577

 1 BEFORE THE

 FLORIDA PUBLIC SERVICE COMMISSION

 2

 3 DOCKET NO. 070650-EI

 4 In the Matter of:

 5 PETITION TO DETERMINE NEED FOR TURKEY

 POINT NUCLEAR UNITS 6 AND 7 ELECTRICAL

 6 POWER PLANT, BY FLORIDA POWER & LIGHT

 COMPANY.

 7 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/

 8

 9 VOLUME 6

 10 Pages 577 through 807

 11

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 14

 15 PROCEEDINGS: HEARING

 16 BEFORE: CHAIRMAN MATTHEW M. CARTER, II

 COMMISSIONER LISA POLAK EDGAR

 17 COMMISSIONER KATRINA J. McMURRIAN

 COMMISSIONER NANCY ARGENZIANO

 18 COMMISSIONER NATHAN A. SKOP

 19 DATE: Thursday, January 31, 2008

 20 TIME: Commenced at 9:30 a.m.

 Recessed at 6:10 p.m.

 21

 PLACE: Betty Easley Conference Center

 22 Room 148

 4075 Esplanade Way

 23 Tallahassee, Florida

 24 REPORTED BY: MARY ALLEN NEEL, RPR, FPR

 25 APPEARANCES: (As heretofore noted.)

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 2 NUMBER ID. ADMTD.

 3 40 through 51 588

 4 52 and 53 649

 5 54 through 57 694

 6 58 and 59 720

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 8 97 Excerpts from U.S./ Emission and Fuel 788

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 99 (Late-filed) Recalculated Appendix F 802

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

 2 (Transcript follows in sequence from

 3 Volume 5.)

 4 Thereupon,

 5 LEONARDO F. GREEN

 6 called as a witness on behalf of Florida Power & Light

 7 Company, continued his sworn testimony as follows:

 8 CROSS-EXAMINATION

 9 BY MS. KRASOWSKI:

 10 Q. Good afternoon, Dr. Green.

 11 A. Good afternoon.

 12 Q. It's nice to see you again, by the way.

 13 A. Thank you. The same here.

 14 Q. You're welcome. Thank you.

 15 On page 6, on lines 10 through -- of your

 16 testimony, excuse me, on lines 10 through 14, you speak

 17 about the projected growth in real personal income for

 18 Florida being overly optimistic and incremental needs in

 19 capacity that may not be realistic, and I see that you

 20 have -- I see that you have changed your projections

 21 here. But I was wondering, how does the slowing of

 22 personal income in Florida affect commercial

 23 construction growth?

 24 A. Okay. We adjusted -- as you just mentioned,

 25 we adjusted the outlook for the economy that was

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 1 provided to us by Global Insight. We thought it was

 2 overly optimistic, so we lowered that forecast. Looking

 3 back now, I think we should not have done it, because

 4 they had projected 4.6 percent for 2007. I lowered it

 5 to 3.2, and it came in closer to 4.6 percent.

 6 So, yes, there is a slowing down of the

 7 economy. I will not disagree with that. However,

 8 that's the way the economy works. It works in cycles.

 9 There's a hot period and there's a slow period, a high

 10 period and a slow period. In putting together our

 11 forecast, we do not try to pinpoint those cycles. We

 12 try to give a trend. We try to give a trend as to what

 13 the growth in this economy is going to be.

 14 The fundamentals of the Florida economy has

 15 not been affected by the slowdown. And when I say the

 16 fundamentals, I'll say this. Construction and

 17 manufacturing is not the basis of this economy. Tourism

 18 did great last year. Tourism boomed. We have good

 19 growth in health services. We have good growth in

 20 professional services. In Florida, even with the

 21 slowdown, we're the second state in creation of jobs,

 22 just behind Texas.

 23 The question -- and that's a long answer to

 24 the question that you asked. She asked how the slowdown

 25 is going to affect construction of commercial activity.

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 1 A curious fact: Last year, residential customers in

 2 FPL's service territory grew by just over 1 percent.

 3 Commercial customer growth was 2.7 percent. There has

 4 been a slowdown in the residential sector, but the

 5 commercial sector has not experienced that slowdown.

 6 Q. Is it generally accepted that there's a year

 7 lag between residential and commercial slowdown in

 8 construction?

 9 A. That's a good assumption, yes.

 10 Q. You said that you use the University of

 11 Florida for your population report. Could you tell me

 12 which year BEBR report you were using for the

 13 population?

 14 A. Yes. The population projections were based on

 15 a forecast that was done in 2006.

 16 Q. Is this the same population projection that

 17 you used for the Glades County coal plant?

 18 A. That's correct.

 19 Q. Do you know when the new BEBR is supposed to

 20 come out?

 21 A. There was one that came out in -- there's two

 22 that came out in 2007, and in April of this year, the

 23 University of Florida will release another forecast of

 24 population.

 25 Q. Let's see. On page 7 in your testimony, in

 583

 1 lines 4 and 5 -- wait. Actually, it's 5 and 6. You say

 2 that Florida's population and economy are expanding at

 3 levels well above the national average. And I do agree

 4 with you on certain levels about the economy as far as

 5 the economy staying pretty much where it is and jobs

 6 being added, although they're in the lower sectors, but

 7 they're added. Sorry.

 8 But my question is, do you know what position

 9 the State of Florida is in now as far as population

 10 growth goes compared to the other 50 states?

 11 A. Yes. Florida is now the fourth fastest in

 12 absolute number of customers growth. And it's important

 13 to make that distinction. You have states like Arizona

 14 and New Mexico. The higher percentages in growth of

 15 population, percentages mean nothing. The absolute

 16 number of customers is the amount of megawatts that

 17 you're going to have to serve. And in absolute numbers,

 18 Florida is fourth currently.

 19 Q. And it's fourth fastest in terms of customers.

 20 I guess with the customers, that would also include the

 21 commercial and business also?

 22 A. That's correct. That is a general average.

 23 Customers include all categories.

 24 Q. Are you familiar with the latest U.S. Census

 25 figures for Florida?

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 1 A. Yes, I am.

 2 Q. What do the trends suggest based on the latest

 3 U.S. Census figures?

 4 A. The latest figures suggest a slowing down in

 5 customer growth and population growth for the State of

 6 Florida.

 7 I would like to add to that that just 10 years

 8 ago in the '90s, Florida Power & Light was averaging

 9 approximately 65,000 customers per year. Last year we

 10 added 87,000. Coming out of the 1990s, where we were

 11 adding 65,000 to 70,000 customers per year, in the early

 12 part of the 2000s, we went, for example, in 2004, over

 13 100,000. Right now we're at 87,000. It goes in cycles.

 14 It goes in cycles. This year the Baby Boomers turn 62

 15 years. There's going to be quite of influx of retirees

 16 into the State of Florida starting with this year.

 17 Q. Would you say that that is your opinion, or

 18 have you heard other opinions about the Baby Boomers

 19 coming to Florida?

 20 A. The opinions that I've heard suggest that we

 21 will not get as much as we used to get. However, based

 22 on the volume, there's 70-something million Baby Boomers

 23 out there. If we get a small percentage of them, it's

 24 going to be a significant growth in our population base.

 25 Now, I would like to say that even the

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 1 University of Florida that suggests that we might see a

 2 slowing down in the population growth, still it puts us

 3 with tremendous growth in population. It's just not of

 4 the magnitude that we saw in the last four or five

 5 years. But, yes, they still are suggesting tremendous

 6 growth in Florida. And I would like to repeat, it goes

 7 in cycles. Right now we're in one of those low points.

 8 And I would like to add one more observation.

 9 I've been doing this forecast for FP&L for 21 years. In

 10 21 years, the University of Florida always revised their

 11 population estimates upward, 21 out of 21 years.

 12 Q. Since you have made your observations based

 13 upon the 2006 BEBR report, have you seen the 2007 BEBR

 14 report, and did they increase the population estimates

 15 in that report also?

 16 A. In the 2007 estimates, I'm not certain. I'm

 17 not certain were there revisions for 2007. However, I

 18 know for the 2006 revision, it was up. That was the

 19 last one that I saw.

 20 Q. Would a slowdown -- does the slowdown in --

 21 how am I going to say this? Let's see. Does the

 22 slowdown in the population growth make it possible to

 23 not need as much base load capacity generation?

 24 A. If there were a continued slowdown in

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 1 might not be of the same magnitude, but there would

 2 continue to be a need for future generation, yes.

 3 Q. But at a slower level, lower level?

 4 A. That's correct. If we have less population

 5 growth, the demand will be less.

 6 Q. And I have a hypothetical question. If the

 7 population slows down to the point where there is not

 8 any growth and we get a few hurricanes like we did that

 9 one year where we had the five, how would that affect

 10 the need for a new electrical plant?

 11 A. After the hurricanes in 2004 and 2005, in

 12 December of 2006, December over December, Florida Power

 13 & Light's customer count was 102,000 new customers,

 14 December 2006 over December 2005. So, yes, it affects

 15 the psychology, but people continue to come here.

 16 People just love the lifestyle.

 17 But I believe the primary reason -- I believe

 18 the primary reason why people move to Florida is that

 19 people will seek job opportunities. As I said, we're

 20 the second state in the creation of jobs. People are

 21 going to come for those jobs.

 22 There's a study that was done by the

 23 university, Florida State University, the Claude Pepper

 24 Aging Institute, and they predict that for every retiree

 25 that comes to Florida, they create three jobs. Three

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 1 jobs are created by every retiree into Florida. That

 2 predicts quite a growth, quite a growth in more

 3 employment. If we get that employment, whatever

 4 slowdown that you see currently in our population growth

 5 will disappear real fast.

 6 Q. When was that Claude Pepper study made?

 7 A. I think it was 2004, 2005.

 8 MS. KRASOWSKI: Thank you, Dr. Green.

 9 CHAIRMAN CARTER: Thank you. Commissioners,

 10 any questions? We'll go to staff, and then we'll come

 11 back to the Commissioners if you think of any. Staff,

 12 you're recognized.

 13 MS. FLEMING: We have no questions. Thank

 14 you.

 15 CHAIRMAN CARTER: That was quicker than I

 16 thought. Commissioners?

 17 Okay. Let's do this. Mr. Huntoon, do you

 18 have redirect?

 19 MR. HUNTOON: No, I do not, Mr. Chair.

 20 CHAIRMAN CARTER: Okay. Well, let's deal with

 21 these exhibits then.

 22 MR. HUNTOON: We would like to move Exhibits

 23 40 through 51, please.

 24 CHAIRMAN CARTER: Forty through 51. Any

 25 objections? Without objection, show it done.

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 1 (Exhibits Number 40 through 51 were admitted

 2 into the record.)

 3 CHAIRMAN CARTER: Now, Dr. Green, now that

 4 you're released from your stint on the stand, you left

 5 us.

 6 THE WITNESS: I did.

 7 CHAIRMAN CARTER: Have a good time in Texas.

 8 THE WITNESS: Thanks.

 9 CHAIRMAN CARTER: Keep up the good work.

 10 Let's do this, Commissioners. We've been at

 11 it for well over an hour plus, and, you know, the mind

 12 can't handle more than the body can stand, so why don't

 13 we take a recreational break, a brief break so we can

 14 kind of do a stretch break and come back. I'm looking

 15 at 2:44. I'm saying this because I want you guys to be

 16 on my time. I'm looking at 2:44, so let's come back at

 17 about -- I started to say 2:54, but that's so close to

 18 three o'clock, let's come back at three o'clock. We're

 19 in recess.

 20 (Short recess.)

 21 CHAIRMAN CARTER: We are back on the record,

 22 and just before we call our next witness, Commissioner

 23 Skop, you're recognized.

 24 COMMISSIONER SKOP: No, Mr. Chair. I'm

 25 prepared to go forward with the witnesses.

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 1 CHAIRMAN CARTER: Okay. Thank you, sir.

 2 Thank you, sir. Call your next witness.

 3 MR. HUNTOON: Thank you, Mr. Chairman. The

 4 company calls Mr. Dennis Brandt. Mr. Chairman,

 5 Mr. Brandt has not been sworn, and we also have another

 6 FPL witness, Henrietta McBee, who is in the room, who

 7 could be sworn at this time as well, if it's your

 8 pleasure.

 9 CHAIRMAN CARTER: Okay. Let's do it. They

 10 say it's cheaper by the dozen, so we'll do them by two.

 11 Would you please stand and just raise your right hand.

 12 (Witnesses collectively sworn.)

 13 CHAIRMAN CARTER: Thank you very much. You're

 14 recognized, sir.

 15 MR. HUNTOON: Thank you, Mr. Chairman.

 16 Thereupon,

 17 C. DENNIS BRANDT

 18 was called as a witness on behalf of Florida Power &

 19 Light Company and, having been first duly sworn, was

 20 examined and testified as follows:

 21 DIRECT EXAMINATION

 22 BY MR. HUNTOON:

 23 Q. Mr. Brandt, would you please state your name

 24 and business address?

 25 A. My name is C. Dennis Brandt. My business

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 1 address is 9250 West Flagler Street, Miami, Florida.

 2 Q. By whom are you employed, and in what

 3 capacity?

 4 A. I'm employed by Florida Power & Light. I'm

 5 the Director of Product Management and Operations.

 6 Q. Have you prepared and caused to be filed 30

 7 pages of prefiled direct testimony in this proceeding?

 8 A. Yes, I have.

 9 Q. Do you have any changes or revisions to your

 10 prefiled direct testimony?

 11 A. Yes, I do.

 12 Q. Please provide that.

 13 A. On pages 3 and 7 of my prefiled testimony, I

 14 discuss the effectiveness of FPL's DSM efforts based on

 15 data from the U.S. Department of Energy for the year

 16 2005. Based on this 2005 data, FPL was ranked number

 17 one for cumulative conservation achievement and number

 18 four in load management. In November 2007, the

 19 Department of Energy published updated data for 2006.

 20 Based on this most current data, FPL is still ranked

 21 number one cumulatively for conservation, but has moved

 22 up to third in load management.

 23 The resulting changes to my testimony are on

 24 pages 3, line 14, where you need to change four to

 25 three, and on line 15, change 2005 to 2006. Also, on

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 1 page 7, line 18, change 2005 to 2006. And on line 20,

 2 change four to three.

 3 Q. Mr. Brandt, with that update, if I asked you

 4 the same questions contained in your prefiled direct

 5 testimony today, would your answers be the same?

 6 A. Yes, they would.

 7 MR. HUNTOON: Mr. Chairman, FPL requests that

 8 the prefiled direct testimony of Mr. Brandt be inserted

 9 into the record as though read.

 10 CHAIRMAN CARTER: The prefiled testimony will

 11 be inserted into the record as though read.

 12 BY MR. BUTLER:

 13 Q. Mr. Brandt, are you also sponsoring any

 14 exhibits to your direct testimony?

 15 A. Yes, I am.

 16 Q. Do the exhibits consist of documents DB-1 and

 17 DB-2?

 18 A. Yes.

 19 MR. HUNTOON: Mr. Chairman, I would note that

 20 Mr. Brandt's exhibits have been premarked for

 21 identification as Exhibits 52 and 53 in this proceeding.

 22 CHAIRMAN CARTER: Thank you.

 23

 24

 25

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 1 BY MR. HUNTOON:

 2 Q. Mr. Brandt, have you prepared a summary of

 3 your direct testimony?

 4 A. Yes, I have.

 5 Q. Would you please provide it to the Commission?

 6 A. Good afternoon, Chairman Carter and

 7 Commissioners. My testimony details FPL's efforts to

 8 ensure that it has identified all cost-effective

 9 demand-side potential for the 2007 through 2020 time

 10 frame. In spite of the implementation of substantial

 11 amounts of DSM and the projection of additional DSM,

 12 there still exists a need for additional capacity as

 13 identified in this proceeding.

 14 FPL has been very successful in

 15 cost-effectively avoiding new power plant construction

 16 using DSM. The U.S. Department of Energy ranks FPL

 17 number one nationally for cumulative conservation

 18 achievement and number three in load management. FPL

 19 serves about 3 percent of the U.S. consumers, but has

 20 achieved 13 percent of the total U.S. conservation and

 21 6 percent of the total load management. FPL's success

 22 should be attributed not just to its size relative to

 23 other utilities, but to its commitment to achieve the

 24 maximum cost-effective amount of DSM.

 25 FPL recently completed a comprehensive review

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 1 of its DSM programs. This is a result of the Commission

 2 approving modifications to eight of its existing

 3 programs and two new programs. While they're not

 4 Commission-approved DSM goals beyond 2014, FPL has

 5 included a reasonable projection of its industry-leading

 6 efforts of additional demand reduction capability for

 7 the 2015 through 2020 time frame. Combined with the

 8 program modifications I just discussed, the result is

 9 1,899 megawatts of additional DSM through 2020. Even if

 10 there were a potential for more DSM on FPL's system, it

 11 would require almost three times the identified

 12 potential, or 5,130 megawatts, in order to meet FPL's

 13 projected capacity needs through 2020. Even under the

 14 most dramatic improvement in technology, building codes,

 15 and customer receptivity, it's not realistic that FPL

 16 could achieve this level of peak demand reduction.

