1385

 1 BEFORE THE

 FLORIDA PUBLIC SERVICE COMMISSION

 2

 3 DOCKET NO. 070098-EI

 4 In the Matter of:

 5 PETITION FOR DETERMINATION OF NEED

 FOR GLADES POWER PARK UNITS 1 AND 2

 6 ELECTRICAL POWER PLANTS IN GLADES

 COUNTY, BY FLORIDA POWER & LIGHT

 7 COMPANY.

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 12

 VOLUME 10

 13

 Pages 1385 through 1625

 14

 15

 PROCEEDINGS: HEARING

 16

 BEFORE: CHAIRMAN LISA POLAK EDGAR

 17 COMMISSIONER MATTHEW M. CARTER, II

 COMMISSIONER KATRINA J. McMURRIAN

 18

 DATE: Thursday, April 26, 2007

 19

 TIME: Commenced at 9:30 a.m.

 20 Recessed at 5:34 p.m.

 21 PLACE: Betty Easley Conference Center

 Room 148

 22 4075 Esplanade Way

 Tallahassee, Florida

 23

 REPORTED BY: MARY ALLEN NEEL, RPR, FPR

 24

 APPEARANCES: (As heretofore noted.)

 25

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

 2 (Transcript follows in sequence from

 3 Volume 9.)

 4 CHAIRMAN EDGAR: We will go back on the record

 5 from lunch break.

 6 And I am a little confused, because I thought

 7 that we were going to take up Mr. Plunkett and work

 8 through his testimony.

 9 MR. GUEST: Well, the practical problem, Madam

 10 Chairman, is that his son is by himself in Vermont, and

 11 he's got to get out of Dodge. We had anticipated based

 12 on what we heard yesterday that he would be able to do

 13 that. He has to absolutely catch his flight. We

 14 anticipate that we'll be -- now we're running so late

 15 that there's, I don't think, much possibility -- we

 16 probably aren't even going to get done with Mr. Furman

 17 now, and he's the next guy in the batting order. So

 18 Mr. Plunkett has been kind enough to say that he'll make

 19 himself available whenever the next date is, and we'll

 20 keep the batting order.

 21 CHAIRMAN EDGAR: Okay. So what you're

 22 proposing is to take up Mr. Furman now and then go on to

 23 rebuttal and come back to Mr. Plunkett on Monday? Is

 24 that your proposal?

 25 MR. GUEST: No. I think actually – my

 1389

 1 belief, based on the way things have been going, is that

 2 we're not going to get through Mr. Furman today. We

 3 might, but I'm guessing no. I mean, we had anticipated

 4 20 minutes or so for Mr. Sim, and --

 5 CHAIRMAN EDGAR: Okay. I understand. You've

 6 raised that a number of times, but this is where we are

 7 now. So again, what you are requesting is to take up

 8 Mr. Furman and then move to Mr. Hicks after that and to

 9 take up Mr. Plunkett at some point on Monday; is that --

 10 MR. GUEST: If it's necessary, yes. If the

 11 cards play that way, yes, but -- I mean, if that's --

 12 CHAIRMAN EDGAR: Well, I think that that --

 13 Mr. Anderson, do you have an alternate proposal or

 14 request or not?

 15 MR. ANDERSON: Yes, we do. Yes, we do,

 16 Chairman Edgar. Florida Power & Light Company is

 17 prepared to examine Mr. Plunkett. It would not be very

 18 extensive, perhaps 20 minutes. That would be one

 19 choice.

 20 Another choice would be, if he needs to go,

 21 which that's fine, we are willing to accept a

 22 stipulation of his deposition into the record, and

 23 respecting that, in our view, he could go.

 24 CHAIRMAN EDGAR: Mr. Krasowski, I'm sorry. I

 25 may have asked you this already, and I apologize if I

 1390

 1 have. So either for the first time or the second time,

 2 let me pose this question to you. Do you have questions

 3 for Mr. Plunkett?

 4 MR. KRASOWSKI: Yes. I have quite a few

 5 questions.

 6 CHAIRMAN EDGAR: And that is what I asked

 7 previously, isn't it?

 8 MR. KRASOWSKI: That's right.

 9 CHAIRMAN EDGAR: And I apologize to both

 10 gentlemen --

 11 MR. KRASOWSKI: Well, I volunteered that for

 12 you.

 13 CHAIRMAN EDGAR: -- for confusing Furman and

 14 Plunkett occasionally in my mind. My apologies to both

 15 of them.

 16 Okay. Then what I would like to do is take up

 17 Mr. Plunkett and let's see if we can move through it and

 18 see where we are. I also have been trying to rearrange

 19 things, and I can stay later than I had said yesterday,

 20 which is an inconvenience to me as well. However, in

 21 the abundance of all of us trying to work together and

 22 move through what we need to in an orderly way, that is

 23 my request.

 24 MR. GUEST: May I add an additional fact to

 25 the mix, Madam Chairman? I think he has to leave for

 1391

 1 his plane at 2:30, which is 40 minutes from now.

 2 CHAIRMAN EDGAR: Mr. Guest, we are all trying

 3 to work together. There are numerous planes out of

 4 Tallahassee.

 5 MR. GUEST: The first thing we did was check,

 6 and that is the last one that gets him home, and his

 7 12-year-old is home alone.

 8 CHAIRMAN EDGAR: He should have brought him.

 9 MR. GUEST: You know, that would have been a

 10 great idea, and we should have. And I'm feeling remorse

 11 that my son is not here, frankly.

 12 CHAIRMAN EDGAR: I did say earlier in the

 13 proceeding that anybody was welcome to bring their

 14 children, please note, and we would have welcomed both

 15 of them, I assure you.

 16 MR. KRASOWSKI: Madam Chair.

 17 CHAIRMAN EDGAR: Mr. Krasowski. You could

 18 have brought your children too.

 19 MR. KRASOWSKI: I wish I would have brought my

 20 son.

 21 CHAIRMAN EDGAR: Me too.

 22 MR. KRASOWSKI: He's probably just hanging

 23 around at home doing nothing. He's in college. Aside

 24 from that, though -- and I sincerely wish I did.

 25 I think Mr. Plunkett is a very important

 1392

 1 witness, and I wouldn't want to see his

 2 cross-examination and comments being abbreviated due to

 3 his urgency to get home or whatever, so I would

 4 certainly favor having him come back and deal with

 5 Mr. Furman if that's at all possible.

 6 CHAIRMAN EDGAR: I understand. Thank you,

 7 Mr. Krasowski.

 8 All right. My preference, quite frankly,

 9 would be to take up Mr. Plunkett as I have expressed.

 10 However, we do try to recognize all needs and the whole

 11 person here, truly. So I will expect to see

 12 Mr. Plunkett on Monday.

 13 MR. GUEST: All right.

 14 CHAIRMAN EDGAR: Mr. Plunkett?

 15 MR. GUEST: Okay. So we'll just do both.

 16 (Counsel conferring.)

 17 MS. SMITH: Can we just try to get through it,

 18 Madam Chairman? We have very, very little. We can move

 19 very quickly.

 20 MR. KRASOWSKI: And they said they had --

 21 excuse me, Madam Chairman. FPL said they had 20

 22 minutes, and I have some questions, and I suppose others

 23 might. You'll ask. And you might have questions for

 24 Mr. Plunkett. And if he has to leave at 2:30, I mean,

 25 we don't have time to do that properly. And he has a

 1393

 1 lot to say. Well --

 2 MR. GUEST: Let me see if I can buy some more

 3 time.

 4 MS. SMITH: Madam Chairman.

 5 CHAIRMAN EDGAR: Yes, ma'am.

 6 MS. SMITH: I would ask that we learn how much

 7 of the examination by Mr. Krasowski is friendly

 8 cross-examination as opposed to inquiring about

 9 Mr. Plunkett's testimony. Mr. Guest did tell us during

 10 the lunch break that he was working with Mr. Krasowski

 11 to try and limit what he called Mr. Krasowski's redirect

 12 of Mr. Plunkett. Certainly friendly cross-examination

 13 would be irrelevant, immaterial, and unduly repetitious

 14 evidence, and therefore immaterial -- inadmissible,

 15 sorry, under the APA.

 16 MR. KRASOWSKI: Madam Chair, may I speak?

 17 CHAIRMAN EDGAR: Actually, truthfully, I think

 18 it's best if we all not right now.

 19 I will point out that Mr. Krasowski is here

 20 pro se, that as such, there is some latitude in his

 21 questioning. However, I will also point out that as

 22 with every proceeding, and this one is certainly no

 23 exception, I have made the request to limit friendly

 24 cross, and if that will not be done mutually by the

 25 parties, then it will be done by me.

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 1 Now, Mr. Guest, we are all glad that

 2 Mr. Plunkett has joined us. I have, as you may all

 3 know, a special place in my heart for children not being

 4 left alone without their parents. I am trying to work

 5 with you and accommodate. However, it does seem to be a

 6 moving target a bit. So what do we need to do?

 7 MR. GUEST: Well, I would propose let's just

 8 give it a whirl, and when we get to the time where he's

 9 got to bolt off to his plane, let's address whatever

 10 needs to be addressed then, and we'll do the best we

 11 can.

 12 CHAIRMAN EDGAR: We'll give it a try.

 13 Mr. Plunkett, thank you for bearing with us, and please

 14 join us.

 15 MR. KRASOWSKI: Madam Chair.

 16 CHAIRMAN EDGAR: Yes, sir.

 17 MR. KRASOWSKI: Madam Chair, I want to express

 18 this in appropriate terms, but I do not identify

 19 whatsoever with the accusation that I am being managed

 20 to any degree by Mr. Guest or anybody in his party. My

 21 being here is a direct result of the way they're

 22 approaching this case and the things they're advocating

 23 for. So Mr. Plunkett is not a friendly witness, but he

 24 is someone who -- through his testimony is identified as

 25 somebody who might be knowledgeable and able to

 1395

 1 illuminate what we've not been able to uncover yet far,

 2 so far. So thank you, Madam Chair.

 3 CHAIRMAN EDGAR: Thank you. I appreciate your

 4 comments, and I note them for the record.

 5 MS. PERDUE: Madam Chair, just so you know

 6 also, we have questions for this witness as well.

 7 CHAIRMAN EDGAR: Thank you.

 8 Okay. Mr. Plunkett, you need to be sworn, so

 9 when you are settled in, if you would, stand with me and

 10 raise your right hand. Thank you.

 11 MR. GROSS: I just want to say good afternoon,

 12 Madam Chair and Commissioners Carter and McMurrian.

 13 Thereupon,

 14 JOHN J. PLUNKETT

 15 was called as a witness on behalf of The Sierra Club,

 16 Inc., et al. and, having been duly sworn, testified as

 17 follows:

 18 DIRECT EXAMINATION

 19 BY MR. GROSS:

 20 Q. Mr. Plunkett, will you please state your full

 21 name and business address.

 22 A. John J. Plunkett. I'm a partner in Green

 23 Energy Economics Group. My business address is 1002

 24 Jerusalem Road, Bristol, Vermont.

 25 Q. And on whose behalf are you here to testify

 1396

 1 today?

 2 A. I'm here on behalf of The Sierra Club, Save

 3 Our Creeks, Florida Wildlife Federation, Environmental

 4 Confederation of Southwest Florida, and Ellen Peterson.

 5 MR. GROSS: I just want to add that we also

 6 have been retained by the NRDC, who intervened late in

 7 the proceeding.

 8 BY MR. GROSS:

 9 Q. Did you cause to be filed direct testimony on

 10 March 16th, including exhibits JJP-1 through 4, in this

 11 docket?

 12 A. Yes.

 13 Q. Do you have any questions -- any corrections

 14 or revisions to your testimony?

 15 A. Yes, one. On page 7, line 6, there is an

 16 extra zero in 20011. That should be 20 -- 2011, not

 17 20011.

 18 Q. Okay. If I asked you the very same questions

 19 posed in your testimony today, would your answers be the

 20 same?

 21 A. Yes, they would.

 22 MR. GROSS: I would request that

 23 Mr. Plunkett's testimony be inserted into the record as

 24 though read.

 25 CHAIRMAN EDGAR: The prefiled direct testimony

 1397

 1 will be entered into the record as though read, with the

 2 correction noted by the witness.

 3 BY MR. GROSS:

 4 Q. Mr. Plunkett, did you sponsor any exhibits

 5 with your testimony?

 6 A. Yes, 1 through 4.

 7 Q. Was that JJP-1 through 4?

 8 A. Correct.

 9 MR. GROSS: Those exhibits have been premarked

 10 as 122 through 125.

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 1412

 1 MR. GROSS: May I proceed?

 2 CHAIRMAN EDGAR: I'm sorry. Yes.

 3 BY MR. GROSS:

 4 Q. Do you have a summary of your testimony,

 5 Mr. Plunkett?

 6 A. I do.

 7 Q. Could you go ahead and give that summary,

 8 please?

 9 A. Yes. Florida Power & Light has undertaken in

 10 the past and committed in the future to significant

 11 acquisitions of energy efficiency resources from its

 12 customers. The company's current DSM plans are

 13 responsible for postponing the need date for new

 14 capacity. But additional DSM savings beyond FPL's

 15 current plans can slow peak demand growth, thereby

 16 postponing the need date for new capacity.

 17 Utilities in other jurisdictions have been and

 18 are pursuing proportionally greater investment in energy

 19 saving demand-side management. These demand-side

 20 management resources are costing somewhere between 3 and

 21 6 cents a kilowatt-hour saved, that is, about 30 to

 22 60 percent of the life cycle or all-in costs of the

 23 Glades units, as I understand them. FPL could postpone

 24 the need date for new generating capacity if it

 25 broadened, deepened, and accelerated its current DSM

 1413

 1 plans.

 2 I'm sorry. I lost my place.

 3 Additional cost-effective energy savings could

 4 be realized if FP&L offered more aggressive programs

 5 targeting areas and measures and deeper market

 6 penetration in some of the markets that they have been

 7 involved in, in particular, comprehensive efficiency

 8 improvements in new building construction and design,

 9 residential lighting products, high efficiency equipment

 10 purchases by businesses, including motors, drives,

 11 refrigeration, and HVAC, as well as comprehensive

 12 retrofits in existing businesses, just to mention a few

 13 areas.

 14 If Florida Power & Light followed the lead of

 15 what some consider to be the leading energy efficiency

 16 practitioner in the country in terms of scale and scope

 17 and comprehensiveness, it could postpone the need date

 18 for the Glades units beyond 2023. Such deferral would

 19 be cost-effective under the total resource cost test,

 20 though unlikely so under the rate impact measure, which

 21 counts the cost of lost sales revenue as a cost. I note

 22 that Florida is the only jurisdiction that I know of

 23 that uses this test for distributional equity to

 24 preclude DSM that would otherwise lower total resource

 25 cost test -- total resource costs, that is, improve

 1414

 1 economic efficiency.

 2 MS. SMITH: Madam Chairman, I hate to

 3 interrupt, but Mr. Plunkett is exceeding the scope of

 4 his direct testimony. This isn't a summary.

 5 CHAIRMAN EDGAR: Ms. Brubaker?

 6 MS. BRUBAKER: I have to agree.

 7 MR. GROSS: Well, his direct testimony has

 8 specific reference to the RIM test, and it was responded

 9 to by the rebuttal testimony of FPL witnesses. I don't

 10 know if that's what you're objecting to, but if that is

 11 it, that is specifically referenced in his direct

 12 testimony, his prefiled testimony.

 13 MS. BRUBAKER: Perhaps you could identify page

 14 and line numbers. It just seems to me it's going above

 15 and beyond the scope of what he actually testified to.

 16 CHAIRMAN EDGAR: Thank you, Ms. Brubaker. Can

 17 you point us? I think we all have copies with us.

 18 MR. GUEST: I can do it.

 19 MR. GROSS: We have it.

 20 CHAIRMAN EDGAR: Would you like to confer with

 21 your witness for a moment?

 22 MS. BRUBAKER: As a further matter of

 23 clarification, this is direct testimony, so I don't

 24 think it would be appropriate for him to be rebutting --

 25 is it rebutting rebuttal or -- to me, this is your case

 1415

 1 in chief. You don't necessarily --

 2 MR. GROSS: He's not rebutting. If one just

 3 simply reads page 12, lines 19 through 24, and page 13,

 4 lines 1 through 12, he talks at length about the RIM

 5 test, and he critiques, vigorously critiques the RIM

 6 test.

 7 MS. SMITH: If I may, there's absolutely no

 8 mention of the total resource cost test, which is what

 9 Mr. Plunkett is addressing right now.

 10 MS. BRUBAKER: I have to agree.

 11 THE WITNESS: I did mention it.

 12 MR. GROSS: I believe he does mention the

 13 total resource cost test.

 14 MS. SMITH: Madam Chairman, I'll withdraw my

 15 objection in the interest of moving things along.

 16 CHAIRMAN EDGAR: Okay.

 17 THE WITNESS: That was all I was going to say

 18 about the RIM test.

 19 CHAIRMAN EDGAR: Mr. Plunkett, if you would,

 20 continue with your summary, please.

 21 THE WITNESS: Yes. Finally, matching PG&E's

 22 commitments on a proportional basis is not necessary to

 23 defer the need for the unit significantly. As I say in

 24 my testimony, lesser amounts would be sufficient to

 25 postpone the need for the unit cost-effectively within

 1416

 1 the planning horizon.

 2 So in conclusion, I recommend that the PSC not

 3 approve FP&L's application based on the high likelihood

 4 that the company could slow demand growth and postpone

 5 the need with far less costly energy efficiency.

 6 That concludes my summary.

 7 CHAIRMAN EDGAR: Thank you.

 8 MR. GROSS: We offer Mr. Plunkett for cross.

 9 CHAIRMAN EDGAR: Thank you. Mr. Beck, any

 10 questions?

 11 Mr. Krasowski.

 12 CROSS-EXAMINATION

 13 BY MR. KRASOWSKI:

 14 Q. Good afternoon, Mr. Plunkett.

 15 A. Hello.

 16 Q. Mr. Plunkett, in your testimony you mention

 17 PG&E in California. Could you explain what above and

 18 beyond DSM practices the State of California has to

 19 maximize efficiency and reduce the need for new power

 20 plants?

 21 A. Beyond energy efficiency?

 22 Q. Beyond --

 23 A. Or beyond demand-side management?

 24 Q. Beyond demand-side management. Well, maybe I

 25 could rephrase that and make it a little easier going

 1417

 1 one step at a time.

 2 Are you familiar with the demand-side

 3 management practices of FP&L?

 4 A. I have some knowledge of FP&L's demand-side

 5 management efforts, their accomplishments. It's been a

 6 little hard to get my hands on all the moving parts, but

 7 I have a pretty good idea of the programs they're

 8 running and the savings they are claiming from them.

 9 Q. Now, you've suggested in your testimony that

 10 this power park, the Glades Power Park, the need for it

 11 could be totally eliminated by increased demand-side

 12 management and other efficiency efforts.

 13 A. I've testified that there's enough energy

 14 efficiency and demand-side management potential out

 15 there in the service territory to allow the company to

 16 postpone the date at which it would hit a system peak of

 17 24,391 megawatts, which is the peak load forecast by the

 18 company by 2013, and that -- I'm hesitating at the word

 19 "eliminate." What I'm saying is that it can postpone

 20 that need past 2020, past 2023, if it went as far as

 21 PG&E did on a proportional basis.

 22 Q. Okay. Yes, I accept what you're saying as far

 23 as you didn't say eliminate, but to postpone it to that

 24 late date.

 25 With your understanding of what is FP&L's

 1418

 1 demand-side management program, what about the PG&E

 2 demand-side management program is different that allows

 3 PG&E to have such greater effect?

 4 MS. SMITH: Madam Chairman.

 5 CHAIRMAN EDGAR: Yes, ma'am.

 6 MS. SMITH: I have to object to the form.

 7 This is not an adverse witness to Mr. Krasowski, and he

 8 is asking Mr. Plunkett leading questions.

 9 MR. KRASOWSKI: Ma'am, I --

 10 CHAIRMAN EDGAR: More direct questions,

 11 please.

 12 MR. KRASOWSKI: A more direct question. Okay.

 13 And, Madam Chair, I don't perceive this witness to be

 14 any less friendly to me than anybody else I've talked

 15 to.

 16 CHAIRMAN EDGAR: Sometimes I feel the same

 17 way.

 18 MR. GUEST: Madam Chairman, would it be

 19 appropriate for me to help Mr. Krasowski?

 20 CHAIRMAN EDGAR: I think he's doing all right.

 21 Let's let him --

 22 MR. GUEST: I mean to get past the objections.

 23 CHAIRMAN EDGAR: Let's let him give it another

 24 try.

 25 MR. KRASOWSKI: I would rather fly on my own

 1419

 1 as long as possible.

 2 CHAIRMAN EDGAR: I understand.

 3 MR. KRASOWSKI: I can just read it now, how

 4 the Sierra Club, and whatever.

