 months
2 from its original 2016 in-service date. Currently the
3 company's focus is to obtain the combined operating
4 license from the Nuclear Regulatory Commission, which
5 the company currently expects in late 2012 or early
6 2013. The company does not plan to complete any major
7 construction on the Levy nuclear project until after
8 receiving this approval.

9 In keeping with its decision to shift the
10 construction schedule for the Levy nuclear project,
11 Progress Energy Florida renegotiated its existing
12 engineering procurement and construction contract with
13 the consortium of Westinghouse and Shaw Stone & Webster.
14 The amended contract now allows for this extended shift
15 in schedule.

16 Additionally, the company anticipated an
17 increase in the total project cost as a result of the
18 schedule shift, and the company has identified these
19 costs in the new estimates in its overall integrated
20 project plan. Audit staff determined that the
21 management approach and internal controls used to
22 evaluate and select the final decision for the Levy
23 nuclear project were reasonable.

24 **A.** (By Mr. Carpenter) In 2009, the company also
25 moved forward with the extended power uprate project for

1 its Crystal River 3 unit. The project management team
2 demonstrated that the work completed during 2009 was
3 within the original schedule range and budget range
4 approved by management. Overall, the company estimates
5 that the final project costs will be approximately
6 12 percent over the original estimate.

7 During the 2009 refueling outage, while
8 performing the steam generator replacement, the company
9 identified a delamination in the unit's containment
10 vessel wall. While this event is not related to the
11 extended power uprate project, the repair timeline will
12 delay the company's future uprate schedule. Audit staff
13 recommends that the Commission monitor for potential
14 impacts on the uprate schedule and cost estimates as a
15 result of the delamination repairs.

16 Additionally, the company has experienced
17 challenges with the low pressure turbines it plans to
18 install as part of the uprate project. Audit staff
19 recommends the Commission continue to monitor the impact
20 of the turbine manufacture and installation to ensure
21 that no unnecessary additional costs are incurred as a
22 result of the manufacturing issues, and that the plan
23 versus, the plan versus achieved megawatt electricity
24 output resulting from any changes is properly handled.

25 Finally, the company has not submitted its

1 license amendment request with the Nuclear Regulatory
2 Commission to operate at the anticipated additional
3 180 megawatts of electricity once the project is
4 complete. In 2009, the company determined after review
5 by an expert panel that its original draft license
6 amendment request application would not meet the Nuclear
7 Regulatory Commission's expectation or approval. The
8 company spent the second half of 2009 and the first half
9 of 2010 restructuring and strengthening its application.

10 Audit staff recommends that the Commission
11 consider whether additional costs incurred as a result
12 of these actions were a result of inadequate management
13 oversight.

14 That concludes our summary. Thank you.

15 **MR. YOUNG:** Mr. Chairman, before we tender
16 Mr. Coston and Mr. Carpenter for cross, I'd like to note
17 on page 13 of staff's revised exhibit, we, we
18 highlighted in yellow, it is confidential, so any
19 questions, just a point of information to the parties,
20 if any questions relating to that, please be careful on
21 that.

22 **COMMISSIONER SKOP:** All right. Very well. At
23 this point staff has tendered the witness for
24 cross-examination, and who's going first? We're going
25 to start with the Intervenors or I believe Progress.

1 **MR. WALLS:** No questions.

2 **COMMISSIONER SKOP:** Okay. Very well. Any
3 questions from the Intervenors? Mr. Rehwinkel?

4 **MR. REHWINKEL:** Yes.

5 **CROSS EXAMINATION**

6 **BY MR. REHWINKEL:**

7 **Q.** Good afternoon.

8 **A.** (By Mr. Coston) Good afternoon.

9 **A.** (By Mr. Carpenter) Good afternoon.

10 **Q.** Charles Rehwinkel with the Public Counsel's
11 Office. I guess the way I'll ask questions, I'll lob
12 the question out there, and whoever is the right one to
13 answer it, answer it.

14 **A.** (Mr. Coston) Okay.

15 **Q.** In the testimony on page 4, on lines 1 through
16 7, you state conclusions regarding the nuclear, the Levy
17 nuclear project; is that correct?

18 **A.** (By Mr. Coston) Yes.

19 **Q.** Okay. There's a statement in here on lines 6
20 through 7 that says, "Given the uncertainties facing the
21 company, keeping the project progressing without further
22 substantial investment is a reasonable approach at this
23 time -- "is a reasonable approach at this point in
24 time." Is that correct?

25 **A.** (By Mr. Coston) By Progress, yes.

1 **Q.** Okay. Now does your testimony make a judgment
2 about whether Progress will ultimately take the
3 appropriate steps to restart the project?

4 **A.** (By Mr. Coston) Our testimony speaks to the
5 decision-making process the company went through to make
6 the decision to extend its schedule. And this, this
7 statement reflects that.

8 **Q.** Okay. So is it true then that your testimony
9 makes no judgment about whether Progress will ultimately
10 build the Levy nuclear plant?

11 **A.** (By Mr. Coston) No. It does not make --

12 **Q.** Is it true that it makes no judgment?

13 **A.** (By Mr. Coston) It makes no judgment. Excuse
14 me.

15 **Q.** So the answer would be yes for the record.

16 **A.** (By Mr. Coston) Okay.

17 **Q.** When you made this statement -- let me strike
18 that and say it this way. Isn't it true that when you
19 provided your testimony, you did not have the
20 information contained in John Elnitsky's rebuttal
21 testimony Exhibit JE-6?

22 **A.** (By Mr. Coston) We did not have that specific
23 testimony on hand when we filed our testimony or made
24 this assessment.

25 **Q.** Did you review Exhibit JE-6 to John Elnitsky's

1 rebuttal testimony?