 17 Finally, there was a discussion earlier about

 18 the potential for solar water heating. We have done an

 19 analysis, and based on our estimates of .4 kW of peak

 20 demand reduction per customer, it would take over

 21 4.5 million solar water heaters to eliminate the two

 22 1,100-megawatt nuclear power plants we're talking about

 23 here today. This is -- 4.5 is more than all of our

 24 residential customers, many who couldn't even install

 25 such a system.

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 1 Further, despite federal and state incentives,

 2 there's still a significant upfront capital investment

 3 for customers to install these types of systems, and the

 4 payback is probably over eight years. It's not

 5 realistic to expect that even a fraction of these

 6 systems would be installed based on those economics.

 7 Thank you.

 8 MR. HUNTOON: Mr. Chairman, Mr. Brandt is

 9 available for cross-examination.

 10 CHAIRMAN CARTER: Thank you. Mr. Beck.

 11 MR. BECK: I have no questions.

 12 CHAIRMAN CARTER: Mr. Krasowski.

 13 MR. KRASOWSKI: Thank you, Mr. Chair.

 14 CROSS-EXAMINATION

 15 BY MR. KRASOWSKI:

 16 Q. Hello, Mr. Brandt.

 17 A. Hello.

 18 Q. I'm Bob Krasowski, with my wife, Jan, and we

 19 have some questions to ask of you, if you would help us

 20 out to understand your testimony.

 21 A. Sure.

 22 Q. And your DSM programs.

 23 Mr. Brandt, I noticed through reading through

 24 your documents here that you are the person who oversees

 25 the implementation and tracking of various DSM programs,

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 1 but I don't see any mention of your participation in the

 2 Florida Energy Commission's -- one of their

 3 subcommittees that is addressing DSM as an issue.

 4 A. That's correct. I am -- was on the

 5 subcommittee for the Florida Energy Commission.

 6 Q. And also as part of your work, are you

 7 involved with the Governor's Action Team that's

 8 analyzing the future energy policy for the State of

 9 Florida?

 10 A. I'm not a member of the Governor's Action

 11 Team. I have helped in analysis for the company.

 12 Q. Have you been involved with the Public Service

 13 Commission in their numerous workshops on demand-side

 14 management and rulemaking efforts?

 15 A. Yes, I have.

 16 Q. Have you been involved with the Public Service

 17 Commission in their numerous meetings and efforts to

 18 identify renewable portfolio standards as they apply to

 19 energy savings in the State of Florida?

 20 A. No, I have not been directly involved in the

 21 portfolio standards workshops.

 22 Q. Has someone from FP&L been represented during

 23 those workshops?

 24 A. Yes, they have.

 25 Q. Okay. Thanks. Let's see. Are you aware of

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 1 the Public Service Commission's almost amazing effort at

 2 efficiency and conservation analysis for the State of

 3 Florida?

 4 A. Yes, I am.

 5 Q. It's quite elaborate, wouldn't you say?

 6 A. Yes, sir.

 7 Q. And extensive. And when I say this, I'm

 8 talking about not only the PSC board, but the staff, the

 9 technical staff. Do you understand that to be true?

 10 A. Yes, sir.

 11 Q. Okay. Good. Okay. So you've certainly been

 12 participating in addressing the efforts, comprehensive

 13 efforts at energy efficiency, conservation, demand-side

 14 management. Across the board, you're involved?

 15 A. That's correct.

 16 Q. Okay. Thank you. At this time, I would like

 17 to say I think you've done a great job. And I'm not

 18 friendly crossing here. This is just stating fact, you

 19 know. But we hear other things from other people about

 20 how we could do more, so I would like to ask you a few

 21 questions about the programs you have.

 22 First of all, aren't these all voluntary

 23 programs?

 24 A. Yes, sir, they all are voluntary programs.

 25 Q. Okay. And I have the material in front of me.

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 1 On page 19 and 20 of your testimony, you identify all of

 2 the residential programs that you're working with and

 3 the business programs in terms of your efforts to manage

 4 DSM as we know it, as it exists today. And what I kind

 5 of want to -- would like to do is, in your -- in this

 6 other document I have in front of me, it's Interrogatory

 7 Number 76, page 1 of 1. Do you have that with you?

 8 A. Yes, I do.

 9 Q. What I would like to do is go down this list

 10 and compare it and ask you kind of the same question

 11 about each one of these programs. For example, you have

 12 a business energy evaluation -- excuse me. Let me get

 13 to the right place here.

 14 Okay. Page 18. I'm sorry. Could you go to

 15 page 18?

 16 A. Sure. Okay.

 17 Q. Okay. Now, let me ask you for the record, you

 18 determine what programs are viable or prudent or good or

 19 bad based on your analysis that -- you use the RIM

 20 standard and the Participant standard; is that correct?

 21 A. That is correct for most of the programs.

 22 Q. Okay. Are there other standards that you use

 23 in some of the programs that go beyond the RIM, or could

 24 you --

 25 A. Actually, two of our programs, the residential

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 1 conservation service program and the business energy

 2 evaluation program, are required to be offered by the

 3 Florida Administrative Code, so they are not judged to

 4 be cost-effective using the RIM or Participant, or for

 5 that matter, any other cost-effectiveness test.

 6 Q. Okay. Thank you. So if I come to those and

 7 ask again about it, just remind me. Okay?

 8 A. Yes, sir.

 9 Q. If you would. Thank you.

 10 Residential conservation service, is that the

 11 one that's required, one of them?

 12 A. Yes, sir.

 13 Q. Okay. The duct system testing and repair,

 14 you've identified this on page 18. Now, here we have in

 15 the other document, your interrogatory, duct system

 16 testing and repair. It shows that 12 percent of the

 17 eligible customers participated in that as a voluntary

 18 program.

 19 So pretty much what I'll ask of you on all of

 20 these -- and maybe by doing this now, I can simplify and

 21 accelerate the process -- would be, is there some way

 22 you can establish how much, how many megawatts or that

 23 portion of a megawatt that program provides to us in

 24 savings, in deferred need? Like I understand through

 25 your testimony, we've saved a number of -- the need for

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 1 a number of power plants when you add all of this stuff

 2 up together. But I'm trying to get an estimation of, if

 3 we were to go from voluntary to mandatory on these

 4 things, how much more could we save, or if we could

 5 figure some way of improving the participation, how much

 6 could we save?

 7 MR. HUNTOON: Mr. Chairman, I think we would

 8 ask if Mr. Krasowski could possibly follow a little bit

 9 more of a question and answer format.

 10 MR. KRASOWSKI: Sure, sure. No problem, sir.

 11 I'll do that.

 12 BY MR. KRASOWSKI:

 13 Q. So, Mr. Brandt, page 1, I'll refer to it as

 14 page 1 on this interrogatory. In your duct system

 15 testing and repair, it shows a participation rate of

 16 12 percent. Do you have any idea how many megawatts or

 17 fraction thereof that would represent as far as savings?

 18 A. Yes. That's 209 megawatts.

 19 Q. 290?

 20 A. Nine.

 21 Q. 109. Is that every year, or is that the

 22 cumulative?

 23 A. That's the cumulative.

 24 Q. How would I evaluate that on an annual basis?

 25 A. Well, that program actually has been around

 630

 1 for probably about 15 years, so simplistically, we could

 2 divide 209 by 15.

 3 Q. Thank you. I like the simplistic answer. So

 4 if I were to divide that by 15 years, the 209 megawatts,

 5 I could get an approximation. Okay.

 6 So would I be correct in thinking that --

 7 let's see. Let me do a little figuring here. That that

 8 might apply to all the other situations as far as just

 9 how much years it has been around divided by -- just to

 10 get a ballpark figure?

 11 A. That would be somewhat of a crude estimate.

 12 Q. Okay.

 13 A. I mean, you have to remember some of these

 14 programs, when you initially launch them, you have time

 15 to ramp up the market and get people aware and

 16 participating, so you build momentum in the program,

 17 those types of things.

 18 Q. Okay. Yes, that makes a lot of sense. Thank

 19 you. I appreciate the answer.

 20 But let's say 15 into 209, that's 20 -- let's

 21 just say as an estimate -- I don't have my calculator

 22 here. It didn't help in the Glades case either. But

 23 let's just estimate that its 10 megawatts. Could I say

 24 10 megawatts of -- and this is a crude estimate,

 25 Mr. Brandt. I'm not holding you to this. But could I

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 1 say 10 megawatts of power were diverted this year

 2 because of the 12 percent participation of your

 3 customers in the duct system testing and repair program?

 4 A. Assuming your assumptions are correct and your

 5 math is correct, that would be okay.

 6 Q. Okay. And I'm going to accept like just

 7 general ballpark type figures on this. I'm not going to

 8 hold you to it, you know, as far as any kind of details,

 9 but my interest is trying to get an estimate of this.

 10 And my point -- well, I can't make a point. Okay.

 11 That's interesting.

 12 So what is the most successful -- okay.

 13 Number three, number three here is the residential air

 14 conditioning program. Okay. The residential air

 15 conditioning program, I understand from reading your

 16 testimony, has kind of maxed out as far as an

 17 opportunity to make great efficiency increases in that

 18 program, because the standard has been raised so high

 19 that hardly -- in the old houses that you used to work

 20 on, their air conditioners have been replaced, so you

 21 don't have much room for improvement at this time.

 22 A. Well, actually, what has changed is, the

 23 minimum efficiency of an air conditioner that is

 24 available to a customer basically went from a SEER 10 to

 25 a SEER 13, so there's a significant jump in the minimum

 632

 1 standard. So for our program, we try to incent

 2 customers to go above the minimum. And obviously, when

 3 the code was at 10, you know, we had a lot of leeway to

 4 get customers to upgrade from 12 to 13 or 14, whatever.

 5 Now with the minimum at 13, you know, there's less

 6 opportunity to get customers to increase their

 7 efficiency. And likewise, when they do, you typically

 8 get smaller demand reductions than you would have gotten

 9 prior to that code change.

 10 Q. So how to would that impact what is identified

 11 here in the document at page 1 again, the fact that

 12 32 percent of the participating or eligible customers --

 13 participation of eligible customers, that 31 percent of

 14 those eligible customers have participated in that? Can

 15 that be an indication -- I mean, how does that affect

 16 that fact? You say 32 percent of the people eligible

 17 have participated.

 18 MR. HUNTOON: Your Honor, there's four

 19 questions that were sort of, I think, strung together

 20 here, and I think the record -- I don't know how

 21 Mr. Brandt can answer four questions at once. It's kind

 22 of a problem.

 23 MR. KRASOWSKI: I'm sorry, Your Honor. I will

 24 go step by step by step.

 25 CHAIRMAN CARTER: Okay.

 633

 1 BY MR. KRASOWSKI:

 2 Q. Mr. Brandt, this shows a 32 percent

 3 participation rate in your residential air conditioner

 4 program?

 5 A. That's correct.

 6 Q. How does what you just told me about the

 7 availability of the efficiency of air conditioners

 8 affect your future ability to save energy in that

 9 program?

 10 A. Well, because of the code change, we would

 11 expect fewer participation over the short term. As the

 12 market gets built up with higher efficiency units and

 13 the supply chain gets stocked with those units --

 14 because obviously, if you live in Florida, if your air

 15 conditioner breaks, if the guy you call to put your air

 16 conditioner in doesn't have the high efficiency unit in

 17 stock, you probably don't want to wait a week to get

 18 one. So a real driver of these types of programs is

 19 making sure the supply chain has sufficient units

 20 available to meet our program. Since the code changed,

 21 slowly the supply chain is getting built up with these

 22 higher efficiency units. So I would say short term, I

 23 would expect a slowdown in the number of participants

 24 per year, but over time, we would hope that would go

 25 back up.

 634

 1 Q. Okay. Thank you, Mr. Brandt. Now, let me

 2 jump down to your BuildSmart program. Now, I see

 3 2 percent of the eligible participants are participating

 4 in BuildSmart. How much energy might we estimate as

 5 being saved by the BuildSmart program?

 6 A. Probably 15 megawatts.

 7 Q. Okay. And would that be annual, or that's --

 8 A. That's program to date.

 9 Q. And when did that program start?

 10 A. In the late 1990s.

 11 Q. So would you agree that if the standards of

 12 the BuildSmart program were set as the minimum standard,

 13 we would increase substantially the use of energy saved?

 14 I'll rephrase that if it's a little convoluted.

 15 A. Thank you.

 16 Q. You show 2 percent participation in your

 17 BuildSmart program. What if we were to get that

 18 participation rate up to 90 percent? How much more

 19 would we save? That's two questions; right?

 20 If we were to bring it up to 90 percent --

 21 could we bring it up to 90 percent? That's one

 22 question. Two percent, could we bring it up to

 23 90 percent?

 24 A. As a voluntary program, I don't believe you

 25 could get to 90 percent.

 635

 1 Q. Thank you. And what if it was a mandatory

 2 program?

 3 A. Well, I think over time, you'll see -- once

 4 again, BuildSmart is another example where the building

 5 code changed over time, so things that in the past we

 6 would incent customers to do in BuildSmart now become

 7 part of code. So the analogy to the air conditioner,

 8 the high efficiency change is very, very similar.

 9 Q. And there is a -- well, do you see that

 10 happening right now in the State of Florida, the

 11 standards being increased as far as building?

 12 A. Well, there's a normal code cycle that the

 13 building code goes through for normal upgrades. There

 14 has also been some discussions at both, I think, the

 15 Florida Energy Commission and the Governor's Action Team

 16 about trying to increase the code to be more efficient.

 17 Q. In what program do you see the greatest

 18 opportunity for efficiencies as you have the programs

 19 listed here in the residential category?

 20 A. Of the programs listed, I think the one that

 21 has the highest ability to defer peak demand is our

 22 On-Call program, which is our residential load

 23 management program.

 24 Q. Do you see any changes in the rules regarding

 25 the use of electricity in the State of Florida that will

 636

 1 impact your On-Call program?

 2 A. No, I'm not aware of any.

 3 Q. Okay. So the On-Call. What would be the next

 4 one after the On-Call program that you perceive to be

 5 the greatest -- have the greatest potential for giving

 6 us more energy efficiency into the immediate future?

 7 A. Probably our business air conditioning

 8 program.

 9 Q. Okay. I see you have a 3 percent

 10 participation rate. Would you say there's a lot of room

 11 for improvement in that?

 12 A. Yes. The 3 percent is a little bit

 13 misleading, in that it's 3 percent of our business

 14 customers. But if you think about customers who

 15 participate in that program, it's primarily our largest

 16 customers, office buildings, schools, institutional

 17 customers, those types of customers. So they're skewed

 18 a little bit from, you know, the strip shopping centers,

 19 where in many cases the customer doesn't own the

 20 facility. You know, those are more difficult to get

 21 customers to participate in these types of programs.

 22 Q. Yes, understandably. Thank you for clarifying

 23 that.

 24 Now, is there a separate category for

 25 institutional participants?

 637

 1 A. Those are addressed by our business programs.

 2 Q. Right. Do you separate those out? Do you

 3 have information that identifies a distinction between

 4 the institutional and other businesses?

 5 A. We track that information. I don't have it

 6 with me.

 7 Q. Okay. But that's available, right, if we --

 8 A. Yes.

 9 Q. Okay. Recently the State of Florida, the

 10 government has taken up analysis of what the Florida

 11 state can do, as you know.

 12 MR. HUNTOON: Your Honor, I think I need to

 13 object to statements of fact and statements that the

 14 witness knows something. If Mr. Krasowski wants to

 15 inquire whether the witness does know something, I think

 16 that would be an appropriate question.

 17 MR. KRASOWSKI: Excuse me. I'll try to avoid

 18 doing that and ask --

 19 CHAIRMAN CARTER: Just ask a question.

 20 MR. KRASOWSKI: Okay. Yes, yes.

 21 CHAIRMAN CARTER: Thank you.

 22 BY MR. KRASOWSKI:

 23 Q. Okay. What's the next program in line that

 24 you think offers great opportunities for energy savings?

 25 A. I would probably say one of our business load

 638

 1 management programs, which is the commercial demand

 2 reduction program, for instance.

 3 Q. Is that the program where businesses volunteer

 4 to reduce usage when you need it, when you need energy?

 5 A. That's correct.

 6 Q. Okay. That's great. Were you listening in at

 7 the public portion at the beginning of the hearing?

 8 A. I heard parts of it.

 9 Q. Did you hear Mr. Gordon Hansen's presentation

 10 on some mathematical -- well, did you hear Mr. Gordon

 11 Hansen's presentation?

 12 A. I don't recognize the name.

 13 Q. Okay. Let me mention essentially what he

 14 said. First, he provided this for the record, and it's

 15 his computations that look at hot water heater --

 16 MR. HUNTOON: Your Honor, I need to object

 17 again. I think Mr. Krasowski should simply ask a

 18 question.

