





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

2 (Hearing reconvened at 1:23 p.m.)

3 (Transcript continues in sequence from Volume 1.)

4 CHAIRMAN CLARK: Reconvene the hearing.

5 Mr. Wright?

6 MR. WRIGHT: Thank you, Madam Chairman.

7 ROBERT D. DOLAN

8 resumed the stand as a witness on behalf of Florida Power  
9 Corporation and, having been previously sworn, testified as  
10 follows:

## 11 CROSS EXAMINATION

12 BY MR. WRIGHT:

13 Q Mr. Dolan, as I indicated before the lunch break, I  
14 would like to have you walk through and illustrate what  
15 happens vis-a-vis the priority groups identified in Florida  
16 Power Corporation's curtailment plan as the Company moves  
17 through low load conditions of increasing depth or increase --  
18 conditions that in the Company's mind require increasingly  
19 greater curtailments. Can we do that?

20 A Yes.

21 Q I'll start with some questions, and you can feel  
22 free to go with narrative if and when you think it's  
23 appropriate.

24 The first thing that happens on a daily basis is  
25 that some of the Group A NUGs who have commitments to reduce

1 their output on a daily basis do so everyday regardless of  
2 whether it's a low load day or not?

3 A That's correct.

4 Q And isn't it true that some of those actually have  
5 as part of their agreement with Power Corp that if you all ask  
6 them to stay at a higher output level because you need the  
7 power to save money, that they'll do so?

8 A That's correct.

9 Q Now, I think for the rest of the discussion we can  
10 talk about a low load condition.

11 When you are approaching a low load condition, how  
12 much of the Group A committed capacity will have come off line  
13 by virtue of these automatic arrangements?

14 A Now, this is a quick calculation, Schef, but I think  
15 it's 225 megawatts is the nightly reduction and that includes  
16 Orange, which is going commercial May 18th, so --

17 Q Just so I can be clear, that includes Orange CoGen.  
18 Does it include Lake Cogen?

19 A Yeah. It included Auburndale for 31 megawatts,  
20 Tiger Bay for 48 megawatts, Lake Cogen for 15 megawatts.  
21 Mulberry, right now, is 100, but it's fixing to go to 110.  
22 And Orange would be 87.

23 Q At that point in an event, would those Group A NUGs,  
24 who have some additional capacity that they sell on an  
25 as-available basis to Florida Power, also have taken that

1 as-available capacity off line?

2 A Yes. In their nightly reductions, they go well  
3 below their committed capacities. So, they, on their nightly  
4 basis, already have taken off their as-available.

5 What number did I give you a minute ago?

6 Q 275, I believe.

7 A Yeah, that's close enough.

8 Q Now, if Florida Power believes it needs additional  
9 output reductions, what's the next thing it will do?

10 A Well, we have some discretionary rights that we can  
11 curtail some others by megawatts if we notify them by noon of  
12 the preceding day, which noon gives you about 12 hours notice  
13 because a minimum load event usually occurs between 12:00 and  
14 1 o'clock of the next day.

15 And on that we can take Auburndale from 100  
16 megawatts to zero ten times a year. We can reduce Ridge  
17 Generating by 12 megawatts 50 times a year, and Dade County  
18 from 17 megawatts 30 times a year.

19 Q I notice that Pasco Resources Recovery and Pinellas  
20 Resources Recovery are also in Group A. Do they come into  
21 play at this point in an event?

22 A No. What we got with them was long-term scheduling  
23 rights, and we arrange with them to do their maintenance  
24 where -- both facilities have three boilers. And they would  
25 take one boiler off; I think it is for eight days, and then

1 another boiler off for eight days, and another boiler off for  
2 eight days. And then we schedule that in the periods that we  
3 expect minimum loads to be -- minimum load problems to be  
4 their greatest, such as the April time frame or the  
5 October/November time frame. When we do that we also look at  
6 the scheduling of our own units to try to schedule them so  
7 that we prevent minimum load events from occurring, plus the  
8 QF scheduling rights.

9 Q Okay. Leaving out then Pasco and Pinellas Resource  
10 Recovery units, but assuming that you invoke the additional  
11 Group A curtailments available from Dade, Auburndale, and  
12 Ridge, what's the total megawatts then available to FPC for  
13 curtailment?

14 A You would get 129 megawatts additional.

15 Q So that adding that to the 275, I got 404 megawatts?

16 A Yeah.

17 Q What does this represent as a percentage of those  
18 facilities committed capacity pursuant to their contracts?

19 A I believe their committed capacity is 685 megawatts.

20 Now, if you want to get more precise, you know, I'm  
21 adding it up. Auburndale is 131.18. Tiger Bay is 218.75.  
22 Lake is 110. Mulberry right now is 100. Orange is 74. Ridge  
23 is 39.6, and Dade is 43. Pinellas is 55.75 and Pasco is 23,  
24 so it's 795 megawatts.

25 Q Okay. As I said, I thought that for this analysis I

1 think that we should leave Pasco and Pinellas Research &  
2 Recovery out since they're advanced scheduling and not on a  
3 per-event basis.

4 I'll tell you, let's do the calculations both ways.

5 A If you leave them out it's 716.

6 Q So is it 404 out of 716?

7 A Yeah.

8 Q So that's 56.4%?

9 A Yeah. Yes, sir.

10 Q And if you put Pasco and Pinellas in, what's the  
11 additional megawatts to be curtailed, and what percentage does  
12 the new total represent of that 795 megawatts you mentioned?

13 A Well, again, it would be 404 megawatts over 795 and  
14 that's 51%.

15 Q Okay. What would happen next in a low load event?  
16 Which group or groups would be asked to curtail next?

17 A Well, the nightly reductions that already occurred  
18 and any reductions we called for by 12 --

19 Q Right.

20 A -- we then would curtail the Group C by 100%. And  
21 Group C includes strictly as-available generation from, like,  
22 the phosphates or whomever, plus any capacity that the firm  
23 guys are delivering above their committed capacity or what we  
24 call excess generation. That would be curtailed by 100%.

25 Q And about how many megawatts is that?

1           A     I think we've got it in here.

2                     At that point most of it's already gone. There's  
3 probably another 10 megawatts or so.

4           Q     Then if additional curtailments were required, would  
5 Florida Power then ask the Group B NUGs to curtail?

6           A     That's correct.

7           Q     Okay. And by how much could they be asked to  
8 curtail as a percentage of their committed capacity before any  
9 additional curtailments are requested of the Group A NUGs?

10          A     By up to 50%.

11          Q     Suppose still more curtailments are required, what  
12 would happen next?

13          A     If more curtailments were required, we would go to  
14 each individual member in Group A and ask for them, if they'd  
15 hadn't already done it, to curtail up to 50% of their  
16 committed capacity.

17          Q     So just so we're clear, at that point, the Group  
18 A's, if you would invoke the rights you have under the Dade,  
19 Auburndale, and Ridge arrangements, the Group A's would  
20 already be as a group at 51%, and you would then go to each  
21 individual Group A NUG who was below 50% and ask them for  
22 additional curtailments; is that right?

23          A     That was generating above 50% and ask them to go to  
24 50% -- up to 50%. We would only ask for as many megawatts as  
25 we needed.



1 Q Okay. And about how many more megawatts of  
2 curtailment would you get from those remaining Group A NUGs  
3 before you asked for any more curtailment from the Group B  
4 NUGs?

5 A I think it's around 197 megawatts.

6 Q 197 more megawatts?

7 A More megawatts.

8 Q Before you asked Group B to go above 50%, if that  
9 were necessary; is that right?

10 A Well, except, I think, in your example we'd already  
11 turned off Auburndale?

12 Q Yes, sir.

13 A So it would be 162 megawatts.

14 Q And just so I'm completely clear on your answer,  
15 that's another 162 megawatts from the remaining Group A NUGs  
16 before you would ask for additional curtailments from Group B?

17 A Before we would go back and ask for additional  
18 curtailments from Group B.

19 Q Correct. And then if there were additional  
20 curtailments required, you would ask for those on an equal  
21 percentage basis from the remaining Group A and Group B NUGs?