2 **A.** (By Mr. Coston) We have reviewed that.

3 **Q.** Okay. Do you have a copy of that with you?

4 Do you have the confidential version?

5 **A.** (By Mr. Coston) We have a redacted version.

6 **Q.** Okay. If I could hand --

7 **MR. REHWINKEL:** Mr. Chairman, if I could
8 approach the witness and hand them a copy of the
9 confidential version.

10 **BY MR. REHWINKEL:**

11 **Q.** This is JE, Exhibit JE-6 attached to the
12 August 3rd, 2010, testimony of John Elnitsky. And I'm
13 going to ask you questions without asking --

14 **MR. YOUNG:** Mr. Chairman? I'm sorry.

15 **COMMISSIONER SKOP:** Hold on, Mr. Rehwinkel.
16 Mr. Young.

17 **MR. YOUNG:** Is it possible I can get the un,
18 the, the confidential version of that testimony?

19 **COMMISSIONER SKOP:** The redacted version or
20 the non-redacted?

21 **MR. YOUNG:** The non-redacted version.

22 **COMMISSIONER SKOP:** Okay.

23 Mr. Rehwinkel, do you--

24 **MR. YOUNG:** Because he's asking confidential.

25 **COMMISSIONER SKOP:** Do you have a copy of the

1 confidential version?

2 **MR. REHWINKEL:** I do not. I mean, that was my
3 copy. Yeah. I think -- yeah.

4 **COMMISSIONER SKOP:** All right. Is there
5 another copy around or is there a way we can work
6 through this? Perhaps, you know, staff might be able to
7 look over someone's shoulder.

8 **MR. YOUNG:** Thank you.

9 **MR. REHWINKEL:** I think Mr. Walls is
10 accommodating. I appreciate that.

11 **COMMISSIONER SKOP:** He's got them working well
12 for you.

13 **MR. REHWINKEL:** I think everybody has been
14 very professional about litigating without taking it
15 personally here.

16 **COMMISSIONER SKOP:** Sharing the workload.
17 It's all good.

18 **BY MR. REHWINKEL:**

19 **Q.** My question to you is, and I don't want you to
20 utter any of the numbers --

21 **A.** (By Mr. Coston) Certainly.

22 **Q.** -- in this in any answers that I, that I ask,
23 ask for. This testimony was filed on August 3rd, 2010.
24 Your report was filed in July of 2010; is that correct?

25 **A.** (By Mr. Coston) That is correct.

1 Q. Okay. The number that is contained, that is
2 summarized, that is the summary number in JE-6, is that
3 a number that you considered when drafting your
4 testimony?

5 A. (By Mr. Coston) You're making reference to the
6 top number or the bottom chart?

7 Q. The number that is, and I believe I can say
8 this, greater than 400 million.

9 A. (By Mr. Coston) That number was not -- I do
10 not recall being provided during the course of our
11 review.

12 Q. Were you aware of the magnitude of that number
13 when you did your review?

14 A. (By Mr. Coston) Again, that number was not
15 provided and I was not aware of that number.

16 Q. So you would not have been aware of that?

17 A. (By Mr. Coston) No.

18 Q. Okay. Is that number greater than what you
19 thought it would be at the time you wrote your
20 testimony?

21 A. (By Mr. Coston) I have not had an opportunity
22 to look at what the number is speaking to. When we
23 create, wrote our testimony in reference to the, the
24 assertion that we make that we spoke to earlier on page
25 4, that was looking at the decision-making process,

1 which looked at costs but looked at the greater totality
2 of the internal controls in the project management
3 approach. So numbers were one aspect of what we looked
4 at, including the chart listed above, but the bottom
5 number we did not look at, we were not aware of.

6 Q. Okay. And your, your opinion that is
7 contained on lines 6 and 7 on page 4 is from a project
8 decision-making standpoint and not necessarily based on
9 a customer impact; is that correct?

10 A. (By Mr. Coston) That's correct. We did not
11 look at the customer impact.

12 Q. Okay. Okay. I can relieve you of the burden
13 of that confidential information.

14 I want to turn now, I want to turn now to the
15 CR3 project, and ask that you turn to page 45 of the, of
16 the audit. What do I call this exhibit? This is the
17 audit report. Okay. Now at this point in time there's
18 no confidential information on page 45; is that correct?

19 A. (By Mr. Coston) That's correct.

20 Q. Okay. In your review of the CR3 EPU project,
21 did you look at the budget for the project, or cost
22 estimate, I should say?

23 A. (By Mr. Coston) We did look at the cost
24 estimate.

25 Q. Okay. Now in your testimony, or in this, the

1 audit report, you state that the project, the initial
2 project cost estimate was approximately \$427 million; is
3 that correct?

4 **A.** (By Mr. Coston) Yes.

5 **Q.** Okay. And you say there was a base
6 \$250 million uprate work estimate. What do you mean by
7 base?

8 **A.** (By Mr. Coston) That number was the number
9 provided by the company as the base for its technical
10 work of the project. At inception in the 2006 business
11 analyst package, that's what they included in that
12 package.

13 **Q.** Okay. Now did you make any judgment about the
14 \$89 million for transmission upgrades as far as whether
15 it -- let me strike that question.

16 There's a statement in here that there, there
17 was \$89 million for transmission upgrades; is that
18 right?

19 **A.** (By Mr. Coston) Yes.

20 **Q.** Okay. Did you make any judgment about whether
21 that \$89 million should be appropriate for the current
22 budget to be measured against?

23 **A.** (By Mr. Coston) We did not.

24 **Q.** Okay. Did you learn anything about whether,
25 in your, in your audit work, about whether the -- well,

1 let me strike that question.

2 In reviewing the company documents, did you
3 look at the July 2nd, 2009, audit of the CR3 EPU?

4 **A.** (By Mr. Coston) We did look at that audit.