 19 CHAIRMAN CARTER: Yes, Mr. Krasowski. He said

 20 he's not familiar with Mr. Hansen, so it would be

 21 improper to try to impeach him with Mr. Hansen's

 22 document.

 23 MR. KRASOWSKI: Okay. Can I give him a copy

 24 just so he can see it?

 25 CHAIRMAN CARTER: Well, he said he didn't hear

 639

 1 it, so I don't think it would be appropriate.

 2 MR. KRASOWSKI: Okay. Thank you, Your Honor.

 3 My apologies.

 4 CHAIRMAN CARTER: No problem.

 5 MR. KRASOWSKI: Okay.

 6 CHAIRMAN CARTER: You can ask him his opinion.

 7 MR. KRASOWSKI: About what? I'm scared. I'm

 8 too scared.

 9 Okay. I'll just move on. Mr. Brandt is very

 10 cooperative, and if I ask the question right, he's going

 11 to tell me.

 12 CHAIRMAN CARTER: There you go.

 13 MR. KRASOWSKI: I'm sorry.

 14 CHAIRMAN CARTER: Okay.

 15 MR. KRASOWSKI: I apologize for all my flaws.

 16 CHAIRMAN CARTER: You're okay.

 17 BY MR. KRASOWSKI:

 18 Q. Okay. Mr. Brandt, now, we've already

 19 established that your efforts have achieved substantial

 20 efficiencies and reductions in demand. And what I would

 21 like to try to do now -- let me ask you, do you

 22 understand the cost, or do you understand what has been

 23 projected as the potential range of costs for the

 24 proposed nuclear units?

 25 A. Yes.

 640

 1 Q. Okay. Am I correct in my understanding that

 2 that would be between 12 and $24 billion, depending on

 3 what technology we go towards?

 4 A. I believe that's what was spoken earlier

 5 today, yes.

 6 Q. Do you have any estimate on what you might

 7 achieve if you had 12 to $24 billion to spend over the

 8 next 10 years implementing demand-side management

 9 programs?

 10 A. I have not done that analysis.

 11 Q. All right. Do you think that making these

 12 programs mandatory would provide efficiencies in our

 13 electrical use that would be multiples of what is

 14 represented here?

 15 Let me rephrase that, if I may. If the

 16 voluntary programs that you show here that have been so

 17 successful, if the participation was increased, do you

 18 think we would realize a very large savings of

 19 electricity?

 20 A. I think you would realize more savings than we

 21 currently have. I'm not sure I can tell you how big

 22 that would be.

 23 Q. Okay. Well, I appreciate that, Mr. Brandt.

 24 If you'll give me a minute, maybe we might be done here.

 25 Mr. Brandt, are you familiar with the solar –-

 641

 1 well, do you deal with solar energy, or is that

 2 Ms. McBee's realm?

 3 A. I think you need to be more specific about

 4 what you're asking.

 5 Q. What I wanted to ask is if in your range of

 6 analysis you consider solar programs in other countries.

 7 A. No, I have not.

 8 MR. KRASOWSKI: You don't. Okay. Well, thank

 9 you, Mr. Brandt. Thank you for everything you do. I

 10 think you're doing a great job. Nice seeing you again,

 11 and it was great to talk to you.

 12 THE WITNESS: Thank you very much.

 13 MR. KRASOWSKI: I'm done with questions of

 14 Mr. Brandt. Thank you.

 15 CHAIRMAN CARTER: Thank you. In the line of

 16 questioning about the mandatory DSM and those things,

 17 obviously, you said you didn't have any idea, but -- so

 18 I guess I shouldn't even ask. I was going to ask if you

 19 have any idea what you think it would cost the

 20 ratepayers and what it would cost the individual

 21 homeowners, because a lot of your volume would have to

 22 come -- I notice you had a discussion about the air

 23 conditioners and all like that, so it's probably an

 24 unfair question. But when you start thinking about

 25 things like that, you start thinking about how much is

 642

 1 it going cost, and those costs, particularly if the

 2 government starts to mandate things, people tend to be a

 3 little -- you know, we pride ourselves on property

 4 rights in Florida, so that may be a problematic thing.

 5 I did want to ask, though -- and I think

 6 you've already said this. I think you said that based

 7 upon the fact that the programs are voluntary, you've

 8 probably maxed out on them. Was that not what you said

 9 pretty much?

 10 THE WITNESS: Could you clarify which program?

 11 CHAIRMAN CARTER: I think you went down with

 12 the -- do you want me to go down each one of them, or do

 13 you want to just tell me which ones they are that you

 14 think are maxed out?

 15 THE WITNESS: I'll be more than happy to.

 16 CHAIRMAN CARTER: Okay.

 17 THE WITNESS: I think the issue that we

 18 probably talked about kind of maxing out was more in the

 19 residential HVAC program. And the issue there was I

 20 think temporarily maxed out, because we need to, as I

 21 talked about earlier, get the supply chain built up with

 22 those high efficiency units. I suspect we'll see a drop

 23 in participation short term, and then long term, you'll

 24 see participation ramp back up.

 25 We saw a similar situation when the SEER was

 643

 1 changed to 10, so this process went -- it was probably

 2 10 years ago where we kind of went through the same

 3 wave. So it's kind of playing itself out, just as we

 4 saw before, and we expect, you know, over time people

 5 will be replacing air conditioners in Florida. And this

 6 program -- high efficiency air conditioners makes sense

 7 for customers to do, have good economics, and provide

 8 good demand reduction for us. You know, I think we're

 9 just going through a little downturn due to the supply

 10 chain, but we expect it to go back up.

 11 CHAIRMAN CARTER: And you think it's probably

 12 during the -- it may take about 10 years for the cycle

 13 to run its course? Has that been your experience?

 14 THE WITNESS: My thought is -- I mean, we'll

 15 be back up in -- my suspicion is, you know, in a year or

 16 two, we'll see those participation numbers start picking

 17 up again. When we go through this cycle again will

 18 depend when the minimum SEER level is decided to be

 19 upgraded. And as I said, it was probably at least 10

 20 years since it was done before. I suspect with all the

 21 interest in energy efficiency that we're now facing, it

 22 won't take 10 years for that to happen again.

 23 CHAIRMAN CARTER: Good deal. Commissioners,

 24 before I go to staff, I want to see if you have any.

 25 Commissioner Skop, you're recognized.

 644

 1 COMMISSIONER SKOP: Thank you, Chairman

 2 Carter. Good afternoon, Mr. Brandt.

 3 THE WITNESS: Good afternoon.

 4 COMMISSIONER SKOP: I'm going to proceed

 5 cautiously. Although -- I want to draw your attention

 6 to the Sunshine Energy program for a second, because

 7 although that program is the subject of a separate

 8 docketed matter, FPL close to highlight the program in

 9 the course of this proceeding, and it did so by offering

 10 your prefiled direct testimony, your deposition, as well

 11 as late-filed exhibits. And that puts me in a difficult

 12 situation.

 13 Starting on a positive note, I generally

 14 support the concept of the program and the recent

 15 completion of the Rothenbach project, for which I

 16 commend your efforts. Based on your testimony in the

 17 matter, however, I cannot allow FPL to showcase the

 18 Sunshine Energy program in this proceeding without

 19 commenting upon the significant concerns that I have.

 20 Specifically, I'm disappointed in the manner

 21 in which this program is being portrayed, the management

 22 of this program, the performance of your vendor under

 23 the existing contract to date, directions in which the

 24 program is heading, and the utilization of the revenue

 25 stream from this program, which could be better used to

 645

 1 serve your customers and the needs of this state.

 2 Based on the above, again, that's not really

 3 relevant to the proceeding, but I do have one question

 4 for you, and I would appreciate a very direct yes or no

 5 answer to this question. I'll even afford you the

 6 opportunity of conferring with counsel should you wish

 7 to do so. But my question is, at the time FPL sought

 8 permanent approval of the Sunshine Energy program, did

 9 FPL disclose to the Commission that FPL or its vendor

 10 was not meeting the solar buildout requirements in 2005

 11 and 2006?

 12 THE WITNESS: I don't believe that was a

 13 question at the time, so I would say no.

 14 COMMISSIONER SKOP: Are you sure about that?

 15 MR. HUNTOON: Commissioner, I'm not sure I

 16 understood the question.

 17 COMMISSIONER SKOP: Okay. Let me reframe the

 18 question. And again, I'm looking to the witness based

 19 on his deposition testimony to answer it. And again, I

 20 apologize, but please recognize I have a job to do. And

 21 again, you know, I can't allow testimony to be, you

 22 know, brought before this Commission without, you know,

 23 subjecting it to appropriate fact checking.

 24 My question is, at the time FPL sought

 25 permanent approval of the Sunshine Energy program, did

 646

 1 FPL disclose to the Commission that FPL or its vendor

 2 was not current or actually was not meeting its solar

 3 buildout requirements in 2005 and 2006?

 4 MR. HUNTOON: Commissioner, again, I must

 5 apologize. I actually was representing the company at

 6 Mr. Brandt's deposition, and I don't recall that coming

 7 up, that particular question. And maybe I'm missing

 8 something entirely.

 9 COMMISSIONER SKOP: Again, I don't want to go

 10 down a line of questioning that would result in

 11 impeachment, but I do want to make one quick point, and

 12 then we'll get out this.

 13 Mr. Brandt, do you remember the deposition

 14 that you took on January 18th, 2008?

 15 THE WITNESS: Yes, I do.

 16 COMMISSIONER SKOP: And you were there?

 17 THE WITNESS: Yes, I was.

 18 COMMISSIONER SKOP: Your attorney was there,

 19 OPC was there, and PSC staff was there. On page 25 of

 20 your deposition, line 19, I believe you stated that we

 21 were not current during 2005 and 2006; correct?

 22 THE WITNESS: That is correct.

 23 COMMISSIONER SKOP: And that's in relation to

 24 the buildout requirements?

 25 THE WITNESS: That is correct.

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 1 COMMISSIONER SKOP: And that's the

 2 requirements that you represent to your customers when

 3 you sign them up for this program?

 4 THE WITNESS: That's our target, yes, that's

 5 correct.

 6 COMMISSIONER SKOP: Thank you. I've made my

 7 point. No further questions.

 8 CHAIRMAN CARTER: I better push the button

 9 first. Commissioners, any further questions?

 10 Staff, you're recognized.

 11 MS. FLEMING: We have no questions.

 12 CHAIRMAN CARTER: Commissioner Argenziano, do

 13 you have any questions?

 14 COMMISSIONER ARGENZIANO: No, not at this

 15 time.

 16 CHAIRMAN CARTER: Thank you. Mr. Huntoon.

 17 Mr. Huntoon.

 18 MR. HUNTOON: Huntoon. That's fine. Just

 19 don't call me late for dinner, as they say; right?

 20 CHAIRMAN CARTER: Mr. H. You're recognized,

 21 sir.

 22 MR. HUNTOON: Thank you, Mr. Chairman.

 23 Mr. Chairman, it's my understanding that the depositions

 24 have been admitted into the record and the entire scope

 25 of questions and answers of Mr. Brandt at the deposition

 648

 1 are part of the record at this point. I think that's

 2 right. Okay.

 3 REDIRECT EXAMINATION

 4 BY MR. HUNTOON:

 5 Q. I just wanted to ask you, Mr. Brandt, whether

 6 the need analysis that the company has submitted in this

 7 case includes significant amounts of DSM in addition to

 8 existing DSM benefits.

 9 A. Absolutely. We're estimating 1,899 additional

 10 megawatts of DSM to be done during this -- between now

 11 and 2020.

 12 Q. And also, just one last question. Does FPL do

 13 all of the cost-effective DSM that it can identify?

 14 A. Absolutely. You know, our charge, as directed

 15 by the Commission, is to make sure we identify and

 16 implement all cost-effective DSM.

 17 MR. HUNTOON: I don't have any further

 18 questions.

 19 CHAIRMAN CARTER: Commissioner Skop.

 20 COMMISSIONER SKOP: Thank you, Mr. Chairman.

 21 And again, I want to emphasize for the record and as a

 22 point of clarification again, my line of questioning had

 23 absolutely nothing to do with the testimony with respect

 24 to FPL's DSM efforts. Thank you.

 25 CHAIRMAN CARTER: Let's deal with our

 649

 1 exhibits.

 2 MR. HUNTOON: Thank you, Mr. Chairman. We

 3 would like to move into the record Exhibits 52 and 53.

 4 CHAIRMAN CARTER: Any objections? Hearing

 5 none, show it done.

 6 (Exhibits Number 52 and 53 were admitted into

 7 the record.)

 8 CHAIRMAN CARTER: Any further questions for

 9 Mr. Brandt?

 10 Thank you, sir.

 11 THE WITNESS: Thank very much.

 12 CHAIRMAN CARTER: Do you want to take a moment

 13 before you call your next witness?

 14 MR. BUTLER: That would be good if we could.

 15 CHAIRMAN CARTER: Let's do that. Okay,

 16 everybody. Let's kind of -- let's take -- I'm looking

 17 at 3:55. We'll come back at 4:10.

 18 MR. BUTLER: Thank you.

 19 CHAIRMAN CARTER: We're in recess.

 20 (Short recess.)

 21 CHAIRMAN CARTER: Okay. We are back on the

 22 record, and we were in the process of getting ready to

 23 call the next witness. You're recognized.

 24 MR. ANDERSON: Thank you, Chairman Carter. My

 25 name is Bryan Anderson appearing for Florida Power &

 650

 1 Light Company. Good afternoon, Ms. McBee.

 2 THE WITNESS: Good afternoon.

 3 CHAIRMAN CARTER: Whoa.

 4 MR. ANDERSON: The witness -- I'm sorry.

 5 CHAIRMAN CARTER: You're recognized. Go

 6 ahead.

 7 MR. ANDERSON: Thank you very much.

 8 Thereupon,

 9 HENRIETTA G. McBEE

 10 was called as a witness on behalf of Florida Power &

 11 Light Company and, having been first duly sworn, was

 12 examined and testified as follows:

 13 DIRECT EXAMINATION

 14 BY MR. ANDERSON:

 15 Q. Have you been sworn as a witness?

 16 A. Yes, I have.

 17 Q. Would you please tell us your name and your

 18 business address?

 19 A. My name is Henrietta Gurri McBee, and my

 20 address is 700 Universe Boulevard, Juno Beach, Florida,

 21 33408.

 22 Q. By whom are you employed, and in what

 23 capacity?

 24 A. I'm employed by FPL as Director of Project

 25 Development for Renewable Energy.

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 1 Q. Have you prepared and caused to be filed 24

 2 pages of prefiled direct testimony in this proceeding?

 3 A. Yes.

 4 Q. Did you also cause to be filed an errata to

 5 your testimony?

 6 A. Yes.

 7 Q. Do you have any further changes or revisions

 8 to your prefiled direct testimony other than the errata

 9 sheet?

 10 A. No.

 11 Q. If I asked you the same questions contained in

 12 your prefiled direct testimony, would your answers be

 13 the same here today?

 14 A. Yes.

 15 MR. ANDERSON: Chairman Carter, FPL requests

 16 that the prefiled direct testimony Ms. McBee be inserted

 17 into the record as though read.

 18 CHAIRMAN CARTER: The prefiled testimony will

 19 be inserted into the record as though read.

 20 BY MR. ANDERSON:

 21 Q. Are you sponsoring any exhibits to your direct

 22 testimony?

 23 A. Yes, I am.

 24 Q. Are they documents HGM-1 through HGM-4

 25 attached to your direct testimony?

 652

 1 A. Yes.

 2 MR. ANDERSON: Chairman Carter, I would note

 3 that Ms. McBee's exhibits have been premarked on the

 4 staff exhibit list for identification as Exhibits 54 to

 5 57.

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 1 BY MR. ANDERSON:

 2 Q. Ms. McBee, have you prepared a summary of your

 3 direct testimony?

 4 A. Yes, I have.

 5 Q. Please provide your summary to the Commission.

 6 A. Thank you. Good afternoon, Commissioners.

 7 FPL has been providing a portion of its customer energy

 8 needs from renewable resources since 1980. Currently,

 9 FPL provides more than 300 megawatts and 1.6 million

 10 megawatt-hours of power from renewable resources yearly.

 11 This energy is purchased from owners of waste-to-energy,

 12 biomass, and landfill gas power plants located in

 13 Florida. FPL is working to extract as much energy as

 14 technically and economically possible from renewable

 15 resources and continues to explore the use of emerging

 16 technologies.

 17 In July 2007, FPL concluded a renewable energy

 18 request for proposals for renewable energy with expected

 19 in-service dates prior to June 2015. In the RFP, FPL

 20 asked for information regarding new renewables beyond

 21 2015. Importantly, the RFP contained no restriction on

 22 price and provided maximum flexibility for potential

 23 suppliers in order to encourage as much participation as

 24 possible. As a result of the 2007 renewable RFP, FPL

 25 received proposals from five bidders totaling 144

 679

 1 megawatts of firm capacity. FPL incorporated these

 2 potential resources in its integrated resource planning

 3 underlying this petition, as discussed in the testimony

 4 of FPL witness Dr. Sim.