 5 BY MR. KRASOWSKI:

 6 Q. But, Mr. Plunkett, I'm trying here to phrase

 7 my questions so they can illuminate truth, and I don't

 8 care who it serves. As I stated, will you please

 9 explain the difference between demand-side management at

 10 PG&E and demand-side management in Florida?

 11 A. Yes. The demand-side management planned and

 12 practiced by PG&E and the other California utilities

 13 basically involves a lot deeper investment in the

 14 markets that they're involved in and a deeper

 15 involvement in all -- in a broader set of markets using

 16 much more aggressive strategies than are currently in

 17 place by Florida Power & Light's programs.

 18 Now, there's nothing wrong with Florida Power

 19 & Light's programs as they exist now. They look to be

 20 cost-effective. What happens is, when you are trying to

 21 acquire all the savings, you go deeper.

 22 And so, for example -- I'll give you a good

 23 example on their commercial new construction. They make

 24 it so that an architect, an owner, an engineer, a

 25 developer of a new commercial space is facing

 1420

 1 practically no incremental cost to go with higher

 2 efficient design and construction and choice of

 3 equipment, because these are considered lost

 4 opportunities. They last for a long time, and so a lot

 5 of effort is put into making sure that they get maximum

 6 market penetration.

 7 Another example is, they have programs for

 8 small commercial customers that are not just energy

 9 audits and suggestions, but literally targeted town by

 10 town, where they come in and recommend -- do an

 11 inspection, recommend a set of energy efficiency

 12 measures that would be cost-effective as retrofits.

 13 That means early retirement of existing lights and air

 14 conditioning, as well as the addition of various

 15 controls, and offers to install them at little or no

 16 cost to the customer. And they know from this

 17 experience that they can get something like an 80 to

 18 90 percent participation rate as opposed to the

 19 20 percent participation rate that you can get over time

 20 with less aggressive strategies.

 21 So these are just two examples of their

 22 involvement in intervention in the markets to secure

 23 greater savings, that is, acquire all the savings that

 24 can be gotten for less than the cost of -- less than the

 25 avoided cost of new supply.

 1421

 1 Q. Mr. Plunkett, as you describe in California,

 2 the situation there, where does the money come from that

 3 pays for the replacement of these appliances that are

 4 part of that program?

 5 A. Two sources. One is, they have what's called

 6 a public goods charge or PGC which funds basically

 7 statewide programs. It recognizes that, for example, a

 8 lot of markets are basically not specific to utility

 9 service territories, and that funds sort of, I would say

 10 in rough terms, for what they're planning from 2006 to

 11 2008, about half of what they're spending.

 12 In addition, they spend more money, come up

 13 with more funding based on procurement. In other words,

 14 they procure additional resources as their needs demand

 15 for new resources. And they're under regulatory

 16 obligation to pursue all of those resource. All those

 17 resources must be exhausted before they can get approval

 18 for additional supply-side resources that would cost

 19 more than the energy efficiency resources that they can

 20 acquire.

 21 Q. Do you know what type of budget they're

 22 working with that covers the 2006-2008 time period?

 23 A. I do for PG&E, and I have it in my -- I hope I

 24 have it in one of my exhibits. I do know that like the

 25 three investor-owned utilities last time I saw were

 1422

 1 looking at about $2 billion over the -- I believe it was

 2 the next five years. But just looking at PG&E's plans

 3 alone, 2006 through 2008, it looks to be -- it's

 4 237 million in 2006, 270 million in 2007, and 332

 5 million in 2008.

 6 Q. And that was just for PG&E?

 7 A. That is just for Pacific Gas & Electric, yes.

 8 Q. Do you know what their customer base is, the

 9 size of their --

 10 A. Not off the top of my head. They used to be

 11 the biggest or one of the biggest utilities in the

 12 country. They've been surpassed by -- well, FPL for

 13 starters. But they have a big mix of commercial,

 14 industrial, agricultural, residential customers. It's

 15 quite a different service territory, though, from

 16 FP&L's, as I point out in my testimony.

 17 Q. Mr. Plunkett -- and you might not be able to

 18 answer this, but if we took the $5.5 billion that the

 19 ratepayers in Florida are being asked to spend minus --

 20 and this is aside from the land costs on this project.

 21 What could we expect in terms of deferred -- or

 22 efficiencies if we were to do what they do in

 23 California?

 24 A. I'm sorry. I don't know the answer to the

 25 question as you've posed it. I have got in my exhibit a

 1423

 1 number, a set of numbers, the budgets that would be

 2 required to replicate the depth and breadth of spending

 3 and savings by PG&E starting in 2008, and I didn't add

 4 it up. One, two and a half -- so by 2000 -- give me a

 5 second. It's about 5 billion, just from my eye, by

 6 2016. And so the answer to my question is -- to your

 7 question is basically, you can pick it right off this

 8 exhibit in terms of when you hit 5 billion, and then I

 9 show up here what the DSM megawatts would be under

 10 PGE-scaled DSM. And unless you want me to sit here and

 11 punch the calculator buttons --

 12 Q. No, that's okay. But that's in your

 13 testimony?

 14 A. You could do that yourself from Exhibit JJP-4.

 15 MS. SMITH: Madam Chairman, frankly, most of

 16 these questions, if not all, are covering subjects that

 17 are already addressed in Mr. Plunkett's prefiled direct

 18 testimony. It's already in the record. At this point,

 19 this is just duplicative of information that's already

 20 in the record.

 21 MR. KRASOWSKI: Madam Chair, the reason I'm

 22 asking these questions is because Mr. Plunkett's

 23 testimony was very vague, not very specific, and it was

 24 torn apart by the FP&L people due to his reference to

 25 the ACEEE group's report too. So I don't think there's

 1424

 1 much basis of anything as far as substantial support for

 2 DSM in any of these documents.

 3 MS. SMITH: Then, Madam Chairman, if I may, in

 4 that case, this is eliciting essentially surrebuttal

 5 testimony, which is procedurally improper at this point.

 6 The opportunity to file testimony by the intervenors

 7 came and went. I believe it was March 30th. And at

 8 this point, again, it's procedurally improper.

 9 MR. KRASOWSKI: Madam Chair, I thought it --

 10 okay.

 11 CHAIRMAN EDGAR: Ms. Brubaker.

 12 MS. BRUBAKER: I suppose where I come to it

 13 is, if Mr. Krasowski is looking for clarification or

 14 impeaching the testimony of Mr. Plunkett, it is -- I

 15 think a certain amount of allowance should be granted.

 16 I'm really at a loss as to what else to add.

 17 Mr. Harris, if you have anything, but to me -- well, I

 18 suppose it just hadn't come to my mind yet that we're at

 19 the point where I would recommend the objection be

 20 sustained. I do think Mr. Krasowski's questions do tend

 21 to track Mr. Plunkett's testimony.

 22 CHAIRMAN EDGAR: Mr. Harris, do you have

 23 additional comments?

 24 MR. HARRIS: I cannot be -- I cannot say that

 25 I'm overly familiar with his direct testimony. I would

 1425

 1 say the purpose of cross, as I understand it, is to test

 2 the fundamentals in the direct testimony. If the

 3 questions are designed to elicit the basis for the

 4 testimony, I think they're appropriate. If they're

 5 designed simply to reiterate information that's in the

 6 record without any new information or testing those

 7 assumptions or facts or premises, then I would think it

 8 would be probably impermissible.

 9 MS. BRUBAKER: If I may also, I mean, to the

 10 extent Mr. Krasowski's questions were putting into the

 11 record facts, events, matters that were not previously

 12 identified in Mr. Plunkett's testimony, I think it would

 13 be more appropriate for him to ask very pointed, concise

 14 questions. But again, that would be my only direction.

 15 Again, I suppose in my mind, I just haven't heard

 16 anything to this point which would lead me to recommend

 17 sustaining the objection.

 18 CHAIRMAN EDGAR: All right. Thank you,

 19 Counsel.

 20 Mr. Krasowski, I stopped you. Do you have

 21 additional response or comment?

 22 MR. KRASOWSKI: To Mr. Plunkett?

 23 CHAIRMAN EDGAR: No, to what you have just

 24 heard, to the objection that was raised and the advice

 25 of counsel.

 1426

 1 MR. KRASOWSKI: Well, basically, I think staff

 2 is on the right track and FP&L is way out of line. But

 3 I would like to continue, please.

 4 CHAIRMAN EDGAR: Yes. I'm going to allow you

 5 to continue. But again, keep in mind, as always, time

 6 frames and direct and concise questioning to the best of

 7 your ability, and all the rest of ours as well.

 8 MR. KRASOWSKI: Thank you, ma'am.

 9 BY MR. KRASOWSKI:

 10 Q. Mr. Plunkett, in your testimony you made

 11 reference to general law that deals with efficiency, and

 12 you did touch on it a minute ago when you mentioned how

 13 some of the DSM programs in California were a little

 14 stricter. So my question to you would be, Mr. Plunkett,

 15 could you please mention an example of a law in

 16 California that mandates a certain efficiency?

 17 A. I'm not a lawyer, and I believe that this

 18 mandate that has come down for the utilities has

 19 actually come from the Public Utilities Commission of

 20 California. Now, there may be some statute behind that,

 21 but I don't know about it.

 22 That said, they do have some laws in

 23 California, particularly very tight building efficiency

 24 standards known as Title 24 that they use in concert

 25 with their energy efficiency programs. They basically

 1427

 1 use the programs to soften the market, if you will, so

 2 that they can basically motivate early compliance with

 3 future standards, which then allows them to tighten up

 4 the standards again. But it's a matter of regulatory

 5 policy, to my understanding, that has led to this,

 6 partly based on their experience from 2001, when they

 7 basically used conservation and efficiency and load

 8 management together to help avert a repeat of the 2000

 9 blackouts.

 10 Q. So, Mr. Plunkett, is there a difference

 11 between the DSM -- any other differences between the DSM

 12 program of FP&L and PG&E?

 13 A. Well, there are many. You know, again, it's

 14 partly a matter of policy. I mention in my direct

 15 testimony and my summary that one of the restraints that

 16 Florida puts on the amount of DSM that can be considered

 17 economic is the use of this rate impact measure test.

 18 And I even say that it's doubtful that the additional

 19 efficiency that I recommend, if it followed some of the

 20 designs and practices of Pacific Gas & Electric, would

 21 pass the RIM test. I don't think it would pass the RIM

 22 test in California either. So that is a law or -- it's

 23 a policy decision that is hampering or impeding the

 24 amount of efficiency that Florida Power & Light can

 25 actually pursue.

 1428

 1 Q. Mr. Plunkett, you identify the report

 2 generated by the American Council for an Energy

 3 Efficient Economy briefly and ever so slightly in your

 4 testimony. Who are other organizations outside of the

 5 industry who might perform an analysis of the Florida

 6 Power & Light system as to opportunities for efficiency?

 7 A. Well, there are lots of consulting

 8 organizations out there. I've worked with ACEEE on a

 9 potential study in New York state, very comprehensive,

 10 for example. There are firms like Quantum Consulting

 11 that I think is based in California. Kema/Xenergy --

 12 that's K-e-m-a, slash, X-e-n-e-r-g-y. These are a

 13 couple of, I think, what people consider to be the best,

 14 but there are a lot of them out there, people that do

 15 this kind of work.

 16 Q. You recommend to the Commission to charge FP&L

 17 with the task of doing a reanalysis of their DSM

 18 programs. Did you make that recommendation with the

 19 full knowledge that an analysis had just recently been

 20 completed in concert with the PSC staff to do just that?

 21 A. I'm aware of the goal-setting process. I

 22 actually was involved in Florida DSM in the early '90s

 23 and am aware of how the current system shook out, if you

 24 will, and I've seen some of their analysis.

 25 Again, nowhere in my testimony have I said the

 1429

 1 company has done bad analysis or that it's wrong. I

 2 think it doesn't get at all the potential, however.

 3 Sometimes it's how you do these things, and there's a

 4 connection between the design you assume that you're

 5 willing to use, the program design, the strategies, and

 6 what you'll see as a reasonable participation rate, for

 7 example.

 8 So I think that -- these are often called

 9 program potential studies, where instead of these

 10 theoretical, technical, economic potential studies,

 11 which again I've had to do myself, it's much more

 12 helpful if you visualize a set of programs aimed at very

 13 specific markets, everything from equipment to new

 14 construction to existing housing, and bundle these

 15 measures in in these marketplaces -- excuse me, markets

 16 with very aggressive program designs, and they will let

 17 you -- enable you to better project what you can

 18 accomplish, what's realistic to accomplish, and then to

 19 decide whether it's economic.

 20 Again, I think it would require -- let me put

 21 it this way. It wouldn't be worth doing over again if

 22 the Commission sticks with the RIM test as the guiding

 23 economic principle, because that would be the limiting

 24 factor. And they could do all the analysis in the

 25 world, but my suspicion is that it would -- all the

 1430

 1 increases would probably fail the RIM test.

 2 Q. Do you see a role for the Florida Legislature

 3 in improving efficiencies?

 4 A. Sure.

 5 CHAIRMAN EDGAR: Mr. Krasowski, I think we've

 6 gone a bit far afield.

 7 MR. KRASOWSKI: Okay. If I could ask just

 8 some questions on the Florida Solar Energy Center.

 9 CHAIRMAN EDGAR: If they pertain to the issues

 10 in the case.

 11 MR. KRASOWSKI: Yes. Well, this speaks

 12 specifically to efficiency.

 13 BY MR. KRASOWSKI:

 14 Q. Are you familiar with -- Mr. Plunkett, are you

 15 familiar with the Florida Solar Energy Center?

 16 A. Familiar wouldn't be the right word. I know

 17 of them and have admired them from afar for a long time.

 18 MS. SMITH: Madam Chairman, excuse me.

 19 There's no reference to the Florida Solar Energy Center

 20 in Mr. Plunkett's testimony, so I think again this is

 21 beyond the scope.

 22 MR. KRASOWSKI: I'll withdraw my question on

 23 that.

 24 CHAIRMAN EDGAR: Thank you.

 25 BY MR. KRASOWSKI:

 1431

 1 Q. Just a couple more questions, Mr. Plunkett.

 2 Do you still hold your position that there are

 3 efficiencies out there that would allow the deferral of

 4 this project?

 5 A. Yes. I believe market barriers apply in many

 6 markets throughout Florida and that these strategies

 7 that have worked elsewhere would work here as well, even

 8 though the technologies and the performance of any

 9 opportunities would be quite different.

 10 MR. KRASOWSKI: Madam Chair, is Mr. Plunkett

 11 going to be available for questions in the future?

 12 CHAIRMAN EDGAR: No.

 13 MR. KRASOWSKI: No? This is it?

 14 CHAIRMAN EDGAR: That is my understanding. I

 15 mean, he's not scheduled to be back before us after the

 16 finish of his cross and redirect today at this time.

 17 MR. KRASOWSKI: Well, thank you, Mr. Plunkett.

 18 I think, other than just having an open conversation

 19 about your testimony, I don't know what to do now. But

 20 I hope I haven't sold the people of Florida short. So

 21 thank you very much. Thank you, Madam Chair.

 22 CHAIRMAN EDGAR: Thank you.

 23 MR. KRASOWSKI: Apologies for the --

 24 CHAIRMAN EDGAR: No, that's fine.

 25 Okay. Ms. Perdue.

 1432

 1 MS. PERDUE: Thank you, Madam Chair.

 2 CROSS-EXAMINATION

 3 BY MS. PERDUE:

 4 Q. Good afternoon.

 5 A. Hi.

 6 Q. I think we've already established that you do

 7 not live in the State of Florida; is that correct?

 8 A. That's correct. I visit occasionally. My

 9 parents do.

 10 Q. I'm sorry?

 11 A. My parents live here. I visit occasionally.

 12 Q. Okay. Have you ever lived here?

 13 A. No.

 14 Q. In your analysis that is in your direct

 15 testimony, did you review any federal census data

 16 relative to Florida's population?

 17 A. No.

 18 Q. Did you review any state data regarding

 19 Florida's population growth?

 20 A. No. I reviewed load forecast information and

 21 anything that might have been related to that.

 22 Q. Did you review any state or federal data

 23 regarding job or economic growth in the State of

 24 Florida?

 25 A. No.

 1433

 1 Q. Did you conduct any studies yourself regarding

 2 population growth in the State of Florida?

 3 A. No, because I didn't think it was necessary to

 4 estimate this.

 5 Q. Did you conduct any studies yourself regarding

 6 job growth in Florida?

 7 A. No, again, for the same reason.

 8 Q. Did you conduct any studies yourself in the

 9 State of Florida regarding housing starts?

 10 A. No, only insofar as they're reflected in the

 11 company's load forecast, which I assume there's plenty

 12 of that.

 13 Q. And so you accept the company's load forecast

 14 as correct in your analysis?

 15 A. Absolutely. I do not question the company's

 16 load forecast at all. And housing starts present a

 17 major opportunity for efficiency improvement.

 18 Q. Does your opinion and direct testimony and

 19 your underlying analysis of that testimony consider

 20 Florida's position as both a national and international

 21 competitor with an expanding population and expanding

 22 economic base and business community?

 23 A. Oh, yes. I think that cost-effective energy

 24 efficiency would improve California -- sorry, Florida's,

 25 not California's, competitive position by reducing the

 1434

 1 cost of doing business and making firms either more

 2 profitable or more competitive or both.

 3 Q. Do you agree that an adequate infrastructure,

 4 including available and reliable electric services, is a

 5 vital requirement for the State of Florida in competing

 6 with other states and other countries in attracting

 7 businesses to the state?

 8 A. I do.

 9 Q. Isn't it true that reduced peak demand is what

 10 actually defers or reduces the need for power plants?

 11 A. Actually, reduced peak demand reduces the need

 12 for capacity that's designed to meet system peak. If

 13 you mean -- there's also energy requirements that need

 14 to be met. In fact, the proposed units are not peaking

 15 facilities. They're base load facilities. So reducing

 16 the peak demand may or may not reduce the need or the

 17 economic need for base load generation.

 18 But the way the company has presented its

 19 case, it looks like peak demand -- lowering peak demand

 20 will reduce the need for the peaking capacity that they

 21 seek to obtain from the Glades units.

 22 Q. If FPL increased its conservation spending, as

 23 your testimony suggests that it should or that it might,

 24 there's no proof -- or is there any proof that any such

 25 efforts would reduce peak demand in FPL's service

 1435

 1 territory?

 2 A. I believe there's evidence that it would. If

 3 the company did more of what it's already doing to

 4 reduce peak demand, I don't know why you wouldn't

 5 believe you would reduce peak demand. If you put in

 6 high efficiency air conditioners, why wouldn't that

 7 reduce peak demand?

 8 Q. Well, if the company did more, then does your

 9 opinion -- I don't see in your direct testimony any

 10 specific conservation measures or programs that would

 11 defer the need for the Glades unit. Is there something

 12 that I missed in your testimony?

 13 A. I did not make an application here for

 14 approval of any particular programs. I did recommend

 15 that the company develop these programs to achieve these

 16 savings, but I didn't develop any myself, no.

 17 Q. Okay. But you basically have asserted the

 18 position that FP&L should spend more on conservation

 19 measures; is that true?

 20 A. I said that the company should acquire more,

 21 and it costs money to acquire these savings. And so

 22 I've recommended a budget that if they -- I believe it

 23 has been proven in California and elsewhere that one can

 24 invest proportionally more and get deeper savings. So

 25 based on that, I believe -- I see no reason why Florida

 1436

 1 Power & Light couldn't as well.

 2 Q. Do you know -- and I don't see in your direct

 3 testimony where you've stated that you do, but do you

 4 know what the impact on FP&L's customer rates would be

 5 if they increased the spending as you've suggested?

 6 A. I did not make those calculations.

 7 Q. So your analysis of increased conservation

 8 spending does not encompass customer rates, is that

 9 correct, or the impact on customer rates?

 10 A. What mine covers is the effect on total

 11 revenue requirements and total bills. I did not look at

 12 the effect on units costs, that is, the average cost per

 13 kilowatt hour sold, no.

 14 Q. In your direct testimony on page 13 at line

 15 15, you stated that you believe the Glades units are,

 16 and this is the quote, most probably not needed, end

 17 quote. Is that your testimony?

 18 A. Yes.

 19 Q. So you are not stating for sure or for certain

 20 that the Glades units are not needed; correct?

 21 A. I made a -- I'm not saying with 100 percent

 22 certainty, no. I --

 23 Q. Okay. Thank you.

 24 MR. GUEST: Can he finish his response?

 25 CHAIRMAN EDGAR: Did you have additional

 1437

 1 response to that question?

 2 THE WITNESS: I think it is extremely unlikely

 3 that they're needed if, and only if, the company does

 4 something else. Something is needed if nothing else

 5 happens. I believe the company's load forecasts and

 6 resource posture speaks for itself.