5 **Q.** Okay. Did you look at the audit work papers
6 associated with that audit?

7 **A.** (By Mr. Coston) We looked at the management
8 response to the audit. I cannot recall if we looked
9 specifically at the work papers themselves. We spoke
10 with the audit manager who conducted the audit and
11 conducted the interview.

12 **Q.** Okay. Now, as part of your, the opinion that
13 you would render to the Commission in this audit report,
14 this July 2010 audit report, would you be concerned with
15 the company's adherence to the project budget from a
16 cost standpoint?

17 **A.** (By Mr. Coston) I don't recall the specifics
18 of that audit report. If you have a copy, I'd be glad
19 to look at it.

20 **Q.** Well, I guess my question was just generally
21 with respect to the audit report that you performed,
22 would, would adherence to the budget, for the overall
23 project budget, is that something that you would look at
24 with respect to developing your opinions in the audit
25 report?

1 **A.** (By Mr. Coston) Certainly.

2 **Q.** Did, did you see any evidence in the July 2nd
3 audit report work papers that the Phase 2 portion of the
4 EPU uprate was 50 percent over budget?

5 **A.** (By Mr. Coston) Certainly we looked at the
6 budget aspects of that and looked at the budget in the
7 totality of the original budget that was provided to the
8 IPP, in the IPP for the project and the company's
9 approach to that. And the management audits, or the
10 audits that we reviewed, we spoke with management on
11 their response to those audits in addressing the
12 concerns that the audit managers had in relation to
13 those audits.

14 **Q.** Okay. If, if the, there was not a specific
15 finding in the company's internal audit by the ASD, the
16 Audit Services Division, would you not then be of any,
17 have any concern if -- if there was not a specific
18 finding in the ASD work product, you would not look
19 behind that?

20 **A.** (By Mr. Coston) We requested and received the
21 audits that were completed by the company, the
22 management response to those audits, and spoke with the
23 audit managers for those audits, and certainly looked at
24 those and discussed the, the findings and the company's
25 approach to resolving those findings. So, and we

1 certainly, any time there would be a, an issue or an
2 improvement, requirement or something to that effect,
3 certainly talked through how the company has addressed
4 those.

5 Q. Okay. So if there was not a finding in the
6 July 2nd, 2009, report about the Phase 2 portion of the
7 CR3 uprate being 50 percent over budget, then that would
8 not have been something that you would have been aware
9 of; is that correct?

10 A. (By Mr. Coston) I would have to really look at
11 the July audit and kind of refresh my memory on what the
12 audit said to determine how we approached.

13 MR. REHWINKEL: Okay. Mr. Chairman, I would
14 like to inquire of staff witnesses using an exhibit that
15 was admitted with Mr. Franke's testimony. I just need
16 to get a hand on it.

17 COMMISSIONER SKOP: All right. We'll hold in
18 place for a moment.

19 And, staff, since the exhibit has been moved
20 into evidence already, I'm sure that staff would have no
21 objection to the use of the exhibit.

22 MR. YOUNG: Not at this time.

23 COMMISSIONER SKOP: All right.

24 MR. REHWINKEL: This is Exhibit 199 for
25 everybody.

1 **COMMISSIONER SKOP:** Very well.

2 **MR. REHWINKEL:** And I would like to hand
3 Mr. Brew's copy of this exhibit to the witness and
4 reference page, Bates stamp page 10 NC OPC
5 POD2-45-000488, and ask the witnesses to review that
6 document.

7 **MR. YOUNG:** And, Mr. Chairman, just for point
8 of clarification.

9 **COMMISSIONER SKOP:** Mr. Young.

10 **MR. YOUNG:** This is -- or point of inquiry.
11 This is a confidential document; correct?

12 **MR. REHWINKEL:** Yes, it is.

13 **MR. YOUNG:** And you're talking about the page,
14 if I'm following correctly, that begins with the word
15 "final." Or am I mistaken on the page?

16 **MR. REHWINKEL:** Yes. Which is, which is a
17 line that is not highlighted in yellow.

18 **MR. YOUNG:** Okay.

19 **COMMISSIONER SKOP:** Before the witness answers
20 the questions, let's make sure that the information
21 we're not disseminating is in fact not confidential.

22 **MR. REHWINKEL:** Yes.

23 **COMMISSIONER SKOP:** Everyone in agreement on
24 that?

25 **MR. YOUNG:** Can you repeat? I'm sorry, sir,

1 can you repeat --

2 **COMMISSIONER SKOP:** I just want to make
3 sure -- and I appreciate you taking the time to ask
4 Mr. Rehwinkel. I just want to make sure that the
5 information contained in his proposed question is not
6 going to be confidential. So we'll check and balance
7 here. But as long the parties agree it's not a problem,
8 you may proceed.

9 But, Mr. Walls, do you have something to add?

10 **MR. WALLS:** Yeah. Mr. Young is correct. That
11 line is not highlighted.

12 **COMMISSIONER SKOP:** All right. Better to be
13 safe than sorry.

14 **MR. YOUNG:** Yes.

15 **COMMISSIONER SKOP:** Thank you. You may
16 proceed.

17 **BY MR. REHWINKEL:**

18 **Q.** The first page, if you can keep your finger on
19 that page, the first page of this document says, "Audit
20 services department CR3 EPU and SGR projects July 2,
21 2009." Do you see that?

22 **A.** (By Mr. Coston) Yes.

23 **Q.** Okay. Is -- so going back to Bates stamp page
24 488, is this information that's on this first line in
25 that first sentence, is that information you were aware

1 of when you prepared your audit report?

2 **A.** (By Mr. Coston) Yes. We did review this
3 document with the company.