22 A That's correct.

23 Q If you know, as a percentage of total megawatts  
24 hours curtailed during the seven actual curtailments events  
25 we've had so far, how much was curtailed from Group A and how

1 much from Group B?

2 A Schef, we could get that for you; I don't have it  
3 here. I mean we could do that as a late-filed exhibit or  
4 something, but, I mean, I just don't --

5 I think, too, you're, you know, I know, missing a  
6 lot of value the Group A's are giving, because you can look at  
7 their contributions for the seven events, but there may have  
8 been 30 other events if it hadn't have been for the Group A's.  
9 And that's an important distinction between even just looking  
10 at an event of what megawatts got contributed by each class,  
11 but how many events did the Group A's -- just there not be a  
12 minimum load event that the Group B's got the benefit of.

13 Q Right. Well, you did anticipate my next question in  
14 your response there. You said there may have been as many as  
15 30. Do you have a better estimate of that or a specific  
16 estimate that you can give the Commission as to how many  
17 events that would have affected the Group B NUGs, did not by  
18 operation of your arrangements with Group A NUGs?

19 A I think Tiger Bay's arrangements that we worked out  
20 in 1994 probably prevented 10 curtailment events that would  
21 have occurred in October and November.

22 Tiger Bay being off line for two consecutive weeks  
23 in March and two consecutive weeks in April definitely  
24 contributed to a number of what I would call "not events."

25 Q Do you have an approximation or approximate estimate

1 of how many of those events you're talking about in the  
2 March/April time period?

3 A It could have been as high as ten, maybe as low as  
4 five to ten. The invoking of the Auburndale curtailment  
5 agreement to shut them off, I think, prevented one event from  
6 happening, of being able to turn them to zero.

7 Q In developing the estimates that you just gave to  
8 the Commission, did you do so in any kind of a written way?  
9 Do you have a worksheet that would show those?

10 A The last one I did on the two-week outages was more  
11 of an estimation of knowing how many weekends we had low loads  
12 in, but we did try and go back in record and see the -- being  
13 able to call Tiger Bay up at night and having them to turn  
14 off. Prior to them going commercial, actually went through  
15 and did some detail calculations and came up with the ten.

16 Q Is there a document reflecting those calculations  
17 that we could obtain?

18 A Yeah, I believe there is.

19 Q Okay. I would like to request that as a late-filed  
20 exhibit, please.

21 A Okay.

22 MR. WRIGHT: That will be 2, I believe, Madam  
23 Chairman.

24 CHAIRMAN CLARK: That will be Exhibit 2. And the  
25 title, do you know?

1 MR. WRIGHT: Curtailments avoided by Tiger Bay  
2 output reductions.

3 (Late-Filed Exhibit No. 2 identified.)

4 CHAIRMAN CLARK: Okay.

5 Q (By Mr. Brown) Mr. Dolan, I understand from  
6 reviewing Mr. Harper's exhibits that, I believe, on a daily or  
7 near daily basis, Florida Power Corporation completes, I think  
8 you all call it a minimum load emergency curtailment worksheet  
9 or something like that?

10 A Yeah. I think Chuck would probably be the better --  
11 Mr. Harper would probably be the better witness to --

12 Q I was just going to ask whether those worksheets  
13 might also illustrate the effects of when you all called on  
14 Tiger Bay. And, if so, I would ask that they be included as  
15 part of the exhibit.

16 A I don't know.

17 Q Okay.

18 A They may or may not help. I haven't looked at those  
19 worksheets.

20 MR. WRIGHT: I'll let that go.

21 And that's all I have, thank you.

22 CHAIRMAN CLARK: Thank you, Mr. Wright.

23 Are there any other intervenors that have questions  
24 to ask? Staff?

25

## CROSS EXAMINATION

1  
2 BY MS. BROWN:

3 Q Mr. Dolan, we just have a very few questions for  
4 you.

5 Do you have Rule 25-17.086 in front of you?

6 A I can get it.

7 Q Got it?

8 A Yep.

9 Q Now, the first part of that rule has been cited to  
10 the Commission a couple of times already today. I'd like you  
11 to take a look at the second part of the rule. Starting --  
12 actually, it's the next to the last sentence that starts, "In  
13 either event" --

14 A Right.

15 Q Do you see that? Could you read that, please?

16 A "In either event the utility shall notify the  
17 Commission, and the Commission Staff shall, upon request of  
18 the affected qualifying facilities, investigate the utility's  
19 claim."

20 Q Okay. Do you understand that provision to mean,  
21 Mr. Dolan, that even if the Commission adopts your plan for  
22 curtailing, Florida Power Corporation will still have the  
23 responsibility to justify the implementation of that plan in  
24 any future curtailment events that would occur?

25 A That's my understanding. And I think we talk about

1 that in the plan, and that we'll provide you notice and create  
2 a file that will substantiate that the curtailment was a  
3 proper event.

4 Q And a QF at that point would have the opportunity to  
5 object to the implementation of any further curtailments,  
6 correct?

7 A That's correct.

8 Q Either by objecting to the Staff or filing something  
9 formal with the Commission?

10 A That's my understanding.

11 Q Okay. You were asked several questions by  
12 Mr. Watson and Mr. Wright regarding the scope of Florida Power  
13 Corporation's low load problems, primarily in terms of the  
14 duration of them, whether they are going to last five or six  
15 years. Do you remember that?

16 A Yes, ma'am.

17 Q I don't want to go back over that, but I have a  
18 couple of scope questions that I want to ask you as well.

19 Do the curtailment agreements that you've signed  
20 with the QFs' contemplate, generally speaking, a much larger  
21 number of curtailments in, say, a year curtailment period than  
22 have actually occurred so far?

23 A The curtailment agreements, I guess two of you  
24 mentioned, had that we could turn them down 30 times and one  
25 50 times. And we have had fewer curtailment events than we

1 had anticipated.

2           You know, I think we were looking more at the at  
3 least 30 range or more. And I think I mentioned that it's a  
4 high likelihood that Tiger Bay's voluntary actions may have  
5 eliminated up to 15 to 20 curtailment events.

6           Q     Well, now that you have those curtailment agreements  
7 in place, which year in that five-year period you were talking  
8 about, I assume you mean, like, to the year 2000 perhaps,  
9 2002, which of the years at this point do you anticipate to be  
10 the most severe in terms of Power Corp's low load problems?

11          A     Assuming the load continues to grow, probably this  
12 fall. If we get more QF capacity that comes on line, such as  
13 Panda comes on line, that could be the worst year, the first  
14 year that Panda's on line with their facility according to  
15 what arrangements we make with or without Panda on minimum  
16 load effect. We only have one contract left that has not  
17 become or is not about to become commercial, and that's the  
18 Panda contract.

19          Q     Do you have a curtailment agreement with them?

20          A     No, we do not.

21          Q     Are you negotiating one?

22          A     We had discussions may six months or a year ago  
23 about it and nothing's really come about.

24          Q     So if you can negotiate a curtailment agreement with  
25 Panda, you expect this next fall to be the worst year for

1 minimum load problems?

2 A That's probably right, next fall or next spring.

3 Q And, thereafter, we're talking '96 now, '96-'97.

4 Thereafter, in like '97-'98, the problem would diminish  
5 further?

6 A In a general sense it would diminish further, but  
7 it's a little hard to quantify at that because a QF being off  
8 line or not off line, or one of our units being off line or  
9 not off line, either makes an event or prevents an event. So  
10 it's kind of like rolling the dice. You know, if we have a  
11 forced outage or they have a forced outage, all of a sudden  
12 what would have been an event is no longer an event.

13 Q But can you generally predict that if you  
14 anticipated anywhere between 50 and 30 curtailment events in  
15 this year and you actually only had seven, that at least in  
16 the years to come, the curtailment events that you will have  
17 may be considerably less than 30 or 50 as you anticipated?