 5 FPL will continue to promote renewable

 6 generation in Florida through RFPs and other purchased

 7 power agreements and is exploring direct development of

 8 renewable generation projects, including solar, wind,

 9 and other renewable energy sources. This past summer,

 10 FPL announced a collaborative initiative with St. Lucie

 11 County to work towards developing the first wind project

 12 in the state on Hutchinson Island. Additionally, FPL

 13 recently announced a major clean energy plan to build up

 14 to 300 megawatts of solar generating capacity in

 15 Florida. This includes FPL's work with NASA to site a

 16 large scale solar photovoltaic facility up to

 17 10 megawatts at the Kennedy Space Center.

 18 My testimony explains that FPL agrees with the

 19 general conclusions with respect to availability of

 20 renewable energy stated in "An Assessment of Renewable

 21 Electric Generating Technologies for Florida" issued by

 22 the Florida Public Service Commission and the Florida

 23 Department of Environmental Protection in 2003. While

 24 the overall expectation of energy production from

 25 renewable sources in Florida is modest, FPL supports

 680

 1 development of Florida's renewable resources to the

 2 maximum extent feasible. There is ample room for all

 3 the good renewable energy ideas that can be brought

 4 forward, and FPL warmly encourages their development and

 5 implementation. At the same time, it is important to

 6 recognize, as explained in Dr. Sim's testimony, that

 7 renewable energy is sufficient only to meet a small

 8 portion of FPL's customers' needs.

 9 That concludes my summary. Thank you.

 10 MR. ANDERSON: Chairman Carter, Ms. McBee is

 11 available for cross-examination.

 12 CHAIRMAN CARTER: Thank you, Mr. Anderson.

 13 Commissioners, just kind of FYI -- sorry I

 14 didn't say that this morning. Usually I try to let you

 15 know in advance about how long we're going. I know we

 16 have people from out of town coming in and making travel

 17 arrangements, and I neglected to mention this morning

 18 that we will be going until 5:00 today, and we'll pick

 19 up again tomorrow and conclude from there. I'm sorry

 20 about that. I wanted to take care of all my

 21 housekeeping matters this morning, but I was not able to

 22 do that.

 23 Mr. Beck.

 24 MR. BECK: Thank you. I have no questions.

 25 CHAIRMAN CARTER: Mr. Krasowski.

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 1 MR. KRASOWSKI: Thank you, Commissioner

 2 Carter.

 3 CROSS-EXAMINATION

 4 BY MR. KRASOWSKI:

 5 Q. Hello, Ms. McBee.

 6 A. Hello.

 7 Q. My name is Bob Krasowski. I'm here with my

 8 wife, Jan, and we're intervenors as ratepayers to FP&L,

 9 so we're very interested in the opportunities for solar,

 10 efficiency, and renewables, and we're very interested in

 11 your work. I have a couple of pages of questions. I

 12 would like to move through them as quickly as possible.

 13 I'll mention that this question relates to

 14 your testimony on page 2, line 3. As you look for that,

 15 maybe I'll ask my question, and it is, what are the

 16 factors involved in arranging easements with landowners?

 17 That's one of your responsibilities.

 18 A. We have to negotiate the commercial terms with

 19 the landowner, and that includes the price as well as

 20 the actual area. And you also have to include land

 21 utilization issues.

 22 Q. Does FP&L pay for the privilege of going

 23 across land based on each individual landowner?

 24 A. I'm sorry. Can you please explain the

 25 question?

 682

 1 Q. Is there is a payment involved to the

 2 individual landowners?

 3 A. In some cases, that's correct.

 4 Q. Let me ask you about the easement behind my

 5 house where my power comes in from. Is that easement

 6 provided by government, or how does that work?

 7 MR. ANDERSON: May we please object.

 8 MR. KRASOWSKI: Okay. Too many questions at

 9 once.

 10 CHAIRMAN CARTER: She probably doesn't know

 11 where you live.

 12 MR. KRASOWSKI: Thank you. I appreciate that.

 13 CHAIRMAN CARTER: Mr. Anderson, state your

 14 objection for the record, please.

 15 MR. ANDERSON: Yes. The easements behind

 16 Mr. Krasowski's house are irrelevant to any issue in

 17 this proceeding.

 18 CHAIRMAN CARTER: I sustain the objection.

 19 Mr. Krasowski, move on.

 20 MR. KRASOWSKI: Okay.

 21 CHAIRMAN CARTER: Thank you.

 22 BY MR. KRASOWSKI:

 23 Q. But easements in general -- okay. I'll just

 24 move on. Okay. Thanks. That's not that important.

 25 On page 4, line 4, what are you referring to?

 683

 1 What kind of firm and non-firm capacity and energy are

 2 purchased yearly?

 3 A. We have power purchase agreements that have

 4 been negotiated, and as I mentioned in my summary,

 5 they're biomass, landfill gas, those kinds.

 6 Q. And which is firm and which is not firm,

 7 non-firm?

 8 A. We have approximately 158 megawatts of firm

 9 and 146 megawatts of non-firm, or what we consider

 10 as-available.

 11 Q. Can you identify for me what the non-firm is?

 12 A. I cannot.

 13 Q. Okay. Can you define firm?

 14 A. It's capacity that's available at all times.

 15 Q. Okay. Thank you. You mentioned -- at page 5,

 16 line 15, you make reference to a study that you -- well,

 17 and in your opening statement, you referred to a study

 18 that was done in 2003.

 19 A. Yes.

 20 Q. Are there any more recent updates on the

 21 issues that that study evaluates?

 22 A. I'm not aware of the Public Service Commission

 23 having any recent updates.

 24 Q. Okay. Thank you. What do you mean -- on

 25 lines 17 and 18 on the same page, what do you mean when

 684

 1 you refer to -- by feasible?

 2 A. Can you explain your question, please?

 3 Q. Okay. You state that while the overall

 4 expectation of energy production from renewable sources

 5 in Florida is modest, FPL supports development of

 6 Florida's renewable resources to the maximum extent

 7 feasible. Can you clarify what you mean by feasible?

 8 A. If the resource is available, we will try to

 9 harness it.

 10 Q. On lines 17 and 18 on the same page, same

 11 lines, I guess, or line 18, you said there is ample room

 12 for all of the good renewable energy ideas that can be

 13 brought forward, and FP&L is warmly encouraging the

 14 development and implementation. What are some bad

 15 renewable energy ideas?

 16 A. I don't understand the question.

 17 Q. Well, you refer to good renewable energy

 18 ideas. Are there bad ideas you're aware of?

 19 A. What I was trying to say in my testimony is

 20 that ideas that are cost-effective and doable for the

 21 customer.

 22 Q. Cost-effective as it's determined by what

 23 standard?

 24 A. Cost-effective as determined by what makes

 25 sense to our customers.

 685

 1 Q. Is the RIM standard involved in that?

 2 A. I am not -- the RIM standard is not part of my

 3 testimony.

 4 Q. Okay. Thank you. On page 6, on lines 7 and

 5 8, I would like to ask you about the Commission recently

 6 approved a revised and improvement standard offer

 7 contract. What does it pay, the standard offer

 8 contract?

 9 A. The standard offer contract is available on

 10 our website. I can't tell you exactly what it pays.

 11 Q. But it's available on the website?

 12 A. Yes.

 13 Q. Thank you very much. On page 7, of the

 14 179 megawatts of new renewable energy production, how

 15 much is solar voltaic? And that's at line 22. I'm

 16 sorry.

 17 A. I'm not able to break that up.

 18 Q. Okay. You identify in your testimony

 19 waste-to-energy as a renewable resource. Are you

 20 familiar with the greenhouse gas emissions that are

 21 emitted from waste energy plants?

 22 A. Generally speaking.

 23 Q. Okay. Can you explain why waste-to-energy

 24 plants are considered renewable energy?

 25 A. I'm using the definition per the statute that

 686

 1 I refer to in my testimony.

 2 Q. Okay. Thank you. On page 9, lines 9 through

 3 10, you speak of the potential of ocean current. Could

 4 you -- on line 9, could you please explain more about

 5 that?

 6 A. We received a bid as part of our request for

 7 proposal, and we received a non-firm capacity bid for

 8 100 megawatts, as stated therein, from a supplier that's

 9 working to prototype an ocean current device.

 10 Q. By non-firm capacity, do you mean that it's in

 11 the abstract, suggest stage now?

 12 A. I don't understand the question.

 13 Q. I don't understand non-firm capacity.

 14 A. It's not available all the time.

 15 Q. Oh, okay. Intermittent, would that --

 16 A. It may be intermittent, but non-firm is just

 17 that it's not available for evening and to be able to be

 18 relied on by your customers.

 19 Q. How does ocean current -- okay. You're

 20 referring to the project that's -- oh, maybe not. Okay.

 21 What type of ocean energy are you referring to?

 22 A. In this particular bid? Is that what your

 23 question is?

 24 Q. Yes, yes. Thank you.

 25 A. They are trying no harness the potential of

 687

 1 the Gulf Stream.

 2 Q. And the potential for the Gulf Stream is not

 3 available 24/7, 365?

 4 A. It may be.

 5 Q. But it isn't right now?

 6 A. It isn't, because the prototype is not

 7 completed.

 8 Q. Thank you. Okay. Now I understand that. I

 9 appreciate it.

 10 Okay. Page 10, line 1. Where might there be

 11 additional wind opportunities that would add to the

 12 renewable portfolio in Florida?

 13 A. If I may refer to the Exhibit HGM-3, the

 14 United States wind resource map, you will notice that

 15 the resource is available on the coast line, so we're

 16 looking at the coast line.

 17 Q. Okay. Thank you. That clarifies that.

 18 Page 10, line 21. Is the Sarasota, Florida,

 19 solar plant operational now?

 20 A. Yes.

 21 Q. How long has it been operational?

 22 A. I think I will refer that question -- that

 23 question would have been better answered by witness

 24 Brandt, Dennis Brandt, the gentleman who was just here.

 25 Q. Okay.

 688

 1 A. I can clarify that I have a general time

 2 period if you want that. I don't know the exact date,

 3 but it was end of October or early November.

 4 Q. That's fine. That's when they initiated

 5 operation?

 6 A. I believe so, but I would prefer that that

 7 question be referred to perhaps for follow-up.

 8 Q. Okay. Thank very much.

 9 Page 11, line 3. What is FP&L's relationship

 10 to the Florida Solar Energy Center?

 11 A. We've developed alliances with them in the

 12 past and worked on special projects. And it's actually

 13 mentioned in the Public Service Commission report that I

 14 discussed in the oral summary.

 15 Q. Okay. So you've had an extensive relationship

 16 with them over the years?

 17 A. Yes, we have. Since the late '70s, we've done

 18 special projects with them.

 19 Q. Thank you for clearing that up.

 20 On page 15, line 1 through 13, was solar

 21 thermal and steam storage -- let me rephrase this. I

 22 want to make it more clear. Was the possibility of

 23 solar thermal and steam storage included in the analysis

 24 of what was available for base load capacity in the FPSC

 25 and FDEP renewables assessment?

 689

 1 A. I don't believe so.

 2 Q. And just to clarify that, if you would, would

 3 that mean that the solar thermal and steam storage

 4 information wasn't available at the time the assessment

 5 was made?

 6 A. I can't speak to that.

 7 Q. Okay. Thank you. Line 10 of page 16. Which

 8 renewable technologies have poor emission rates?

 9 A. It depends. Some biomass projects.

 10 Q. And essentially, what are the renewable energy

 11 technologies we're considering in your testimony?

 12 A. At this time, Florida Power & Light has made

 13 announcements that we are considering wind and solar

 14 initiatives.

 15 Q. And you have in your -- am I correct in

 16 understanding that biofuel projects are ongoing, which

 17 include waste energy plants?

 18 A. As we issue requests for proposals, such as

 19 the one I mentioned in my oral summary for 2007, we do

 20 get those types of proposals, and they do need to adhere

 21 to very strict standards.

 22 Q. Okay. Page 21, line 23. Actually, this

 23 refers to page 20, line 23, and then goes over to page

 24 21, lines 1 and 2. You speak of how installed capacity

 25 of nuclear base load would produce six times the energy

 690

 1 of wind, as compared to wind technology. What I would

 2 like to know is, what is the comparison in waste product

 3 between wind and nuclear? How much radioactive waste

 4 does wind produce?

 5 MR. ANDERSON: FPL objects, because

 6 environmental considerations are beyond the scope of

 7 this witness's testimony. Mr. Kosky would be the

 8 correct witness for that.

 9 MR. KRASOWSKI: We'll withdraw it. Okay. Our

 10 question is not environmental. It is economic, because

 11 waste is an economic --

 12 CHAIRMAN CARTER: I think you were right to

 13 withdraw it with this witness.

 14 MR. KRASOWSKI: Okay. Thank you.

 15 BY MR. KRASOWSKI:

 16 Q. Are there any waste costs associated with wind

 17 energy?

 18 A. No.

 19 Q. Thank you. Page 22, line 10. You say that

 20 solar PV and large scale solar thermal energy are

 21 comparatively expensive sources of electricity. Does

 22 this include concentrated solar?

 23 A. Yes.

 24 Q. Okay. And does it include the full cost of

 25 managing waste that's associated with nuclear

 691

 1 facilities?

 2 MR. ANDERSON: Same objection as earlier.

 3 It's beyond the scope of the witness's testimony.

 4 CHAIRMAN CARTER: Sustained.

 5 MR. KRASOWSKI: Okay. Pardon me.

 6 BY MR. KRASOWSKI:

 7 Q. Does solar -- let me ask you, to the best of

 8 your knowledge, what are the waste byproducts of solar

 9 energy?

 10 MR. ANDERSON: Objection. Beyond the scope.

 11 MR. KRASOWSKI: Okay. Thank you.

 12 BY MR. KRASOWSKI:

 13 Q. Page 22, line 14. Can you elaborate or

 14 explain -- well, let me start over. Could you comment

 15 on the newest solar technology developments?

 16 A. There are many solar technologies. Could you

 17 be more specific?

 18 Q. Yes. FPL has a project going on now, ongoing

 19 with Ausra. I believe you mentioned them in your

 20 testimony, A-u-s-r-a, Ausra.

 21 A. I didn't mention Ausra in my testimony.

 22 Q. You don't? Okay. I'm sorry. I'm confusing

 23 you with somebody else. I apologize.

 24 A. Do you have a question about Ausra?

 25 Q. Yes. Are you familiar with –-

 692

 1 A. Yes, I am.

 2 Q. Okay. Are there any plans to do more than

 3 just the 300 megawatts project that's in the works now

 4 into the future?

 5 A. Well, we've had numerous meetings with senior

 6 executives and technical experts from Ausra, and we've

 7 conducted a technical due diligence analysis, and that

 8 has included an engineer visit to Australia. Ausra's

 9 project has never produced steam in any meaningful

 10 quantity or any electricity. Furthermore, the

 11 demonstration project won't meet Florida's building

 12 codes. Ausra has not demonstrated the steam storage

 13 capability. So we have a lot of discussions we need to

 14 follow up with them on.

 15 Q. Thank you for that information. Also, along

 16 the same lines, are you familiar with the Israeli

 17 company, Solel, that FPL's national parent company has

 18 hired to do work on their solar operation out west?

 19 A. Generally speaking.

 20 Q. Okay. So do they -- they have a solar thermal

 21 product. Is that -- what stage of development is that

 22 in? Do you know?

 23 A. I can't speak for Solel.

 24 Q. You're not working on anything with them at

 25 the time?

 693

 1 A. There may be people in my company working with

 2 Solel, but I'm not.

 3 Q. Okay. Now, one last question in regards to

 4 the ocean technology project that you're involved in.

 5 Are there concerns about the impact on manatees?

 6 A. I'm sorry. Can you restate that?

 7 Q. Yes. Have you ever testified in front of --

 8 well, I guess that's outside the realm as well, so we'll

 9 just forget that, and we're done. Thank your very much

 10 for your cooperative answers.

 11 CHAIRMAN CARTER: Thank you very kindly.

 12 Commissioners? Commissioner Argenziano, you're still

 13 with us; right?

 14 COMMISSIONER ARGENZIANO: No, Mr. Chair. I

 15 was just wondering, with all due respect, since we've

 16 had a lot of breaks today and people are from out of

 17 town, is there any objection to maybe staying until

 18 6:00, trying move on a little quicker, if there are

 19 people from out of town?

 20 CHAIRMAN CARTER: Commissioners? Well, we're

 21 fine. Is that all right with the parties? Okay.

 22 MR. ANDERSON: Of course, Your Honor.

 23 CHAIRMAN CARTER: Great suggestion,

 24 Commissioner Argenziano.

 25 COMMISSIONER ARGENZIANO: Thank you,

 694

 1 Mr. Chair.

 2 CHAIRMAN CARTER: Staff, any questions for

 3 Ms. McBee?

 4 MS. FLEMING: We have no questions.

 5 CHAIRMAN CARTER: Commissioners, any questions

 6 for Ms. McBee? Any redirect?