4 **Q.** Okay. So were you aware of budget costs for
5 Phase 2 being 50 percent over in the financial view
6 compared to project estimates?

7 **A.** (By Mr. Coston) Yes. We did go through the
8 findings that were outlined in this audit as well as the
9 improvements that the company or the audit staff
10 identified and management's response to how they were
11 managing and tracking the costs.

12 **Q.** So does the fact that you offer no opinion
13 about that mean there was not a concern to you about the
14 project being 50 percent over budget, Phase 2 portion of
15 it?

16 **A.** (By Mr. Coston) Well, in relation to the
17 audit, we looked at the audit and were satisfied that
18 the, that the items that were identified by the
19 company's Audit Services Department were adequately
20 addressed by management.

21 **Q.** Okay. If the company -- so from the
22 standpoint of the customers and the costs that the
23 company is seeking to recover, does your audit report
24 say that it's okay for them to be over budget, or are
25 you not offering an opinion about that aspect of their

1 project?

2 **MR. YOUNG:** Objection. Asked and answered.
3 Just to be, to expound on the objection, I think the
4 witness has answered that question, that they did not,
5 did not express an opinion as it relates to the
6 50 percent over the financial, 50 percent over the
7 financial view compared to the project estimates.

8 **COMMISSIONER SKOP:** Mr. Rehwinkel, to the
9 objection.

10 **MR. REHWINKEL:** I really don't think that
11 part of my -- I didn't think I asked that question yet.
12 I mean, that's what I want to know. I don't feel like
13 there's an answer to that. I mean, my question isn't
14 critical. I'm just trying to understand the nature of
15 the opinion that is being offered in the audit report.

16 **COMMISSIONER SKOP:** All right. I'm going to
17 overrule the objection. You may proceed.

18 **THE WITNESS:** (By Mr. Coston) Could I have you
19 repeat the question?

20 **MR. REHWINKEL:** Okay. Let me see if I can --
21 can the court reporter read my question back?

22 (Foregoing question read by the court
23 reporter.)

24 **THE WITNESS:** (By Mr. Coston) Thank you.
25 We're not offering an opinion on the overage or underage

1 of the budget. What we are offering, our review looks
2 at, is how the company monitors and evaluates through
3 its internal control process its costs. And including
4 in that is the audit review that the internal, that the
5 company does through its audit process.

6 **BY MR. REHWINKEL:**

7 Q. Okay. Thank you. That's, that's helpful to
8 me. Thank you.

9 With respect to the issue regarding the AREVA
10 rewrite, did you ask the company to provide
11 documentation that showed that the, they had planned to
12 have the expert panel participate in the review of the
13 draft LAR?

14 A. (By Mr. Coston) We did talk through that with
15 the company.

16 Q. Did they show you any documents before the
17 expert panel review that showed that the expert panel
18 was something that was always planned?

19 A. (By Mr. Coston) We were not able to identify
20 that in our work papers, any of the work papers provided
21 by the company.

22 A. (By Mr. Carpenter) I would add that the
23 presentation that was given to the Nuclear Regulatory
24 Commission on April 1st of 2009, I recall that it is,
25 that the expert panel was addressed in one of those

1 slides. And I can get that in front of me, if you need
2 me to.

3 Q. April 1, 2009?

4 A. (By Mr. Carpenter) Yes. The title of this
5 presentation was Crystal River Unit 3 Extended Power
6 Uprate, April 1st, 2009. This was a presentation from
7 Progress Energy to the NRC, the Nuclear Regulatory
8 Commission.

9 And the pages are not numbered, but the title
10 of this particular slide is EPU Submittal Approach. At
11 the bottom of that is a sentence that states -- and I
12 don't believe any of this, since I got it off the
13 website, would be confidential. But it states that,
14 "Establishing independent expert panel for supplemental
15 review." That was the first notice that I saw in the
16 documentation that we looked at.

17 Q. Okay. So that says establishing as if it is
18 currently going on; correct?

19 A. (By Mr. Carpenter) It's stating establishing
20 independent expert panel. So at that point in time I
21 think they were starting to think about having the
22 expert panel review the LAR. At least that's what I
23 would take from it.

24 Q. Okay. But there's no documentation that you
25 were provided that shows that this had always been

1 planned as part of the LAR preparation?

2 **A.** (By Mr. Carpenter) It was stated to us
3 verbally, but nothing in documentation.

4 **Q.** Okay. What reliance did you place on the IPP
5 with respect to cost, to cost, effective cost control?

6 **A.** (By Mr. Coston) IPP for both projects or a
7 particular project?

8 **Q.** For the CR3.

9 **A.** (By Mr. Coston) CR3. The IPP, we used that as
10 the document that the company uses to receive approval
11 for the expenditures of the project, and in that
12 document we look at the risk and the feasibility aspects
13 they include in that and present to their senior
14 management for approval.

15 **Q.** Did you consider the IPP to be a controlling
16 document with respect to their, the company's
17 performance against the budget with respect to the
18 execution of the project?

19 **A.** (By Mr. Coston) Certainly the IPP is the
20 document, the request to the senior management for
21 funding, so the company does use that and the project
22 team uses that for the request for additional funding if
23 there is a budget variance.

24 **Q.** Did you understand the IPP to be the official
25 budget for the project until changed by a subsequent

1 **A.** (By Mr. Coston) Yes.

2 **Q.** And were you responsible for or involved in
3 the preparation of those responses?

4 **A.** (By Mr. Coston) Yes, I was.

5 **A.** (By Mr. Carpenter) Yes.

6 **Q.** And can you state whether or not those
7 responses are accurate?

8 **A.** (By Mr. Coston) If you'll give me a moment, I
9 can.

10 **Q.** Sure.

11 **A.** (By Mr. Coston) Yes.

12 **Q.** Yes? Thank you.