18 A That's a potential. But if Florida Power does  
19 something with the maintenance of its coal plants, lengthens  
20 the duration between maintenance outages of the coal plants,  
21 that could change what happens in the future versus what had  
22 happened in '93 and '94.

23 And I think I need to emphasize that in '94 we  
24 worked out a voluntary arrangement with Tiger Bay where we  
25 could call them up by noon. Because their project hadn't



1 become commercial, their gas commitments hadn't become take or  
2 pay. And we'd say, "Hey, we're having problems on our system,  
3 could you shut off," and they did that ten times. That will  
4 not happen in the future. It was just a verbal agreement we  
5 made over the phone that they would take their 220-megawatt  
6 facility to zero, and that occurred, I think, ten times in  
7 '94.

8 Q So you can't say with certainty or any measurable  
9 degree of certainty that the minimum load condition that  
10 Florida Power Corporation has experienced in these years will  
11 diminish over the remaining seven years?

12 A Common sense tells you it should diminish. We've  
13 had trouble getting our models to predict these phenomena  
14 because it's such a discrete -- items that create a  
15 curtailment are not a curtailment.

16 Q All right.

17 A And we have had people working for many months  
18 trying to do exactly what you are talking about, is what is  
19 the best guess of the number of curtailments in 1996. What's  
20 the best guess in '97. And nobody has ever felt comfortable  
21 with any of the numbers that have come out of them.

22 Q Well, let me ask it this way then and then we'll  
23 move on. Do you expect the number of curtailments to increase  
24 above between 30 and 50 as contemplated in some of your  
25 contracts in the next five years?

1           A     I would, as I said, common sense tells me they  
2 should decrease from the 30 to 50 as the load grows.

3           Q     So that's a no?

4           A     That's no.

5           Q     Okay.

6           A     But you could have bad luck in one year and create a  
7 bunch of events. Just like gambling at the casino. I mean,  
8 you know, overall you end up losing when you go to the casino,  
9 but, you know, one year you can win and one year you can lose.  
10 And minimum load events are probabilistic events. So one year  
11 you could have a lot more events than you expected, and one  
12 year you could have a lot less.

13          Q     You mentioned earlier that Pasco Cogen had increased  
14 its committed capacity from 102 megawatts to 109 megawatts.  
15 Do you remember that?

16          A     That's correct.

17          Q     How many QFs have increased their committed capacity  
18 over what was originally contracted for?

19          A     Almost all of them have. It may be easier to go  
20 through the one's that didn't. Cargill didn't, which was the  
21 old Seminole Fertilizer; Timber Energy didn't. Pinellas  
22 County didn't, and Mulberry hasn't done it yet but they are  
23 contemplating it once the Orange Co facility comes on line,  
24 they'll increase it at that point.

25          Q     That's from 100 to 110?

1 A From 100 to 110.

2 Q So how many megawatts are we talking about of an  
3 increase? Just generally, a ballpark figure.

4 A It's probably close to 100; maybe 90 to a 100  
5 megawatts.

6 Q 90 to 100 additional megawatts?

7 A Yeah. And that's probably a little high.

8 Q From the increased capacity that the QFs have --

9 A Most of the contracts increase their committed  
10 capacity by 10%.

11 Q Has that contributed to Florida Power Corporation's  
12 minimum load problem?

13 A What --

14 Q Yes?

15 A Yeah, when they built bigger facilities than the  
16 original contract contemplated, yes. But even more so than  
17 that, they built facilities, some of them bigger than the 10%.

18 COMMISSIONER GARCIA: But wouldn't you have still  
19 had to purchase according to those contracts?

20 MR. DOLAN: Even if the contracts hadn't had an  
21 increase in the percentage, we still would have had to have  
22 purchased under the as-available rules.

23 Q (By Ms. Brown) I just have one more question just  
24 to clarify in my own mind.

25 When you filed this plan, you included several

1 curtailment agreements that you had negotiated and indicated  
2 that you were negotiating more. And it's my understanding  
3 since this case began, you have negotiated additional  
4 curtailment agreements; is that correct?

5 A Well, we signed an agreement with Lake Cogen at some  
6 date that may have been after we announced to the QFs, the  
7 grouping. It was November 3rd. We filed the plan about  
8 October 17th.

9 Q I'm not sure if it's not --

10 A We also superseded a curtailment agreement with  
11 Auburndale with the agreement that was executed last Wednesday  
12 or May 3rd.

13 Q Well, let's go through it. In your curtailment plan  
14 at Appendix B, Page 1 of 1, you list the different groups of  
15 cogenerators.

16 A Yes.

17 Q And the B Group includes Orlando, Cargill, Pasco,  
18 Timber, Lake Cogen, Lake Resource Recovery, Bay County, Orange  
19 and Panda?

20 A Right.

21 Q And you just said that you had negotiated an  
22 agreement with Lake Cogen now?

23 A Yes. And also Orange CoGen.

24 Q And also Orange. Are those the only two additional?

25 A Those are the only two we have finalized agreements

1 with. We have talked about finalizing agreements with both  
2 Lake Resource Recovery and Cargill but have not executed them  
3 yet. Both parties hadn't executed them.

4 Q Now, what about the Timber Energy one, though?

5 A What about Timber Energy?

6 Q Yes.

7 A This Timber Energy is a different one than the  
8 Timber Energy that was discussed earlier.

9 Q Okay.

10 A This is the Timber Energy that's the actual project  
11 over in Telogia, 13-megawatt contract.

12 Q Okay?

13 A And we have not finalized an agreement with them.

14 Q All right. So presently you do not have a  
15 curtailment agreement with one, two, three, four, five, six,  
16 seven of your QFs?

17 A Well -- and U.S. Ag in Group C down there, they  
18 executed a standard offer a number of months ago, so they, I  
19 guess, would then have moved up to Group B.

20 Q Okay. So it's eight all together?

21 A Eight, yeah. We have a quasi agreement with Cargill  
22 that says Cargill will do what they can when they can and we  
23 won't penalize them. But they did not agree to any definitive  
24 curtailments. So we have an agreement with them that they'll  
25 do what they can when they can, but we didn't view that as a

1 definitive agreement to allow the move into Group A. And we  
2 have not finalized a more definitive agreement with them.

3 Q Have they done anything?

4 A Have they done anything --

5 Q Have they done anything?

6 A -- to help in the past?

7 Q During curtailment periods?

8 A Yes, when they can. You know, they're more process  
9 oriented so if they have to get out some fertilizers, they  
10 don't help in the minimum load situation, but if they can  
11 rearrange their fertilizer schedule, they do.

12 MS. BROWN: All right. We have no further  
13 questions.

14 CHAIRMAN CLARK: Thank you. Redirect?

15 Excuse me.

16 MR. FAMA: Just a couple of questions.

17 CHAIRMAN CLARK: Excuse me just a minute.

18 Commissioners, are there any questions?

19 Go ahead, redirect.

20 REDIRECT EXAMINATION

21 BY MR. FAMA:

22 Q Mr. Dolan, Mr. Watson asked you a series of  
23 questions about Pasco who was in Group B, but has certain  
24 informal agreements to help out in curtailment situations. Do  
25 you recall those questions?

1 A That's correct.

2 Q Okay. Has Pasco had several opportunities to sign  
3 agreements and move up to Group A?

4 A Yes, they have. Once we formally -- more formalized  
5 that we were going to have a Group C-B-A curtailment plan, we  
6 approached Pasco Cogen and said, you know, you all have been  
7 doing some noncontractual voluntary reductions most of the  
8 time and almost always get below their committed capacity, we  
9 need to formalize our agreement with you to move you into  
10 Group A to recognize those contributions. And Pasco chose not  
11 to formalize those informal voluntary reductions.

12 Q Do you know of any operational reason why they  
13 wouldn't want to formalize the agreement and move up to A?

14 A No. And I can only speculate it could have  
15 something to do with the other court case that's going on with  
16 Pasco.