 7 MR. ANDERSON: No, sir.

 8 CHAIRMAN CARTER: Okay, Mr. Anderson. Let's

 9 deal with the exhibits.

 10 MR. ANDERSON: FPL would offer Exhibits 54 to

 11 57 into evidence.

 12 CHAIRMAN CARTER: Okay. Any objections?

 13 Without objection, show it done.

 14 (Exhibits Number 54 through 57 were admitted

 15 into the record.)

 16 CHAIRMAN CARTER: Call your next witness.

 17 Thank you, Ms. McBee.

 18 THE WITNESS: Thank you very much.

 19 MR. BUTLER: Would he would call Mr. Yupp. I

 20 don't believe Mr. Yupp has been sworn.

 21 CHAIRMAN CARTER: Mr. Yupp, would you please

 22 stand and raise your right hand.

 23 (Witness sworn.)

 24 CHAIRMAN CARTER: Please be seated.

 25 Thereupon,

 695

 1 GERARD J. YUPP

 2 was called as a witness and, having been first duly

 3 sworn, was examined and testified as follows:

 4 DIRECT EXAMINATION

 5 BY MR. BUTLER:

 6 Q. Would you please state your name and business

 7 address for the record?

 8 A. My name is Gerard Yupp. My business address

 9 is 700 Universe Boulevard, Juno Beach, Florida.

 10 Q. By whom are you employed, and in what

 11 capacity?

 12 A. I am employed by Florida Power & Light Company

 13 as the Director of Wholesale Operations in the Energy

 14 Marketing and Trading Division.

 15 Q. Have you prepared and caused to be filed 17

 16 pages of prefiled direct testimony in this proceeding on

 17 October 16, 2007?

 18 A. Yes, I have.

 19 Q. Do you have any changes or revisions to your

 20 prefiled direct testimony?

 21 A. No, I do not.

 22 Q. If I asked you the questions contained in your

 23 prefiled direct testimony, would your answers be the

 24 same?

 25 A. Yes, they would.

 696

 1 MR. BUTLER: Chairman Carter, FPL requests

 2 that the prefiled direct testimony of Mr. Yupp be

 3 inserted into the record as though read.

 4 CHAIRMAN CARTER: The prefiled testimony will

 5 be accepted into the record as though read.

 6 MR. BUTLER: Thank you.

 7 BY MR. BUTLER:

 8 Q. Mr. Yupp, are you also sponsoring Exhibits

 9 GJY-1 and GJY-2 which are attached to your prefiled

 10 testimony?

 11 A. Yes, I am.

 12 MR. BUTLER: Chairman Carter, I would note

 13 that those exhibits have been premarked for

 14 identification as 58 and 59.

 15 CHAIRMAN CARTER: Okay.

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 1 BY MR. BUTLER:

 2 Q. Mr. Yupp, would you please summarize your

 3 direct testimony for the Commission?

 4 A. Yes, I will. Thank you.

 5 Good afternoon, Chairman Carter and

 6 Commissioners. Turkey Point 6 and 7 will enhance FPL's

 7 system reliability and help reduce price volatility, as

 8 an electric system that maintains a balanced,

 9 fuel-diverse generation portfolio is less susceptible to

 10 fuel supply disruptions and better protected from the

 11 impact of sudden swings in the price of one fuel on

 12 total system fuel costs. As shown on my Exhibit GJY-2,

 13 FPL's existing nuclear fleet has saved FPL's customers

 14 approximately $9 billion in fuel costs since the year

 15 2002. Additionally, Turkey Point 6 and 7 will help

 16 reduce FPL's reliance on natural gas.

 17 Now, it's important to understand that in the

 18 past, or the current natural gas supply and delivery

 19 infrastructure into Florida, it has provided a high

 20 level of reliability over the years. But it's important

 21 to recognize that as we look at future additions of

 22 natural gas-fired generation that that is going to

 23 require an investment in both infrastructure expansion

 24 and supply diversity alternatives in order to maintain

 25 the level of reliability that we have today. And that

 715

 1 investment will likely increase the gas transportation

 2 charges that FPL and other gas users in Florida will

 3 have to pay.

 4 Now, finally, Turkey Point 6 and 7 do provide

 5 several favorable fuel supply characteristics as

 6 compared to a natural gas-fired plant. Currently, our

 7 natural gas-fired facilities carry approximately three

 8 days of light oil storage or backup fuel on-site. In

 9 contrast to that, a nuclear unit can produce power for

 10 18 months before it needs additional fuel. And nuclear

 11 units can also continue power production beyond the

 12 scheduled end of their fuel cycle by slightly reducing

 13 power output over time. And that's important. That

 14 flexibility could prove to be very useful in mitigating

 15 the impact of supply disruptions for other fuels, as

 16 well as helping to reduce fuel price volatility during

 17 certain times.

 18 Finally, my testimony does cover FPL's fuel

 19 price projections that were used in the economic

 20 evaluation of Turkey Point 6 and 7. Fuel price

 21 projections are inherently uncertain, unpredictable and

 22 uncertain due to a number of unpredictable, again, and

 23 uncontrollable factors that influence short- and

 24 long-term prices. And so with that in mind, FPL

 25 developed multiple fuel price forecasts for the economic

 716

 1 evaluation of Turkey Point 6 and 7 to cover a wide range

 2 of projected outcomes, and we believe that our multiple

 3 fuel price forecasts do provide a reasonable set of

 4 long-term price outcomes for economic evaluation

 5 purposes for Turkey Point 6 and 7.

 6 That concludes my summary. Thank you.

 7 MR. BUTLER: Thank you, Mr. Yupp. I tender

 8 the witness for cross-examination.

 9 CHAIRMAN CARTER: Thank you. Mr. Beck.

 10 MR. BECK: I have no questions. Thank you.

 11 CHAIRMAN CARTER: Ms. Krasowski.

 12 CROSS-EXAMINATION

 13 BY MR. KRASOWSKI:

 14 Q. Hello, Mr. Yupp.

 15 A. Hello.

 16 Q. I just have a few questions about the uranium

 17 fuel.

 18 A. I'm covering fossil fuel in my -- my testimony

 19 covers fossil fuel. If there are questions regarding

 20 uranium fuel, that would be directed to witness Villard.

 21 MS. KRASOWSKI: Well, thank you.

 22 CHAIRMAN CARTER: Commissioners? Staff.

 23 MS. FLEMING: Just a few questions, please.

 24 CHAIRMAN CARTER: You're recognized.

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 1 CROSS-EXAMINATION

 2 BY MS. FLEMING:

 3 Q. Hello, Mr. Yupp. I'm Katherine Fleming.

 4 A. Hello.

 5 Q. At your deposition, we discussed the

 6 alternatives that FPL looked at when deciding on the

 7 Turkey Point 6 and 7. Do you recall that conversation?

 8 A. Alternatives from a generation standpoint?

 9 Q. That's correct.

 10 A. Yes, I do.

 11 Q. And at your deposition, you stated that all

 12 alternatives were evaluated, but the most likely

 13 candidates were natural gas and nuclear. Do you recall

 14 that?

 15 A. I do recall that.

 16 Q. Thank you. So for purposes of this, your

 17 testimony is that the two viable alternatives at this

 18 stage are the Turkey Point nuclear plants or a combined

 19 cycle gas plant; is that correct?

 20 A. I'm not sure that's my testimony. My

 21 testimony does cover the benefits of fuel diversity in

 22 regard to the Turkey Point 6 and 7 units, and also

 23 supports the fuel price forecast. But I think overall,

 24 it's safe to say that the best alternatives through the

 25 evaluation process turned out to be Turkey Point 6 and 7

 718

 1 or a combined cycle unit.

 2 Q. If Turkey Point 6 and 7 are not built, will

 3 there be a need for more investment as far as gas

 4 pipelines to meet demand?

 5 A. Yes, there will be. As my testimony describes

 6 and as I described in my oral summary, to the extent

 7 that we do add natural gas-fired generation, incremental

 8 natural gas-fired generation to what we have now, there

 9 will be the requirement for investing in not only an

 10 expansion of the supply infrastructure into the state,

 11 because currently the two major pipelines that do supply

 12 gas into Florida are fully subscribed, or FGT is fully

 13 subscribed, and Gulfstream will be by mid-2009. So

 14 we'll be looking at not only an infrastructure

 15 expansion, but as we add more natural gas-fired

 16 generation, it will really become imperative that we

 17 look at supply alternatives. So we divest, so to speak,

 18 away from the Gulf of Mexico and look at other

 19 alternatives that can help supply reliability on the

 20 supply side.

 21 Q. And in your summary, you stated that FPL

 22 created three forecasted gas price scenarios; is that

 23 correct?

 24 A. That is correct.

 25 Q. And were those three forecasts based on –-

 719

 1 your high and low forecasts were based on the medium

 2 forecast; is that correct?

 3 A. Partly. We created or we developed a medium

 4 price forecast based on the methodology that is

 5 described in my testimony. And to create the high and

 6 the low band forecast, what we did is, we went back to

 7 January 2000, and we looked at actual fuel prices, and

 8 in this case, natural gas that was delivered to FPL, so

 9 actual natural gas prices that we paid as a company in

 10 the period January 2000 through April 2007. And we

 11 looked at the high and low ranges of what we paid during

 12 that period of time, and then we applied those high

 13 percentages and low percentages to our medium price

 14 forecast in order to create the high and low band.

 15 Q. And is it my understanding that no

 16 probabilities were assigned to these three scenarios?

 17 A. I don't recall any. There's no probabilities,

 18 no. It was simply looking at the high and low range, so

 19 to speak, and applying that to the medium price

 20 forecast. I don't recall probabilities, so to speak, in

 21 that sense being applied.

 22 Q. Of the three forecast scenarios that FPL has

 23 looked at, is there one scenario that is more probable

 24 than the others?

 25 A. I think it's safe to assume -- without saying

 720

 1 that anything is more likely than the other, I think the

 2 safe assumption that can be made is that the medium

 3 price forecast is something that takes into account all

 4 of the currently available information that is out in

 5 the marketplace that is used to develop fuel price

 6 forecasts. And so to that extent, that is what we would

 7 believe to be at this point in time, given the

 8 information we have, a reasonable forecast. The others,

 9 the high and low, put bands around that. But that is

 10 the forecast that was developed with the latest

 11 information.

 12 MS. FLEMING: Okay. Thank you. We have no

 13 further questions.

 14 MR. ANDERSON: Commissioners, do you have any

 15 questions?

 16 Okay. Mr. Butler, let's deal with the

 17 exhibits.

 18 MR. BUTLER: No redirect, and I move the

 19 exhibits.

 20 CHAIRMAN CARTER: Oh, I'm sorry.

 21 MR. BUTLER: It was good intuition. No

 22 redirect, and I move Exhibits 58 and 59 into the record.

 23 CHAIRMAN CARTER: Any objections? Without

 24 objection, show it done.

 25 (Exhibits Number 58 and 59 were admitted into

 721

 1 the record.)

 2 CHAIRMAN CARTER: Call your next witness.

 3 MR. BUTLER: Thank you. I call Mr. Yupp --

 4 I'm sorry, Mr. Villard to the stand. And I --

 5 Mr. Villard, have you been sworn?

 6 THE WITNESS: No, not yet.

 7 MR. BUTLER: Okay.

 8 CHAIRMAN CARTER: Would you please stand and

 9 raise your right hand.

 10 (Witness sworn.)

 11 CHAIRMAN CARTER: Thank you. You may be

 12 seated.

 13 Thereupon,

 14 CLAUDE A. VILLARD

 15 was called as a witness on behalf of Florida Power &

 16 Light Company and, having been first duly sworn, was

 17 examined and testified as follows:

 18 DIRECT EXAMINATION

 19 BY MR. BUTLER:

 20 Q. Mr. Villard, would you please state your name

 21 and business address for the record?

 22 A. Yes. My name is Claude A. Villard. And I --

 23 my business address is 700 Universe Boulevard, Juno

 24 Beach, Florida.

 25 Q. Thank you. By whom are you employed, and in

 722

 1 what capacity?

 2 A. I'm employed by FP&L. I'm Director of Nuclear

 3 Fuels.

 4 Q. Have you prepared and caused to be filed 11

 5 pages of prefiled direct testimony in this proceeding on

 6 October 16, 2007?

 7 A. Yes, I have.

 8 Q. Do you have any changes or revisions to make

 9 to your prefiled direct testimony at this time?

 10 A. No, no changes.

 11 Q. If I asked you the questions contained in your

 12 prefiled direct testimony, would your answers be the

 13 same?

 14 A. They would be the same, correct.

 15 MR. BUTLER: Chairman Carter, I would ask that

 16 the prefiled direct testimony of Mr. Villard be inserted

 17 into the record as though read.

 18 CHAIRMAN CARTER: The prefiled testimony will

 19 be inserted into the record as though read.

 20 MR. BUTLER: Thank you.

 21 BY MR. BUTLER:

 22 Q. Mr. Villard, are you also sponsoring exhibits

 23 CAV-1 through CAV-6 which are attached to your prefiled

 24 testimony?

 25 A. Yes, that is correct.

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 1 MR. BUTLER: Chairman Carter, I would note

 2 that these exhibits have been premarked for

 3 identification as 60 through 65.

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 1 BY MR. BUTLER:

 2 Q. With that, Mr. Villard, would you please

 3 summarize your direct testimony for the Commission?

 4 A. Yes, gladly so. Mr. Chairman, Commissioners,

 5 I'm responsible for nuclear fuel procurement, contract

 6 administration, reactor core design, nuclear fuel

 7 performance, and certain spent fuel storage matters for

 8 FPL's nuclear power plants. I have more than 30 years

 9 of experience in various technical and commercial

 10 aspects of the nuclear fuel cycle.

 11 My testimony provides the nuclear fuel cycle

 12 price projections that were used for FPL's economic

 13 evaluation of Turkey Point 6 and 7 in this need

 14 determination proceeding. The calculation for this fuel

 15 cost projection was performed consistent with the method

 16 currently used for FP&L's fuel clause filing.

 17 The cost of nuclear fuel reflects costs for

 18 several steps of the fabrication of fuel before delivery

 19 to a nuclear power plant. These steps are mining of

 20 uranium ore, converting the solid uranium ore to a gas

 21 that is better suited for isotopic separation or

 22 enrichment, enriching the uranium so that it has a

 23 higher concentration of the isotopes needed to support

 24 nuclear power reaction, fabricating the nuclear fuel

 25 assembly itself, and related engineering services. In

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 1 addition, the nuclear fuel cost projections that I have

 2 prepared include the standard payment made to the U.S.

 3 Department of Energy as compensation for disposing of

 4 spent fuel.

 5 Nuclear fuel costs have historically been

 6 significantly more stable and significantly lower than

 7 the cost of fossil fuels. Prices for all the components

 8 of the nuclear fuel cycle, except for the recent uranium

 9 ore prices, have not changed much in nominal dollars

 10 during the last 25 years. Although the uranium ore

 11 market is currently in transition, I expect the market

 12 to follow the fundamentals on a long-term basis, with

 13 sufficient supply to address the nuclear fuel needs for

 14 Turkey Point 6 and 7 at reasonable and stable prices.

 15 The current price increases have led to

 16 significant investment, new production investment, which

 17 should create additional supply that will moderate

 18 future prices. Because the lead time to build a nuclear

 19 plant is longer than what is needed to expand production

 20 at existing uranium production facilities or to actually

 21 put additional mining operations in service, I expect

 22 the market will have adequate supply to meet demand.

 23 To add additional uranium supply security, the

 24 nuclear industry is working with the Department of

 25 Energy, who has a significant amount of inventory of

 737

 1 uranium, to make available -- if requested by a utility,

 2 to make available the amount of uranium needed for first

 3 core. As you may realize, the first core of a reactor

 4 takes a significant amount of fuel, and therefore, the

 5 U.S. Department or Energy is willing to supply it, of

 6 course, at the market price, no subsidy there.

 7 A. Even if periodic price fluctuations occur,

 8 uranium prices do not have the same impact on the FPL's

 9 customers as more volatile fossil fuel supply, fossil

 10 fuel prices. First, uranium is only one of about five

 11 components of the fuel costs, and there has been almost

 12 no volatility in the other cost components. For

 13 example, I was thinking about -- I was reflecting on the

 14 fact that in 1985, enrichment services, which is a very

 15 important -- (pause).

 16 Q. Mr. Villard, you may continue.

 17 A. Thank you. Enrichment services, which is a

 18 very major component of the nuclear fuel cost, was at

 19 about $140 per SWU, which is a unit of services, in

 20 1985, and today's market price is about $143 per SWU,

 21 unit of services. So there has been almost no changes.

 22 There's been some up and down, but almost no changes.

 23 Second, about a third of the reactor is

 24 replaced every 18 months, so the impact of any given

 25 increase is amortized over four or five years, because

 738

 1 every reload is left in the reactor for about three

 2 cycles, which lasts every 18 months, and therefore 4.5

 3 to five years.

 4 Third, nuclear fuel costs are a much smaller

 5 portion of total generation costs for nuclear.