13 I'm going to refer you back to the statement
14 you have on page 4 of your prefiled testimony that
15 Mr. Rehwinkel discussed with you regarding the question
16 and answer on the top of page 4 that says, "Please
17 summarize your conclusions regarding the Levy nuclear
18 plant project." And the statement at line 6 and 7 that,
19 "given the uncertainties facing the company, keeping the
20 project progressing without further substantial
21 investment is a reasonable approach at this time," do
22 you see that?

23 **A.** (By Mr. Coston) Yes.

24 **Q.** And I've got to admit I was very perplexed by
25 this testimony, and I think we're going to be here for a

1 while, but I think I understood you to change your
2 testimony in your summary, and I want to make sure that
3 I understood it right. I heard you to say that your
4 conclusion was that Progress's management controls for
5 making the Levy decision was reasonable. Is that a fair
6 statement of your testimony?

7 **A.** (By Mr. Coston) I have it in front of me.
8 Could I have you repeat?

9 **Q.** What I heard you was that you said that you
10 concluded that Progress's management controls for the
11 Levy decision were reasonable. Is that right?

12 **A.** (By Mr. Coston) I can read back what I, what
13 I --

14 **Q.** Please do.

15 **A.** (By Mr. Coston) I said audit staff determined
16 that the management approach and internal controls used
17 to evaluate and select the final decision of the Levy
18 nuclear project were reasonable.

19 **Q.** Okay. But what your testimony says is that
20 you have concluded that the company's decision, given
21 the uncertainties that it faced, to progress without
22 further substantial investment is a reasonable approach
23 at this time. So what I want to understand is, did you
24 reach an independent decision that Progress's decision
25 regarding the revised schedule and the go-slow approach

1 for Levy is reasonable? Is that your opinion, or are
2 you saying that your review of the company's process,
3 their management controls is reasonable, because those
4 are two very different things?

5 A. (By Mr. Coston) The scope of our audit review
6 was to examine the project management internal controls
7 of Progress Energy and its relationship in constructing
8 this plant, new plant, and that is what we did in our,
9 within our scope. And that is what our statement here
10 reflects, in that within the scope of our review and the
11 scope that is included within our executive summary, the
12 approach that was taken by the company were within a
13 reasonable, with internal controls -- excuse me. Let me
14 restate that.

15 The approach taken by the company and the
16 controls that were in place to reach the decision and
17 the decision-making process were reasonable. We're not
18 speaking on the decision itself.

19 Q. Very good. So to the extent that I asked you
20 questions about the three options that the company
21 considered --

22 A. Uh-huh.

23 Q. -- whether they were reasonable, you would say
24 you have no opinion about the decision regarding any of
25 those options, but that the process for the company to

1 consider them you thought was reasonable.

2 **A.** (By Mr. Coston) Right. That they were in the
3 totality of the decision-making process, yes.

4 **A.** (By Mr. Carpenter) That is correct.

5 **Q.** Okay. And to the extent the company in its
6 rebuttal referred to this statement as a statement that
7 staff considered their actions to be reasonable, that
8 would not be an accurate statement of your actual
9 findings; is that right?

10 **A.** (By Mr. Coston) Right. We're speaking on
11 behalf of the decision-making process --

12 **Q.** Process, not the decisions itself.

13 So when I ask -- I'm sorry.

14 **THE COURT REPORTER:** You were talking over
15 each other. Would you repeat your answer, please?

16 **THE WITNESS:** (By Mr. Coston) Yes. We
17 reviewed in relationship to the decision-making process,
18 in relationship to the internal controls in place by the
19 company.

20 **BY MR. BREW:**

21 **Q.** So if I were to ask you the questions of,
22 regarding what would be the appropriate criteria to
23 consider to make an informed decision on that, you again
24 would say that you don't have an opinion on that, again
25 only that the company's process for evaluating the

1 criteria it selected was reasonable.

2 **A.** (By Mr. Coston) I would say we had a, we
3 looked at the process, and in relationship to that
4 process there are certain criteria that the company
5 looked at and assumptions they made. And that, we
6 looked at those in the totality of the decision-making
7 process.

8 **Q.** Good. But to the extent I asked you did you
9 use any assumptions of your own or do any of your own
10 evaluation of the decision, the answer would be no,
11 that's not what we did?

12 **A.** (By Mr. Coston) No.

13 Excuse me.

14 **Q.** Do you mean yes?

15 **A.** (By Mr. Coston) Yes.

16 **Q.** Okay. And so, bottom line, the question of
17 prudence, was their decision reasonable, is not
18 something in your testimony?

19 **A.** (By Mr. Coston) No.

20 **Q.** Okay. The same, the beginning of that
21 sentence, "Given the uncertainties facing the company,"
22 again, did you evaluate those uncertainties as to their
23 likely impact on the project, or was your review -- went
24 to -- did your review go to the company's process for
25 evaluating those uncertainties?

1 **A.** (By Mr. Coston) Our review went to the process
2 for evaluating and identifying those uncertainties.

3 **Q.** Okay. But whether those uncertainties had
4 gotten bigger, smaller, changed was not an evaluation
5 that you performed.

6 **A.** (By Mr. Coston) Correct.

7 **Q.** Okay. And, again, to the extent the company
8 made a decision that revised the costs and schedule for
9 the project, you did not evaluate the reasonableness of
10 the proposed cost and schedule; is that correct?

11 **A.** (By Mr. Coston) Correct. The decision process
12 to revise those costs.

13 **Q.** Nor did you evaluate the likely ramifications
14 of that in terms of impacts on rates or customer
15 impacts; is that right?

16 **A.** (By Mr. Coston) Correct.

17 **Q.** Okay. You're making progress.