17 Q The antitrust case?

18 A Yes, the antitrust case.

19 MR. PAMA: That's all I have.

20 CHAIRMAN CLARK: Thank you, Mr. Dolan.

21 MR. DOLAN: Thank you.

22 (Witness Dolan excused.)

23 - - - - -

24 MR. PAMA: Chairman Clark, I'd move for the  
25 admission into evidence of Exhibit 1.

1 CHAIRMAN CLARK: Exhibit 1 will be admitted in the  
2 record without objection.

3 (Exhibit No. 1 received in evidence.)

4 MR. WRIGHT: I move Exhibit 2, subject to the  
5 parties' rights to object once it's filed.

6 CHAIRMAN CLARK: Well, I can't remember how we do  
7 that. I think we don't admit it.

8 MR. WRIGHT: I'm just covering the base to make sure  
9 it's moved --

10 CHAIRMAN CLARK: -- if we have no objection --

11 MR. WRIGHT: -- it will come in if there's no  
12 objection.

13 CHAIRMAN CLARK: It will come in if there's no  
14 objection to it.

15 Mr. Harper?

16 You were sworn in, were you not?

17 WITNESS HARPER: Yes, ma'am.

18 CHAIRMAN CLARK: Okay.

19 We will just take five minutes right here.

20 (Brief recess.)

21 - - - - -

22

23

24

25



1 CHARLES J. HARPER

2 was called as a witness on behalf of Florida Power Corporation  
3 and, having been duly sworn, testified as follows:

4 DIRECT EXAMINATION

5 BY MR. FAMA:

6 Q Mr. Harper, state your name and position with  
7 Florida Power?

8 A Charles Harper, Manager of System Control.

9 Q Are you the same Chuck Harper who sponsored prefiled  
10 direct testimony and exhibits in this proceeding?

11 A Yes.

12 Q Are there any corrections to your prefiled testimony  
13 that you need to make?

14 A No, there are not.

15 Q If I were to ask you today the same questions that  
16 appear in your testimony, would you give the same answers?

17 A Yes, I would.

18 MR. FAMA: Commissioners, I would move to have the  
19 prefiled testimony inserted into the record as though read.

20 CHAIRMAN CLARK: The prefiled direct testimony of  
21 Mr. Charles Harper will be inserted in the record as though  
22 read.

23 Q (By Mr. Fama) Mr. Harper, are you sponsoring  
24 Prefiled Exhibits CJH-1 and CJH-2?

25 A Yes, I am.

1 MR. FAMA: Madam Chair, I would like to have Mr.  
2 Harper's Exhibit CJH-1 and 2 marked as a composite exhibit.

3 CHAIRMAN CLARK: They'll be marked as Composite  
4 Exhibit 3.

5 (Composite Exhibit No. 3 marked for identification.)

6 MR. FAMA: Thank you.

7 Q (By Mr. Fama) Mr. Harper, are there any corrections  
8 to those exhibits that you need to make at this time?

9 A No corrections.

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**FLORIDA POWER CORPORATION  
DOCKET No. 941101-EQ**

**DIRECT TESTIMONY OF  
CHARLES J. HARPER**

**I. INTRODUCTION AND QUALIFICATIONS**

1  
2  
3 **Q. Please state your name and business address.**

4 **A. My name is Charles J. Harper and my business address is Post Office**  
5 **Box 14042, St. Petersburg, Florida 33733.**

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

8 **A. I am employed as Manager of System Control for Florida Power**  
9 **Corporation ("Florida Power" or "the Company").**

10  
11 **Q. Please describe your education and business experience.**

12 **A. I graduated from the United States Navy Nuclear School seventh in my**  
13 **class and have a Bachelor of Science Degree in Mechanical Engineering**  
14 **from Thomas Edison State College. I worked in the United States Navy**  
15 **Nuclear program and Diplomatic Service between 1963 and 1967.**  
16 **After working for the Largo Sentinel Newspaper from 1967 to 1969 and**  
17 **the Royal Typewriter Company from 1969-1971, I joined Florida Power**  
18 **Corporation in 1971. I have held a variety of positions of increasing**  
19 **responsibility at Florida Power, including serving as a Substation**  
20 **Maintenance Electrician, Substation Construction Electrician, Energy**

1 Control System Dispatcher, Energy Control System Supervisor and  
2 Supervisor of System Control. I currently serve as the Manager of  
3 System Control.  
4

5 **Q. What are your responsibilities as Manager of System Control?**

6 **A. I have responsibility for the 24 hour a day operation of Florida Power's**  
7 **bulk power system, to ensure safe, reliable and economic operation of**  
8 **the system. I have direct responsibility for the Company's**  
9 **generation/interchange dispatchers and transmission dispatchers. Under**  
10 **my supervision, the system dispatchers and assistant dispatchers work**  
11 **with plant personnel to ensure that daily plans for scheduling generating**  
12 **unit start-up, shut-down and hourly loadings optimize economic**  
13 **efficiency while ensuring adequate on-line generating capacity. Also**  
14 **under my supervision, the transmission dispatchers ensure that system**  
15 **security is maintained when transmission and substation clearances and**  
16 **switching orders are issued. My responsibilities also include**  
17 **coordinating Florida Power's system operations with those of the other**  
18 **interconnected systems in Florida. This involves overseeing the**  
19 **Company's hourly Florida/Energy Broker and interchange transactions**  
20 **and directing all of Florida Power's bulk power dispatching activities**  
21 **during system disturbances and emergencies. Finally, I have a variety**  
22 **of administrative responsibilities that range from maintaining accurate**  
23 **records of system operations to preparing budgets and managing**  
24 **employees.**

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## II. PURPOSES AND ORGANIZATION OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe the mechanics of Florida Power's October 12, 1994 "Generation Curtailment Plan For Minimum Load Conditions" ("the Curtailment Plan"), which is being sponsored as Florida Power's Exhibit No. 1 (RDD-1) with Mr. Dolan's testimony. First, I will describe the procedures and instructions to system operating personnel, as set forth in Appendix C of the Curtailment Plan. Second, I will describe the Company's first experience operating under the Curtailment Plan when curtailments became necessary on October 19, 1994. Next, I will explain some additional measures the Company has been able to take in order to help keep QF curtailments to an absolute minimum. Because of the Company's continuing efforts to mitigate curtailments, it has only been necessary to implement involuntary curtailments once in 1994 and a handful of times so far in 1995. Finally, I will show that the few problems experienced on October 19, 1994 were effectively eliminated during the January, 1995 curtailments.

Q. Are you sponsoring any exhibits with your testimony?

A. Yes. I am sponsoring Exhibit No. 3 (CJH-1) which are the summary operating logs and related materials documenting the steps that were taken in anticipation of, during and after the minimum load conditions experienced on October 18-19, 1994, and in January, 1995; and Exhibit

1 No. 3 (CJH-2) which includes representative examples of a newly  
2 developed minimum load worksheet designed to assist in the daily  
3 planning process.

4  
5 **Q. Are you testifying in this proceeding as a policy witness for the**  
6 **Company?**

7 **A. No, I am not. My testimony is intended only to describe the plan and**  
8 **the actions taken by Florida Power's system operating personnel in**  
9 **response to minimum load conditions. Mr. Henry Southwick is the**  
10 **Company's principle policy witness in this docket.**

11  
12 **III. OVERVIEW OF THE CURTAILMENT PLAN**

13  
14 **Q. Please begin with a short overview of the Curtailment Plan's structure.**

15 **A. The Curtailment Plan has four parts. The first and longest part contains**  
16 **an explanation of the Plan's background and objectives. These portions**  
17 **are described extensively in the testimony of Messrs. Dolan and**  
18 **Southwick. Also included in this first part is a general description of**  
19 **how curtailments actually will be implemented and how the Company**  
20 **will seek to enforce compliance with the Plan if enforcement becomes**  
21 **necessary.**

22  
23 **The remaining parts of the Plan consist of three appendices which are**  
24 **available to the Company's system operating personnel as they make**

1 the day-to-day decisions necessary to match the system's available  
2 resources to its instantaneous loads.