 6 Fourth, the cost of nuclear is substantially

 7 lower than the cost of fossil fuel. For this reason, it

 8 is appropriate to use long-term prices more reflective

 9 of market fundamentals for a price projection for this

 10 case.

 11 Nuclear plants also are much less vulnerable

 12 to supply disruption than fossil plants, especially

 13 those that are gas-fired. Because nuclear plants are

 14 refueled at very lengthy intervals, every 18 months

 15 rather than continuously as the case in fossil fuel,

 16 nuclear plants have long periods of operation where the

 17 immediate availability of additional fuel supply is not

 18 an issue, and this long lead time allows supply to

 19 adjust in case there was any supply disruption.

 20 In addition, the delivery of nuclear fuel is

 21 scheduled typically two months before it's actually

 22 loaded in the reactor core during the refueling outage,

 23 and this time will provide additional sufficient cushion

 24 in case a supply disruption occurs for supplying nuclear

 25 fuel itself. Moreover, in the event of fossil fuel

 739

 1 supply disruption, nuclear plants are capable of

 2 operating beyond the planned refueling dates.

 3 Finally, FPL is confident that there are

 4 viable economic alternatives available for the storage

 5 of spent nuclear fuel at Turkey Point 6 and 7 regardless

 6 of when the Department of Energy fulfills its statutory

 7 and contractual obligation to take delivery of spent

 8 nuclear fuel for disposal.

 9 That concludes my summary.

 10 MR. BUTLER: Thank you, Mr. Villard. I tender

 11 the witness for cross-examination.

 12 COMMISSIONER EDGAR: Thank you. Mr. Beck.

 13 MR. BECK: Thank you. I have no questions.

 14 COMMISSIONER EDGAR: Ms. Krasowski.

 15 CROSS-EXAMINATION

 16 BY MS. KRASOWSKI:

 17 Q. Good afternoon, Mr. Villard. It's almost good

 18 evening.

 19 A. Good evening.

 20 Q. On page 4 of your testimony, you speak of the

 21 uranium mining. Can you tell me how the radioactive

 22 tailings from uranium mining are dealt with?

 23 A. There are specific regulatory requirements

 24 which apply to uranium mining which we abide by, all the

 25 miners that we buy fuel from.

 740

 1 Q. Do you foresee the Federal Government

 2 requiring the mining companies that have not been

 3 dealing with the tailings the way that they're supposed

 4 to do by law, forcing them into cleaning up their areas?

 5 MR. BUTLER: Objection to that for lack of

 6 foundation.

 7 MS. KRASOWSKI: All right.

 8 BY MS. KRASOWSKI:

 9 Q. How long do you think that the quality of

 10 uranium in the United States is going to be of the

 11 quality that requires less -- that requires the amount

 12 of milling that is required right now for uranium fuel?

 13 A. Can you clarify your question, because I'm not

 14 sure I understand what --

 15 Q. Yes. Is there a large quantity of high

 16 quality uranium fuel -- of uranium available in the

 17 United States?

 18 A. Well, maybe I can help you a little bit.

 19 There are different grades of ore. That's what you are

 20 referring to. And it's just a question of the cost of

 21 production. When the market price went down to $10 per

 22 pound, you had significant shutdown of uranium

 23 facilities in the U.S. But the market has recovered

 24 quite a bit now, and we expect it on a long-term basis

 25 in 2007 now to be what we're assuming is between 50 and

 741

 1 $60 per pound. With that type of dollar amount, there

 2 is plenty, there's plenty of incentive, financial

 3 incentive to allow significant expansion of uranium

 4 mining in the U.S., even at lower grades.

 5 Q. Is it true that if the ore quality is lesser

 6 that it requires more milling and things to get the

 7 amount of uranium that you need?

 8 A. That is true. That is correct.

 9 Q. And does that add to the carbon dioxide and

 10 other greenhouse gases that are associated with the

 11 nuclear fuel cycle?

 12 A. You're talking about a very, very small

 13 amount. You're adding a very small amount, I would say.

 14 If you have to do more processing, you're going to need

 15 more power and you've going to need more energy. And

 16 there is, yes, some very infinitesimal addition to the

 17 carbon dioxide, yes.

 18 Q. Are there -- this is still on page 4. Are

 19 there radioactive or greenhouse gas releases when the

 20 in-situ leaching operations burp or bulge gases into the

 21 atmosphere?

 22 A. Could you repeat it? When what operation?

 23 Q. When the in-situ leaching --

 24 A. Oh, in-situ leaching operation. Any operation

 25 does use machinery, so, yes, to the extent you're

 742

 1 talking about a very, very small amount, yes. Yes, it

 2 will.

 3 Q. And what about radioactive emissions?

 4 A. I'm not --

 5 MR. BUTLER: I'm going to object to this line

 6 of questioning. It's pretty clear now that it's really

 7 about the environment consequences of uranium mining,

 8 which is beyond the scope of his testimony and also

 9 beyond the scope of this proceeding.

 10 CHAIRMAN CARTER: Okay. I'll sustain.

 11 BY MS. KRASOWSKI:

 12 Q. Mr. Villard, can you tell me how many CFCs,

 13 which are the carbofluoro -- CFCs are released during

 14 the enrichment process?

 15 MR. BUTLER: I'm going to object again. I

 16 fail to see how that relates to issues in his testimony

 17 or the proceeding.

 18 MS. KRASOWSKI: Well, CFCs are a greenhouse

 19 gas, carbofluoro --

 20 CHAIRMAN CARTER: The objection, though -- did

 21 you hear his objection? Mr. Butler, would you state

 22 your objection again?

 23 MR. BUTLER: My objection is that it is a

 24 subject not covered in Mr. Villard's testimony and not

 25 relevant to this proceeding.

 743

 1 MS. KRASOWSKI: Sorry. It's getting late in

 2 the day.

 3 BY MS. KRASOWSKI:

 4 Q. How does -- well, does FP&L refine and enrich

 5 its raw uranium, or do you buy uranium already enriched?

 6 A. Well, we buy the raw uranium, and we also buy

 7 the services to do the enrichment of uranium.

 8 Q. Okay. If the proposed nuclear power plants

 9 that are being proposed for the United States, which

 10 there are many right at the moment, if there are a lot

 11 of them trying to have their fuel enriched, how many

 12 fuel enrichment facilities are there currently in the

 13 United States?

 14 A. There's only one facility currently operating

 15 in the United States.

 16 Q. And can that meet the need for all of the

 17 proposed nuclear power plants?

 18 A. No, of course not.

 19 Q. How many will it take?

 20 A. Well, if you look at worldwide, this is an

 21 international market, and we buy services from France,

 22 from England, from the U.S. So it's an international

 23 market. The current capacity is really 50 million units

 24 of services, and there is a significant plan -- many

 25 companies are in fact planning on introducing that

 744

 1 technology in the U.S., which is a centrifuge technology

 2 for the enrichment of uranium, and there's significant

 3 investment being made to increase the capacity, the

 4 current capacity for producing -- for the enrichment

 5 services in the U.S.

 6 Q. How long will it take to build one of the

 7 centrifuge enrichment plants?

 8 A. Well, how long will it take to actually build

 9 or to have a license and build?

 10 Q. Well, to have the license and be built and

 11 have enough --

 12 A. It's about five years, about five years.

 13 Q. Okay. What kind of facility does FP&L use now

 14 for enrichment?

 15 A. We mostly buy from the USEC, which used to be

 16 a part of the U.S. Government, and the U.S. Government

 17 created that separate corporation and then sold it to

 18 the public, and we mostly buy from that facility.

 19 Q. And is that facility in Paducah, Kentucky?

 20 A. It is. Yes, it is.

 21 Q. All right. I just have just a follow-up

 22 question. On your Exhibit CAV-1, which is now Exhibit

 23 Number 60, I believe --

 24 A. CAV-1.

 25 Q. On this exhibit, you have like -- you have the

 745

 1 nuclear fuel cycle here. When you get to number 7, you

 2 have reprocessing of -- reprocessing of spent fuel to

 3 separate wastes, and then you have some going back up to

 4 fuel fabrication.

 5 A. That is what the exhibit shows, yes.

 6 Q. Is this done at any of the nuclear power

 7 plants currently?

 8 A. Well, reprocessing is not done at a nuclear

 9 power plant, but it's being done in France.

 10 Q. Why do they reprocess the fuel? Is there a

 11 benefit to reprocessing the fuel?

 12 A. Well, different countries made a decision--

 13 it's broader than just the economics, and the French

 14 have knowledged that it is not purely based on the

 15 economics. As a state, the French have decided a long,

 16 long time ago that reprocessing was the right thing to

 17 do for nuclear fuel, whereby in the U.S., the policy

 18 came out that final disposal of the fuel rods in a

 19 repository was and still is the final solution.

 20 Q. Was that done because of -- was that done

 21 because of plutonium concerns?

 22 A. There was some -- that was the initial reason

 23 back in the 1970s. There was some proliferation

 24 concern. But subsequently, the train had left the

 25 station, and we were pretty much embarking to final

 746

 1 disposal in the repository of the spent rods, if you

 2 will.

 3 Q. Does reprocessing add a lot to the cost of the

 4 nuclear fuel cycle in you add reprocessing to it?

 5 A. If you were to add reprocessing, with the

 6 current volume and the current facilities, I would say

 7 yes, it is correct. However, as we're all aware, should

 8 there be significantly more volume and significantly

 9 more interest in reprocessing, as with any technology,

 10 as with any endeavor, human beings tend to improve it,

 11 and the efficiency will increase. However, currently,

 12 the answer is yes.

 13 MS. KRASOWSKI: Well, thank you, Mr. Villard.

 14 THE WITNESS: You're welcome.

 15 CHAIRMAN CARTER: Thank you. Commissioners,

 16 any questions? Staff.

 17 MS. FLEMING: Just a couple of questions.

 18 CHAIRMAN CARTER: You're recognized.

 19 CROSS-EXAMINATION

 20 BY MS. FLEMING:

 21 Q. Good evening, Mr. Villard.

 22 A. Good evening.

 23 Q. I believe in your testimony you stated that

 24 the current supply of natural uranium and enrichment

 25 services is currently tight; is that correct?

 747

 1 A. That is correct.

 2 Q. But then because of the expected construction

 3 of new nuclear units, you would agree that the demand

 4 for nuclear fuel will increase; is that correct?

 5 A. That is correct.

 6 Q. So how will this demand be met if the supply

 7 is short or is tight right now?

 8 A. Oh, as I indicated in my testimony, what we

 9 have is, we are in a transition period where for a long

 10 time, we've been using mostly -- almost 40 percent of

 11 the supply for uranium came from inventories, partly

 12 from the Russian downblending inventories and other

 13 utilities' and producers' inventories. In fact, what's

 14 making supply tight is the anticipation, and therefore,

 15 a lot of people are buying material for inventory, and

 16 that in fact is increasing the demand for uranium, which

 17 makes the current situation tight.

 18 As you have a very tight supply, what has

 19 happened over the past year was, for example, in

 20 December 2006, the price of uranium was about $40 per

 21 pound, and the price jumped up to $137 per pound in

 22 June, July of 2007. Now, today, it's back down to

 23 $78 per pound, so it has been dropping significantly as

 24 we speak. But what that has done is that that high

 25 price at 40 to $50 per pound is actually encouraging

 748

 1 significantly more production. So there's a lot of

 2 things being done. There was a very large Namibian mine

 3 that was shut down, that was about to shut down, and

 4 because of the high price, realizing that we went from

 5 $10 per pound to 40 or 50 on a long-term basis, because

 6 of the expected high prices, those facilities are now

 7 coming back to life, and there's significantly

 8 additional expenditure being planned.

 9 And because of that, we will expect that once

 10 -- as we can see right now, the price pinch was also due

 11 to a force majeure that occurred. There were two large

 12 uranium mines that shut down last year. Once was in

 13 Australia. They were flooded by a cyclone. We all know

 14 about hurricanes here, but in Australia they call them

 15 cyclones. And also, there was another flooding that

 16 happened in Canada two months before, and that has made

 17 it even worse, and that's what caused the price to spike

 18 to about 137. But the price is currently returning back

 19 to the more fundamental to support the capital

 20 investments which are needed for the long-term expansion

 21 of nuclear power.

 22 MS. FLEMING: Thank you. We have no further

 23 questions.

 24 CHAIRMAN CARTER: Thank you. Commissioners?

 25 Mr. Butler.

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 1 MR. BUTLER: A couple of brief redirect,

 2 please.

 3 REDIRECT EXAMINATION

 4 BY MR. BUTLER:

 5 Q. Mr. Villard, is FPL currently reprocessing any

 6 of its spent nuclear fuel for any of its nuclear units?

 7 A. No.

 8 Q. Does the project that is the subject of this

 9 proceeding, does it contemplate the use of reprocessed

 10 fuel in your analysis?

 11 A. No, we do not, because it contemplates the

 12 final disposal by the government with the 1 mill per

 13 kilowatt-hour fee.

 14 Q. You just had an exchange with staff regarding

 15 uranium prices and supply. Would the sort of higher

 16 uranium prices that you mentioned significantly affect

 17 the overall operating costs of the proposed nuclear

 18 units?

 19 A. No, it has not, because as we indicated in my

 20 oral summary and in my testimony, the interesting thing

 21 about nuclear fuel is that even if you may have one year

 22 where you have a significantly high price, that one year

 23 will only impact one-third of the fuel which is being

 24 loaded in the reactor core, and that one-third is

 25 amortized over five years, four or five years.

 750

 1 In addition to that, that one-third is also

 2 added to the other two-thirds of the fuel which is in

 3 the reactor core which was bought a few years ago, and

 4 therefore, there's a levelizing. There's a completely

 5 stabilizing impact that a big spike like that, you will

 6 not see a significant variation in the cost to the

 7 customer, which makes nuclear very, very stable in

 8 prices, in cost.

 9 MR. BUTLER: Thank you. That's all the

 10 questions that I have. And I would move the admission

 11 of Exhibits 60 through 65.

 12 CHAIRMAN CARTER: Any objections? Without

 13 objection, show it done.

 14 (Exhibit Numbers 60 through 65 were admitted

 15 into the record.)

 16 MR. BUTLER: Thank you. May Mr. Villard be

 17 excused?

 18 CHAIRMAN CARTER: Absolutely.

 19 THE WITNESS: Thank you.

 20 MR. BUTLER: We would call our -- should we go

 21 on to our next witness?

 22 CHAIRMAN CARTER: Yes.

 23 MR. BUTLER: Okay. It will be Mr. Kosky.

 24 MR. KRASOWSKI: Excuse me, Mr. Chairman. I

 25 have a question while the witness is coming up.

 751

 1 CHAIRMAN CARTER: Yes, sir.

 2 MR. KRASOWSKI: Will we be ending with

 3 Mr. Kosky, being that were projected to go till 6:00,

 4 and it's 5:30? We have some questions for him, but we

 5 would like to stop there.

 6 CHAIRMAN CARTER: Let me ask you this. We

 7 want to as much as possible accommodate you. Do you

 8 think you would be able to get your questions in in this

 9 time frame? Otherwise, we'll just find a possible

 10 breaking point.

 11 MR. KRASOWSKI: I think we'll be able to ask

 12 Mr. Kosky all the questions we have of him, but we

 13 wouldn't be so available to ask Mr. Sim or Mr. Reed, two

 14 additional today before six o'clock. Just asking while

 15 we had a little dead time here, a little downtime.

 16 CHAIRMAN CARTER: Okay. Well, let's get

 17 through this witness and see where we are.

 18 MR. KRASOWSKI: And see where we are? Okay.

 19 Thank you.

 20 MR. ANDERSON: FPL would --

 21 CHAIRMAN CARTER: Mr. Anderson.

 22 MR. ANDERSON: Thank you, Chairman Carter.

 23 FPL would call as its next witness Ken Kosky. He has

 24 not been sworn as a witness. He is an out-of-town

 25 witness, by the way.

 752

 1 CHAIRMAN CARTER: Thank you. Mr. Kosky, would

 2 you please stand and raise your right hand?

 3 (Witness sworn.)

 4 CHAIRMAN CARTER: Please be seated.

 5 Thereupon,

 6 KENNARD F. KOSKY

 7 was called as a witness on behalf of Florida Power &

 8 Light Company and, having been first duly sworn, was

 9 examined and testified as follows:

 10 DIRECT EXAMINATION

 11 BY MR. ANDERSON:

 12 Q. Good afternoon, Mr. Kosky.

 13 A. Good afternoon.

 14 Q. Please tell us your name and business address.

 15 A. My name is Kennard Kosky. My business address

 16 is 6241 Northwest 23rd Street, Suite 500, Gainesville,

 17 Florida, 32653.

 18 Q. By whom are you employed, and in what

 19 capacity?

 20 A. I'm employed by Golder Associates, Inc. as a

 21 principal in the Gainesville office.

 22 Q. Have you prepared and caused to be filed 23

 23 pages of prefiled direct testimony in this proceeding?