 7 Whether a coal plant is needed or not is

 8 another matter, but some new capacity from some source

 9 would be needed to meet their reserve requirements by

 10 the in-service date for this unit.

 11 BY MS. PERDUE:

 12 Q. I understand, and I'm going to ask you if you

 13 agree, that FPL is ranked number one nationally in

 14 conservation management. Do you have any reason to

 15 disagree with that?

 16 A. It depends on what you mean. Sure, they're

 17 the biggest, so I have no doubt that -- and I've seen

 18 the numbers myself in the Energy Information

 19 Administration that shows on an absolute basis, their kW

 20 reductions are the biggest. However, size matters, and

 21 on a proportional basis, they're nowhere near the

 22 biggest. In other words, if you divide the peak demand

 23 savings they're realizing into their total peak demand,

 24 it's quite a bit smaller, and they would be ranked well,

 25 well behind the first and probably pretty far down the

 1438

 1 page.

 2 Q. But you do agree that currently they are the

 3 largest conservation manager in the country? That's

 4 what you just said.

 5 A. No. I said that they can show that the

 6 cumulative peak demand reductions that they've achieved

 7 from both load management and energy efficiency is in

 8 absolute terms the highest number. That doesn't mean

 9 they're the biggest saver of energy. In fact, Vermont

 10 probably is on a proportional basis.

 11 Q. What's Vermont's population?

 12 A. 600,000.

 13 Q. So it's much smaller than Florida's.

 14 A. And it makes it really, really hard to do

 15 efficiency when you've got mountains and an agricultural

 16 population. So again, you need to -- you have to scale

 17 this thing when you made these comparisons.

 18 Q. So the Vermont to Florida comparison would be

 19 apples to oranges?

 20 A. No. I'm telling you that if you want to

 21 compare Vermont's megawatts with FP&L's megawatts, you

 22 would have to do it on a relative basis and adjust for

 23 the different sizes, that's all.

 24 Q. And the different population needs and the

 25 different climate and other things like that as well?

 1439

 1 A. No. If you're going to look at everybody --

 2 there's nothing wrong with comparing everybody,

 3 relatively speaking. You know that their populations

 4 are different. You know their appliance mixes are

 5 different. It just means they have different

 6 opportunities. But when it's all said and done, how

 7 deep is the savings potential? We don't have any air

 8 conditioning in Vermont to speak of, for example, so we

 9 don't get much of our savings from air conditioning.

 10 Florida has a lot, and you can get a lot.

 11 Q. Another witness earlier in this proceeding,

 12 Mr. Brandt, testified. Are you familiar with his

 13 testimony?

 14 A. Some of it, yes.

 15 Q. He testified that FPL is ranked number four

 16 nationally in load management. Do you have any reason

 17 to disagree with that?

 18 A. No. I would still want to make it a fair

 19 comparison. You would want to scale it. But I -- just

 20 for the record here, I'm not actually recommending that

 21 they pursue any additional load management.

 22 Q. Okay. In your testimony -- actually, attached

 23 to your direct testimony -- I'm referring to Exhibit

 24 JJP-2, and specifically page 2 of 2.

 25 A. I have it.

 1440

 1 Q. And the title of that is "Energy Efficiency

 2 Portfolio Performance Comparison." And this particular

 3 chart deals with nonresidential customers; is that

 4 correct?

 5 A. Yes.

 6 Q. And what is your reason for including this

 7 chart with your direct testimony?

 8 A. I wanted to show it on a sector basis. This

 9 is nonresidential. The page before it is residential.

 10 And this is one of those things you can adjust for

 11 between utilities, because this is the thing that often

 12 varies the most, the proportion of residential to

 13 nonresidential.

 14 So the purpose of this was to show in relative

 15 terms what these utilities have been -- how deep their

 16 investment has been in terms of spending, what the yield

 17 is that they've been getting in terms of kilowatt-hours

 18 per dollar spent, as well as the depth of the savings --

 19 that's what those columns 1, 2, and 3 are -- throughout

 20 the northeastern region where these programs have been

 21 going on for the last -- well, at least back to 2001,

 22 and use this as a basis, if you will, to sort of find

 23 the ones that would be most aggressive that would make

 24 sense to help me project and scale savings if FP&L

 25 replicated this kind of performance from any one of

 1441

 1 these places.

 2 Q. So am I correct in concluding that you are

 3 suggesting that FP&L model its efforts after the states

 4 that you have listed on this chart?

 5 A. No. I said that it should model its

 6 expectations on how much it could save. And the program

 7 designs that they're using are also probably worth

 8 picking up, but there would need to be modifications to

 9 handle the differences, the different opportunities that

 10 Florida has.

 11 Q. And are there any other states that you've

 12 included besides what are listed here, which are

 13 Connecticut, Maine, Massachusetts, New Hampshire, New

 14 Jersey, Vermont, and the two -- there's a Long Island

 15 and a New York State, which I believe are both in New

 16 York.

 17 A. Yes.

 18 Q. Would you agree with me that those states are

 19 primarily manufacturing economies rather than service or

 20 tourism economies like Florida's?

 21 A. No. They're different. They're way

 22 different. You know, you could pick one of these out.

 23 I mean, Vermont is kind of touristy, because people go

 24 there for the opposite reason they come to Florida.

 25 They're just not primarily manufacturing. I think

 1442

 1 there's a lot of service.

 2 Q. Would you agree with me that none of these are

 3 the tourism industry state that Florida's economy is?

 4 A. I would agree with that.

 5 MS. PERDUE: Those are all the questions I

 6 have, Madam Chair.

 7 CHAIRMAN EDGAR: Thank you. Ms. Smith.

 8 MS. SMITH: Madam Chairman, I would ask that

 9 we mark for identification Mr. Plunkett's -- the

 10 deposition transcript of our deposition of Mr. Plunkett

 11 taken March 23rd, 2007. I will say that by stipulation

 12 of the parties, we've agreed that that can go into the

 13 record. I think we're up to 190. We're handing out

 14 copies of that deposition transcript now.

 15 MR. GUEST: Madam Chairman.

 16 CHAIRMAN EDGAR: Mr. Guest.

 17 MR. GUEST: Mr. Plunkett's plane leaves in an

 18 hour now, so I think we could stipulate to put the

 19 deposition in. I think we talked about doing that. And

 20 I'll forgo redirect. We could forgo redirect, and your

 21 plan will have worked.

 22 MS. SMITH: And before we get to that, I will

 23 say also that I have no questions, given that the

 24 deposition transcript is going into the record.

 25 CHAIRMAN EDGAR: Are there questions or

 1443

 1 comments from staff?

 2 MS. BRUBAKER: No questions from staff.

 3 CHAIRMAN EDGAR: No questions from staff.

 4 Okay. So we are going to enter the deposition into the

 5 record. And just let me make sure I haven't missed

 6 something. Which will be 190.

 7 (Exhibit 190 marked for identification and

 8 admitted into the record.)

 9 CHAIRMAN EDGAR: I generally prefer it if you

 10 let me excuse the witness before they disappear, quite

 11 frankly.

 12 MR. GUEST: I apologize.

 13 CHAIRMAN EDGAR: And I did ask for just a

 14 moment also just to make sure we were in order.

 15 Okay. So we will enter the deposition, and

 16 then we will need to take up the exhibits, 122 through

 17 125.

 18 (Exhibits 122 through 125 admitted into the

 19 record.)

 20 CHAIRMAN EDGAR: Ms. Brubaker, is there

 21 anything else we need to do before we lose Mr. Plunkett?

 22 MS. BRUBAKER: I'm aware of nothing.

 23 CHAIRMAN EDGAR: Okay. All right. Thank you,

 24 Mr. Plunkett.

 25 MR. GUEST: I apologize, Madam Chairman.

 1444

 1 Are we ready, Madam Chairman?

 2 CHAIRMAN EDGAR: I am.

 3 MR. GUEST: Good afternoon, Mr. Furman.

 4 CHAIRMAN EDGAR: We need to swear Mr. Furman.

 5 That's actually what I was waiting for. Are we on the

 6 same --

 7 MR. GUEST: That was my next question.

 8 CHAIRMAN EDGAR: We're on the same track.

 9 Okay.

 10 MR. GUEST: My first question is have you been

 11 sworn.

 12 CHAIRMAN EDGAR: Thank you.

 13 Thereupon,

 14 RICHARD C. FURMAN

 15 was called as a witness on behalf of The Sierra Club,

 16 Inc., et al. and, having been duly sworn, testified as

 17 follows:

 18 DIRECT EXAMINATION

 19 BY MR. GUEST:

 20 Q. Could you please state your name and business

 21 address.

 22 A. Richard Furman, 10404 Southwest 128th Terrace,

 23 Perrine, Florida.

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

 25 A. I'm a retired engineer. I'm being retained in

 1445

 1 this case by The Sierra Club, Save Our Creeks, Florida

 2 Wildlife Federation, Environmental Confederation of

 3 Southwest Florida, Ellen Peterson, and NRDC.

 4 Q. Have you prepared and caused to be filed 29

 5 pages of prefiled direct testimony?

 6 A. Yes, I have.

 7 Q. Have you also prepared and caused to be filed

 8 25 pages of prefiled supplemental direct testimony?

 9 A. Yes, I have.

 10 Q. Do you have any changes or revisions to this

 11 testimony?

 12 A. Yes. I have a few minor changes.

 13 Q. Can you first give us a quick characterization

 14 of what these changes are and why you need them?

 15 A. Yes. On page 5 of my testimony, line 6, I

 16 listed at the time the Department of Energy's list of

 17 proposed IGCC projects, which at the time that I

 18 prepared that was 28. Then when I prepared my answers

 19 to interrogatories, the number had gone up to 32, and I

 20 presented that number. And more recently, when I last

 21 checked a week or so ago, that number had gone up to 34.

 22 Those would be the only -- that would be the update that

 23 I would give. And then in my Exhibit Number 2 that I

 24 provided as an answer to interrogatories to PSC staff

 25 when they asked for a more complete listing and

 1446

 1 characteristics of those plants, we were able to come up

 2 with 39 IGCC plants and a total of 45 if you include

 3 polygeneration.

 4 Q. With those changes made, if I asked you those

 5 questions today, would your answers be same as in your

 6 prefiled testimony as revised as you just told us?

 7 A. There's one other correction. On page 20 of

 8 my testimony, line 12, I had indicated a Department of

 9 Energy document that showed 14 operating IGCC plants.

 10 Then in my answers to interrogatories, I provided a more

 11 updated list which included 17 operating IGCC plants.

 12 That would be Exhibit Number 4 in my answer to

 13 interrogatories.

 14 Q. So with those three changes, would your

 15 answers be the same as in your prefiled testimony?

 16 A. Yes.

 17 MR. GUEST: Madam Chairwoman, I ask that the

 18 prefiled testimony be entered into the record as though

 19 read with the changes noted.

 20 CHAIRMAN EDGAR: The prefiled direct testimony

 21 of the witness will be entered into the record as though

 22 read with the changes noted by the witness.

 23 BY MR. GUEST:

 24 Q. Do you have -- are you sponsoring any exhibits

 25 with your prefiled testimony?

 1447

 1 A. Yes, I am.

 2 Q. What are those?

 3 A. They are copies of the posters that I'm going

 4 to be talking from for my summary.

 5 MR. GUEST: We have them listed as Exhibits 93

 6 through 121.

 7 CHAIRMAN EDGAR: Okay. I have 122 to 125.

 8 MR. GUEST: Well, let me hand this problem

 9 over to someone who knows what they're doing.

 10 Our list shows 93 to 121.

 11 MS. BRUBAKER: Madam Chairman, if I may.

 12 CHAIRMAN EDGAR: Please.

 13 MS. BRUBAKER: 122 through 125 are

 14 Mr. Plunkett's exhibits.

 15 CHAIRMAN EDGAR: Okay. My apologies.

 16 MS. BRUBAKER: And up through 121 --

 17 CHAIRMAN EDGAR: And apologies again for

 18 confusing the two names, which I have done a couple of

 19 times today, and I do apologize. Thank you.

 20 MR. GUEST: Thank, Madam Chairman.

 21

 22

 23

 24

 25

 1502

 1 BY MR. GUEST:

 2 Q. Do you have a summary of your prefiled

 3 testimony to share with us?

 4 A. Yes, I do.

 5 Q. Would you provide that summary, please.

 6 A. Yes. The objective of my testimony is to

 7 present the most recent and unbiased information on

 8 pulverized coal and IGCC technology. The most common

 9 and unbiased source of this type of information is the

 10 Department of Energy's National Energy Technology

 11 Laboratory, Office of System Analysis and Planning.

 12 Much of the information included in my testimony is from

 13 the Department of Energy.

 14 I would like to suggest that due to the

 15 importance of this discussion, additional time be

 16 granted to enable the PSC staff, the DOE staff, FPL, and

 17 me to conduct a team analysis. DOE's engineers and

 18 analysts are available to work with the Public Service

 19 Commission staff and utilities to evaluate site-specific

 20 alternatives. I've spoken with this DOE office, and

 21 they have agreed to work with Florida's PSC staff to

 22 provide the information and analyses that you need.

 23 These are the types of analysis that I

 24 conducted when I worked for Florida Power & Light. I

 25 would like to volunteer my time to work with FPL's staff

 1503

 1 and the PSC staff to conduct these analyses. The time

 2 that I was given did not allow me the opportunity to

 3 complete this type of analysis by the April 5th

 4 interrogatories deadline. The analysis that I have been

 5 able to present in my testimony indicates that an IGCC

 6 plant should be able to provide new base load capacity

 7 for FPL at a lower cost and with significantly lower

 8 emissions.

 9 The costs and uncertainty about capturing CO2

 10 is also significantly less for the IGCC plant. Exhibit

 11 7 in my testimony is from a recent DOE presentation that

 12 shows slightly higher electric costs today for this IGCC

 13 plant, but significantly lower future electric costs for

 14 IGCC plants than pulverized coal plants. It is

 15 important to note that this study was for a Midwest

 16 location, and petcoke was not included as a potential

 17 fuel for this IGCC plant. This DOE study shows a 30

 18 percent increase in the cost of electricity for IGCC

 19 with CO2 capture versus a 68 percent increase in the

 20 cost of electricity for PC with CO2 capture.

 21 Next slide. This confirms -- these numbers

 22 confirm the General Electric results, which show a 25

 23 percent increase in the cost of electricity for IGCC

 24 with CO2 capture versus a 66 percent increase in the

 25 cost of electricity for PC with CO2 capture.

 1504

 1 Next slide. I produced Exhibit 5 by taking

 2 the results of this DOE evaluation of pulverized coal

 3 versus IGCC for a Midwest plant location and replacing

 4 the delivered fuel cost with a delivered fuel cost for

 5 Florida's electric utilities. Exhibit 5 shows the costs

 6 of electricity for pulverized coal plants are higher

 7 than the costs of electricity for an IGCC plant using

 8 petroleum coke in Florida. Although the IGCC has a

 9 higher capital cost than the PC plant, it has a

 10 significantly lower fuel cost when using petroleum coke.

 11 Since the economics of IGCC are favorable at this

 12 initial level of evaluation, then the next step should

 13 be a more detailed, site-specific evaluation, including

 14 the requirements of the Glades site, but also other

 15 potential sites that might be more feasible.

 16 Whenever possible in my testimony, I have

 17 presented two independent sources of unbiased and recent

 18 information. For comparing emission levels from the new

 19 PC and new IGCC plants, I prepared Exhibit 8, which

 20 shows the percentage of emissions that a new IGCC plant

 21 produces relative to the amount of emissions from a new

 22 ultra-supercritical pulverized coal plant. The data

 23 used for the preparation of this chart is from the July

 24 2006 EPA final report called "Environmental Footprints

 25 and Costs of Coal-based Integrated Gasification Combined

 1505

 1 Cycle and Pulverized Coal Technologies." For both new

 2 PC and new IGCC plants, I used the best available

 3 control technology as reported in this EPA report.

 4 Next slide. For another independent

 5 comparison of emissions, I took the recent IGCC permit

 6 levels and proposed permit levels in applications for

 7 permits for new IGCC plants and compared these emission

 8 levels with the proposed permit levels for the Glades

 9 plant. This comparison is shown in Exhibit 11.

 10 Based on both of these independent methods of

 11 comparison, the EPA report of best available control

 12 technology and the actual comparison of permit levels,

 13 the IGCC plant provided significantly lower emissions.

 14 The other aspects that I would like to try to

 15 address by working together as a team is how we might be

 16 able to integrate this new plan alternative with other

 17 alternatives that have been talked about here today,

 18 like conservation and renewable energy. By working

 19 together as a team, I think we can dramatically reduce

 20 the size of the new plant required and the resources and

 21 environmental damages that can be created.

 22 Thank you.

 23 CHAIRMAN EDGAR: Mr. Beck, any questions?

 24 Mr. Krasowski.

 25 MR. KRASOWSKI: Yes, ma'am.

 1506

 1 CROSS-EXAMINATION

 2 BY MR. KRASOWSKI:

 3 Q. So, Mr. Furman, you're here to promote IGCC?

 4 A. No, no. IGCC is really a third option, in my

 5 mind. I think we need to do dramatically more with

 6 energy conservation.

 7 Q. Do you have that in your testimony here, about

 8 energy conservation?

 9 A. No, I do not. I did work for a period of my

 10 engineering career as an energy conservation engineer,

 11 so I do realize how poorly we're doing in Florida as far

 12 as energy conservation and how much more we can do.

 13 And I think -- just common sense, I think we

 14 all know how much we waste energy. I've been trying to

 15 reduce energy on a personal level and have an electric

 16 bill that's half of what any of my neighbors' are. So I

 17 think we can go a long way, and I think we have to take

 18 it on as a personal responsibility and as a public

 19 responsibility. So I applaud the efforts --

 20 CHAIRMAN EDGAR: Okay. Mr. Furman, I would

 21 like you to limit your answers to the specific question

 22 that has been asked, please. Thank you.

 23 BY MR. KRASOWSKI:

 24 Q. My next question is, if you're so concerned

 25 with energy conservation, why didn't you have it in your

 1507

 1 testimony as opposed to your elaborations on the

 2 benefits of IGCC?

 3 A. A great deal more of my engineering experience

 4 has been on power plants and gasification technologies.

 5 Q. Are you familiar with the Joyce Foundation?

 6 A. No, I'm not.

 7 Q. Are you here on behalf of the NRDC?

 8 A. Yes.

 9 Q. Are you aware the NRDC are advocates for

 10 gasification, IGCC?

 11 A. I'm not aware whether they're advocates or

 12 not.

 13 Q. And I'm assuming -- I don't want to assume, so

 14 let me ask the question. So you're not aware that

 15 they're funded by the Joyce Foundation to promote IGCC?

 16 A. I believe FPL in my deposition asked me that

 17 same question, so my only source of information on that

 18 is from the question in my deposition. They had

 19 indicated that they had donated -- the Joyce Foundation

 20 had donated some money to NRDC. That's my only

 21 knowledge.

 22 MR. KRASOWSKI: Well, I have no further

 23 questions, being that this isn't my specific area of

 24 interest. I'm more into the alternatives in

 25 conservation. Thank you, Mr. Furman. Thank you, ma'am.

 1508

 1 CHAIRMAN EDGAR: Thank you. Ms. Perdue, any

 2 questions?

 3 MS. PERDUE: Just a few, Madam Chair. Thank

 4 you.

 5 CROSS-EXAMINATION

 6 BY MS. PERDUE:

 7 Q. Mr. Furman, in your direct testimony that has

 8 been filed, you are assuming that -- and correct me if

 9 I'm wrong, but the proposed capacity of the FGPP plant

 10 is 1,916 megawatts; is that true?

 11 A. Yes.

 12 Q. And has there -- you've got these

 13 recommendations in your testimony that perhaps there

 14 should be an IGCC plant. Does an IGCC power plant exist

 15 at that capacity? Has one ever been built?

 16 A. No.

 17 MS. PERDUE: Thank you. That's all.

 18 CHAIRMAN EDGAR: Mr. Anderson.

 19 MR. ANDERSON: May I put up some exhibits very

 20 briefly?

 21 CHAIRMAN EDGAR: You may.

 22 MR. ANDERSON: May I proceed, please? Is he

 23 all set? May I proceed?

 24 CHAIRMAN EDGAR: Yes, sir.

 25 MR. ANDERSON: Thank you very much.

 1509

 1 CROSS-EXAMINATION

 2 BY MR. ANDERSON:

 3 Q. Good afternoon, Mr. Furman.

 4 A. Good afternoon.

 5 Q. My name is Bryan Anderson. I'm an attorney

 6 for Florida Power & Light Company. I'll be asking you

 7 some questions today about your testimony.

 8 Your testimony disagrees with FPL's selection

 9 of ultra-supercritical pulverized coal technology for

 10 its proposed FPL Glades Power Park Units 1 and 2; is

 11 that right?

 12 A. Yes.

 13 Q. You have never been responsible for

 14 development of a new electric generating plant; right?