3  
4 Appendix A summarizes the voluntary QF output reduction plans which  
5 the Company has negotiated. Mr. Dolan generally describes these plans  
6 and is sponsoring an exhibit which updates Appendix A to include all  
7 currently-available plans (Exhibit No. 1 (RDD-3)). By including these  
8 summaries as a part of the Curtailment Plan, the system operating  
9 personnel have a useful tool available to plan ahead for QF output  
10 reductions (as, for example, by scheduling maintenance or exercising  
11 discretionary output reduction options during anticipated periods of  
12 lowest load). The summaries also give the system operators more  
13 immediate information, such as the ability to call on the QFs for specific  
14 megawatt output reductions during certain hours of the day.

15  
16 Appendix B (which is updated in Mr. Dolan's Exhibit No. 1 (RDD-4))  
17 sets forth the three curtailment priority groups into which the Plan  
18 places Florida Power's QF suppliers. Group A includes all QFs who  
19 supply firm capacity to the Company and have agreed in writing to a  
20 specific output reduction plan. Any QFs who supply firm capacity, but  
21 have not agreed to a written output reduction plan, are placed in Group  
22 B. The Group C QFs are those who sell as-available energy to the  
23 Company. This group includes COG-1 Rate Schedule purchases and all  
24 purchases in excess of the Committed Capacities set forth in firm  
25 purchase contracts.

1 Appendix C to the Curtailment Plan contains the specific step-by-step  
2 procedures which are to be followed by the Company's system  
3 operating personnel when minimum load conditions appear to be  
4 imminent. In effect, the whole balance of the Curtailment Plan lays the  
5 foundation for these specific operating procedures. From the system  
6 operators' perspective, Appendix C is the heart of the Curtailment Plan.  
7

8 **IV. THE PLAN'S APPENDIX C MINIMUM LOAD EMERGENCY**  
9 **CURTAILMENT PROCEDURES**

10  
11 **Q. Do the Appendix C procedures contemplate a lot of last minute**  
12 **decisionmaking?**

13 **A. Actually, they seek to minimize last minute uncertainty. They do this**  
14 **first by developing a strategy for handling minimum load conditions well**  
15 **in advance of a potential minimum load emergency. In addition, they**  
16 **anticipate that this strategy will be reviewed and updated regularly and**  
17 **adjusted as necessary to minimize any need for QF curtailments. When**  
18 **curtailments nonetheless become necessary, the procedures attempt to**  
19 **avoid last minute discretionary decisionmaking as much as possible by**  
20 **prescribing standardized curtailment priorities.**

21  
22 **Q. Does the advance planning and regular updating of operating strategies**  
23 **parallel the way in which Florida Power operates its own equipment?**

24 **A. Absolutely. Our Energy Control Center ("ECC") is manned 24 hours a**  
25 **day. Changing system operating conditions require continuous updating**  
26 **of operating strategies.**



1 **Q. How is this updating concept built into the Appendix C procedures?**

2 **A. Appendix C treats the approach of a minimum load emergency**  
3 **somewhat like the way the National Weather Service treats the**  
4 **approach of a dangerous weather condition. The Appendix C**  
5 **procedures describe four status levels culminating in a minimum load**  
6 **emergency -- these are: Level 1 Minimum Load Alert; Level 2 Preliminary**  
7 **Dispatcher Review; Level 3 Minimum Load Warning; and Level 4**  
8 **Minimum Load Emergency. Specific instructions are provided to the**  
9 **Company's operating personnel for each separate level. In addition, the**  
10 **procedures establish a fifth level -- Level 5 Reporting -- which occurs**  
11 **following the conclusion of a minimum load emergency and includes**  
12 **appropriate notification to this Commission.**

13  
14 **Q. Please describe what happens during a Level 1 Minimum Load Alert.**

15 **A. A Level 1 Minimum Load Alert is declared on or before noon of any**  
16 **business day on which the forecasted minimum load is expected to be**  
17 **2,500 MW or lower and the system generation level is expected to**  
18 **exceed the forecasted load level. This analysis takes into account all**  
19 **known information and expected conditions relating to customer loads,**  
20 **forecasted power purchases and sales, and both Company and QF**  
21 **generating units.**

22  
23 **Q. Can the declaration cover more than one succeeding day?**

24 **A. Yes, in the case of a weekend or holiday, the system operating**  
25 **personnel normally would make their preliminary load and resource**

1 evaluations before the extended non-business period and may provide  
2 notices that look ahead more than one day. If this practice is followed,  
3 then the potentially affected QFs would receive more rather than less  
4 advance notice of a possible curtailment situation.

5  
6 **Q. How is the Level 1 Minimum Load Alert communicated to affected QFs?**

7 **A. All affected QFs will be notified by facsimile notices sent to their plant**  
8 **operating personnel.**

9  
10 **Q. What special steps has Florida Power taken to ensure that its QF**  
11 **suppliers receive notices promptly under the Curtailment Plan?**

12 **A. The Company has arranged to use an expedited multi-party facsimile**  
13 **service called "Sprint Fax" which provides for simultaneous facsimile**  
14 **delivery of important operating instructions to all QF suppliers. As long**  
15 **as the QFs' plant operators have ready access to receiving facsimile**  
16 **machines, this system allows for almost immediate distribution of**  
17 **information.**

18  
19 **Q. What information is provided to the QF suppliers in a Level 1 Minimum**  
20 **Load Alert notice?**

21 **A. The notice will state that a minimum load condition may be imminent**  
22 **and it will identify the time period during which the condition is**  
23 **expected to occur. In addition, the notice will contain at least the**  
24 **following information:**

- 1 (1) A warning to QFs with voluntary output reduction plans that  
2 they will be expected to implement their agreed-upon  
3 reductions; and  
4  
5 (2) A request to these and all other QFs to communicate their  
6 willingness to make further voluntary output reductions before  
7 curtailments are made.

8  
9 **Q. After a Level 1 alert is issued, what initial actions does Appendix C**  
10 **instruct the Company's personnel to take?**

11 **A. The Company's Power Supply personnel are first instructed to gather**  
12 **the following information:**

- 13 (1) Estimated amounts of QF energy, including scheduled  
14 maintenance and voluntary daily/hourly QF output reductions;  
15  
16 (2) Additional amounts of QF energy which could be reduced, if  
17 needed, according to discretionary output reduction options  
18 available to the Company under negotiated output reduction  
19 plans; and  
20  
21 (3) The minimum levels at which the Company will be able to  
22 operate its own units and the minimum amounts to which the  
23 Company can reduce its energy purchases from other utilities.

24 The Power Supply staff next are instructed to develop a strategy for  
25 handling the minimum load situation considering all of the information  
26 that has been gathered. The strategy is to be documented and shared  
27 with appropriate ECC System Control personnel. Thereafter, ongoing  
28 review of system conditions continues.

29  
30 **Q. When will the Company proceed from a Level 1 condition to a Level 2**  
31 **condition?**

32 **A. The alert condition will proceed more or less automatically from Level**  
33 **1 to Level 2 as the minimum load period gets closer in time. As I have**

1 noted already, review of system conditions is ongoing at this point.  
2 However, by about 7:00 p.m., which typically will be about four hours  
3 before the beginning of the minimum load period, the Manager of  
4 System Control and/or the generation dispatcher will specifically review  
5 the strategy and documentation prepared by the Power Supply  
6 personnel. Also, the Company's plant operators will be contacted in  
7 order to verify and update the data and assumptions previously  
8 collected. Throughout this period, in addition to verifying information  
9 and modifying the minimum load strategy as needed, the generation  
10 dispatcher will attempt to arrange economic off-system sales.