 24 A. Yes, I have.

 25 Q. Did you cause errata also to be filed?

 753

 1 A. Yes, I have.

 2 Q. Do you have any further changes or revisions

 3 other than your errata sheet?

 4 A. No, I do not.

 5 Q. If I asked you the same questions in your

 6 prefiled direct testimony, would your answers be the

 7 same?

 8 A. Yes, they would.

 9 MR. ANDERSON: Chairman Carter, FPL requests

 10 that the prefiled direct testimony of Mr. Kosky be

 11 inserted into the record as though read.

 12 CHAIRMAN CARTER: The prefiled testimony will

 13 be inserted into the record as though read.

 14 BY MR. ANDERSON:

 15 Q. Are you sponsoring any exhibits to your direct

 16 testimony?

 17 A. Yes, I am.

 18 Q. Are those KFK-1 through KFK-9?

 19 A. Yes, they are.

 20 MR. ANDERSON: Chairman Carter, those have

 21 been premarked, consistent with the staff list, as

 22 Exhibits Number 66 to 74.

 23

 24

 25

 778

 1 BY MR. ANDERSON:

 2 Q. Mr. Kosky, have you prepared a summary of your

 3 direct testimony?

 4 A. Yes, I have.

 5 Q. Please provide your summary to the Commission.

 6 A. Good evening, Chairman and members of the

 7 Commission. My name is Kennard Kosky, and over the last

 8 30 years, I've spent my career as an engineer permitting

 9 and doing environmental studies for electric power

 10 plants. I've performed projects in 28 states and 22

 11 foreign countries involving the construction and/or

 12 operation of over 100,000 megawatts of electric

 13 generating facilities. My experience specifically

 14 includes the overall responsibility for the site

 15 certification application for Turkey Point Unit 5 and

 16 the certification application for Turkey Point Units 3

 17 and 4 uprate projects.

 18 My role here today is to provide assurance as

 19 an independent Florida Professional Engineer that Turkey

 20 Point 6 and 7 can comply with environmental requirements

 21 and that the expected environmental compliance costs

 22 have been included and properly considered by FP&L.

 23 Here are some key points concerning Turkey

 24 Point 6 and 7. Turkey Point 6 and 7 will utilize highly

 25 efficient base load nuclear generation technology that

 779

 1 has the beneficial effect of avoiding CO2 emissions.

 2 The environmental controls being considered for Turkey

 3 Point 6 and 7 are based on proven and demonstrated

 4 technologies that will minimize environmental impacts.

 5 Turkey Point 6 and 7 can be constructed and operated in

 6 a manner that minimizes impacts to the environment.

 7 There have been discussions this week about

 8 life cycle emissions for nuclear generation. My

 9 testimony shows that life cycle emissions for nuclear

 10 generations are low when compared to non-emitting

 11 renewables. Life cycle emissions for nuclear generation

 12 are equivalent to wind generation and three times lower

 13 than solar generation.

 14 To put the future environmental benefits of

 15 nuclear generation in perspective, I have shown on

 16 Exhibit Number KFK-4 -- I think you have a copy -- the

 17 past environmental benefits of avoided CO2 emissions by

 18 FP&L's four existing nuclear units. Since their initial

 19 operation, FP&L's nuclear units have cumulatively

 20 avoided about 400 to 700 million tons of CO2.

 21 These historical benefits of nuclear

 22 generation will be greater in the future with the

 23 addition of Turkey Point 6 and 7 to FP&L's system. The

 24 future benefit of CO2 emissions that are avoided by

 25 Turkey Point 6 and 7 is illustrated in Exhibit KFK-7.

 780

 1 This exhibit shows a significant environmental benefit

 2 of avoided CO2 emissions for Florida's future.

 3 Most importantly, adding base load nuclear

 4 generation will reduce the total CO2 emissions from

 5 FP&L's system. This is illustrated in Exhibit KFK-9,

 6 which shows the reduction of CO2 emissions in FP&L's

 7 system by adding non-emitting nuclear generation by

 8 2021. Adding Turkey Point 6 and 7 to FP&L's system, as

 9 shown by the lower bar on the left, can reduce FPL's

 10 2021 CO2 emissions 76 percent of the way toward the goal

 11 stated in Governor Crist's executive orders.

 12 None of the other non-emitting generation

 13 choices, either individually or collectively, can result

 14 in such a significant reduction as does base load

 15 nuclear generation toward achieving Florida's CO2

 16 reduction goals. This is illustrated in Exhibit KFK-8,

 17 showing the higher avoided CO2 emissions of base load

 18 nuclear generation compared to solar and wind for the

 19 same installed capacity.

 20 That concludes my summary.

 21 MR. ANDERSON: Chairman Carter, Mr. Kosky is

 22 available for cross-examination.

 23 CHAIRMAN CARTER: Thank you. Mr. Beck.

 24 MR. BECK: Thank you, Mr. Chairman.

 25

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 1 CROSS-EXAMINATION

 2 BY MR. BECK:

 3 Q. Good afternoon, Mr. Kosky.

 4 A. Good afternoon.

 5 Q. Mr. Kosky, in addition to the exhibits that

 6 you've attached to your testimony, you're also

 7 sponsoring Appendix F to the need study, are you not?

 8 A. That's correct.

 9 Q. Would you please turn to page 3 of 4 of

 10 Appendix F to the need study?

 11 A. I do not have -- I did not bring that with me,

 12 unfortunately.

 13 MS. KLANCKE: Commissioners, I have extra

 14 copies of this document if you need them.

 15 CHAIRMAN CARTER: One second here. Are you

 16 going to go into a line of questioning on this,

 17 Mr. Beck?

 18 MR. BECK: Yes.

 19 CHAIRMAN CARTER: Okay. One second then.

 20 THE WITNESS: I have page 3 of 4 here.

 21 MR. BECK: Thank you. And that was unplanned,

 22 that the staff plans to use this exhibit as well.

 23 BY MR. BECK:

 24 Q. Mr. Kosky, on page 3 of 4 of Appendix F to the

 25 need study, you show various scenarios for projections

 782

 1 of cost for carbon dioxide emissions, do you not?

 2 A. That's correct.

 3 Q. And there are four different environmental

 4 cost projections that are listed on this page; is that

 5 right?

 6 A. That's correct.

 7 Q. What is Env 1?

 8 A. Env 1 is a mild CO2 projection cost.

 9 Q. And is that projection based on a study

 10 performed by ICF International?

 11 A. Yes, it was, in part. It's based on their

 12 projections of a 2006 study that they had conducted

 13 which provided costs through 2030.

 14 Q. And when you say it's in part, it's because

 15 you used the ICF study through 2030; is that right?

 16 A. That's correct.

 17 Q. And then past 2030, the ICF study does not

 18 have projections, does it?

 19 A. That's correct.

 20 Q. So how did Florida Power & Light use the ICF

 21 study to project past 2030?

 22 A. For each of the different cases, a projection

 23 was made that would essentially estimate by 2050 what

 24 the cost would be. It was a consensus decision, and

 25 then from 2050 to 2030, a straight line was drawn and

 783

 1 the estimates made.

 2 Q. And when you say a consensus, a consensus

 3 among whom?

 4 A. Myself and members of FP&L.

 5 Q. What did you base your projection of 2050 on

 6 in reaching that consensus?

 7 A. They looked -- the projections were pretty

 8 similar to what you would project if you were to look on

 9 a graph and sort of draw a line out there. And the

 10 projections were slightly different for each different

 11 case in terms of that 2050 determination.

 12 Q. Are you saying you essentially extrapolated?

 13 A. It was an extrapolation of what ICF had

 14 initially made. You could call it that, yes.

 15 Q. And the mild case, which is Env 1, was that

 16 based on a particular bill that had been introduced in

 17 Congress?

 18 A. Yes, it was.

 19 Q. Was that the Bingaman bill?

 20 A. That was the Bingaman bill back in 2006 when

 21 they made that projection, yes.

 22 Q. All the dollars that are listed on Appendix F

 23 are in nominal dollars per ton; is that correct?

 24 A. That's correct.

 25 Q. Does that mean that it's in the dollars that

 784

 1 will exist at the time of the projection?

 2 A. Yes.

 3 Q. It includes the impact of inflation; is that

 4 right?

 5 A. They were escalated at a rate of 2.5 percent

 6 based on the basis of the ICF report.

 7 Q. So if we look, for example, at the year 2020

 8 for the mild case, there is the number 13 listed there.

 9 Does that mean that the emission cost projected by

 10 Florida Power & Light is $13 per ton of carbon dioxide

 11 in 2020 dollars?

 12 A. Yes.

 13 Q. And likewise, if we looked at 2030, $19 is

 14 listed for the mild case, and that would be in 2030

 15 dollars?

 16 A. Yes.

 17 Q. Let's go to Env 2. Is that your expected

 18 case?

 19 A. That was a moderate case. We called it sort

 20 of a mid case in this particular analysis.

 21 Q. Okay. You've also in response to -- in

 22 interrogatory responses described that as an expected

 23 case, did you not?

 24 A. Yes. This particular Env 2 came from ICF's

 25 expected case, which they had labeled as expected.

 785

 1 Q. And under that scenario, the carbon dioxide

 2 emission costs in 2020 would be $26 per ton?

 3 A. Yes.

 4 Q. And in 2030, $52 per ton?

 5 A. Yes.

 6 Q. Okay. Scenario number 3, what is that?

 7 A. Scenario number 3 was a high case.

 8 Q. And is that based upon a bill by Senator

 9 McCain?

 10 A. Yes, it was, in the ICF projection, yes.

 11 Q. You used the ICF projections for numbers 1, 2,

 12 and 3; is that right?

 13 A. That's correct.

 14 Q. And is that also called the stringent case?

 15 A. Stringent case or high case initially, yes.

 16 Q. These three scenarios we discussed, numbers 1,

 17 2, and 3, are they the same scenarios that Florida Power

 18 & Light used in the Glades coal case?

 19 A. Yes, they were.

 20 Q. And number 4, that was not used in the Glades

 21 coal case, was it?

 22 A. No, that was not.

 23 Q. And number 4 that's listed on here was created

 24 by Florida Power & Light for this case; is that right?

 25 A. Yes, it was.

 786

 1 Q. And the numbers in number 4 are essentially

 2 130 percent of the numbers that are listed in number 3;

 3 is that right?

 4 A. Yes, that's correct.

 5 Q. And what did you base that upon in creating

 6 scenario number 4?

 7 A. That was based on a review of some reports

 8 that had made projections for legislation that was filed

 9 this year. One of those reports included a report from

 10 MIT that showed that the expected compliance costs may

 11 be much higher than as projected by ICF in 2006. That

 12 particular one was used as a way to account for newer

 13 legislation and potentially higher costs for CO2 in the

 14 future.

 15 Q. When you say the fourth one was based in part

 16 on the study by MIT, is that a staff exhibit that's

 17 being produced, that Florida Power & Light produced in

 18 response to Document Request Number 20?

 19 A. I believe it is. It was supplied as a result

 20 of an interrogatory.

 21 Q. Does the MIT report contain a specific

 22 forecast for carbon dioxide emission costs?

 23 A. No, it does not. It evaluates various

 24 legislative proposals and estimates what the impacts of

 25 those would be.

 787

 1 MR. BECK: Mr. Chairman, I have an exhibit

 2 that I would like to ask be labeled for identification.

 3 And it's a document that Florida Power & Light has

 4 claimed confidentiality, so I have it in red folders.

 5 The exhibit is titled -- it's excerpts from U.S.

 6 Emission and Fuel Markets Outlook 2006, Volume II,

 7 Emission Markets, Winter 2006/2007.

 8 CHAIRMAN CARTER: Can you assist Mr. Beck,

 9 staff, in passing this out, please.

 10 You don't need it? All right.

 11 MR. KRASOWSKI: Excuse me, Mr. Chairman.

 12 CHAIRMAN CARTER: Yes, sir.

 13 MR. KRASOWSKI: For the record, I would like

 14 to say that the Krasowskis are not receiving this

 15 document. We haven't expressed in an interest to review

 16 the confidential materials.

 17 CHAIRMAN CARTER: Okay.

 18 MR. BECK: I'm sorry, Mr. Chairman. You

 19 labeled this as an exhibit? I didn't get the number.

 20 CHAIRMAN CARTER: The confidential? No, I did

 21 not.

 22 MR. BECK: I would like to ask that it be

 23 labeled.

 24 CHAIRMAN CARTER: For identification purposes?

 25 MR. BECK: Yes, please.

 788

 1 CHAIRMAN CARTER: I think we're on 90 --

 2 MS. FLEMING: Seven.

 3 CHAIRMAN CARTER: Ninety-seven.

 4 (Exhibit Number 97 was marked for

 5 identification.)

 6 BY MR. BECK:

 7 Q. Mr. Kosky, do you have Exhibit 97 for

 8 identification in front of you?

 9 A. Yes, I do.

 10 Q. And do you recognize that as an except from

 11 the ICF study that Florida Power & Light used for the

 12 projections of environmental costs?

 13 A. Yes.

 14 Q. Mr. Kosky, I'm going to ask you some questions

 15 about this. I'm going to try my very best to avoid

 16 verbalizing anything that Florida Power & Light would

 17 claim to be confidential, but I would like to go through

 18 particularly the page number that has 142 in the lower

 19 right-hand corner, the second to last page. Do you have

 20 that in front of you?

 21 A. Yes, I do.

 22 Q. Okay. Do you see the chart on the right-hand

 23 side?

 24 A. Yes.

 25 Q. Okay. And in that chart, there's a red line

 789

 1 that's labeled "Expected Case"?

 2 A. Yes, it is.

 3 Q. And does that relate to your number 2 carbon

 4 dioxide scenario that you've shown?

 5 A. Yes, it does. That was the -- information

 6 from this particular case was used to develop case

 7 number 2, Env 2, in Exhibit F.

 8 Q. Now, on top of the chart, it lists the pricing

 9 scheme that's used in the exhibit. It's not nominal

 10 dollars as we discussed in your Appendix F, is it?

 11 A. No. It's constant dollars, 2005.

 12 Q. And would that be the reason that the numbers

 13 that we see on the chart here do not match the numbers

 14 that are contained in Appendix F?

 15 A. That's correct.

 16 Q. And in the chart -- I think you already said

 17 this. The broad red line would be your Environmental 2,

 18 the expected case; is that correct?

 19 A. That's correct.

 20 Q. And you see that there's a purple line on the

 21 graph. Would that be the mild case?

 22 A. Yes, it would.

 23 Q. And the blue line would be your number 3 case;

 24 is that right?

 25 A. Yes.

 790

 1 Q. Now, with regard to the expected case, there's

 2 a chart on the left side of this page that shows various

 3 weightings of various bills by various states. Do you

 4 see that?

 5 A. Yes.

 6 Q. Could you briefly describe how ICF utilized

 7 weightings and dates to develop the expected case?

 8 A. Well, they used -- based on their projections,

 9 developed CO2 price trajectories based on each bill and

 10 each year. Then ICF determined for each year and for

 11 each bill what the probability would be relative to each

 12 of those years and bills. Those probabilities are in

 13 turn used to estimate the expected case.

 14 Q. You testified in the Glades coal case

 15 certificate of need proceeding, did you not?

 16 A. Yes, I did.

 17 Q. And do you recall whether there was a witness

 18 for the Sierra Club and the Natural Resource Defense

 19 League that testified about projections of emission

 20 costs in that case, David Schlissel?

 21 A. I believe there was, yes.

 22 Q. Do you recall how his middle projection

 23 compared to the expected case of ICF?

 24 A. If recall correctly, it was pretty close. I

 25 don't know how much different it was, but it was fairly

 791

 1 close, I believe.

 2 Q. Mr. Kosky, do you recall the deposition we

 3 took two weeks ago and one day?

 4 A. Yes, I do.

 5 Q. And do you recall at that deposition I asked

 6 you whether this ICF study was the most recent study by

 7 ICF that Florida Power & Light had at that time?

 8 A. Yes, you did.

 9 Q. And you told me that that was the most recent

 10 study at that time, did you not?

 11 A. To my knowledge, it was.

 12 Q. Okay. Is there an updated forecast?

 13 A. Yes, there is.

 14 Q. When was it released?

 15 A. I was made aware of that last Thursday or

 16 Friday, because it's a confidential document of FP&L's,

 17 and I was made aware of it last, as I said, either

 18 Thursday or Friday.

 19 Q. Okay. And have you reviewed the new forecast

 20 provided by ICF?

 21 A. Yes, I have.

 22 Q. Okay. And when did you actually receive

 23 possession of that yourself?

 24 A. About Thursday or Friday, about the same time

 25 I was aware that it was available.

 792

 1 Q. And do you when that study was provided to the

 2 parties in this case?

 3 A. I do not.

 4 MR. BECK: Mr. Chairman, I have another

 5 exhibit I would like to ask to be labeled for

 6 identification.

 7 CHAIRMAN CARTER: Okay.

 8 MR. BECK: And I'm hoping -- I asked FPL

 9 earlier if they would have additional copies. This is

 10 the two pages?