18 To the extent there were other ramifications
19 of the decision to slip the schedule by 60 months,
20 including its impact on potential joint ownership in the
21 project, answers would be the same, you did not evaluate
22 those likely ramifications or the reasonableness? You
23 simply, again, looked at to the extent to which they
24 were part of the company's process for making its
25 decision; is that right?

1 **A.** (By Mr. Coston) Correct. We did look at joint
2 ownership and what the company is doing in that area,
3 but not, you know, in relationship to the decision.

4 **Q.** You looked at it in relationship to its
5 process and controls or the reasonableness of its
6 actions?

7 **A.** (By Mr. Coston) Process, the process and
8 controls and if it did impact a decision-making -- if it
9 was included in the decision-making process.

10 **Q.** Got you. Not whether they decided that
11 process reasonably.

12 **A.** (By Mr. Coston) Correct.

13 **Q.** Okay. In the context of the options that the
14 company considered, in particular the potential for
15 project cancellation, again, my questions are going to
16 be the same. Did you look at whether they, they
17 considered -- whether the decision not to cancel the
18 project was reasonable or whether or not their process
19 for evaluating that option was reasonable?

20 **A.** (By Mr. Coston) The evaluation of the option.

21 **MR. BREW:** Okay. Thank you. That's all I
22 have.

23 **COMMISSIONER SKOP:** Thank you, Mr. Brew.

24 Ms. Kaufman?

25 **MS. KAUFMAN:** Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MS. KAUFMAN:

Q. Mr. Coston; right?

A. (By Mr. Coston) Yes.

Q. Okay. Thank you very much for that clarification with Mr. Brew. That cut out a lot of my questions. And that statement caused some consternation on this side of the table, so, so thank you for that.

I wanted to have you turn to page 15 of the audit report. Let me know when you're there.

A. (By Mr. Coston) Okay. We're there.

Q. Toward the middle of the page you talk about the operational readiness organization. Do you see that?

A. (By Mr. Coston) Yes.

Q. And in the next paragraph you talk about the importance of that readiness group. But the very last sentence in that paragraph says, "However, audit staff has concerns about the timing and resources placed on this group during 2009, given the schedule flux and the company's consideration to cancel the project."

Can you explain what concerns you had about the timing and resources related to the operational readiness group?

A. (By Mr. Coston) Yes. The concerns that are

1 referenced in that sentence would be the, again, the
2 timing of the implementation of the operational
3 readiness group within the organization for the Levy
4 project in relation to the evaluation of project
5 schedules that was being considered by the company.

6 Q. Well, is it your view that dollars were
7 expended on that activity that were perhaps unnecessary
8 given the, how did you put it, the schedule flux?

9 A. (By Mr. Coston) The company did expend
10 resources on that, within that group in the time frame.
11 The -- as we state in our report, there is value in that
12 organization. We're not nuclear engineers to under --
13 or recognize the need for training in that, or the time
14 it takes to train for that position. But given the
15 shift and, that the company was considering and those
16 resources and the implementation of that resources at a
17 senior management level provided some concern to us
18 during the review.

19 Q. In the course of your work, did you, did you
20 quantify or calculate a dollar amount that was related
21 to the concerns that you referenced there?

22 A. We did not, no.

23 MS. KAUFMAN: Thank you, Mr. Coston. That's
24 all I have. Coston.

25 COMMISSIONER SKOP: Mr. Jacobs.

1 **MR. JACOBS:** Thank you, Mr. Chairman.

2 **CROSS EXAMINATION**

3 **BY MR. JACOBS:**

4 **Q.** Good afternoon, gentlemen.

5 **A.** (By Mr. Coston) Good afternoon.

6 **A.** (By Mr. Carpenter) Good afternoon.

7 **Q.** My name is Leon Jacobs. I'm here representing
8 the Southern Alliance for Clean Energy. I think my
9 questions can be rather brief as well. You've answered
10 several of them already.

11 First of all, let's step back for a moment.
12 You've described this, what we see as Exhibit 77, as a
13 management review; right?

14 **A.** (By Mr. Coston) Correct.

15 **Q.** Is there, is there a nuance or a technical
16 distinction between a management review and an audit?

17 **A.** (By Mr. Coston) This review and the scope of
18 our review was done using the standards established by
19 the Institute for Internal Auditing, and I think it
20 would be comparable to, similar to a management review
21 or an internal audit type review.

22 **Q.** Okay. So you use the standards of an audit,
23 but you actually weren't in the context of traditional
24 Commission audits where you'd go in and perform an
25 official audit; this is not that. Is that, is that a

1 correct statement?

2 **A.** (By Mr. Coston) I would say that our audits
3 were not financial audits.

4 **Q.** Okay.

5 **A.** (By Mr. Coston) In that respect they're not
6 financial-based audits. They're more internal audits,
7 style audits.

8 **Q.** The, the, the text of your report in several
9 places presents statements that, that would make
10 conclusions about various issues that you had, you had
11 done a review of. And let's go to page 15 since we're
12 there.

13 **A.** (By Mr. Coston) Okay.

14 **Q.** And we're at the top of the page. The very
15 last sentence in that -- now I'd caution you there are
16 some, there is some confidential information here, but
17 I'm not, I'm not addressing that. I'm looking
18 specifically at the very last sentence of the first
19 page. I'm on the page, the first paragraph on page 15.

20 That sentence reads, "If the company remains
21 committed to completing the project, the cost
22 differential is necessary."

23 Could you walk me through what that statement
24 is, is, is meaning to communicate?

25 **A.** (By Mr. Coston) Sure. Just give me a moment

1 to refresh with respect to it.