 15 A. Conversion of plants, yes.

 16 Q. Never responsible for the development of a new

 17 electric generating plant. The answer is yes; right?

 18 A. That's correct.

 19 Q. You've not been responsible for obtaining

 20 environmental permits for any electric generating plant

 21 of any type; isn't that right?

 22 A. That's correct.

 23 Q. You have never signed and sealed as a

 24 professional engineer any application for environmental

 25 permits for any electric generating plant in Florida,

 1510

 1 the United States, or any other country; right?

 2 A. Yes.

 3 Q. You have no experience in negotiating

 4 contracts for major equipment or construction for an

 5 IGCC plant?

 6 A. No.

 7 Q. Or a USCPC plant?

 8 A. That's correct.

 9 Q. Or any coal plant, or any power plant at all;

 10 right?

 11 A. That's correct.

 12 Q. You have never managed the design of an IGCC

 13 plant?

 14 A. No.

 15 Q. Or a USCPC plant?

 16 A. No.

 17 Q. Or any coal plant?

 18 A. If I could explain, one of my jobs when I

 19 worked for Florida Power & Light was, I managed Florida

 20 Power & Light's coal conversion program. This was after

 21 the second oil embargo of '78 when I worked for Florida

 22 Power & Light.

 23 And that was one of the reasons I was

 24 specifically hired, because I had just completed the

 25 engineering study for the conversion of the largest

 1511

 1 power plant in New England, which was the Brayton Point

 2 Power Plant. That was after the first oil embargo of

 3 '73, when we got a team approach like I'm suggesting

 4 here. We got a team approach there consisting of the

 5 regulatory commissioners, the EPA, the business

 6 community, and the utility, and we figured out a way of

 7 how we could satisfy the needs of all of the group and

 8 come to a consensus on how we would convert that power

 9 plant from oil to coal. And that has been successfully

 10 converted, so I think I do have some experience.

 11 And then I was hired by Florida Power & Light

 12 after the second oil embargo. Florida Power & Light was

 13 the largest oil-burning utility in the country at that

 14 time. We were being faced by mandatory conversion

 15 orders, because the plants were originally designed for

 16 coal, and FPL would have had to spend a lot of money to

 17 convert those plants from oil to coal. And we were

 18 concerned that we would get a mandatory conversion

 19 order, so what we did was, we tried a new technology

 20 called coal-oil mixtures. And we actually had the first

 21 conversion of a 400-megawatt power plant from oil to a

 22 coal-oil mixture, which was a successful conversion.

 23 And the Brayton Point Power Plant was really the first

 24 major conversion of a power plant from oil to coal in

 25 the United States.

 1512

 1 My first engineering job was working for

 2 Southern California Edison Company, and my job there was

 3 more in the pollution control area, because --

 4 MR. ANDERSON: Chairman Edgar, at this point,

 5 I think this is a bit beyond the question.

 6 CHAIRMAN EDGAR: Actually, I tend to agree.

 7 And I do recognize that biographical resumé experience

 8 information, et cetera, is in the testimony and

 9 exhibits.

 10 MR. ANDERSON: Thank you.

 11 BY MR. ANDERSON:

 12 Q. You've never managed the construction of an

 13 IGCC plant?

 14 A. No.

 15 Q. Or a USCPC plant?

 16 A. No.

 17 Q. Or any coal plant?

 18 A. No.

 19 Q. You've not managed the operations of an IGCC

 20 plant?

 21 A. No.

 22 Q. Or a USCPC plant?

 23 A. That's correct.

 24 Q. Your testimony describes and relies on 26

 25 exhibits; is that right?

 1513

 1 A. Twenty-six in the direct testimony; right.

 2 CHAIRMAN EDGAR: Shall we mark? I'm on 191.

 3 MR. ANDERSON: Yes, please. Thank you.

 4 (Exhibit 191 marked for identification.)

 5 BY MR. ANDERSON:

 6 Q. You have before you what has been identified

 7 as Exhibit 191; is that right?

 8 A. No. Actually, mine says Exhibit 82.

 9 Q. Okay. For purposes of this hearing, the

 10 Chairman just identified this as Exhibit 191. Will you

 11 accept that?

 12 A. Sure.

 13 Q. Great. It's fair to say that you used

 14 essentially the same exhibits for your appearance as a

 15 public witness before the Commission in the Taylor

 16 Energy Center need proceeding as your exhibits in this

 17 case; right?

 18 A. I've used some of them, yes.

 19 Q. Of your 26 exhibits to your direct testimony,

 20 you told us at your deposition, I think, 23 are the same

 21 exhibits that you provided in the TEC case. Do you

 22 recall that?

 23 A. I haven't counted them. I'll take your word

 24 for it. And I think as I stated in my summary remarks,

 25 I stated that I would like to volunteer my time to work

 1514

 1 with FPL staff and Public Service Commission staff to

 2 conduct these analyses. These types of analysis could

 3 not be completed by my April 5th interrogatories

 4 deadline. There just wasn't enough -- there isn't

 5 enough time in the procedure to allow an individual to

 6 do that type of analysis. I was given a few weeks, and

 7 I believe FPL's resources are far greater than mine, and

 8 I believe you had years to compile your studies.

 9 Q. Yes, the company had years to do its work;

 10 right? We had the benefit of an engineering staff; is

 11 that correct?

 12 A. Yes.

 13 Q. We had the benefit of outside expert

 14 consultants also?

 15 A. That's right.

 16 Q. Nearly all of the slides attached to your

 17 direct testimony come from other people's presentations;

 18 isn't that right?

 19 A. Well, you also -- most of my time was devoted

 20 to answering the questions from staff interrogatories.

 21 And I think of the -- I've submitted three documents.

 22 You're referring to the first document, which I already

 23 had been compiling information on for public forum

 24 presentations on both the Taylor plant and the Glades

 25 plant. So I already had much of that information

 1515

 1 available, and I was able to make use of it. Subsequent

 2 to that, I submitted supplemental direct testimony in

 3 response to the numerous witnesses that you had appear,

 4 and then subsequent to that, I entered the answers to

 5 interrogatories, which was a rather extensive data

 6 information source answering all of their questions.

 7 Q. Mr. Furman, I was asking you about the slides

 8 attached to your direct testimony. Nearly all those

 9 came from other people's presentations?

 10 A. Yes. And as I stated in my summary, the

 11 objective of my testimony is to present the most recent

 12 and unbiased information, and so what I'm -- I'm not

 13 having you rely on my word, but what I'm trying to do is

 14 present two or more sources of what I consider to be the

 15 most current and most unbiased sources of information.

 16 They weren't hired by me. They weren't paid by me.

 17 They were independent sources that aren't in favor of

 18 either pulverized coal or IGCC technology.

 19 Q. Well, Mr. Furman, you have hundreds, even

 20 thousands of slides from other people's presentations in

 21 your collection, don't you?

 22 A. Yes, I do.

 23 Q. And you pick out the ones you want to put

 24 together your presentation; right?

 25 A. No, that's not true.

 1516

 1 Q. Somebody else picked them?

 2 A. No, unlike Mr. Jenkins, who will pick out

 3 slides and argue the case for IGCC, for IGCC when he's

 4 talking to gasification people. Like when he gives his

 5 IGCC 101 presentation, he'll talk about the benefits of

 6 IGCC, and when he comes here, he'll talk about the

 7 benefits of ultra-supercritical pulverized coal. I find

 8 that morally repugnant. I've made my own determination

 9 as to which technology is best and which is in the best

 10 interests of our country, and I will stand by the data

 11 that I'm presenting and don't try to present both sides

 12 of the story.

 13 Q. So you pick your selection of technology, and

 14 then you go through your hundreds or thousands of slides

 15 in your collection and put them together. And some you

 16 got at seminars; right?

 17 A. Yes.

 18 Q. Others you found on the Internet?

 19 A. Yes, that's right.

 20 Q. At your deposition, some of them, you didn't

 21 even recall where you got them from; isn't that right?

 22 A. Which ones are you referring to?

 23 Q. Do you have a copy of your deposition there?

 24 A. No, I do not.

 25 Q. Okay. Do you want to take a look at your

 1517

 1 deposition? Do you not recall telling me that some of

 2 the slides, you didn't even remember where they came

 3 from?

 4 A. If you could refresh my memory, I could

 5 corroborate that.

 6 MR. GUEST: I think if there's an impeachment

 7 item underway, it might be useful to offer the

 8 deposition to the witness so he can review it.

 9 CHAIRMAN EDGAR: Yes, I agree. We need to get

 10 a copy and -- okay. A copy for the witness. Mr. Guest,

 11 do you have a copy?

 12 MR. GUEST: I do, somewhere. But I will trust

 13 the witness to read it accurately and respond

 14 reasonably.

 15 CHAIRMAN EDGAR: Okay.

 16 THE WITNESS: Yes, I have a copy.

 17 BY MR. ANDERSON:

 18 Q. Please look at page 37 of your deposition, and

 19 please look at line 14 through to line 23.

 20 Specifically, your document RCF-6 is referred to. Do

 21 you see that?

 22 A. Yes. Let me just refer to the document.

 23 Q. I asked you, "If you were not present at the

 24 presentation, how did you get the slide RCF-6?" Do you

 25 see that?

 1518

 1 A. Yes.

 2 Q. You said, "I have various sources of getting

 3 the full presentations, either directly from the author,

 4 from the power gen conference, or through the Internet,

 5 or from other IGCC experts as we exchange information."

 6 Do you see that?

 7 A. Yes.

 8 Q. And then you were asked this question and gave

 9 this answer. "Focusing on RCF-6 in particular, do you

 10 remember which of these methods you used to obtain this

 11 particular slide?"

 12 And you answer, "No, I do not."

 13 A. Okay. If could I explain, then you might get

 14 a perspective on the other questions that you've been

 15 asking also. I have talked and corresponded with

 16 probably ten different people at General Electric who

 17 are in charge of different aspects of developing their

 18 IGCC technology. One of them is Robert Rigdon. I have

 19 spoken to him. I do have a copy of his presentation.

 20 And whether I got it directly from him, whether I got it

 21 from the General Electric website or not, that

 22 particular slide has been presented at a number of

 23 conferences. I give the reference down there for the

 24 conference that it came from. The fact that I don't

 25 remember where I happened to first see that or get it I

 1519

 1 think is immaterial.

 2 Q. You talked a little while ago about some work

 3 you did. When did you leave Florida Power & Light

 4 Company?

 5 A. It would be either '82 or '83.

 6 Q. So that's 24 or 25 years ago?

 7 A. Yes.

 8 Q. The plant you referred to was the Sanford

 9 plant; is that right?

 10 A. Yes.

 11 Q. Isn't it correct that what you called a

 12 conversion was only a test for a number of weeks and was

 13 not implemented?

 14 A. That's right. Actually, we ended up selling

 15 that technology to Mitsubishi.

 16 Q. But the -- I'm sorry. Go ahead. The plant,

 17 the Sanford plant, though, continued to operate on oil

 18 until repowered to CC for gas in 2002; right?

 19 A. Right.

 20 CHAIRMAN EDGAR: Okay. Hold on, Mr. Furman.

 21 I'm sorry. Was that an objection?

 22 MR. GUEST: Well, I think -- I'm not sure, but

 23 I think the witness may not have been finished answering

 24 the question before the next question. I wasn't sure.

 25 CHAIRMAN EDGAR: Okay. I try to allow the

 1520

 1 witnesses to finish the answer, so if you'll just bear

 2 with us. Mr. Furman, were you able to complete your

 3 answer?

 4 THE WITNESS: I was just going to put it in

 5 perspective. The reason why the -- the technology was

 6 successful. We had a successful conversion of that

 7 plant at 400 megawatts. It was so technically

 8 successful that they asked me to go to Japan and to

 9 spend a week over there explaining the technology to

 10 Mitsubishi Company, who ultimately bought the technology

 11 and used it for some of their plants. And it was a

 12 technical success, which was my responsibility, part of

 13 my -- part of a team.

 14 And after that, the price of oil came back

 15 down. As I think we all know, we've had spikes up and

 16 down. And with the price coming down, there was no need

 17 to make use of that technology. So just to put it in

 18 perspective, it wasn't that the technology wasn't used

 19 or couldn't be used. It was that the economics didn't

 20 require it.

 21 CHAIRMAN EDGAR: Okay. Mr. Anderson.

 22 MR. ANDERSON: Thank you.

 23 BY MR. ANDERSON:

 24 Q. I would like you to take a look at a slide

 25 we're going to exhibit on the right-hand side, the

 1521

 1 right-hand easel, and we'll give you one to look at

 2 also.

 3 MR. GUEST: Madam Chairman, we're missing --

 4 we can't see the outer -- the left two feet of that.

 5 MR. ANDERSON: Okay. Let's move the easel so

 6 everyone can read it.

 7 By the way, this and the next slide Mr. Hicks

 8 spoke to, so people have copies. We have additional if

 9 people wish them.

 10 CHAIRMAN EDGAR: Okay. This is the same that

 11 was passed out?

 12 MR. ANDERSON: It's the same one.

 13 CHAIRMAN EDGAR: Whichever day that was that

 14 this was passed out.

 15 MR. ANDERSON: That's right. That's right.

 16 BY MR. ANDERSON:

 17 Q. Mr. Furman, we've indicated check marks on

 18 this yellow board which show FPL's position concerning

 19 important aspects of technology choice. Now, I'm not

 20 asking you to agree with FPL's position, but just to

 21 frame the balance of your examination this afternoon, I

 22 ask you to agree that the placement of the check marks

 23 in the various columns for the several factors reflects

 24 FPL's position in this proceeding. Why don't you take a

 25 look and see if you agree that that's right.

 1522

 1 A. No, I would disagree.

 2 Q. Okay. Well, you disagree that FPL believes

 3 USCPC is the correct technology choice?

 4 A. Yes, I do.

 5 Q. So it's your opinion that FPL actually would

 6 prefer IGCC?

 7 A. Could you repeat that question?

 8 Q. All we're trying to get at is, this particular

 9 slide characterizes, where the check marks are, FPL's

 10 position that USCPC, based on our analysis, is the

 11 preferred technology with respect to technological

 12 maturity, reliability, construction risk, life cycle

 13 costs, generation efficiency, and CO2 emissions, that

 14 USCPC is at least as good as next generation IGCC from

 15 the perspective of environmental performance, or SO2,

 16 nitrous oxide, and particulate matter. Do you

 17 understand that to be FPL's position in this case?

 18 A. Yes.

 19 Q. Good. Could you please take down the second

 20 slide?

 21 A. Would you like me to explain why I would put

 22 the checks in a different place?

 23 Q. No, thank you, because what we're going to do

 24 is explore each of these points, and I'll be asking you

 25 questions, and you're free to respond.

 1523

 1 Let's talk about technological maturity. Do

 2 you agree that technological maturity of a generating

 3 technology is an important factor in selecting a

 4 technology?

 5 A. Yes.

 6 Q. And by technological maturity, we typically

 7 mean whether it's commercial, whether it's in

 8 demonstration, whether it's experimental; right?

 9 A. Yes.

 10 Q. You understand that by referring to

 11 ultra-supercritical pulverized coal technology, FPL

 12 refers to steam cycle operating pressures exceeding

 13 3,600 PSIA and main superheat steam temperature

 14 approaching 1,100 degrees Fahrenheit? That's what

 15 Mr. Hicks was talking about yesterday as FPL's -- what

 16 FPL is looking to. You understood that and heard that

 17 testimony; right?

 18 A. Yes, and I have concerns about that.

 19 MR. GUEST: Your Honor, Madam Chairman.

 20 CHAIRMAN EDGAR: Yes, sir.

 21 MR. GUEST: I don't think this is proper

 22 cross. I think all he's getting him to do is to repeat

 23 what FPL has said. That doesn't tend to undermine his

 24 testimony. It's just repetition of what other people

 25 have said and repetition of what's on the board. I

 1524

 1 think proper cross-examination is to take his testimony

 2 on direct and explore it, and I think we've seen some of

 3 that when examining qualifications and so forth, but I

 4 don't think this qualifies.

 5 THE WITNESS: I would be glad to explain what

 6 my --

 7 CHAIRMAN EDGAR: Mr. Furman, please, let me do

 8 something as long as I'm sitting here all day.

 9 Okay. Mr. Anderson.

 10 MR. ANDERSON: I believe the record shows that

 11 these are the various features that are important in

 12 selecting generation technology. One of the core

 13 elements in Mr. Furman's technology choice is asserting

 14 to the Commission that a different technology choice

 15 should be made, and he talks about the availability of

 16 different size gasifiers and all these types of things.

 17 And the heart of our case on this point is that our

 18 technology is well established at large commercial scale

 19 and been successfully operating. We're entitled to

 20 point that out and obtain this witness's agreement as to

 21 those points, and similarly, obtain his agreement that

 22 there's no such demonstration of those points for his

 23 technology. That's the heart of cross-examination.

 24 THE WITNESS: Then I guess you would like

 25 me –-

 1525

 1 CHAIRMAN EDGAR: Mr. Furman, please, please.

 2 Okay. Thank you. And I note that Mr. Guest will have

 3 the opportunity to pose questions to you on redirect

 4 here shortly, so you will get another opportunity.

 5 MR. GUEST: I think what I heard was that the

 6 question was, "Do you think these are the right

 7 factors?" And if that was the question, I wouldn't have

 8 objected. But what he's really asking is, "Is this what

 9 FP&L says," and I don't think that's really cross. The

 10 question is, is there another factor, or shouldn't it

 11 count or something? That's cross. And so it's improper

 12 cross.

 13 CHAIRMAN EDGAR: Okay. I've decided that I'm

 14 going to implement personally the no joking rule,

 15 because I was about to make one, and I'm not going to.

 16 So, Mr. Anderson, in the interest of time, could you

 17 perhaps be more direct in your questions and let's see

 18 how that works?

 19 MR. ANDERSON: That's fine.

 20 BY MR. ANDERSON:

 21 Q. FPL is proposing two USCPC units of 980 net

 22 megawatts each; right?

 23 A. Yes.

 24 Q. You are aware that ultra-supercritical

 25 pulverized coal units of 1,000 megawatts have been

 1526

 1 designed, permitted, constructed, and are in commercial

 2 operation; right?

 3 A. I'm also aware of the problems with those

 4 units, if you would let me explain why.

 5 Q. I would suggest that would be appropriate

 6 redirect. But my point has been answered. Thank you.

 7 For example, the Neiderausem,

 8 N-e-i-d-e-r-a-u-s-e-m, 1,027-megawatt unit, that's an

 9 example of a unit of roughly comparable size and type to

 10 what FPL is proposing; right?

 11 A. Yes. And I'm also aware that very few of

 12 these plants have been built in the United States, and

 13 therefore, we have the question of how reliable will

 14 they be in the United States, because we have different

 15 building standards, different trades that we don't have

 16 in the other countries. And I'm also aware that this

 17 technology of these conditions was actually developed in

 18 the 1950s, and the utility industry decided not to make

 19 use of it. And therefore, it was developed in Germany

 20 and Japan, and we're now importing that technology back

 21 here.

 22 So to assume that the utility industry will

 23 have the same performance with those units in this

 24 country under different building standards and

 25 conditions I think is making a great assumption that

 1527

 1 you'll be able to get that 92 percent availability. And

 2 I have not seen any data to indicate that that will be

 3 the fact.

 4 Q. So the laws of physics are a little different

 5 over there in Germany; is that right?

 6 A. No, I --

 7 MR. GUEST: Objection. Argumentative.

 8 MR. ANDERSON: Well, he's saying that there's

 9 some difference on some other continent that accounts

 10 for why a technology successfully implemented in another

 11 country can't be here.

 12 CHAIRMAN EDGAR: I understand. I'll tell you

 13 what. Let's take a 10-minute break. I would like to

 14 clear my cobwebs, so let's take a short break, 10

 15 minutes, and we will come back. And, Mr. Furman, stay

 16 close, if you would.

 17 (Short recess.)

 18 CHAIRMAN EDGAR: Okay. We will go back on the

 19 record. Thank you. Mr. Anderson.

 20 MR. ANDERSON: Thank you. Madam Chairman, in

 21 the interest of time management, we've been told that

 22 counsel for The Sierra Club, et al., have maybe only

 23 about 10 questions for Mr. Rose. Our thought, because

 24 we would like to see him get up and go, Mr. Rose, that

 25 is, also, is to complete our cross-examination, consider

 1528

 1 it done at this time, and just move on.

 2 CHAIRMAN EDGAR: Oh. Done at this time.

 3 MR. ANDERSON: Right now.

 4 CHAIRMAN EDGAR: Caught me by surprise.

 5 MR. ANDERSON: We're done.

 6 CHAIRMAN EDGAR: Are there questions from

 7 staff?