 11 MR. ANDERSON: The two pages?

 12 MR. BECK: Yes.

 13 MR. ANDERSON: Yes, we have those.

 14 MR. BECK: I would like to ask if that could

 15 be distributed and labeled as an exhibit for

 16 identification.

 17 CHAIRMAN CARTER: That would be Number 98.

 18 What was the title?

 19 MR. BECK: Updated Forecast by ICF.

 20 (Exhibit Number 98 was marked for

 21 identification.)

 22 BY MR. BECK:

 23 Q. Mr. Kosky, do you have Exhibit 98 for

 24 identification in front of you?

 25 A. Yes, I do.

 793

 1 Q. And is this an excerpt from the new forecast

 2 prepared by ICF?

 3 A. Yes, it is.

 4 Q. Could you turn to the page that has a chart on

 5 it? I'm sorry, a graph.

 6 A. I have it.

 7 Q. On the graph, there are a number of different

 8 scenarios that are portrayed; is that correct?

 9 A. Yes.

 10 Q. And there's one line on the graph with red

 11 blocks that are used to create the line. Is that an

 12 expected case?

 13 A. Yes. ICF indicates that that's their expected

 14 case, yes.

 15 Q. And so would that correlate to the expected

 16 case that we discussed on Exhibit 97 for identification?

 17 A. I wouldn't characterize it as a correlation in

 18 that technical sense. It's a projection that they made

 19 looking at different bills. The approach they used is

 20 slightly different, but they developed what they call

 21 for this projection an expected case.

 22 Q. Okay. And maybe it's my choice of words. Is

 23 this the closest thing we have in the new projection

 24 that would match the expected case in the previous

 25 projection?

 794

 1 A. Yes, as ICF has defined it, yes.

 2 Q. If you can, can you compare the projections

 3 that are in the new case to the ones that were used in

 4 the old case?

 5 A. I have. I have also compared other

 6 projections that they made a similar contest. I can say

 7 that the expected case is higher for this projection

 8 than it was in 2006. And when you adjust it, looking at

 9 it, it varies by year, but based on -- and going back

 10 Appendix F, it's roughly about 20 percent higher than

 11 the projection that ICF -- again, it's variable by year,

 12 but it is definitely higher.

 13 Q. Would it be possible to prepare as a

 14 late-filed exhibit a new Appendix F for your scenarios

 15 that utilizes the new expected case as opposed to the

 16 older one?

 17 A. Another Appendix F could be generated using

 18 the new information in a manner similar to what was done

 19 in 2006, so it could be essentially that as a basis.

 20 Again, there would have to be some thought as well as

 21 projections beyond 2030, because the 2006 and the 2007

 22 stop at 2030.

 23 Q. Let me ask this. If we asked to you prepare a

 24 new exhibit or Appendix F and stop it at 2030, then you

 25 wouldn't have that extra judgment that's necessary,

 795

 1 would you?

 2 A. No. That would be a calculation.

 3 Q. And would that be confidential? Could you

 4 prepare a non-confidential new Appendix F reflecting the

 5 new forecast compared to the older one that's in there

 6 now?

 7 MR. ANDERSON: I would like to speak to that,

 8 because I don't know --

 9 CHAIRMAN CARTER: Mr. Anderson, you're

 10 recognized. Mr. Anderson.

 11 MR. ANDERSON: Thank you, Chairman Carter.

 12 The ICF document belongs to them, so anything we do with

 13 it that goes into the public record we have to run back

 14 by them. On confidentiality points, they've been very

 15 good in terms of material thus far, but I would just ask

 16 that this witness not be asked to commit to ICF. We

 17 would communicate if there's any work like that to do.

 18 CHAIRMAN CARTER: Well, you attorneys can work

 19 on that.

 20 MR. BECK: That's fine. I have no problem

 21 with that. What I would like to request is a late-filed

 22 exhibit where through 2030, it matches what's contained

 23 in Appendix F, but it uses the new information. And I

 24 guess whether it's confidential or not, we'll just find

 25 out later.

 796

 1 CHAIRMAN CARTER: Mr. Anderson, do you think

 2 you'll be able to accommodate?

 3 MR. ANDERSON: If I could ask Mr. Kosky -- if

 4 we were to do that, we would like to do that while the

 5 record is open in the case. Is that something that can

 6 be done in the next day?

 7 THE WITNESS: It probably could, as, you know,

 8 the expected, although you would also have to calculate

 9 in the same manner, because Appendix F had a range of

 10 costs, since no legislation has yet been passed. There

 11 would, in my judgment, have to be an equivalent four

 12 different scenarios projected to 2030 to sort of match

 13 up to what was done previously on Appendix F, sort of an

 14 apples-to-apples kind of comparison.

 15 MR. ANDERSON: We would have no problem doing

 16 that. It's just a question of time and getting it done

 17 by close of the gavel tomorrow.

 18 CHAIRMAN CARTER: One moment, Commissioner.

 19 Let me kind of think this through here. Ms. Helton, we

 20 need to pick your brain.

 21 MS. HELTON: I'm not sure how good it is, but

 22 you can try.

 23 MR. ANDERSON: I'm sorry. May I speak,

 24 please?

 25 My colleague just suggested a good idea, which

 797

 1 is, if the parties agree to stipulate admissibility of

 2 the late-filed exhibit into the record, then we can get

 3 it done as quick as possible, but we're not restricted

 4 by when the gavel comes down tomorrow. Does that work

 5 for people?

 6 MS. HELTON: That works for me, Mr. Chairman,

 7 if it works for you.

 8 CHAIRMAN CARTER: I think so, because I think

 9 that the OPC wants the document, and I think that FPL

 10 wants to present it, and I think staff wants to see it,

 11 and the Commissioners want to see it too. So that works

 12 fine for me.

 13 MR. ANDERSON: Then we're happy to do that.

 14 CHAIRMAN CARTER: Commissioner Skop.

 15 COMMISSIONER SKOP: Thank you, Chairman

 16 Carter. Again, I've been trying to follow along with

 17 Mr. Beck, and I know that apparently the data is

 18 proprietary to ICF, but --

 19 CHAIRMAN CARTER: One second, Commissioner,

 20 before you go further. Let's land the plane on the

 21 late-filed exhibit. All parties are in agreement with

 22 the stipulation on the late-filed exhibit; correct?

 23 Let's make sure we've got that together.

 24 MR. BECK: I think so. I had a few questions

 25 I wanted to ask about the preparation of the exhibit.

 798

 1 COMMISSIONER SKOP: That's what mine goes to

 2 also.

 3 CHAIRMAN CARTER: Yours goes to the

 4 preparation?

 5 COMMISSIONER SKOP: Preparation and trying to

 6 avoid the confidentiality issue, real quick.

 7 CHAIRMAN CARTER: Mr. Beck, do you mind just

 8 holding your questions for a moment? But we're all on

 9 board that this will be a late-filed exhibit, and we'll

 10 all accept it; right? Okay. So there won't be any

 11 misunderstanding.

 12 Okay. Commissioner Skop, you're recognized.

 13 COMMISSIONER SKOP: Thank you, Chairman

 14 Carter. Again, I sense that there is a proprietary data

 15 concern, as well as I'm having trouble discerning

 16 between the original forecast and the updated forecast

 17 just due to the fact that, without getting into the

 18 details, the scales are a little bit different, and then

 19 the -- it's in a different year per se. The updated one

 20 is a year plus one as opposed to the original one.

 21 But I was wondering, is it possible, to help

 22 possibly avoid the proprietary data and confidentiality

 23 concerns, if you just plotted two curves with no axes on

 24 them and labeled one curve original and second curve

 25 updated, with again no axis? That way you could look at

 799

 1 the slope of the curves and kind of discern what's going

 2 on in reference to the original confidential documents,

 3 because again, what I'm looking at is essentially -- and

 4 Mr. Beck, this was a question to you that I was going to

 5 go with before we got into the confidentiality issue,

 6 but are you trying to discern that the slope of one

 7 curve is more gentle than the other? I guess that's

 8 what I'm trying to get at.

 9 MR. BECK: I'm just trying to get a

 10 comparison. And my hope was that since Appendix F is

 11 not confidential, but it's based upon a confidential

 12 report, my hope is that we can get an exhibit that would

 13 be publicly available that would show the difference on

 14 a comparable basis.

 15 COMMISSIONER SKOP: And that's what I was

 16 suggesting, merely if the parties -- and again, I don't

 17 know if this would cause a problem, but it seems to me

 18 that if you input a dataset with no labeling on the axes

 19 and plotted one curve against the other curve, at least

 20 that would provide some at least graphical indication of

 21 what the difference is between the two forecasts.

 22 MR. BECK: But it wouldn't give us the

 23 numbers.

 24 CHAIRMAN CARTER: Here's what I think. I

 25 think that Mr. Beck, this is his perspective here, and I

 800

 1 think as much as possible, we probably can accommodate.

 2 They've already agreed to do that, so it will probably

 3 make more sense, since we're talking about the four

 4 scenarios -- because that's really what you're talking

 5 about, the four scenarios, and you're looking at the

 6 numbers going out to 2030; correct?

 7 MR. BECK: Yes.

 8 CHAIRMAN CARTER: And I think that will

 9 probably be simpler. It will be simpler for me. You're

 10 talking about these scales. I can't tell if they're

 11 scales for a red snapper or a mullet. But I do think

 12 that the charts, the four scenarios make sense, because

 13 I can see the now, the expected, the high case, and it

 14 makes sense to me. So I think we'll try to accommodate

 15 Mr. Beck, because this is what you're trying to get to

 16 to fully explain your cross-examination and fully get

 17 OPC's record on the case, so I think that would probably

 18 be better. We'll just go with Mr. Beck's recommendation

 19 on this, Commissioners.

 20 MR. ANDERSON: Commissioner Carter, we would

 21 be happy to do them both if that's all right for you

 22 all. That way you can have something in the public

 23 record that shows just as Commissioner Skop has directed

 24 and the actual data. If that works for you, we're

 25 pleased to do that for you.

 801

 1 MR. BECK: Yes. Just a few questions,

 2 Mr. Kosky.

 3 CHAIRMAN CARTER: One second, Mr. Beck.

 4 Commissioner Skop.

 5 COMMISSIONER SKOP: Thank you, Chairman

 6 Carter. And just a quick point of reference with

 7 respect to the scale. If the scales are similar for

 8 both datasets, then you don't need the axes, because

 9 what you're looking at is the difference between the

 10 curves, if we know the starting and ending points. I

 11 guess what's of interest to me is the change in

 12 forecasts as reflected by the slope of the curves.

 13 Thank you.

 14 CHAIRMAN CARTER: I like the charts. This

 15 makes sense. You know, I'm from south Georgia. I like

 16 to keep it real simple. We've got four scenarios, four

 17 scenarios. And I think Mr. Beck has been going -- and

 18 it's agreed by the parties to do that. I see where

 19 you're going, because you're comparing the numbers in

 20 the datasets and comparing them with the different four

 21 cases, so it just kind of makes sense there. I mean,

 22 the other is fine if you want to do that to help the

 23 Commissioners look at it, but I'm with you on -- I

 24 understand exactly what you're saying here, so that

 25 works for me. So if you want to do more, Mr. Anderson,

 802

 1 that's excellent.

 2 MR. ANDERSON: That's fine.

 3 MR. BECK: So we'll label that Late-filed

 4 Exhibit 99?

 5 CHAIRMAN CARTER: I beg your pardon?

 6 MR. BECK: Have we labeled that as an exhibit,

 7 or could we? I would request that we do that.

 8 CHAIRMAN CARTER: Do we need to do that,

 9 Ms. Helton, late-filed?

 10 MR. BUTLER: You want me to give you a title?

 11 CHAIRMAN CARTER: Ms. Helton, you're

 12 recognized.

 13 MS. HELTON: Yes, I believe it's appropriate

 14 to go ahead and label it, and that way the record is

 15 clear.

 16 CHAIRMAN CARTER: Okay. Exhibit Number 99.

 17 Mr. Beck, you want to give us a title?

 18 MR. BECK: Recalculated Appendix F Using --

 19 CHAIRMAN CARTER: How much about just

 20 Recalculated Appendix F? See, I'm all over the parking

 21 lot here. I've got it. Recalculated Appendix X -- F, F

 22 as in Frank. I sound like that when I get hungry.

 23 (Late-filed Exhibit Number 99 was identified.)

 24 CHAIRMAN CARTER: Mr. Beck, you're recognized.

 25 MR. BUTLER: Excuse me, Chairman Carter.

 803

 1 CHAIRMAN CARTER: Yes, sir.

 2 MR. BUTLER: Before we proceed with Mr. Beck's

 3 examination, staff has brought to our attention that

 4 while there is a motion for temporary protective order,

 5 a written one that was filed that covers the material

 6 that Mr. Beck distributed as Exhibit 97, there isn't one

 7 for the updated information that was distributed as

 8 Exhibit 98, and I would like to make an oral motion for

 9 temporary protective order that would certainly be on

 10 the same grounds and same basis as the motion that was

 11 made in writing with respect to the ICF report.

 12 CHAIRMAN CARTER: No objection; right?

 13 MR. BECK: No objection.

 14 CHAIRMAN CARTER: Show it done.

 15 MR. BUTLER: Thank you.

 16 CHAIRMAN CARTER: Mr. Beck, you're recognized.

 17 MR. BECK: Yes. Mr. Chairman, I have one

 18 other item, one last request about a late-filed exhibit.

 19 I just received the study earlier this afternoon, the

 20 whole study by ICF. I went through it and picked

 21 certain pages that I thought were relevant to the

 22 projections. I've discussed it with Florida Power &

 23 Light, and they're agreeable to producing the selection

 24 of pages as a late-filed exhibit. What I would like to

 25 do is request -- it would be excerpts from the new ICF

 804

 1 study, and the page numbers would be 8 through 13, 22

 2 through 23, 68 through 79, 146 through 163, 177 through

 3 181, and 191 through 193.

 4 CHAIRMAN CARTER: And this would be Exhibit

 5 100?

 6 MR. BECK: Please.

 7 MR. ANDERSON: Chairman Carter, FPL would have

 8 no objection that, and we would ask for the same

 9 temporary confidential protection that Mr. Butler has

 10 referred to.

 11 CHAIRMAN CARTER: Okay. Without objection,

 12 show it done.

 13 (Late-filed Exhibit Number 100 was

 14 identified.)

 15 MR. BUTLER: And I have been advised by

 16 Ms. Helton that not only did I need to make the motion

 17 for a temporary protective order, which applies to

 18 allowing Office of Public Counsel to have access to the

 19 information, but since we are envisioning that these are

 20 going to become part of the record here, that I orally

 21 notify of our intent to request confidential

 22 classification, which would apply to you having them in

 23 your possession in the Clerk's Office.

 24 CHAIRMAN CARTER: Okay. And that was a

 25 discussion I had with -- yes, we'll show that done.

 805

 1 MR. BECK: Thank you, Mr. Chairman. That's

 2 all I have of Mr. Kosky.

 3 CHAIRMAN CARTER: That's all you have. Well,

 4 you know what? You must have a sun dial. You're right

 5 on time. I'll tell you, here's where we are. We're at

 6 a little over 6:00. We've got some information and some

 7 recalibrations and some things of that nature. We also

 8 -- Mr. Beck has completed his cross-examination. There

 9 may be some questions from the Krasowskis, there may be

 10 some questions from the Commissioners, and there may be

 11 some questions the staff. And we did extend in order to

 12 accommodate some og our friends and neighbors that are

 13 from out of town. But at this point in time, I see this

 14 as a good breaking point.

 15 Commissioner Argenziano, are you still with

 16 us?

 17 COMMISSIONER ARGENZIANO: Yes, Mr. Chair, I'm

 18 here.

 19 CHAIRMAN CARTER: I think we're at a breaking

 20 point right now before we go with another lawyer on the

 21 witness, and you probably need to take some meds or have

 22 a cup of tea.

 23 COMMISSIONER ARGENZIANO: Yes.

 24 CHAIRMAN CARTER: We're going to break, just

 25 recess and start again tomorrow morning at 9:30. We are

 806

 1 in recess.

 2 (Proceedings recessed at 6:10 p.m.)

 3 (Transcript continues in sequence in

 4 Volume 7.)

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 1 CERTIFICATE OF REPORTER

 2

 3 STATE OF FLORIDA:

 4 COUNTY OF LEON:

 5 I, MARY ALLEN NEEL, Registered Professional

 6 Reporter, do hereby certify that the foregoing

 7 proceedings were taken before me at the time and place

 8 therein designated; that my shorthand notes were

 9 thereafter translated under my supervision; and the

 10 foregoing pages numbered 577 through 806 are a true and

 11 correct record of the aforesaid proceedings.

 12 I FURTHER CERTIFY that I am not a relative,

 13 employee, attorney or counsel of any of the parties, nor

 14 relative or employee of such attorney or counsel, or

 15 financially interested in the foregoing action?

 16 DATED THIS 1st day of February, 2008.

 17

 18

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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