11  
12 **Q. Is this the point at which a Level 3 Minimum Load Warning is issued?**

13 **A. The Minimum Load Warning is not issued until additional mitigation**  
14 **efforts have been made.**

15  
16 **Q. Please describe those efforts.**

17 **A. As the minimum load period gets nearer -- generally between about 9:00**  
18 **p.m. and 11:00 p.m. -- If it still appears that generation will exceed**  
19 **load, the generation dispatcher will make additional efforts to bring the**  
20 **generation and load into balance. Specifically, the dispatcher will:**

- 21 (1) Continue attempts to make additional economic off-system  
22 sales;  
23  
24 (2) Reduce the Company's own baseload coal units to normal  
25 minimum operating levels, to the extent that plant and system  
26 conditions allow;  
27  
28 (3) Communicate with plant operators to determine if it is feasible  
29 to run any of the baseload coal units at lower "emergency"  
30 operating levels to meet the low load conditions;

- 1 (4) Reduce all utility purchases to minimum amounts permitted by  
2 contract or by communications with the other utility, if not  
3 already done previously; and  
4  
5 (5) Cycle off any remaining intermediate and peaking units, again  
6 to the extent that plant and system conditions permit (by now,  
7 all or most of these units would likely be scheduled off-line  
8 already).

9  
10 **Q. What happens next under the Appendix C procedures?**

11 **A. After all the previously described measures have been taken, the**  
12 **generation dispatcher will make a final system evaluation. If a Minimum**  
13 **Load Emergency still appears imminent, the dispatcher will notify an**  
14 **appropriate manager and then issue a Minimum Load Warning Message**  
15 **to all QF suppliers, advising them that curtailments are expected and**  
16 **again asking for compliance with QF output reduction plans and other**  
17 **voluntary reductions. When the generation dispatcher determines that**  
18 **the system generation no longer can match the system load, a Level 4 -**  
19 **Minimum Load Emergency is declared.**

20  
21 **Q. Please describe what steps will be taken in a Level 4 condition.**

22 **A. Level 4 will involve curtailment of QF purchases beyond those that**  
23 **previously had been made voluntarily. These curtailments will occur**  
24 **according to the curtailment priority groupings shown on Appendix B of**  
25 **the Curtailment Plan.**

26  
27 **Q. How will the generation dispatchers determine how much curtailment**  
28 **is required and from which curtailment group or groups?**

1 A. The Company has developed a computer program which reflects the  
2 Appendix B curtailment groupings and the appropriate stacking order of  
3 curtailments as described in the Curtailment Plan. If "X" MW of  
4 curtailments are needed in order to match the system load, the  
5 computer program tells the dispatcher exactly how to apportion "X"  
6 MW among the various QFs as a percentage of their contractual  
7 Committed Capacities. The same can be done for any specified  
8 megawatt level of required curtailments.

9  
10 Q. Please explain how the curtailment priority groups will be effected in a  
11 Level 4 emergency.

12 A. Based on the results of the computer analysis, the generation dispatcher  
13 will take the following successive steps until the condition is abated:

- 14 (1) Notify Group C QFs to reduce as-available deliveries to Florida  
15 Power by up to 100 percent;  
16  
17 (2) Notify Group B QFs to reduce deliveries by a stated percentage  
18 amount up to 50 percent of Committed Capacity;  
19  
20 (3) Notify Group A QFs to reduce deliveries by a stated percentage  
21 up to 50 percent of Committed Capacity (as explained in Mr.  
22 Dolan's testimony, and as reflected in Appendix C of the  
23 Curtailment Plan, the Dade County Resource Recovery facility  
24 is treated differently for 1995 only); and then, if necessary,  
25  
26 (4) Notify all QFs to reduce deliveries by up to 100 percent.

27  
28 Q. What happens when the load begins to increase again?

29 A. As the load increases, the curtailment steps which I just listed will be  
30 followed in reverse order. When the Minimum Load Emergency has  
31 ended, all QFs will be given a notification to that effect.

1 Q. You stated earlier that Appendix C also includes a reporting phase as  
2 Level 5. Please describe that phase.

3 A. The Company will give prompt notice to this Commission whenever a  
4 Minimum Load Emergency results in QF curtailments. In addition, after  
5 such a condition has ended, the Manager of System Control and the  
6 Manager of Power Supply will gather all available documentation  
7 prepared during the minimum load period and will prepare a summary  
8 curtailment report which will be made available to any QF upon request.  
9

10 **IV. THE COMPANY'S INITIAL CURTAILMENT EXPERIENCE**  
11

12 Q. You have testified that the Curtailment Plan was first put into motion on  
13 October 18-19, 1994. Could the Company have avoided curtailments  
14 on that occasion?

15 A. No. The operating personnel at ECC took every measure available to  
16 avoid QF curtailments while maintaining system integrity and reliable  
17 operation of the grid. Beyond those measures there was no way short  
18 of curtailments to balance the system's loads and resources. I was  
19 personally present at ECC throughout the late night and early morning  
20 hours on October 18-19, 1994. When it became absolutely necessary  
21 to initiate curtailments, I helped to ensure that the proper steps were  
22 taken under the Curtailment Plan and that appropriate documentation  
23 was prepared.  
24

25 Q. Please describe your Exhibit No. 3 (CJH-1).

1 A. That exhibit includes a copy of the ECC "Curtailment Summary  
2 Documentation" which documents the steps taken on October 18-19,  
3 1994 before and during the Company's first minimum load curtailments.  
4 In addition, the exhibit contains a brief summary of each QF's response  
5 to Florida Power's curtailment instructions. The exhibit also contains  
6 comparable information for the later curtailments which were required  
7 in January, 1995.  
8

9 Q. Did the Company anticipate a minimum load problem early in the day on  
10 October 18, 1994?

11 A. Yes. In fact, during that part of October, ECC personnel had been  
12 carefully monitoring loads and resources nightly in anticipation of  
13 extremely low load conditions.  
14

15 Q. Please summarize the significant steps that were taken and information  
16 that was gathered on the morning of October 18, 1994 in anticipation  
17 of a potential minimum load problem.

18 A. As the log in Exhibit 3 (CJH-1) indicates, during the morning of  
19 October 18th, Power Supply personnel conferred with the Company's  
20 plant operators to determine the status of the various generating units  
21 and their ability to be cycled to accommodate minimum load conditions.  
22 This investigation revealed that Crystal River Units 1 and 2 could not be  
23 taken below their normal minimum generation levels (120 MW and 140  
24 MW, respectively) without significant risk that the boilers would trip off.  
25 In fact, Crystal River 2 had experienced operating problems on the



1 previous night and had tripped off-line when attempting to go below  
2 140 MW. When these baseload units are off-line, there is a substantial  
3 adverse reliability impact and significant additional costs are incurred to  
4 meet the rising morning loads. Therefore, it was determined that the  
5 normal minimum generation levels would be maintained.

6  
7 Also in the morning of October 18th, it was determined that Bartow  
8 Unit 2 could not be cycled off as contemplated by the Curtailment Plan  
9 because one generator breaker on the unit was in need of repair and the  
10 second unit breaker was out of service. There was significant risk that  
11 if the unit was cycled off, it would not have been possible to reclose the  
12 breaker. As a consequence, the unit would not have been available as  
13 needed on the following morning to meet the Pinellas County loads and  
14 avoid overloading transmission lines into the Suncoast Region.

15  
16 Q. What happened next?

17 A. Based upon all available information, a Level 1 Minimum Load Alert was  
18 declared shortly before noon on October 18th. At that time, it appeared  
19 that the nighttime load would fall to about 2,160 MW, while the  
20 anticipated minimum system generation would be about 2,313 MW.  
21 Thus, curtailments on the order of about 150 MW appeared likely. In  
22 fact, this is almost exactly how much curtailment was actually required  
23 on the morning of October 19th.

1 Q. What other important information was collected during the afternoon of  
2 October 18, 1994?

3 A. During the afternoon, several QFs telephoned the ECC staff to confirm  
4 receipt of the Minimum Load Alert. In addition, Power Supply personnel  
5 communicated further with the plant operators at the University of  
6 Florida cogeneration unit and at Anclote. Cycling problems were  
7 identified at both of those locations.

8  
9 Q. What problem was identified at the University of Florida unit?