 8 MS. BRUBAKER: Staff has no questions.

 9 CHAIRMAN EDGAR: Commissioners? No questions.

 10 Okay. Mr. Guest.

 11 REDIRECT EXAMINATION

 12 BY MR. GUEST:

 13 Q. Okay. Let me just start here with -- the

 14 question was raised that you can't get to -- or there

 15 aren't big IGCC plants that are as large as the proposed

 16 Glades plant. Do you know of any method that could or

 17 has been used to handle that problem?

 18 A. Yes, I do. As a matter of fact, there's a

 19 number of utilities and companies that are planning on

 20 using that method. One is the Hunton Energy Group in

 21 Texas, which is doing pretty much what I had suggested

 22 in my analysis. They're proposing a 1,200-megawatt IGCC

 23 plant in Texas. I have a recent article on it if the

 24 Public Service Commissioners would like to see it.

 25 But their plan is that they already have an

 1529

 1 agreement with Valero Refinery on a long-term contract

 2 basis for the petroleum coke. They're going to be

 3 building this two-phase plant, 600 megawatts per unit.

 4 And they also are in negotiations, and they think they

 5 have a buyer for the carbon dioxide to be used in

 6 enhanced oil recovery in Texas also. So that's pretty

 7 much the scope that I was describing in the analysis

 8 that I did.

 9 The plant at Polk Power Station is basically a

 10 300-megawatt unit. If you put two of these together,

 11 which is what they're planning on doing on their next

 12 plant, then you get -- 630 megawatts will be the output

 13 capacity of that plant.

 14 So all you have to do is basically the same

 15 thing that Florida Power & Light and other utilities

 16 have been building for the last 15 years, which is these

 17 combined cycle units in multiple modules. In this case,

 18 they'll be modules of 630 megawatts each. And if you

 19 put three of those together at the same site, you'll

 20 have about the same capacity that FPL says they need in

 21 the Glades location. It would actually come out to

 22 1,890 megawatts.

 23 I can give other examples if you would like.

 24 Q. Is there anything in particular that you could

 25 do if you were to put them in that configuration that

 1530

 1 would increase the availability?

 2 MR. ANDERSON: Objection. Beyond the scope of

 3 cross-examination. I expressly didn't go into all the

 4 reliability and availability information.

 5 MR. GUEST: Well, the issue here was would it

 6 be possible to build one that big, and the answer is

 7 yes, you could -- well, I better not say the answer, so

 8 I won't. But I think that it fairly opens the question

 9 of how would you do it. There's a "how would you do it"

 10 question here.

 11 CHAIRMAN EDGAR: All right. I'll allow.

 12 A. Yes, there's a lot of things, first of all, my

 13 suggestion on stepping back a minute and really looking

 14 at the wide range of alternatives that are available.

 15 I think we've seen here today demonstrated

 16 that 1,960 megawatts may indeed not be totally the

 17 requirement. Therefore, there may actually be a smaller

 18 size, or maybe no size required. But if you do need to

 19 build a plant and it has to be that size, that can be

 20 done rather easily.

 21 And actually, you can take advantage of the

 22 size of that plant, because right now, on the smaller

 23 size plants, it isn't really feasible to have a spare

 24 gasifier for just a single unit. But when you have

 25 multiple gasifiers -- in this case, in order to have the

 1531

 1 capacity of the Glades plant, you would actually need

 2 six gasifiers to give you that capacity. And if you did

 3 that, what you could do is, you could afford a spare

 4 gasifier, and that spare gasifier could actually be

 5 producing methanol, which can be used as your backup

 6 fuel. It's also possible to use biomass and other

 7 alternative fuels which are less harmful to the

 8 environment. So there's a whole range of options that

 9 really haven't been evaluated as alternatives.

 10 Another example, this plant that I mentioned

 11 in Texas, they're going to also produce -- since it's

 12 going to be a very clean plant, they're going to use a

 13 waste product, petroleum coke, which is normally

 14 exported outside of the country and burned without the

 15 regulations that we have in this country, so they

 16 actually create more pollution by exporting our waste

 17 materials. If we used that waste material here in this

 18 country and we control the emissions like they are in

 19 the Hunton plant and capture the CO2 -- their plans are

 20 to also to generate synthetic natural gas. Well, we can

 21 see in Texas, they have some -- FP&L could look at joint

 22 ventures with companies like that where it is economic

 23 to make use of the petroleum coke close to the source,

 24 make use of the CO2 waste product for enhanced oil

 25 recovery in Texas, which is where they need it, and

 1532

 1 that's also where we get our natural gas from.

 2 So it would be very nice to have a joint

 3 venture arrangement with a company like this Hunton

 4 Energy Group, where we would be buying the synthetic

 5 natural gas from them, making use of a waste product,

 6 sequestering the CO2 economically, and we make use of

 7 the natural gas, buy the natural gas from them, and we

 8 continue building our combined cycle natural gas plants

 9 closer to our load centers, which is much more

 10 efficient, and we don't degrade the environment as much.

 11 So there's a whole range of products, of

 12 alternatives that really should be looked at before any

 13 kind of a decision is made on this type of a plant.

 14 Q. I have two very quick follow-up questions on

 15 that. Are there actually gasification plants around the

 16 world that produce methanol, and if so, could you just

 17 tell us yes or no and maybe where?

 18 MR. ANDERSON: Objection. Beyond the scope of

 19 cross-examination.

 20 MR. GUEST: It's just following up on whether

 21 methanol is -- that's really feasible, that's all.

 22 CHAIRMAN EDGAR: I'll allow.

 23 A. Yes. As a matter of fact, one of the pioneers

 24 in this country is Eastman Chemical Company in

 25 Tennessee, who has been operating for over 20 years a

 1533

 1 gasification process, and their primary product is

 2 methanol, which they then go on and make into other

 3 chemicals.

 4 Q. And why do you think that methanol could be

 5 used to run the combined cycle?

 6 A. That's a fuel that's commonly used to run gas

 7 turbines. There's no problem with using it as a backup

 8 fuel.

 9 Q. You were shown this exhibit over here?

 10 A. Yes.

 11 Q. And the question I think that was asked of you

 12 is are these -- well, may I have a moment?

 13 May I have a moment? I'm really trying to

 14 shorten this thing.

 15 CHAIRMAN EDGAR: I understand.

 16 (Pause.)

 17 BY MR. GUEST:

 18 Q. In the interest of time, a lot of the

 19 witnesses have actually covered a lot of these items, so

 20 there's really no need to -- I mean through cross, so I

 21 think we can jump over the first three without asking

 22 any questions.

 23 Do you agree with FPL's claim that IGCC has a

 24 significantly higher life cycle cost?

 25 A. No, I do not.

 1534

 1 Q. Can you briefly tell us why?

 2 A. If you look at the two primary components of

 3 what goes into the cost of electricity, it's the capital

 4 costs and the fuel costs. I think we've shown that the

 5 costs for the Tampa Electric next plant, which should

 6 come online the same time as the Glades plant, has

 7 comparable capital costs, so the next item really

 8 becomes fuel costs. And I think by FPL's own expert

 9 witnesses, all of them indicated that there was a

 10 significant difference in the projected price of

 11 petroleum coke versus their combination of coals and

 12 petroleum coke.

 13 So I think we can conclude from that -- and I

 14 think if we go back in history and we look at the last

 15 20 years of the price of petcoke, it has averaged half

 16 of the price of coal. That, together with the

 17 projections, make me feel pretty comfortable that

 18 petcoke over the long term is going to be significantly

 19 lower. And I just did a quick calculation that, based

 20 on the number Steve Jenkins used in his presentation of

 21 a $1 per million Btu differential in the price between

 22 coal and petcoke, nets for this plant $120 million a

 23 year of fuel cost savings, which would move on directly

 24 as a savings to the consumer, because fuel costs are

 25 passed on directly.

 1535

 1 The other life cycle cost component that we're

 2 going to have to consider is CO2 costs, and FPL's

 3 testimony indicated they thought that they would

 4 probably have to pay about $28 per ton for CO2 credits,

 5 that they wouldn't be able to capture the CO2 from this

 6 plant, so they would have to pay for the credit for

 7 somebody else capturing the CO2, since they won't be

 8 able to do it economically. And they came up with a

 9 number of about $28 per ton of CO2. The IGCC plant and

 10 the DOE numbers indicated that $18 a ton would be the

 11 cost for capturing the CO2 in an IGCC plant. So again,

 12 if you take the difference between those numbers, you

 13 come up with another $120 million a year of savings.

 14 So I think there are significant life cycle

 15 cost savings that need to be looked at when you go to

 16 IGCC.

 17 Q. Jumping back just for a second, I just would

 18 like a very brief answer to this if that's possible.

 19 Are there supplier guarantees available for IGCC?

 20 A. Yes, and that was really the reason for --

 21 MR. ANDERSON: Madam Chairman, I'm sorry, but

 22 we've forgone all of the examination on all these areas.

 23 We did not interrogate on any of these things. We're

 24 obviously prepared to demonstrate that there are no

 25 contracts in the industry signing up with such

 1536

 1 guarantees. It's going far beyond the scope of the

 2 cross-examination, and we object.

 3 CHAIRMAN EDGAR: I agree.

 4 MR. GUEST: Okay. May I have a moment?

 5 CHAIRMAN EDGAR: Yes.

 6 BY MR. GUEST:

 7 Q. In your direct testimony, you had a chart that

 8 showed relative emissions?

 9 A. Yes.

 10 Q. Is there an issue about higher emissions

 11 during startup?

 12 MR. ANDERSON: FPL objects to this question.

 13 Again, we did not do the environmental performance

 14 cross-examination, and all this is additional direct

 15 exam.

 16 CHAIRMAN EDGAR: I agree.

 17 MR. GUEST: Well, I'll wrap up then.

 18 BY MR. GUEST:

 19 Q. Mr. Anderson referred to the plant proposed

 20 for Glades County as ultra-supercritical.

 21 A. Yes.

 22 Q. Is that true?

 23 A. No, it is not. According to the numerous

 24 definitions from the EPA, from the Department of Energy,

 25 National Energy Technology Laboratory, and the industry

 1537

 1 reference that we gave in cross-examination, I think we

 2 see that what has happened is that the true definition

 3 of ultra-supercritical -- and there was a reason for it

 4 -- is significantly higher pressures. And the reason

 5 for those higher conditions is to get higher

 6 efficiencies. The whole objective of that exercise of

 7 going to higher pressures and temperatures is to get

 8 higher efficiencies, and the plants are not able to

 9 obtain that.

 10 And unless -- and they're really at the end of

 11 their development life as far as how far you can push

 12 this technology of boilers. And without materials that

 13 can operate under those temperatures and pressures,

 14 there's really no hope that we can ever get the boiler

 15 technology to obtain the efficiency levels that were

 16 shown for ultra-supercritical pulverized coal. So what

 17 has happened instead is, the industry has tried to save

 18 face by saying, "Okay. Well, we can't reach those

 19 conditions and we can't get to those efficiencies, but

 20 we've got this word, ultra-supercritical, so we'll try

 21 and make the most out of the word."

 22 But what you have instead for the IGCC

 23 technology is, you have an operating plant. You have a

 24 technology that has been operating for 10 years by a

 25 utility in this state that has enough confidence in that

 1538

 1 technology that they've selected it for their next unit.

 2 There's no scale-up required in the technology

 3 to go from 300 megawatts on to any size you want,

 4 because they're all 300-megawatt modules. So there's

 5 very little risk I see in going with the IGCC

 6 technology, and therefore, I would move that check mark

 7 over, and I would say there's more risk associated with

 8 the supercritical technology, because there haven't been

 9 any built in this country, and no operating results for

 10 that.

 11 And the other thing that I would like to

 12 mention is this chilled ammonia process.

 13 CHAIRMAN EDGAR: Okay. Mr. Furman, I think

 14 we're going a little far afield. Do you have further

 15 questions?

 16 MR. GUEST: Yes. I've got one or two.

 17 CHAIRMAN EDGAR: Okay. Then let me say,

 18 Mr. Furman, if you could try to shorten your answers to

 19 the question being asked.

 20 THE WITNESS: Okay.

 21 CHAIRMAN EDGAR: Thank you.

 22 BY MR. GUEST:

 23 Q. A question was raised about you've got

 24 thousands of photographs. Is that true?

 25 A. More like hundreds.

 1539

 1 Q. I stand corrected.

 2 A. It may be thousands.

 3 Q. Okay. Is it important to have taken the

 4 photograph yourself?

 5 A. No.

 6 Q. Why not?

 7 A. I think you rely upon the source of the

 8 information, the credibility of the source of that

 9 information.

 10 Q. Is that what the experts in your field

 11 generally do?

 12 A. Yes.

 13 Q. Now, finally, a number of questions were asked

 14 of you about various things that you haven't done. Why

 15 is it that you feel comfortable in expressing these

 16 opinions to the Commission and sharing your opinion

 17 about the merits of these two different technologies?

 18 What's the basis for that?

 19 A. The basis for that is that during my career,

 20 what I've devoted it to is energy technologies that I

 21 thought had a future. And so far, I've made some pretty

 22 good guesses, or educated guesses, or very educated

 23 guesses as to what technologies I thought would be

 24 answers to our energy problems.

 25 At MIT, before the first oil embargo, I –-

 1540

 1 well, I guess to give the short answer, I've always

 2 devoted my career to doing the initial engineering

 3 studies to determine the feasibility of what

 4 technologies we should really spend our efforts on. I

 5 made that first determination 35 years ago when I

 6 selected coal gasification as the technology that I did

 7 my master's thesis on, and 25 years ago when I made my

 8 last presentation to the FPL executive board and I

 9 suggested to them at that time 25 years ago that they

 10 ought to build their plants in three phases.

 11 Phase one is a gas turbine peaking plant,

 12 because that's always what you need first, is additional

 13 peaking capacity, but always have the plan in mind for

 14 phases two and three. And two would be the combined

 15 cycle unit, so you get greater efficiency and run at a

 16 higher capacity factor. And the third phase is always

 17 coal gasification, because you don't know if natural gas

 18 or oil or coal will be your cheapest source of fuel.

 19 So I was very happy to learn after leaving

 20 Florida Power & Light for quite a long time that they

 21 actually listened to my recommendation, and they built

 22 the Martin plant that way. It's a combined -- it's a

 23 very large combined cycle plant, but the future

 24 technology that they had in mind and that they listened

 25 to my recommendation on was that they permitted it for

 1541

 1 pulverized coal. They --

 2 CHAIRMAN EDGAR: Mr. Furman, again, I think

 3 we've gone a little far from the question that was

 4 asked. And I think perhaps you and I have a different

 5 definition of shorter answers.

 6 THE WITNESS: Okay. I just thought since you

 7 gave the courtesy to Mr. Hicks and Mr. Jenkins to ramble

 8 on that you would give it to the other witnesses.

 9 CHAIRMAN EDGAR: And, Mr. Furman, I think I

 10 have done and continue to do so.

 11 MR. GUEST: No further questions on redirect.

 12 CHAIRMAN EDGAR: Okay. Exhibits.

 13 MS. BRUBAKER: I show Mr. Furman's prefiled

 14 exhibits as numbers 93 and 121.

 15 CHAIRMAN EDGAR: Okay.

 16 MR. ANDERSON: FPL has no objection. We would

 17 also like to offer Mr. Furman's deposition. Exhibit

 18 192, I think that would be the --

 19 CHAIRMAN EDGAR: I think that's 190, but hold

 20 on just a second and let me get the paper that I need.

 21 MR. GROSS: Madam Chair.

 22 CHAIRMAN EDGAR: Mr. Gross.

 23 MR. GROSS: Excuse me for interrupting, but I

 24 had communicated in writing to FPL objections to several

 25 questions posed at Mr. Furman's deposition, and –-

 1542

 1 CHAIRMAN EDGAR: Mr. Gross, I'm sorry. I need

 2 you to give me just a second --

 3 MR. GROSS: Okay.

 4 CHAIRMAN EDGAR: -- so I can do this, and then

 5 I can listen.

 6 MS. BRUBAKER: Madam Chairman, for

 7 clarification --

 8 CHAIRMAN EDGAR: No, no, no.

 9 MS. BRUBAKER: I'm sorry --

 10 CHAIRMAN EDGAR: Give me a moment. Thank you.

 11 I just need to get my thoughts in order here.

 12 Okay. So we are admitting Exhibits 93 through

 13 121, and then we have these last to take up.

 14 Ms. Brubaker, I'm sorry, but I'm now ready.

 15 (Exhibits 93 through 121 admitted into the

 16 record.)

 17 MS. BRUBAKER: I beg your pardon. I just

 18 wanted to clarify. Exhibit 190 was Mr. Plunkett's

 19 deposition. It has been entered into the record. So

 20 that would bring Mr. Furman's deposition being number

 21 192.

 22 CHAIRMAN EDGAR: Thank you. I appreciate

 23 that.

 24 (Exhibit 192 marked for identification.)

 25 MR. ANDERSON: FPL would also -- we have a

 1543

 1 couple of other small exhibit matters that this would be

 2 a good time to consider perhaps.

 3 CHAIRMAN EDGAR: Okay. Once again, just --

 4 let me get there. I'm sorry. I'm getting tired, and my

 5 ability to multitask is diminishing, so just a moment.

 6 Okay. Where next, Mr. Gross or Mr. Anderson?

 7 Mr. Gross.

 8 MR. GROSS: It's my understanding, but I would

 9 like -- Mr. Anderson, do you have a response to the

 10 objections that we made to Mr. Furman's deposition?

 11 MR. ANDERSON: Counsel indicated a few lines

 12 of the Furman deposition that he did not wish admitted

 13 into the record. We're fine with that, and if the page

 14 and lines numbers are recited, or whatever is best,

 15 we're perfectly fine with that.

 16 Before talking about that further, just to

 17 kind of set a little agenda, I think that would bring

 18 up -- Mr. Schlissel's deposition I think is 193. He

 19 has -- there were Exhibits 1, 2, and 3 to his deposition

 20 also, which I don't know if it's your practice to label

 21 those separately or just consider them part of the

 22 Schlissel deposition.

 23 (Exhibit 193 marked for identification.)

 24 CHAIRMAN EDGAR: Okay. So we have the -- we

 25 still have 191, 192, then we have the Schlissel, which I

 1544

 1 still cannot do properly, deposition and exhibits, and

 2 the question about Mr. Furman's deposition, and

 3 potentially a small deletion, so to speak.

 4 Okay. Ms. Brubaker, help me work through

 5 this.

 6 MS. BRUBAKER: Certainly. With regard to

 7 Mr. Furman's deposition, we can handle those lines to be

 8 excised in one of two ways. We can either as part of

 9 Exhibit 191 include a page showing which portion should

 10 be excised, or if it's the preference of the parties, we

 11 can simply enter a redacted version with those passages

 12 physically struck by permanent marker or what have you.

 13 I have no preference myself. I think either one would

 14 be satisfactory. Certainly we all could look at what

 15 lines should not be relied upon for purposes of the

 16 record. I think that would be sufficient.

 17 CHAIRMAN EDGAR: Mr. Gross. I'm sorry. To

 18 the -- yes, there you go.

 19 MR. GROSS: I'm sorry. I didn't realize I had

 20 it on already. We would prefer a redacted version.

 21 CHAIRMAN EDGAR: Okay.

 22 MR. ANDERSON: We don't have a problem with

 23 that. We'll work with counsel with respect to that.

 24 Document 193 would be the Schlissel deposition with

 25 Exhibits 1, 2, and 3.

 1545

 1 Then a couple of other small matters. We were

 2 asked this morning for a late-filed exhibit. It was

 3 premarked as 185. Basically, staff was asking for a

 4 corrected figure without AFUDC. We have that here.

 5 Copies are being made also.

 6 CHAIRMAN EDGAR: Thank you. Okay. So the

 7 document that we had marked 185 which was to be

 8 late-filed and is being distributed, seeing no

 9 objection, will be admitted into the record.

 10 MR. GUEST: May we see that before we decide

 11 whether or not to object, Madam Chair?

 12 CHAIRMAN EDGAR: Oh, I'm sorry. I didn't

 13 realize that you didn't have it yet. I apologize,

 14 Mr. Guest. Certainly you can take a moment to look at

 15 it.

 16 MR. GUEST: Yes, I think we did see this. No,

 17 wait a minute.

 18 THE WITNESS: Madam Chairwoman, since I

 19 have --

 20 CHAIRMAN EDGAR: Mr. Furman.

 21 THE WITNESS: Since I have a flight to catch,

 22 could I be dismissed?

 23 CHAIRMAN EDGAR: Are there any further matters

 24 that we need Mr. Furman to remain with us for?

 25 MS. BRUBAKER: Staff is aware of none.

 1546

 1 CHAIRMAN EDGAR: Okay. Seeing none, thank

 2 you, Mr. Furman.

 3 THE WITNESS: Thank you.

 4 MR. ANDERSON: Other housekeeping matters --

 5 CHAIRMAN EDGAR: Hold on. I'm sorry,

 6 Mr. Anderson. Again, I don't want to get confused. So,

 7 Mr. Guest, we were -- I perhaps spoke too soon on 185,

 8 and so --

 9 MR. GUEST: I am a little confused, frankly.

 10 I don't understand what the revisions are. I guess

 11 that's what -- maybe you could just tell me what they

 12 are and I might not be concerned. What's different?