2 Q. Sure. Sure.

3 A. (By Mr. Coston) There are, excuse me, there
4 are two numbers, confidential numbers in that paragraph.
5 The statement, the last sentence that you just read
6 reflects those numbers represent moving forward or
7 canceling the project. Just simply stating that,
8 because of the differential in those numbers, if the
9 company is choosing to move the project forward on an
10 ongoing basis, then the differential between those two
11 numbers would be necessary because the project is
12 continuing.

13 Q. Consistent with your prior testimony and line
14 of questioning from Mr. Rehwinkel and from Mr. Brew,
15 you're basically accepting the analysis done by the
16 company and you're looking at the process --

17 A. (By Mr. Coston) Correct.

18 Q. -- more so than looking at a qualitative
19 evaluation.

20 A. (By Mr. Coston) Correct. We did not analyze
21 the specifics of those two numbers.

22 Q. Okay. And if, if we go over to page 58,
23 again, at the top of the page, and again the very last
24 sentence in the first paragraph. And that sentence
25 reads, "Given the uncertainties facing the company,

1 audit staff recognizes that keeping the project
2 progressing without further substantial investment of
3 cost is a reasonable approach by PEF at this point in
4 time."

5 Your assessment of reasonableness, is that
6 consistent with our prior discussion that you've had
7 along the lines that it's pretty much based on a review
8 of your decision-making process?

9 **A.** (By Mr. Coston) Yes. Our definition of
10 reasonableness in this situation was looking at the
11 approach taken by the company as it relates to the
12 standards established with the Institute of Internal
13 Auditors and summarized in our executive summary on page
14 2 of our report where we talk about the control
15 environment, and that's where we assess the
16 reasonableness, the appropriateness in relation to those
17 controls on a project management internal controls area.

18 **Q.** Okay. As -- you undertook this exercise as
19 employees of the Commission; is that correct?

20 **A.** (By Mr. Coston) Correct.

21 **Q.** And you're aware that as, as the witnesses
22 testifying here, that basically your role is pretty much
23 as a, as a technical expert and putting evidence into
24 the record, contrasted with technical staff that would
25 in fact advise the Commission during the deliberative

1 process; you understand that distinction?

2 A. (By Mr. Coston) Certainly. Yes.

3 Q. Okay. So that same distinction would go to
4 any statements that are in your conclusions here, would
5 that not? In other words, if you can't go into the
6 deliberative process and elucidate or expand on these
7 statements for purposes of advising for a final
8 decision, then those statements that you make here you
9 would think have that same limitation, wouldn't they?

10 A. (By Mr. Coston) I'm sorry. I --

11 MR. YOUNG: Objection. I'm a little confused
12 as to what Mr. Jacobs is asking. I think if he is on
13 the lines of the statement, the witnesses' statements
14 being as a regular, as any other ordinary witness in the
15 Commission giving statements of the witnesses the weight
16 it's due, I'm fine with that. If he's on something
17 other than that, then I'd like some clarification on
18 what he's asking the witnesses.

19 COMMISSIONER SKOP: Okay. Mr. Jacobs, I think
20 to facilitate the objection, and hopefully we can avoid
21 the objection, if you could please restate your question
22 or try and address the concerns, and then I'll leave it
23 free to staff to either take up the objection or allow
24 the question.

25 MR. JACOBS: Absolutely. I think it might be

1 helpful, and I'm sorry, I don't have copies, but --

2 **COMMISSIONER SKOP:** Or if you could just
3 restate the question maybe a little bit with a little
4 bit more specificity to --

5 **MR. JACOBS:** By all means.

6 **BY MR. JACOBS:**

7 **Q.** In fact, let me read from, from one of the
8 Commission's guiding rules, and exactly it's where I'm
9 going. In Rule 25-22.033(5), the very last sentence of
10 that rule reads, "However, a staff member who testifies
11 in a case shall not discuss the merits of that case with
12 any Commissioner during the pendency of that case."

13 **A.** (By Mr. Coston) Correct.

14 **Q.** Okay. And my question simply is that these
15 statements here carry that same limitation, wouldn't
16 they not?

17 **A.** (By Mr. Coston) Yes.

18 **Q.** Okay. And so they, just as your counsel just
19 stated, I would agree with that, that they sit in the
20 record simply for the weight of evidence in contrast
21 with all the other evidence in the record; correct?

22 **A.** (By Mr. Coston) Correct.

23 **MR. JACOBS:** Okay. Thank you. No further
24 questions.

25 **COMMISSIONER SKOP:** Thank you, Mr. Jacobs.

1 Any questions from the bench?

2 I do have one to the witness. You were asked
3 previously -- and feel free, either one, to answer,
4 Mr. Coston or Mr. Carpenter. You were asked previously
5 about the staff audit report in relation to the prudence
6 of Progress's management actions and related to the, if
7 my memory serves me correctly, low pressure turbine. Is
8 there anything that members of internal audit staff in
9 preparing that report, given the confidential
10 information that has been redacted, is there anything
11 that would lead internal audit staff to conclude that
12 Progress was anything but imprudent with respect to the
13 action taken and the business acumen applied in
14 resolving that issue?

15 **THE WITNESS:** (By Mr. Coston) Just for
16 clarity, which, excuse me, which audit report?

17 **COMMISSIONER SKOP:** The -- hold on real quick.
18 It's the confidential exhibit that's been passed out.

19 **THE WITNESS:** (By Mr. Coston) Okay.

20 **COMMISSIONER SKOP:** And let me, let me get to
21 the page. And to be helpful, what I was talking about,
22 and I probably should have gotten the document out to
23 begin with because there's the Levy 1 and 2 and the EPU,
24 and my question relates to the EPU on page 41,
25 continuing on to page 42 and then page 43.