10 A. The plant operator reported that the unit's backup boiler was inoperable  
11 because of a tube leak. As a result, if the unit were cycled off, the  
12 plant would have been unable to supply needed steam to its thermal  
13 energy host -- the Shands Hospital. This was viewed as an  
14 unacceptable potential risk to public health and safety. Therefore, it  
15 was determined that the unit would be operated at its minimum  
16 generation level, but would not be cycled off entirely that evening.

17  
18 Q. What was the nature of the operational problem at Anclote?

19 A. In mid-afternoon on October 18th, Power Supply personnel were  
20 informed that Anclote Unit 2 could not be cycled off because it was  
21 experiencing severe turbine shaft vibration problems. Fortunately, the  
22 unit was scheduled for routine maintenance about one week later, and  
23 the vibration problem was corrected at that time. However, like the  
24 situation at Bartow Unit 2, this transitory equipment problem created a  
25 substantial likelihood that removing Anclote 2 from service would have

1 prevented the unit from being restarted and brought into service when  
2 needed to meet the next day's Pinellas County loads. This presented an  
3 unacceptable system reliability risk

4 .  
5 **Q. Please continue by describing the events that took place into the**  
6 **evening of October 18, 1994.**

7 **A. Throughout the afternoon and evening of October 18th, the generation**  
8 **dispatcher followed the procedures called for under Level 2 of the**  
9 **Curtailment Plan, including monitoring system conditions and attempting**  
10 **to make economic off-system sales. For example, Southern Company**  
11 **Services, Inc. and Oglethorpe Power Corporation were contacted in an**  
12 **effort to sell energy. In addition, the dispatcher made hourly quotes on**  
13 **the Florida Broker System, and issued the following notice to all parties**  
14 **on the Florida Messaging System:**

15 FPC TO ALL CO.

16 FPC SHOULD HAVE SOME POWER TO SELL

17 OFF BROKER IN THE 14-15 DOLLAR RANGE

18 FOR HRS ENDING 0100-0500 ON WED. 10-19

19 . . . DGJ. . .

20 These efforts to sell power continued up to and during the period of QF  
21 curtailments on October 19, 1994.

22  
23 **Q. When was a Level 3 condition reached?**

24 **A. The Level 3 Minimum Load Warning was issued on October 19th at**  
25 **12:11 a.m.**

1 Q. Was this warning issued using the Sprint Fax system you described  
2 earlier?

3 A. Yes. However, during the day, we were told that several QFs had not  
4 immediately received the earlier Minimum Load Alert because their  
5 facsimile equipment was not accessible to the plant operators. Also, a  
6 few QF plant operators had not yet been familiarized with the  
7 Curtailment Plan procedures by their principals. Therefore, in order to  
8 ensure clear and timely notice to everyone involved, we separately  
9 telephoned each QF to confirm receipt of the Minimum Load Warning.  
10

11 Q. What else was occurring at ECC during this period?

12 A. Several additional measures were being taken to mitigate potential  
13 curtailments. Numerous telephone calls were made to Southern  
14 Company Services, Inc. to determine Florida Power's minimum take  
15 requirements from the Southern Companies. As it turned out, no such  
16 purchases were made. The generation dispatcher also aggressively  
17 continued his efforts to sell energy both on and off the Florida Energy  
18 Broker System.  
19

20 Q. Did the QFs take any actions in this timeframe which affected the need  
21 for curtailments?

22 A. Actually, the Tiger Bay facility had been off-line all day. Instead of  
23 remaining off-line, Tiger Bay came on-line at about 12:15 a.m.. Had it  
24 not been for that unit's deliveries of up to 156 MW, all or most of the

1 150 MW of curtailments on October 19, 1994 would have been  
2 averted.

3  
4 **Q. When was the Level 4 condition declared?**

5 **A. At 1:40 a.m. on October 19th, a Level 4 Minimum Load Emergency was**  
6 **Sprint Faxed to all QFs. Based upon the on-line information available to**  
7 **me and the generation dispatcher and the computer model which I**  
8 **discussed earlier, the Group A and B QFs were instructed to reduce**  
9 **deliveries to 50 percent of their Committed Capacity levels and the**  
10 **Group C QFs were told to cease all as-available energy deliveries. These**  
11 **percentages were established to achieve a 150 MW total reduction as**  
12 **of 2:00 a.m. to match the falling load.**

13  
14 **In light of the earlier communication problem, we again telephoned each**  
15 **QF to confirm receipt of the curtailment notices. This process was**  
16 **completed before 1:45 a.m.**

17  
18 **Q. Please describe what happened next.**

19 **A. A number of QFs informed us either that they would or would not**  
20 **comply. Some offered reasons; others just refused; some asked for**  
21 **additional time to comply.**

22  
23 **Curiously, instead of ramping down, the Tiger Bay unit increased its**  
24 **output. Pasco County Resource Recovery kept its output about**

1 A. I was extremely proud of the hard work done by my colleagues at ECC  
2 and the cooperative efforts shown by many of the QF operators. As I  
3 said previously, the requested curtailments were necessary under the  
4 circumstances. They were also held to the lowest practicable level  
5 given the unit and system conditions at the time.  
6

7 Overall, the events on October 18-19, 1994 went smoothly. There  
8 were some initial communication glitches, but steps have been taken to  
9 correct those. There also were a few instances of QF failures to follow  
10 the Curtailment Plan, but they do not appear to be continuing.  
11

12 **V. ADDITIONAL MEASURES FOR DEALING**  
13 **WITH CURTAILMENTS**  
14

15 Q. Since the October 19, 1994 curtailments, what additional procedures  
16 has Florida Power developed to facilitate implementation of the  
17 Curtailment Plan?

18 A. In the short time since October 19, 1994, the ECC staff has better  
19 equipped itself to foresee and deal with minimum load emergencies.  
20 Perhaps the most significant improvement has been the development of  
21 a computerized spreadsheet which contains detailed information about  
22 resources, loads and unusual system conditions. Samples of this  
23 spreadsheet are included in my Exhibit No. Σ (CJH-2).

1 Q. Exhibit No. 3 (CJH-2) includes one spreadsheet dated October 19,  
2 1994 and another dated December 8, 1994. Were they developed in  
3 the same way?

4 A. The two sample spreadsheets contain comparable information for the  
5 two days noted. However, the format was developed after October 19,  
6 1994. Thus, the October 19, 1994 spreadsheet shows historic data,  
7 whereas the December 8, 1994 spreadsheet contains projected data.  
8 The December 8, 1994 spreadsheet was prepared in the morning of  
9 December 7, 1994, and it projects load and resource data for the early  
10 morning hours of December 8, 1994. Now that this tool is available, a  
11 comparable spreadsheet is being compiled each morning to forecast the  
12 loads and resources for that night and the following morning. This  
13 analysis provides up-to-date information about unit operating conditions,  
14 required purchases, QF status, and projected loads. The spreadsheet  
15 offers valuable support to the ECC staff as they develop and implement  
16 daily minimum load strategies.

17  
18 Q. If this improved spreadsheet format had been available to the Company  
19 on October 18-19, 1994, could the curtailments which occurred have  
20 been avoided?

21 A. No. The spreadsheet assists greatly in the decisionmaking process, but  
22 would not have changed the ultimate decisions on October 18-19,  
23 1994.

1 Q. Has the Company taken any other actions to improve implementation of  
2 the Curtailment Plan?

3 A. Yes. The system operating personnel have made a concerted effort to  
4 communicate regularly with the QF operators to identify their daily  
5 operating conditions. Additionally, we have maintained close  
6 coordination with the Company's own plant operators in order to  
7 develop efficient and effective minimum load responses. Because we  
8 have been threatened repeatedly since mid-October with potential  
9 minimum load emergency conditions, the ECC staff has been devoting  
10 about two to three manhours daily to the task of understanding the  
11 current options and developing strategies for coping with minimum load  
12 conditions.

13  
14 Q. Has the Company had any close calls since October 18, 1994, where  
15 curtailments ultimately were avoided?