 13 MS. BRUBAKER: I'll ask FPL to clarify if I'm

 14 wrong, but I believe the change is on section 1,

 15 construction, grand total costs in service year without

 16 AFUDC, that the Glades County IGCC number has been

 17 revised. If there are any other revisions, I'll let FPL

 18 speak to them, but that's the only one we've asked for.

 19 MR. ANDERSON: That's the only revision that

 20 has been made per your request.

 21 CHAIRMAN EDGAR: Mr. Guest, was that clear?

 22 MR. GUEST: I think so. I think that that

 23 means that the number goes up a little from 5.7 billion.

 24 Is that the bottom line?

 25 MS. BRUBAKER: I'm sorry. I didn't follow

 1547

 1 you.

 2 MR. GUEST: The price goes up a little bit?

 3 Is that the difference?

 4 MS. BRUBAKER: I believe actually it -- this

 5 is for the IGCC. You might recall during my

 6 cross-examination of Dr. Sim that there was a disconnect

 7 between what we had asked for in an interrogatory

 8 response and what we actually received, and so this is

 9 to clarify that number for IGCC without the AFUDC rather

 10 than with, as it was included in the previous response.

 11 MR. GUEST: So it's a revised interrogatory

 12 answer?

 13 MS. BRUBAKER: That's correct.

 14 CHAIRMAN EDGAR: That is my understanding.

 15 MR. GUEST: Okay.

 16 CHAIRMAN EDGAR: So with that additional

 17 review, this document that will be marked 185 is

 18 admitted into the record, as I said previously.

 19 (Exhibit Number 185 marked for identification

 20 and admitted into the record.)

 21 MR. BECK: Madam Chairman, may I ask staff a

 22 question concerning that?

 23 CHAIRMAN EDGAR: Mr. Beck, yes.

 24 MR. BECK: Jennifer, does that mean you're

 25 also revising the staff Exhibit 155, page 3, where that

 1548

 1 was discussed?

 2 MS. BRUBAKER: Yes, I think that would qualify

 3 to revise that. However, please be aware that 155 is

 4 not entered into the record. In terms of -- if I were

 5 to refer to that document again, yes, it would

 6 necessarily have to modify that.

 7 MR. BECK: I just thought it would be easier.

 8 This changes the 4,197 to 3,373?

 9 MS. BRUBAKER: Yes, off the top of my ahead.

 10 Again, for clarity, 155 and 156, staff is not moving

 11 those into the record.

 12 CHAIRMAN EDGAR: Okay. Are we all almost

 13 there? Mr. Anderson.

 14 MR. ANDERSON: Just about there.

 15 CHAIRMAN EDGAR: Okay.

 16 MR. ANDERSON: What I would like to do is just

 17 walk around the Furman dep and the Schlissel dep so

 18 people have them, and then we can work with counsel,

 19 however they want to handle any redaction they want.

 20 But the last three points we wanted to talk about were,

 21 during Mr. Schlissel's cross-examination, we had

 22 Exhibits 163, 164, and 165, which have had not been

 23 offered yet, which we want to offer. Those are being

 24 walked around also.

 25 CHAIRMAN EDGAR: Okay. And we also,

 1549

 1 Mr. Gross, had 162, which was, according to my record

 2 that I am keeping, the errata.

 3 Okay. So we have the deposition that has been

 4 passed around of Mr. Schlissel with the exhibits with

 5 it, which we marked as 193. I don't think I've entered

 6 that, so any objection to 193 as it has been

 7 distributed? Seeing none, Exhibit 193 will be entered.

 8 (Exhibit 193 admitted into the record.)

 9 CHAIRMAN EDGAR: And then, Mr. Anderson, thank

 10 you for bringing us back to this. We had Exhibit 162,

 11 Mr. Gross, that you had offered, which was the errata

 12 information. Seeing no objection, 162 will be entered.

 13 (Exhibit 162 admitted into the record.)

 14 CHAIRMAN EDGAR: And then we had 163, 164, and

 15 165, which Mr. Litchfield had put forth. Any objection?

 16 Do we need a moment? We need a moment. Okay.

 17 MR. ANDERSON: While that moment is being

 18 taken, just as a practical way, on the Furman

 19 deposition, one way to do that might be if counsel just

 20 wanted to mark through the lines he talked about and

 21 give that to the court reporter, that might be the

 22 fastest way. My recollection is that it was fairly

 23 little material, and we had no problem with what they

 24 wanted to do.

 25 CHAIRMAN EDGAR: Mr. Gross, does that work for

 1550

 1 you?

 2 MR. GROSS: That works for us.

 3 CHAIRMAN EDGAR: Ms. Brubaker?

 4 MS. BRUBAKER: That's fine.

 5 CHAIRMAN EDGAR: Then we will take up Exhibit

 6 192, which is the Furman deposition and contains the

 7 small bits of redacted material that will be given to

 8 the court reporter and then be part of the record.

 9 (Exhibit 192 admitted into the record.)

 10 CHAIRMAN EDGAR: So that leaves us, I think,

 11 with 191 that we still need to discuss. And Mr. Guest,

 12 I'm still waiting for comment from you and your

 13 colleagues as to 163 through 165.

 14 MR. GUEST: It's being reviewed as we speak.

 15 CHAIRMAN EDGAR: Okay. Mr. Litchfield.

 16 MR. LITCHFIELD: Madam Chairman, I think we

 17 have resolution on the three exhibits in question, 163,

 18 164 and 165. Mr. Gross has no objection with respect

 19 163 and 165. He has asked that we in entering 164

 20 simply qualify that the exhibit itself in this form does

 21 not appear in Mr. Schlissel's testimony. This was as

 22 modified per the cross-examination to remove the blue

 23 and green data points.

 24 CHAIRMAN EDGAR: This is the one where we

 25 removed the blue and green data points. I recall.

 1551

 1 MR. LITCHFIELD: Yes. With that

 2 qualification, I believe there's no objection.

 3 CHAIRMAN EDGAR: Okay.

 4 MR. GROSS: I would have a greater comfort

 5 level if we just struck through the testimony, because

 6 it appears that it is the exhibit in his testimony.

 7 Part of the testimony is captured on the sheet.

 8 MR. LITCHFIELD: FPL is okay with that. This

 9 would simply mean drawing a line through lines 3 through

 10 6 on Exhibit 164.

 11 CHAIRMAN EDGAR: I'm sorry. I need you to

 12 repeat that for me, if you would.

 13 MR. LITCHFIELD: It would involve drawing a

 14 line through lines 3 through 6 on Exhibit 164, so

 15 essentially the Q and A, including the table there,

 16 would be lined through to indicate, as Mr. Gross

 17 suggests, that this -- so there's no confusion as to

 18 whether this was lifted directly from his testimony or

 19 not. It was a cross-examination exhibit.

 20 CHAIRMAN EDGAR: I'm having a hard time

 21 putting my hands on that, so just a moment.

 22 MR. GUEST: May we have a further moment? I

 23 think we've got a problem that we're going -- we've got

 24 a problem we're going to have to deal with here.

 25 CHAIRMAN EDGAR: I'm sorry, Mr. Guest. A

 1552

 1 problem with a problem?

 2 MR. GUEST: Yes.

 3 CHAIRMAN EDGAR: All right. Well, once again,

 4 we'll all just take a moment.

 5 MR. GUEST: Well, I think I can probably tell

 6 you what it is.

 7 CHAIRMAN EDGAR: Okay. And now that I know

 8 what I'm looking at, I can maybe understand it.

 9 MR. GUEST: Well, as I understand what

 10 happened here is that -- these are projections for

 11 future carbon cost regulation. And what happened is

 12 that we've had a shift in proposals that are sort of on

 13 the table for future carbon regulation. Some are off

 14 the table and some are on. And what has happened here

 15 is that the ones that are off the table are gone, but

 16 the new ones that are on the table aren't on.

 17 And so it seems to me that if what I'm saying

 18 is true, and I'm assuming that it is, that in fairness,

 19 if you're going to update an exhibit, you should update

 20 it so that the things that go off the table go off, and

 21 the things that go on the table go on. And so this is

 22 sort of a fairness -- I mean, if we're going to update,

 23 let's update everything. I'm not sure we have to deal

 24 with that today.

 25 CHAIRMAN EDGAR: We may hold this in abeyance,

 1553

 1 so to speak.

 2 Ms. Brubaker, please.

 3 MS. BRUBAKER: May I ask for clarification?

 4 Mr. Guest, which exhibit are you referring to? 163?

 5 MR. GUEST: I thought it was 164. 163, 64.

 6 CHAIRMAN EDGAR: Okay.

 7 MR. LITCHFIELD: 163 is just a color version

 8 of what appears in Mr. Schlissel's testimony. 164 is

 9 the identical figure, and we established that on

 10 cross-examination, with the only change being that we

 11 whited out the green and the blue data points,

 12 consistent with the cross-examination. That's it.

 13 MR. GUEST: Things that went off the table.

 14 And our point is that, well, if you're going to update,

 15 you should be able to update both ways. That's my

 16 point.

 17 MR. LITCHFIELD: Madam Chairman, I don't

 18 believe that Mr. Guest was even here during the

 19 cross-examination, and I don't recall that there were

 20 any updated data points offered by Mr. Schlissel, and

 21 certainly there has been no redirect of Mr. Schlissel.

 22 So I think the exhibit is complete as it was offered.

 23 CHAIRMAN EDGAR: Okay. Mr. Brubaker, I was

 24 going to suggest that we wait on this. Is that

 25 consistent with –-

 1554

 1 MS. BRUBAKER: That's fine. The only comment

 2 I was going to offer is, I don't think anyone is

 3 believing that this is Mr. Schlissel's exhibit, that

 4 it's simply a modification made for the purpose of

 5 cross-examination, very much like what staff had earlier

 6 for Dr. Sim.

 7 You know, if you would like to wait and have

 8 the parties talk about it, that's fine, but certainly in

 9 my mind, I'm comfortable with the exhibit as it is, with

 10 the understanding that this is not put forward by

 11 Sierra. It is simply an instrument that was used by FPL

 12 for the purposes of cross, and I think the transcript

 13 sets forth that fully and adequately.

 14 CHAIRMAN EDGAR: I'm sorry. Mr. Guest.

 15 MR. GUEST: May I defer to --

 16 CHAIRMAN EDGAR: Yes.

 17 MS. REIMER: Madam Chairwoman, I was here

 18 during the examination of Dr. Schlissel, and in fact, he

 19 did mention that there were additional studies that had

 20 been done that he had not looked at, because his study

 21 was done prior to this, and that there were other things

 22 that he would have added if he had not finished his

 23 study at the time that he finished it. So what this

 24 represents is simply FP&L deciding to take off some data

 25 points, and we never got an opportunity for

 1555

 1 Dr. Schlissel to add the data points on. So it seems

 2 like all it is is just a modified version of

 3 Dr. Schlissel's, which I don't see that it has any

 4 material value.

 5 CHAIRMAN EDGAR: Okay. Understood.

 6 Therefore, I'm going to come back to my earlier

 7 suggestion a few moments ago and say let's just take

 8 this under advisement, and we will be back on -- we're

 9 not done yet today, but we will be back on Monday, and

 10 we will all be a little clearer then. I certainly will

 11 be. And if we have consensus, we will approach that it

 12 way, and if not, I will make a ruling.

 13 Okay. Which leaves us -- that was 164. I

 14 thought I heard earlier no objections to 163 and 165.

 15 If that is an correct understanding, then we'll go ahead

 16 and dispose of those. Is that correct? It is? Okay.

 17 Then we will enter 163 and 165. We will address 164 as

 18 a preliminary matter when we go back in on Monday

 19 morning.

 20 (Exhibits 163 and 165 admitted into the

 21 record.)

 22 CHAIRMAN EDGAR: And let's see. That brings

 23 me, I believe, to -- I don't think we addressed 191; is

 24 that correct?

 25 MS. BRUBAKER: We need to.

 1556

 1 CHAIRMAN EDGAR: Okay. Any objections to 191,

 2 which is the testimony previously offered by Mr. Furman

 3 at a prior proceeding which was put forth by

 4 Mr. Anderson? Am I seeing no objection?

 5 MR. GUEST: Give us a second.

 6 We think it's admissible.

 7 CHAIRMAN EDGAR: Is that the same thing as no

 8 objection?

 9 MR. GUEST: Yes, I guess so.

 10 CHAIRMAN EDGAR: Okay. All right. Seeing no

 11 objection, we will enter 191.

 12 (Exhibit 191 admitted into the record.)

 13 CHAIRMAN EDGAR: I think that dispenses with

 14 all the procedural evidentiary type of things that I

 15 have pending before me other than one that we are

 16 holding for Monday.

 17 And so, 4:30. We have one witness that we

 18 want to try to take up; is that correct?

 19 MR. LITCHFIELD: If we could, Madam Chair. My

 20 understanding is that there are very few questions from

 21 among the parties for Mr. Rose. He is an out-of-state

 22 witness and would be our last out-of-state witness. It

 23 would be helpful if we could dispense with him this

 24 afternoon.

 25 CHAIRMAN EDGAR: Okay. Are all the other

 1557

 1 parties able to continue on, because I had said

 2 yesterday that we would break prior to this, and I try

 3 stick to that. However, if we can continue to forge on,

 4 we will.

 5 Okay. Then, Mr. Litchfield, if you would call

 6 your witness.

 7 MR. LITCHFIELD: FPL would call Mr. Judah

 8 Rose. Mr. Rose, have you been sworn?

 9 THE WITNESS: No, I have not.

 10 CHAIRMAN EDGAR: Okay. Then we will do that

 11 if you'll stand with me and raise your right hand.

 12 Thereupon,

 13 JUDAH L. ROSE

 14 was called as a rebuttal witness on behalf of Florida

 15 Power & Light Company and, having been duly sworn,

 16 testified as follows:

 17 DIRECT EXAMINATION

 18 BY MR. LITCHFIELD:

 19 Q. Would you please state your name and business

 20 address for the record?

 21 A. Yes. Judah L. Rose, 9500 Lee Highway,

 22 Fairfax, Virginia, 22031.

 23 Q. And by whom are you employed and in what

 24 capacity?

 25 A. I'm employed by ICF International, where I am

 1558

 1 a managing director.

 2 Q. And you're here on behalf of Florida Power &

 3 Light?

 4 A. Yes, I am.

 5 Q. Have you prepared and caused to be filed 25

 6 pages of prefiled rebuttal testimony in this proceeding?

 7 A. Yes, I have.

 8 Q. And did you also cause to be filed errata to

 9 your testimony on April 13, 2007?

 10 A. Yes.

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

 12 prefiled rebuttal testimony other than the errata sheet

 13 that you have submitted?

 14 A. No.

 15 Q. If I were to ask you the same questions

 16 contained in your prefiled rebuttal testimony, would

 17 your answers be the same?

 18 A. Yes.

 19 MR. LITCHFIELD: Madam Chair, I would ask that

 20 Mr. Rose's prefiled rebuttal testimony and the

 21 associated errata be inserted into the record as though

 22 read.

 23 CHAIRMAN EDGAR: Thank you. The prefiled

 24 rebuttal testimony with the errata will be entered into

 25 the record as though read.

 1559

 1 BY MR. LITCHFIELD:

 2 Q. Now, you're sponsoring just one exhibit to

 3 your rebuttal testimony?

 4 A. Yes.

 5 Q. And that consists of document JLR-11?

 6 A. Yes.

 7 MR. LITCHFIELD: And I would note that

 8 Mr. Rose's exhibit has been premarked as 147.

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 1 BY MR. LITCHFIELD:

 2 Q. Have you prepared a summary of your rebuttal

 3 testimony?

 4 A. I have.

 5 Q. Would you please offer that at this time?

 6 A. Yes. My testimony centers on six main points.

 7 First, I believe it is reasonable and prudent to expect

 8 future controls of CO2 emissions and reasonable to take

 9 plausible CO2 allowance prices into account when

 10 planning future generation. The allowance prices used

 11 by FPL in their planning process meet the plausibility

 12 and prudence criteria.

 13 The CO2 allowance prices used by FPL were

 14 developed by my company, ICF International, based on

 15 ICF's modeling of proposed CO2 regulatory programs. In

 16 contrast, there's no evidence that Mr. Schlissel has

 17 effectively or systematically modeled CO2 prices using

 18 industry accepted modeling techniques.

 19 Second, the development of reasonable CO2

 20 parameters requires a balanced accounting of both the

 21 negative impacts of CO2 regulation on the economics of

 22 new coal power plants versus new gas plants, as well as

 23 offsetting factors. The offsetting factors largely

 24 mistreated by Mr. Schlissel include: (1) Higher natural

 25 gas prices; (2) lower coal prices; (3) the potential for

 1586

 1 CO2 emission allowance allocations to new coal power

 2 plants employing clean coal technology, such as

 3 ultra-supercritical PC; (4) low prices for SO2, NOx, and

 4 mercury allowances; and (5) increased diversification

 5 and reliability benefits from coal power plants.

 6 Third, Mr. Schlissel uses analyses with

 7 significant methodological flaws, including studies

 8 claiming negative compliance costs and others ignoring

 9 the effect of CO2 regulation on power plant operations.

 10 He selectively uses results excluding nine of eleven EAI

 11 S. 139 analysis scenarios and 13 of 14 MIT S. 139

 12 analysis scenarios without explanation.

 13 Fourth, I believe the CO2 prices that

 14 Mr. Schlissel suggests be used to evaluate the economics

 15 of building FGPP, in his high case with $50 per ton

 16 prices in particular, are extreme and should be given

 17 very little weight. I say this because there are a

 18 variety of policy and technology options that reduce the

 19 cost of CO2 allowances, including use of offsets,

 20 international allowance trading, and the deployment of

 21 new low-emitting technologies, including nuclear, coal

 22 with carbon capture and sequestration, and renewables.

 23 Fifth, even if one assumes that allowance

 24 prices could potentially reach $50 a ton from a

 25 fundamentals perspective, I do not believe that the U.S.

 1587

 1 could tolerate the impact of such an allowance price.

 2 Raising retail rates 50 percent in real terms would so

 3 depress electricity demand as to preclude allowance

 4 prices at these levels.

 5 Sixth, neglecting to account for increasing

 6 gas prices caused by CO2 regulation, combined with other

 7 errors and contradictions, leads Mr. Schlissel to an

 8 incorrect treatment of FP&L's analysis of the relative

 9 economics of new coal and gas power plants.

 10 Mr. Schlissel greatly understates the likelihood that

 11 new coal power plants will outperform new gas power

 12 plants. When I correct his review of FPL analysis, the

 13 number of cases in which the proposed coal plant

 14 outperforms an alternative gas plant increases from 1 in

 15 8 to 2 out of 4.

 16 Q. Does that conclude your summary?

 17 A. It does.

 18 MR. LITCHFIELD: Mr. Rose is available for

 19 cross-examination.

 20 CHAIRMAN EDGAR: Thank you. Mr. Beck.

 21 MR. BECK: Thank you, Madam Chairman.

 22 CROSS-EXAMINATION

 23 BY MR. BECK:

 24 Q. Good afternoon, Mr. Rose.

 25 A. Good afternoon.

 1588

 1 Q. Would you turn to page 19 of your testimony,

 2 please.

 3 A. Yes.

 4 Q. On page 19, you describe certain scenarios

 5 which you developed that FP&L relied on for their

 6 forecasts; is that correct?

 7 A. Yes.

 8 Q. Could you tell me the date that you prepared

 9 those scenarios?

 10 A. These scenarios were prepared approximately at

 11 the end of last year. We have subsequently completed

 12 our update, and I'm prepared to discuss that as well,

 13 but these particular scenarios were prepared as of the

 14 end of 2006.

 15 Q. The first scenario that you list beginning on

 16 line 5 is the mild CO2 representative of Senator

 17 Bingaman's policy.

 18 A. Yes.

 19 Q. Do you see that?

 20 A. Yes, I see it.

 21 Q. Would you briefly describe Senator Bingaman's

 22 policy as proposed in 2005 that it lists there? What is

 23 that?

 24 A. Senator Bingaman has a proposed bill that

 25 requires emission reductions via a procedure by allowing

 1589

 1 that the CO2 intensity of the economy should decrease

 2 over time. So it's taking into account both economic

 3 growth, allowing that to sort of raise the level of CO2

 4 emissions, but also asking that the CO2 per dollar go

 5 down.

 6 He also has in there provisions related to

 7 economic hardship, as many of the bills do. One of the

 8 provisions there is related to what they call a safety

 9 valve, saying that there's a maximum price that we'll

 10 allow for CO2. This is one of many provisions that's in

 11 place to prevent there being a catastrophic or extremely

 12 negative outcome for the economy associated with the

 13 CO2.

 14 So that is the main elements of Senator

 15 Bingaman's policy proposal as embodied in his proposed

 16 legislation.