1 But is there anything -- again, that issue
2 came up in a cross-examination question. And the
3 question, as I remember it, and, again, that was some
4 questions ago, dealt with the prudence of Progress's
5 action and staff's recommendation related to that
6 specific issue. And was there anything in the staff
7 audit report, again, noting that some of the information
8 is redacted, to show that Progress was anything less
9 than prudent on addressing that issue, not only to
10 preserve the uprate potential but also to protect the
11 interests of their customers?

12 **THE WITNESS:** (By Mr. Coston) Yes. We did
13 point out a few unresolved issues at that time, at the
14 time of our audit report, which was in the spring to
15 early summer, in relationship to the low pressure
16 turbine and the negotiations that the company had
17 ongoing at that time to resolve some of the vendor
18 issues that had arisen.

19 One -- on page 43 specifically, the -- there's
20 a number in paragraph, in the fifth paragraph, the
21 last --

22 **COMMISSIONER SKOP:** I understand. And I'm not
23 concerned, I'm not concerned with that number because,
24 again, that number seems to be outside the scope of the
25 business acumen involved in addressing the issue with

1 the turbine manufacturer.

2 So, again, in terms of preserving its option,
3 and the issue presented starting on page 41 and, you
4 know, continuing on to page 43, was there anything that
5 internal audit staff found to indicate that Progress was
6 not prudent in taking the actions it took?

7 **THE WITNESS:** (By Mr. Coston) No. Our review
8 showed that the company up to that point had done -- had
9 proper internal controls in place to monitor that.

10 **COMMISSIONER SKOP:** All right. So their
11 actions were prudent in relation to addressing that
12 issue?

13 **THE WITNESS:** (By Mr. Coston) (Nods head.)

14 **COMMISSIONER SKOP:** All right. Thank you.

15 **THE WITNESS:** (By Mr. Carpenter) I would
16 add that --

17 **COMMISSIONER SKOP:** Wait. I didn't get a yes
18 or no. I got a head nod.

19 **THE WITNESS:** (By Mr. Coston) Oh, sorry.
20 Excuse me. Yes.

21 **COMMISSIONER SKOP:** All right. Thank you.

22 **THE WITNESS:** (By Mr. Carpenter) I would add
23 that the quality assurance that was in place with
24 Progress Energy prevented them from taking acceptance of
25 a defective component.

1 **COMMISSIONER SKOP:** I understand. I don't
2 want to get too far into contractual issues. But,
3 again, there was a situation that developed, management
4 action, and the question that came up was questioning
5 the prudence of the management action in relation to
6 resolving that issue. And I think that I just wanted to
7 clarify staff's position in relation to that. Thank
8 you.

9 All right. Any additional questions from the
10 bench?

11 All right. Staff for redirect.

12 **MR. YOUNG:** No redirect. And we move Exhibit
13 Number 77.

14 **COMMISSIONER SKOP:** Very well. Any objections
15 to entering Exhibit 77 into the record? All right.
16 Hearing none, show Exhibit 77 --

17 **MR. YOUNG:** And --

18 **COMMISSIONER SKOP:** Hold on. Let me, let me
19 say what I need to say and then we'll move along.
20 Exhibit 77 will be entered into the record.

21 And, Mr. Young, you're recognized.

22 (Exhibit 77 admitted into the record.)

23 **MR. YOUNG:** Mr. Chairman, I just want to point
24 out, to ensure that there were no objections, it was the
25 revised Exhibit Number 77 that, that we passed out.

1 **COMMISSIONER SKOP:** I understand. Right. And
2 I believe that at the time you mentioned that in that
3 clarification, so that's just to cross the Is and dot
4 the Ts. Are there any objections to entering the
5 revised Exhibit 77 into the record?

6 **MR. WALLS:** No.

7 **COMMISSIONER SKOP:** Okay. Very well. Show it
8 done.

9 And then I believe, Mr. Brew, you have Exhibit
10 210 and 211?

11 **MR. BREW:** Yes. Yes, Mr. Chairman. PCS would
12 move both of those into evidence.

13 **COMMISSIONER SKOP:** Okay. Any objection to
14 entering what's been marked for identification as
15 Exhibit 210 and 211 into the record at this time?

16 **MR. WALLS:** No objection.

17 **COMMISSIONER SKOP:** All right. Since there's
18 no objection, show it done.

19 (Exhibits 210 and 211 admitted into the
20 record.)

21 And I believe, Mr. Coston and Carpenter, you
22 may step down.

23 **MR. YOUNG:** At this time, Mr. Chairman, can
24 they be excused?

25 **COMMISSIONER SKOP:** Do they need to reappear

1 in the FPL portion of the docket?

2 **MR. YOUNG:** No, sir. It's another set of
3 witnesses.

4 **COMMISSIONER SKOP:** All right. Very well.
5 You may be excused. Thank you.

6 All right. I think that takes us now to PF,
7 excuse me, Progress Energy rebuttal. And the first
8 witness is I believe Mr. Franke again. So, Mr. Walls,
9 you're free to call your witness.

10 **MR. WALLS:** We'd call Jon Franke to the stand,
11 and he has already been sworn.

12 **COMMISSIONER SKOP:** All right. Thank you.

13 At this transition period, I think this is a
14 good time for a break to allow our court reporters to
15 switch out. And what we'll do is we'll take a brief
16 ten-minute break I believe should be sufficient and
17 allow the parties an opportunity to stretch and get
18 prepared for the next witness. So we're on recess until
19 five after the hour. Thank you.

20 (Recess taken.)

21 (Transcript continues in sequence in Volume
22 4.)

23

24

25

1 STATE OF FLORIDA)
2 COUNTY OF LEON) : CERTIFICATE OF REPORTER

3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I, LINDA BOLES, RPR, CRR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said 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' attorneys or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 2nd day of September, 2010.

Linda Boles
LINDA BOLES, RPR, CRR
FPSC Official Commission Reporter
(850) 413-6734