 17 Q. Why did you choose that as representative of a

 18 mild CO2 forecast?

 19 A. As the debate has developed over the last

 20 couple of years, there seems to be a recurrence of a

 21 particular set of proposals. It seems the debate is

 22 coalescing around three types of proposals. Senator

 23 Bingaman's is one of those three. It is the more mild,

 24 and generally because of the safety valve and the

 25 willingness to allow and accommodate economic growth

 1590

 1 explicitly, tends to have a relatively low CO2 price in

 2 terms of dollars per ton.

 3 Q. The second scenario that you describe

 4 beginning on line 7 is the stringent CO2 representative

 5 of Senators McCain and Lieberman's policy as introduced

 6 in 2006; is that correct?

 7 A. Yes.

 8 Q. Would you describe their bill?

 9 A. In contrast to Senator Bingaman's proposal,

 10 which is explicitly trying to balance the rate of

 11 economic growth and the CO2 intensity of the economy,

 12 the McCain-Lieberman bill has an explicit cap. It's a

 13 fixed amount of tons that's decreasing over time. There

 14 is no safety valve provision, although there is a

 15 recognition of hardship via the use of giving out the

 16 allowances to the people that are most adversely

 17 affected. But it has a cap that is not directly tied to

 18 economic growth.

 19 Q. And your third scenario listed is a moderate

 20 CO2, which is representative of a weighted price stream

 21 of both Bingaman and McCain-Lieberman and an analysis of

 22 Senator Carper's policy; is that correct?

 23 A. Yes.

 24 MR. BECK: Okay. I would like to hand you an

 25 exhibit, if I could. And it has to be marked for

 1591

 1 identification.

 2 CHAIRMAN EDGAR: Okay. And this will be 194.

 3 Mr. Beck, title as listed here, does that work?

 4 MR. BECK: Yes.

 5 CHAIRMAN EDGAR: "Redacted Excerpt from ICF

 6 Emission Markets Outlook."

 7 (Exhibit 194 marked for identification.)

 8 BY MR. BECK:

 9 Q. Mr. Rose, do you have Exhibit 194 for

 10 identification in front of you?

 11 A. Yes, I do.

 12 Q. And do you recognize that?

 13 A. Yes, I do.

 14 Q. And is this an excerpt from the report that

 15 Florida Power & Light used in their scenarios for carbon

 16 emission costs?

 17 A. Yes, it's a redacted portion, so there's some

 18 proprietary information there, confidential information.

 19 Q. ICF developed what you call an expected case

 20 for air regulation, did it not?

 21 A. Yes.

 22 Q. Could you describe that for me, what that is?

 23 A. The expected case was based on looking at

 24 several of the proposed legislation related to CO2

 25 control and giving weight to those proposals, and over

 1592

 1 time increasing the weight that we give to the more

 2 stringent proposals, in recognition that there's likely

 3 to be increasing stringency in the program over time.

 4 So we start with giving more weight to the less

 5 stringent programs, more weight to the more stringent

 6 programs, and we also tend to have the -- eventually, we

 7 give some weight to the stringency being such that it

 8 allows the CO2 program in the United States to come into

 9 line with international developments. And that would be

 10 close to, although not exactly the same as the

 11 McCain-Lieberman bill.

 12 Q. And page 2 of the exhibit describes some of

 13 the things you just described, does it not, describes

 14 what your expected case is?

 15 A. Yes.

 16 Q. And page 3 is a redacted page which has the

 17 specifics of the expected case; is that correct?

 18 A. Yes.

 19 Q. And it has both the Bingaman and McCain bills

 20 listed in the chart that's blacked out there, does it

 21 not?

 22 A. Yes, it does.

 23 Q. And are those the mild and stringent cases

 24 that you described earlier?

 25 A. Yes.

 1593

 1 MR. BECK: Chairman, I have a confidential --

 2 or an exhibit that FP&L has claimed confidentiality for

 3 that I would like to be marked as an exhibit. I'll

 4 leave it to FPL to tell me who to provide it to.

 5 CHAIRMAN EDGAR: Mr. Litchfield?

 6 MR. GUEST: We've all signed confidentiality

 7 agreements, and we've seen this document. We would like

 8 a copy to work with while we're here.

 9 MR. LITCHFIELD: I believe that's true with

 10 respect to counsel for Earthjustice. I cannot recall at

 11 the moment whether the Krasowskis did or did not sign.

 12 CHAIRMAN EDGAR: Did not.

 13 MR. LITCHFIELD: Did not? And AIF did not.

 14 So with those two exceptions, I think everyone else is

 15 entitled to review.

 16 CHAIRMAN EDGAR: Thank you. Ms. Brubaker, do

 17 we need to mark?

 18 MS. BRUBAKER: Yes, let's go ahead and mark

 19 it, and then we'll address whether it gets moved into

 20 the record or not afterwards.

 21 (Exhibit 195 marked for identification.)

 22 CHAIRMAN EDGAR: Okay. So this is 195.

 23 Mr. Beck, a title, please.

 24 BY MR. BECK:

 25 Q. Mr. Rose, do you have Exhibit 195 for

 1594

 1 identification in front of you?

 2 A. Yes.

 3 Q. And that's page 142 from the full report that

 4 you provided, is it not?

 5 A. Yes.

 6 Q. And is that the same as page 3 on Exhibit 194,

 7 except the page I just handed out has no redactions on

 8 it?

 9 A. Yes.

 10 Q. On Exhibit 195, the expected case is charted

 11 on the right side of the page, is it not, in the dark

 12 line?

 13 A. Yes.

 14 Q. And the Bingaman case, which is the mild

 15 scenario, that's one of the lines on the chart that has

 16 small circles lightly shaded; is that correct?

 17 A. Yes.

 18 Q. And the McCain one is on the chart, and it's

 19 got little squares lightly shaded; is that correct?

 20 A. Yes.

 21 Q. If we were to compare the expected case to the

 22 Bingaman, which is the mild case, could you state

 23 generally whether it's less than, the same, or greater

 24 than the mild case?

 25 A. The expected case is generally above the mild

 1595

 1 case.

 2 Q. And compared to the McCain case, which is the

 3 stringent case, could you state generally whether it's

 4 lower than, the same as, or higher than the McCain case?

 5 A. It's generally lower than.

 6 Q. On the left side of the exhibit, there's

 7 certain probabilities listed there. Do you see them?

 8 A. Yes.

 9 Q. So you have probabilities listed for each of

 10 the scenarios that are listed on the chart on the right

 11 side; is that correct?

 12 A. That's correct.

 13 Q. Could you state generally how you determined

 14 those probabilities?

 15 A. The procedure is expert judgment. It's based

 16 on the experience of our staff who are actually doing

 17 the analyses of the bills and taking into account both

 18 the domestic and international developments.

 19 Q. And does this reflect your best judgment of

 20 what is to be expected, you know, is the consensus of

 21 your experts?

 22 A. Yes.

 23 Q. I think you mentioned earlier that you have

 24 prepared an update to this?

 25 A. Yes. We recently completed an update of our

 1596

 1 analysis for all the bills and were able to confirm that

 2 there is no change in our expected case that's warranted

 3 based on the revisions to the legislation that we've

 4 chosen here to base our analysis on nor in terms of our

 5 perception of the international market.

 6 Q. How often do you prepare revisions to the

 7 expected case?

 8 A. We do attempt to stay as current as possible.

 9 Having said that, this particular documents tends to

 10 come out annually. We have a fairly broad subscription

 11 base. But again, even within that period of time, we do

 12 try to keep as up to date as possible based on the most

 13 recent developments.

 14 MR. BECK: Mr. Rose, thank you. That's all I

 15 have.

 16 CHAIRMAN EDGAR: Mr. Guest, do you have

 17 questions, or Mr. Gross? Mr. Gross.

 18 MR. GROSS: One moment, please.

 19 CROSS-EXAMINATION

 20 BY MR. GROSS:

 21 Q. Good afternoon, Mr. Rose. My name is Michael

 22 Gross, and I represent the environmental entities,

 23 Sierra Club, NRDC, and other environmental entities.

 24 Referring to pages 9 and 10 of your rebuttal

 25 testimony, please.

 1597

 1 A. Yes.

 2 Q. You discuss the recent MIT study on the future

 3 of coal; correct?

 4 A. Yes.

 5 Q. And did you read the entire MIT report before

 6 you drafted your rebuttal testimony in this proceeding?

 7 A. Most of it, but I can't say for sure that I

 8 read all of it.

 9 MR. GROSS: I would like to hand out some

 10 excerpts from the MIT study, "The Future of Coal."

 11 (Exhibit 196 marked for identification.)

 12 CHAIRMAN EDGAR: Okay. Mr. Gross, 196, and

 13 why don't you give me a title, please.

 14 MR. GUEST: Well, this is excerpts of MIT

 15 study, "The Future of Coal."

 16 CHAIRMAN EDGAR: Thank you.

 17 BY MR. GROSS:

 18 Q. Mr. Rose, please refer to page Roman numeral

 19 11 or xi, and the third paragraph from the bottom.

 20 Now, is it not the case that MIT analysts

 21 estimate that it would take about a $30 per ton CO2

 22 emission price to make CCS, carbon capture and

 23 sequestration, cost competitive with coal combustion and

 24 conversion systems without CCS with respect to new plant

 25 construction?

 1598

 1 A. Yes, they do say that here on this page. But

 2 as I quoted elsewhere, they're also saying that there's

 3 significant uncertainty about that particular number,

 4 and therefore, they've concluded that the technology

 5 needs to be given a chance to develop.

 6 Q. Refer to page 10, Roman numeral x, the

 7 previous page. Again referring to the third paragraph

 8 from the bottom, the last sentence, is it a fact that

 9 MIT analysts used a high price trajectory that starts at

 10 $25 per ton CO2 in 2015 and increases at 4 percent per

 11 year real rate? Is that correct?

 12 A. Yes. They did not prepare any basis for that

 13 assumption in the document, but they did employ that as

 14 one of the scenarios that they examined.

 15 Q. And do you agree, subject to check, that this

 16 would lead to about a $45 per ton CO2 price in 2030?

 17 A. What was the number that you said, sir?

 18 Q. This would lead to about a $45 per ton price

 19 in 2030.

 20 A. Yes.

 21 Q. Now, next I would like to refer you -- and I

 22 don't know if you have a copy of this or if we have an

 23 extra -- we don't have an extra copy. We've been giving

 24 out the copies. But this is David -- is there a copy of

 25 David Schlissel's corrected supplemental testimony that

 1599

 1 you could -- I mean, I don't mind approaching the

 2 witness, if that's okay with everyone, to show him a

 3 chart.

 4 CHAIRMAN EDGAR: I'm sorry. Why don't you

 5 show Mr. Litchfield first, if you would, and we'll go

 6 from there.

 7 BY MR. GROSS:

 8 Q. Mr. Rose, if you would just please look at

 9 Figure 2 on page 8, and this is of David A. Schlissel's

 10 corrected supplemental testimony dated April 17, 2007,

 11 and familiarize yourself with that, and I have a

 12 question to ask you about it.

 13 A. I'm familiar with this.

 14 Q. Now, isn't it fair to say that the mid range

 15 price for CO2 from approximately 2011 to 2030 for FPL is

 16 pretty similar to the mid range CO2 costs projected by

 17 Synapse, which is Mr. Schlissel's employer?

 18 A. If you just could give me like, you know, 12

 19 more inches.

 20 There is some similarity there. In fact, the

 21 number that I believe that he uses is about $5 a ton, 5

 22 or $6 a ton higher on a levelized average basis in the

 23 mid case compared to our expected case. And to get a

 24 sense of what that is, it's something on the order, on

 25 average, of 19 to 20 versus 14.

 1600

 1 Q. And that pattern continues all the way up to

 2 2030; correct?

 3 A. Well, now that you took the exhibit away --

 4 Q. Okay. I thought you had memorized it.

 5 A. Yes, I think that's a fair characterization.

 6 We're pretty close on the mid and expected cases. Where

 7 we differ is primarily -- not to minimize the difference

 8 that we just discussed, but there's a huge difference in

 9 the high case.

 10 Q. Now, Mr. Rose, I would like to refer you now

 11 to page -- once again to page 19 of your rebuttal

 12 testimony, lines 5 and 6. And here you refer to your

 13 mild CO2 scenario as being representative of Senator

 14 Bingaman's policy, S.A. 868. And I believe you were

 15 already questioned about this; correct?

 16 A. Yes.

 17 Q. Do you know for a fact that Bingaman's

 18 proposal was never actually submitted as a bill in

 19 Congress?

 20 A. No, I do not know that to be the case.

 21 Q. Do you know one way or the other?

 22 A. My recollection is it was, and that's how it

 23 received the number S.A. 868. In order to receive that

 24 number, my understanding is that you have to propose it.

 25 The revised bill, the one that's in the

 1601

 1 current Congress, may not have yet been submitted,

 2 although there's a -- you can read it and see what it

 3 says.

 4 MR. GROSS: Excuse me just a moment. I've got

 5 it here. I'm sorry. I was looking in the supplemental

 6 as opposed to the initial testimony.

 7 BY MR. GROSS:

 8 Q. Also looking at page 19, lines 9 to 11 of your

 9 testimony, how did you produce a weighted price stream

 10 for your moderate CO2 scenario?

 11 A. As was discussed in the previous set of

 12 questions, we analyzed individual bills plus an

 13 international scenario. And by the way, those proposals

 14 have with them -- each one of those are forecasts of

 15 natural gas prices. We believe that you can't do one

 16 without the other, and so we have an expected case

 17 that's a probability weighting. So if you had two cases

 18 and each was 50-50, you would sort of get a number. We

 19 did it for several cases plus an international scenario.

 20 We probability weighted that, and so we have an expected

 21 value, which mathematically means you're probability

 22 weighting it, and we have that for both CO2, and I think

 23 importantly, for gas as well. So we have views with

 24 respect to how the two move together, and that's how we

 25 did it.

 1602

 1 Q. Do you know whether Senator Carper has

 2 resubmitted his 2006 bill in the current Congress?

 3 A. This is my understanding of the current

 4 situation. Senator Feinstein has introduced a bill

 5 which starts "Senator Feinstein," and then I think says

 6 parenthetically or something to that effect, "for Mr.

 7 Carper." So they're sort of cosponsoring a bill that's

 8 pretty similar to what they had in the previous session.

 9 And I believe in the last several days,

 10 Senator Carper has introduced his own legislation, such

 11 that there are actually two, if you will, Carper bills

 12 that are out there, and that one is extremely similar in

 13 terms of its caps. So that's how I can say even in

 14 spite of the fact that one of bills just came in in a

 15 couple days, we've been able to analyze the most recent

 16 key legislation.

 17 Q. Are you aware that the 2007 Feinstein-Carper

 18 bill goes much farther than the 2006 bill, mandating

 19 additional reductions after 2015 and mandating 1 -- in

 20 fact, mandating 1 percent reductions from 2016 to 2019

 21 and 1.5 percent reductions starting in 2020?

 22 MR. LITCHFIELD: Object to the form. It

 23 assumes facts not in evidence.

 24 MR. GROSS: In fact, this is on page -- this

 25 fact is in a schedule of bills and their substance in

 1603

 1 David Schlissel's corrected direct testimony filed

 2 March 16, 2007, and this is on page 11. I hope so.

 3 Let's see.

 4 THE WITNESS: I'm sorry. Is there a question

 5 pending?

 6 CHAIRMAN EDGAR: Oh, I think there are a

 7 couple of them, actually.

 8 MR. LITCHFIELD: I'm searching for the

 9 reference, Madam Chairman. I don't seem to see it, but

 10 I may be --

 11 CHAIRMAN EDGAR: Mr. Gross, can you point us?

 12 MR. GROSS: Well, what I'm looking at is

 13 Feinstein-Carper, S. 317, 2007, and it shows here that

 14 it mandates 1 percent per year reduction from 2016

 15 through 2019 and a 1.5 percent per year reduction

 16 starting in 2020. And that was the question, if he was

 17 aware that that 2007 bill goes farther than the previous

 18 Carper bill.

 19 CHAIRMAN EDGAR: Okay. Hold on.

 20 MR. LITCHFIELD: And I'm sorry. What was the

 21 reference in Mr. Schlissel's testimony?

 22 MR. GROSS: Page 11, and it's the

 23 Feinstein-Carper.

 24 MR. LITCHFIELD: Okay. I see it. Thank you.

 25 Does the witness have that in front of him?

 1604

 1 THE WITNESS: I do not have Mr. Schlissel's

 2 testimony in front of me.

 3 (Document tendered to the witness.)

 4 THE WITNESS: I see that testimony, and I have

 5 a couple of things to say about that. I do see that the

 6 CO2 reductions are moderately more stringent than the

 7 previous version, that is, the previous version of

 8 Feinstein. And having completed the analysis of the

 9 updated, I found that the expected value didn't change.

 10 But I did also specifically mention in my

 11 testimony the fact that -- mentioned the Feinstein bill,

 12 S. 317, specifically to point out that, no, it had not

 13 gone more stringent. In some sense, it had gone the

 14 opposite direction, because specifically here they're

 15 saying that a clean coal plant, including ones that have

 16 high thermal efficiency, could qualify for CO2

 17 allowances.

 18 So that actually works the other way, and in

 19 fact could be very favorable to this particular power

 20 plant, since it has clearly already been designated by

 21 the government, that particular technology, by the

 22 Department of Energy, as a clean coal technology. The

 23 provision of those allowances for this particular plant

 24 would significantly offset the fact that there are

 25 somewhat tighter emission reduction requirements.

 1605

 1 And as I indicated, in balance, taking into

 2 account all of the new developments in the bills, my

 3 expected value has not changed, in part because some of

 4 the other bills went the other direction, particularly

 5 the McCain-Lieberman, as we discussed last week, went

 6 from 15 to 30 percent on the offsets. So taking that

 7 all into account, both this bill and the aggregate of

 8 the bills I don't consider to have gone much farther in

 9 the sense of being more difficult for FGPP.

 10 BY MR. GROSS:

 11 Q. Refer to your Table 1 on page 22 of your

 12 testimony. And in column A, there are -- there's

 13 information based on the assumption of no CO2 costs; is

 14 that correct? Do you see that?

 15 A. Yes.

 16 Q. Isn't it unreasonable at this point to expect

 17 that there will be no regulation of CO2 emissions, and

 18 consequently, no CO2 allowance prices at any time during

 19 the projected lifetime of the FGPP project?

 20 A. I guess what I would say is that it's

 21 unlikely. And as you know from my testimony, we do

 22 expect that there will be CO2 controls. So I would say

 23 it's unlikely.

 24 I would sort of have to also say that, just

 25 like maybe this no CO2 column is not that useful to the

 1606

 1 Commission, the same thing with the low gas prices, the

 2 low and medium differential. We provided the company

 3 four gas prices for each of the scenarios, the no CO2,

 4 the low, the mid, and the high, and the medium

 5 differential on the low were below even our lowest gas

 6 price. So I would agree that I would give little weight

 7 to the no CO2 case, very little weight, but I would also

 8 give very little weight to the medium and low

 9 differential gas price scenarios, which are outside of

 10 our range.

 11 MR. GROSS: Mr. Rose, I have no further

 12 questions. Thank you.

 13 CHAIRMAN EDGAR: Mr. Krasowski, do you have

 14 questions?

 15 MR. KRASOWSKI: Adhering to the no joke rule,

 16 I'll say no.

 17 CHAIRMAN EDGAR: Thank you. Are there

 18 questions from staff?

 19 MS. BRUBAKER: Staff has none.

 20 COMMISSIONER CARTER: Commissioners? No.

 21 Mr. Litchfield?

 22 MR. LITCHFIELD: Very brief redirect.

 23 REDIRECT EXAMINATION

 24 BY MR. LITCHFIELD:

 25 Q. Mr. Rose, Mr. Gross referred you to what has

 1607

 1 been marked as Exhibit 196. Do you still have that in

 2 front of you? I believe that was the excerpt from the

 3 MIT study.

 4 A. Yes, I do.

 5 Q. And in particular, I think he referred you to

 6 on Roman numeral page 10 the first full paragraph

 7 immediately beneath what is in bold face font there.

 8 The paragraph begins, "To explore this prospect," and I

 9 think in particular, he referred you to a sentence

 10 toward the bottom of that paragraph that begins, "In

 11 characterizing the CO2 emission price, we employ a, open

 12 quote, high, close quote, price trajectory that starts

 13 at $25 per ton." Do you see that?

 14 A. I do.

 15 Q. Is it your understanding this was a forecast

 16 developed by MIT or a scenario that they modeled or ran?

 17 A. As I indicated to the Commission earlier in my

 18 response, there was absolutely no basis in the report.

 19 They just essentially picked the number as -- I don't

 20 know. They just call it high. There's no basis,

 21 there's no runs, there's no analysis underneath it.

 22 And even -- in my testimony, I have reviewed

 23 the model that MIT uses. I'm a graduate, so I have

 24 nothing negative against the institution per se. But in

 25 review of that model, it's not what I would consider a

 1608

 1 model that is sufficiently detailed for the type of work

 2 that we need to do here.

 3 So even if they had used the model to try to

 4 do the projection, I would have serious concerns. I

 5 don't think it's detailed enough in terms of what would

 6 be accepted for serious analysis. But that problem

 7 aside, and that problem was mentioned in my testimony,

 8 there's no basis at all. They simply picked that

 9 number.

 10 Q. All right. Mr. Gross also referred to you an

 11 exhibit included in Mr. Schlissel's supplemental direct

 12 testimony on page 6. And the figure is number 2

 13 entitled "Comparison of FPL CO2 Forecast to Synapse

 14 Forecast." Do you see that?

 15 A. Yes.

 16 Q. And I believe he asked you to compare the FPL

 17 medium trajectory to the Synapse medium trajectory. Do

 18 you recall that?

 19 A. I do.

 20 Q. What's your understanding as to how Synapse

 21 developed their mid case scenario?

 22 A. They reviewed published studies, some of which

 23 were out of date, some of which, in my view, as I

 24 described in my testimony, use erroneous methodologies.

 25 They take them, and then they decide how to –-

 1609

 1 MR. GROSS: I have an objection that this is

 2 beyond the scope of cross.

 3 MR. LITCHFIELD: Chairman Edgar, Mr. Gross I

 4 think squarely put that mid forecast back in issue when

 5 he asked Mr. Rose questions about it in asking him to

 6 compare it to FPL's.

 7 CHAIRMAN EDGAR: Mr. Gross.

 8 MR. GROSS: This doesn't go to the comparison.

 9 MR. LITCHFIELD: I think the witness is

 10 entitled to suggest what deficiencies, if any, he might

 11 have with the point of reference that Mr. Gross is

 12 asking him to make.

 13 CHAIRMAN EDGAR: I'm going to allow.

 14 THE WITNESS: Let me --

 15 BY MR. LITCHFIELD:

 16 Q. Had you finished your answer? I'm sorry.

 17 A. No, I haven't. Mr. Schlissel provided to us

 18 the numbers, the dollars per ton from each of those

 19 studies. And when I went and took a simple average of

 20 them, the actual number was actually lower than what he

 21 reported. So the difference between my forecast and his

 22 collapsed by almost -- something on the order of 25 to

 23 35 percent of the way. So part of his being above is

 24 that he had no methodology for actually picking among

 25 the numbers he had. I just took a simple average, and

 1610

 1 that compressed the difference.

 2 The second thing, as I was saying, is that he

 3 has used out-of-date analyses from out-of-date bills.

 4 We discussed last week that the McCain-Lieberman bill

 5 that he had mentioned now has been transformed from

 6 15 percent offsets to 30 percent offsets, which is a big

 7 factor in terms of lowering the stringency of the

 8 program and lowering the dollar per ton. When I take

 9 those out from his spreadsheet, his number on an average

 10 basis is only one or two dollars higher than mine.

 11 So that comparison, not only were we

 12 moderately close to begin with, if he had just done a

 13 simple average of the numbers that he was using, it

 14 would have been even closer. And if he had sort of

 15 eliminated out-of-date studies, we would have been even

 16 closer. So the idea that when we're looking at the mid

 17 cases in terms of CO2 -- unfortunately, he didn't

 18 provide gas prices. But when we just look at CO2, the

 19 idea that the company's analysis is unreasonable or

 20 implausible or imprudent I think is inconsistent with

 21 the fact that a proper use of his own data would show

 22 that the company and his numbers are fairly close.

 23 Q. Let me ask you this question, Mr. Rose. Do

 24 you have a copy of Exhibit 163 in front of you, or do

 25 you recall -- this is Figure 1 from Mr. Schlissel's

 1611

 1 testimony exactly as per his testimony, except shown in

 2 color. Do you recall that exhibit?

 3 A. Yes, I do.

 4 Q. And do you -- you said you ran a simple

 5 average of the data points there other than the ones

 6 identified by blue and green that were outdated. Is

 7 that what --

 8 MR. GROSS: I'm going to object. Leading

 9 question. This is redirect.

 10 MR. LITCHFIELD: I can restate the question,

 11 Madam Chair.

 12 CHAIRMAN EDGAR: Please.

 13 MR. LITCHFIELD: The witness has given an

 14 answer, and I'm simply trying to clarify what he

 15 intended to say with respect to this graph, so let me

 16 ask it this way.

 17 BY MR. LITCHFIELD:

 18 Q. Could you explain the answer that you just

 19 gave in the context of Exhibit 163, specifically

 20 identifying for the Commission where the line

 21 representing the simple average would fall on this

 22 graph?

 23 A. The line of the simple average, if you just

 24 take an average of his own numbers, would have been

 25 lower than where he shows. He goes 2010, 2020, 2030,

 1612

 1 and he sort of connects those three dots. But if he had

 2 taken the actual average, the numbers would have been

 3 lower. And then as I indicated, if he had taken out the

 4 old McCain-Lieberman bill and the analyses from 2003,

 5 his numbers would have been lower and on average almost

 6 identical to the ones that the company is using.

 7 Q. Would that line have been lower or higher than

 8 what appears on Mr. Schlissel's Figure 2 as representing

 9 FPL's mid case?

 10 A. Lower. And so ironically, if I can use the

 11 word "ironically," the question was, you know, don't the

 12 numbers sort of look close. You know, adjusted, they're

 13 almost identical, which then -- the irony of it is, his

 14 conclusion is that the company is being unreasonable in

 15 using scenarios that are not sufficient or not

 16 appropriate, and then when we actually look at the

 17 numbers, they're very, very close. So that's part of

 18 the irony of it.

 19 MR. LITCHFIELD: That's all I have.

 20 CHAIRMAN EDGAR: Okay. Exhibits. We have

 21 147.

 22 MR. GROSS: Madam Chair, I apologize for

 23 interrupting your chain of thought, but I wanted to move

 24 into evidence the excerpt of this MIT study that was

 25 cited by Mr. Rose in his testimony.

 1613

 1 CHAIRMAN EDGAR: This is what we marked as

 2 196?

 3 MR. GROSS: Yes.

 4 CHAIRMAN EDGAR: Okay. We're going to get to

 5 that in just a second. So 147 will go into the record.

 6 (Exhibit Number 147 admitted the record.)

 7 CHAIRMAN EDGAR: Then we had 194 put forth by

 8 Mr. Beck. Any objections to 194? Seeing none, 194.

 9 (Exhibit 194 admitted into the record.)

 10 CHAIRMAN EDGAR: Ms. Brubaker, how do we

 11 handle the confidential?

 12 MS. BRUBAKER: Well, I leave that to Mr. Beck.

 13 Do you need to introduce that into the record?

 14 MR. BECK: Yes, please. I would like to move

 15 it in.

 16 MS. BRUBAKER: Then we move it into the

 17 record, we provide the confidential copy to the court

 18 reporter, and I believe it will also be appropriate to

 19 go ahead and collect the red folders otherwise from the

 20 parties to make sure they're secure.

 21 CHAIRMAN EDGAR: Okay. So we will enter 195,

 22 a confidential exhibit.

 23 (Exhibit 195 admitted into the record.)

 24 CHAIRMAN EDGAR: Did you have a question to

 25 that, Mr. Guest?

 1614

 1 MR. GUEST: Well, it seems like we should have

 2 it until at least we get our proposed orders in.

 3 CHAIRMAN EDGAR: I can't hear you.

 4 MR. GUEST: Could we keep it until the

 5 proposed order goes in?

 6 CHAIRMAN EDGAR: I'm sorry. I'm just not --

 7 MR. GUEST: Keep the exhibit until the

 8 proposed order goes in.

 9 CHAIRMAN EDGAR: Until the proposed order --

 10 I'm sorry. I just didn't catch that.

 11 MR. GUEST: I'm sorry. I was mumbling.

 12 MS. BRUBAKER: That's inconsistent with our

 13 procedures.

 14 MR. GUEST: Should I memorize it? I do have a

 15 good memory.

 16 CHAIRMAN EDGAR: I suspect that you do,

 17 actually.

 18 Ms. Helton, I am going to need you to refresh

 19 my memory on what our rules are regarding confidential

 20 documents.

 21 MS. HELTON: I think perhaps maybe the best

 22 thing for Mr. Guest to do is to work out with Florida

 23 Power & Light, who I believe is the owner of the

 24 information, a way in which he can get a copy that he

 25 can keep during the pendency of the proceeding.

 1615

 1 MR. LITCHFIELD: The information actually is

 2 owned by ICF. We would be happy to discuss that with

 3 ICF sometime offline and get back with Mr. Guest to see

 4 whether suitable arrangements could be made. But in the

 5 meantime, I think I would request that the procedures be

 6 followed.

 7 CHAIRMAN EDGAR: And I think I have to go that

 8 way as well, Mr. Guest. Apologies if there's an

 9 inconvenience, but the rules are clear. Thank you,

 10 Ms. Helton.

 11 So, Mr. Beck, we'll finish with these, and

 12 then I will ask you to collect, if that's all right. So

 13 with the understanding that 195 is confidential, it will

 14 be collected here in a few moments, and Mr. Guest and

 15 Mr. Litchfield will speak after the proceeding about if

 16 there is a way to accommodate Mr. Guest's need to have

 17 use of that information.

 18 We will move then to 196. Mr. Gross, any

 19 objection?

 20 MR. LITCHFIELD: Actually, I would just prefer

 21 that -- if we could defer this also till Monday morning

 22 to give us an opportunity to review the study. We might

 23 ask to have the entire document submitted, or we may

 24 not, if that would be acceptable.

 25 MR. GROSS: We would have no objection to the

 1616

 1 entire document.

 2 CHAIRMAN EDGAR: Mr. Litchfield, do you want

 3 to go with that, or do you prefer to wait?

 4 MR. LITCHFIELD: If we could take that up

 5 first thing Monday morning.

 6 CHAIRMAN EDGAR: All right.

 7 MR. LITCHFIELD: Thanks.

 8 CHAIRMAN EDGAR: We'll have a couple of items,

 9 I'm sure, to take up Monday morning, and we will add

 10 this one to the list, Ms. Brubaker, if you'll help me

 11 remember that.

 12 And then Ms. Brubaker pointed out that I had

 13 missed a couple of exhibits earlier when we were going

 14 through and trying to clean up, so let me get there.

 15 Okay. 126 through 129, which were the

 16 exhibits originally submitted as part of Mr. Schlissel's

 17 direct testimony. Seeing no objection, we will go ahead

 18 and add 126, 127, 128, and 129 to the record.

 19 (Exhibits 126 through 129 admitted the

 20 record.)

 21 CHAIRMAN EDGAR: And I'm sorry, Mr. Rose. I

 22 didn't mean to make you necessarily keep sitting there.

 23 So, Mr. Beck, if you would be sure to get that red

 24 folder as well. Thank you, Mr. Rose. I hope you will

 25 make your plane.

 1617

 1 THE WITNESS: Thank you very much.

 2 CHAIRMAN EDGAR: Okay. I think we're about to

 3 call it a day. Any other matters that would be helpful

 4 for us to discuss before we do?

 5 MR. KRASOWSKI: Madam Chair.

 6 CHAIRMAN EDGAR: Mr. Litchfield. Excuse me.

 7 Yes, Mr. Krasowski.

 8 MR. KRASOWSKI: If I could have a minute.

 9 CHAIRMAN EDGAR: You may.

 10 MR. KRASOWSKI: Thank you. Through the

 11 proceedings and introductions over the last few days,

 12 the environmental justice people have been identifying

 13 themselves as representing the intervenors and the

 14 environmental intervenors -- Earthjustice, I'm sorry,

 15 Earthjustice group.

 16 And I would like to make the point that there

 17 are other intervenors here, and I think there should be

 18 some accommodation for them to distinguish themselves

 19 from other people. We are environmental intervenors, to

 20 the extent that's appropriate in this setting, as well

 21 as they are. Maybe they could be called the big

 22 environmental intervenors and we could be the little

 23 environmental intervenors. But to say they're the

 24 intervenors also leaves out the Office of Public Counsel

 25 and the distinguished representative from the AIF.

 1618

 1 Earlier today there was a suggestion that this

 2 group had been telling the FPL people that they were

 3 feeding me questions. Now, there was a conversation

 4 where it was suggested that maybe I could ask something

 5 or the other, but I was sensitive to that and didn't

 6 want any association or at any point in time anybody

 7 from any of those groups to say that we were an

 8 appendage to them.

 9 And since we have been accepted by the

 10 Commission and allowed to participate and recognized,

 11 we're very sensitive to the fact that we put a lot of

 12 time and effort and energy into representing our

 13 specific points and making our own questions and asking

 14 the questions. So I'm very sensitive to that and think

 15 we deserve an apology if that's actually what happened.

 16 If it was suggested to FP&L that they're writing our

 17 questions, and then they're over here trying to secretly

 18 get me to ask questions, it's just pretty sleazy.

 19 Also, though, aside from those comments, I

 20 would ask that FP&L, if FP&L has any question about

 21 anything, witnesses or schedules or anything like that,

 22 that they come directly to us so there's no concern.

 23 We've been open with them in talking with them, their

 24 people. We've talked with everyone. We would like to

 25 keep that going, but not have any confusion about who

 1619

 1 represents us and what we're agreeing with or not

 2 agreeing with.

 3 So thank you for the minute and 20 seconds.

 4 CHAIRMAN EDGAR: You're welcome. And I

 5 appreciate your comments very much, and they are on the

 6 record, and they are noted. And I'll also add that the

 7 Commission recognizes your independence and also the

 8 work that you've put in to be prepared and to be a very

 9 useful participant, and we appreciate it.

 10 MR. KRASOWSKI: Thank you.

 11 CHAIRMAN EDGAR: Okay. Any other matters?

 12 Ms. Brubaker, before we go, hang on just a minute.

 13 MS. BRUBAKER: Just a suggestion to the

 14 parties. We're resuming Monday. I would ask that all

 15 parties look at the briefing schedule and the

 16 posthearing schedule as it was currently scheduled, and

 17 let's look at the time that is going to be available to

 18 us now. I am open to discussion or any questions about

 19 the briefing schedule, but I would ask that we all be

 20 prepared to address on Monday, anticipating that that

 21 will be the conclusion of the hearing, what the briefing

 22 schedule will be. And any other posthearing matters of

 23 that nature please be prepared to discuss on Monday.

 24 MR. LITCHFIELD: Madam Chairman, I might even

 25 suggest that we could take it up now, but at a minimum,

 1620

 1 I think I would suggest that in light of the schedule

 2 constraints, that parties, if they haven't already been

 3 working on the brief, they should be working on it this

 4 weekend, because I anticipate that we will need a fairly

 5 quick turn on the briefs.

 6 MS. BRUBAKER: That's correct. And I would

 7 note that the court reporters have been making a

 8 Herculean effort to get the transcripts out daily. They

 9 are available. I have already started actually

 10 reviewing the transcripts myself. So everybody please

 11 be mindful, we are all on a short time. I know the

 12 parties are under the gun. The staff is also under the

 13 gun. The Commission will need sufficient time to review

 14 whatever recommendation staff puts forward, so everyone,

 15 let's all cooperate. And again, if you have any

 16 questions or need feedback from staff, we are happy to

 17 provide that.

 18 MR. LITCHFIELD: One question, though, with

 19 respect to the brief that if we could resolve it today

 20 would be helpful, and that is the page limit, which I

 21 think in the Prehearing Order was established at 40

 22 pages, which seems a little light under the

 23 circumstances, and we would respectfully request that

 24 that be augmented to 80 pages.

 25 CHAIRMAN EDGAR: That would be doubled rather

 1621

 1 than just augmented. Mr. Guest.

 2 MR. GUEST: Well, it was once said that I

 3 wanted to write you a short letter, but I didn't have

 4 time. And I think that goes to briefs too, that it

 5 requires more energy to write succinctly, and it's more

 6 useful to write a short brief than a long brief for you

 7 guys and for us too. It requires more self-discipline,

 8 and I think it's a valuable exercise to put a case like

 9 this into 40 pages.

 10 MR. LITCHFIELD: I'm sorry. Mr. Guest is

 11 suggesting that we hold it to 40?

 12 CHAIRMAN EDGAR: Yes, he is.

 13 MR. LITCHFIELD: Well, he's free to write 40.

 14 We're asking for the opportunity to take a little more.

 15 We've got more issues to address, obviously, as a

 16 company.

 17 CHAIRMAN EDGAR: Ms. Brubaker.

 18 MS. BRUBAKER: It's true that the page limit

 19 was not raised at the prehearing conference. I think

 20 the Commission does have the discretion to extend that

 21 at this time if they wish to do so.

 22 For frame of reference, Taylor County, Docket

 23 060635-EU, 80 pages was allowed, I believe. In that

 24 case, you also have to look that there were actually

 25 four applicants that were being looked at, but then

 1622

 1 again, in this case, we're looking at two units versus

 2 one. So an accommodation would be perhaps 60 pages.

 3 Eighty pages does not offend my sensibilities. As

 4 always in these circumstances, I merely say that brevity

 5 is the soul of wit, and I would expect all parties to --

 6 CHAIRMAN EDGAR: I would also note that

 7 extending the page limit does not mean that every inch

 8 of that page limit is required to be used. And I echo

 9 Mr. Guest's comments. We are in agreement on this,

 10 Mr. Guest, that brevity and concise writing is often the

 11 most effective and useful. So with that, I will grant

 12 that extension of the page limit, with the again

 13 unnecessary reiteration that that does not mean you have

 14 to use all of those 80 pages.

 15 Okay. Should we talk about dates? I'm

 16 shuffling paper, because I know we had penciled in some

 17 potential, and I'm having a hard time putting my hands

 18 on it. Do you have those, Jennifer?

 19 MS. BRUBAKER: I do.

 20 CHAIRMAN EDGAR: Okay. Why don't you lay out

 21 a suggestion?

 22 MS. BRUBAKER: This is what I would suggest.

 23 We're looking at concluding the hearing on next Monday,

 24 which is April 30th. My proposal would be to have

 25 briefs filed on May 7th, which would be that next

 1623

 1 Monday. That would permit a full weekend for parties to

 2 complete work on their briefs. Nobody likes working on

 3 the weekends, but certainly staff expects to be doing

 4 plenty of that in the context of the case, and we're

 5 happy to share the pain on that point.

 6 The agenda that's currently scheduled for the

 7 posthearing recommendation is June 5th. There are some

 8 statutory dates which we are aware of that would make

 9 that currently the most logical and available agenda for

 10 us to take up the posthearing recommendation. That

 11 would have staff filing the recommendation, posthearing

 12 recommendation on May 23rd. That is a Wednesday, I

 13 would note, because there is a Monday holiday following

 14 on the 28th.

 15 I think that having the briefs filed on the

 16 7th will probably afford staff sufficient time to file

 17 on the 23rd, but I would ask as an accommodation to have

 18 two extra days just in case it's needed for staff to

 19 file the recommendation on the 25th of May.

 20 MR. LITCHFIELD: That's acceptable to FPL.

 21 MR. GROSS: Madam Chair, I am going to be sort

 22 of out of commission for two days during this period

 23 between the two Mondays for some minor, very minor

 24 surgery, which I've postponed throughout this because of

 25 this proceeding. So I would ask that the briefs not be

 1624

 1 due till May 9th so I could have the full benefit of

 2 that week.

 3 MS. BRUBAKER: With all due consideration to

 4 Mr. Gross's concerns, I have some concerns about putting

 5 the briefs off that far.

 6 CHAIRMAN EDGAR: I do as well, just realizing

 7 we don't have any flexibility on the back end, that I'm

 8 aware of anyway. So, Mr. Gross, I guess what I will do

 9 is -- we've laid out these dates as what we're looking

 10 at, which was the briefs due May 7th, the staff rec due

 11 May 25th. You know, let's see where we are on Monday.

 12 Okay?

 13 MR. LITCHFIELD: Madam Chair, I would express

 14 appreciation on behalf of FPL and Mr. Rose for the

 15 accommodation to take him up today on the part of the

 16 Commission and the other parties. We very much

 17 appreciate it.

 18 CHAIRMAN EDGAR: I'm glad it worked out,

 19 hopefully, for most people's travel schedule to the best

 20 that we can try to make it all work out.

 21 Okay. Thank you all once again for your work

 22 and for your patience. We will see you Monday at 9:30.

 23 We are adjourned.

 24 (Proceedings recessed at 5:34 p.m.)

 25 (Transcript follows in sequence in Volume 11.)

 1625

 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 1385 through 1624 are a true

 11 and 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 27th day of April, 2007.

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 19 MARY ALLEN NEEL, RPR, FPR

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