16 A. Yes, this has occurred repeatedly.

17  
18 Q. Please provide some examples of the circumstances that helped to avoid  
19 curtailments.

20 A. On several occasions, as contemplated by the Curtailment Plan, a  
21 decision was made that unit and system conditions were such as to  
22 justify bringing Crystal River Unit 1 to a lower "emergency" operating  
23 level of 70 MW instead of its "normal" minimum operating level of 120  
24 MW. This cannot be done consistently, nor would it be good for the  
25 unit. However, we took this extraordinary step to help avert



1 curtailments because other units had to remain on-line because of  
2 operating problems. Having these units on-line for system security  
3 purposes provided justification for reducing Crystal River Unit 1  
4 temporarily to a lower operating level.

5  
6 On another occasion, we were able to slow the Crystal River 3 start-up  
7 rate while returning from a maintenance outage to help avoid a  
8 curtailment condition. Also Crystal River 2 happened to have been off-  
9 line during December of 1994 for scheduled maintenance. The  
10 Company also has made aggressive efforts to market power to third  
11 parties. Two good examples are a 142 MW per hour sale to the  
12 Southeastern Power Administration's Carter Pumping Station for five  
13 nights in December 1994, and a longer-term contract providing Florida  
14 Power with an opportunity to sell up to 300 MW during nighttime hours  
15 to Oglethorpe Power Cooperative for its Rocky Mountain Pumped  
16 Storage Project.

17  
18 In addition, the Company has continued its efforts to reach agreed-upon  
19 output reduction arrangements with QFs. Tiger Bay, for example,  
20 agreed to shut down its unit each night upon request through the end  
21 of 1994 and we made that request on several occasions. A 175 MW  
22 reduction of this type goes a long way toward curing the minimum load  
23 problem. If other QFs were willing to shut down from time to time in  
24 this manner, then involuntary curtailments could be reduced accordingly.

**VI. IMPROVED CURTAILMENT EXPERIENCE**  
**IN JANUARY, 1995**

1  
2  
3  
4 **Q. Between October 19, 1994 and the end of January 1995, how many**  
5 **additional curtailment events have occurred?**

6 **A. The Company made it through the rest of October, November and**  
7 **December without any involuntary curtailments. In January, 1995,**  
8 **curtailment events occurred on January 1, 2, 7, 8, 14 and 30. I will**  
9 **refer to these collectively as the "January 1995 curtailments."**

10  
11 **Q. During the seven curtailment events between October and the end of**  
12 **January, was each of the QFs curtailed to the maximum extent called**  
13 **for by the Curtailment Plan?**

14 **A. No. The Group B QFs were curtailed by less than 50 percent on three**  
15 **occasions - January 8, 14 and 30, 1995. Group A curtailments were**  
16 **avoided entirely on January 8, 14, and 30, 1995, and were held to only**  
17 **47 percent of committed capacity on January 2, 1995. During the**  
18 **January 1, 1995 curtailment event, when 11 percent reductions would**  
19 **have been called for from the Group A QFs under the Curtailment Plan,**  
20 **each of these suppliers already was operating below the 11 percent**  
21 **level, so no curtailments were requested from them. In sum, out of**  
22 **seven curtailment events, the Group A QFs were only affected by three,**  
23 **and one of those three curtailments was held to less than 50 percent.**

24  
25 **Q. Are the events that took place during the January 1995 curtailments**  
26 **documented in any of your exhibits?**

1 A. Yes. The summary curtailment log sheets for those days are included  
2 in my Exhibit No. 3 (CJH-1) as are the curtailment notices that were  
3 supplied to the Commission.  
4

5 Q. During the January 1995 curtailments, did the Company experience  
6 problems with Anclote Unit 2, Bartow Unit 2 or the University of Florida  
7 Unit similar to those that occurred on October 19, 1994?

8 A. With one exception, these units all were cycled off during the January  
9 curtailment events as anticipated by the Curtailment Plan before any QF  
10 curtailments were ordered. The single exception relates to January 14,  
11 1995, when problems with the gas regulators to the back-up boilers at  
12 the University of Florida Unit prevented that unit from cycling off. The  
13 unit was kept on-line on that occasion to continue meeting the steam  
14 supply needs of the Shands Hospital.  
15

16 Q. During the January 1995 curtailments, was the Company required to  
17 purchase the Southern Companies' Miller or Scherer unit output?

18 A. On January 1, 1995, Florida Power was not required to purchase any  
19 unit power from Southern. On January 2, 1995, we were required to  
20 accept 23 MW of power from Scherer Unit 3. On January 7 and 8,  
21 1995, the minimum purchases ranged between 109 and 132 MW. On  
22 January 14, 1995, the hourly purchases were 96 MW or less. The  
23 Southern purchases ranged from 8 to 95 MW during the January 30,  
24 1995 curtailment period. In each instance, the QF curtailments were  
25 adjusted accordingly.

1 Q. During the January 1995 curtailments, did Florida Power experience any  
2 of the communication problems that occurred on October 19, 1994?

3 A. We have experienced some minor problems in sending Sprint Fax  
4 messages. For example, Timber Energy still does not have receiving  
5 facsimile equipment available to its plant operator. Therefore, as an  
6 extra precaution, each plant operator has been contacted directly by  
7 telephone. It appears that everyone is receiving timely curtailment  
8 information, but we would prefer to phase out individual telephone calls  
9 because this is an enormous time commitment at a time when running  
10 the system requires the system operators' careful attention.

11  
12 Q. During the January 1995 curtailment events, did Florida Power  
13 experience any of the QF compliance problems that occurred on October  
14 19, 1994?

15 A. No. I am pleased to say that the affected QFs complied with the  
16 Company's curtailment instructions and that output was reduced to the  
17 levels requested.

18  
19 Q. What conclusions do you draw about the Company's experience to date  
20 in dealing with minimum load curtailments?

21 A. Florida Power's Curtailment Plan and implementation practices both  
22 reflect aggressive, ongoing efforts to mitigate QF curtailments. The  
23 ECC staff is working diligently to achieve that objective. As a result,  
24 involuntary curtailments to date have been held to a bare minimum. The  
25 experience during the January 1995 curtailment events indicates that

1 the few initial problems experienced on October 19, 1994 have been  
2 largely remedied. The cooperation currently being put forth by our QF  
3 suppliers is encouraging.

4

5 **Q. Does this conclude your testimony, Mr. Harper?**

6 **A. Yes.**

1 Q (By Mr. Fama) Thank you. Mr. Harper, could you  
2 please summarize your prefiled testimony?

3 A Okay. In my testimony I summarize the  
4 responsibilities that I have as System Control Manager and go  
5 through a typical day, October the 19th, or the date of our  
6 first curtailment.

7 Summarizing that, I have responsibility for the  
8 day-to-day operation of the System Control Center as far as  
9 transmission, interchange and generation considerations go.  
10 It's my duty to operate the system in a safe, economical and  
11 reliable fashion at all times within the guidelines of the  
12 electric utility business.

13 Summarizing what the curtailment plan does, how  
14 we've implemented it so far, the results of that  
15 implementation on the seven curtailments and the daily overall  
16 planning that goes into our daily work process is my  
17 testimony.

18 The final area actually dealt with October 19th.  
19 I'll go through that summary of that account, keeping in mind  
20 that the curtailment of October 19th was not a whole lot  
21 different than any of the other curtailment periods, nor a  
22 whole lot different than our typical daytime operation and how  
23 we plan the system and how we reach conclusions on where we're  
24 going during the day.

25 So, once again, while I'm reading from the October

1 18th-October 19th curtailment event, they pretty much  
2 summarize our daily activities.

3           Typically, in the morning, and at Energy Control,  
4 the Power Supply Department and the System Control Department  
5 talk to the different power plants, see what happened during  
6 the night. We talk to the dispatchers that were on duty, read  
7 their notes from the previous night, gain information from the  
8 QFs by faxes that have been sent in on their proposed megawatt  
9 amounts for the next night. At the same time engineering  
10 technicians are looking at the load forecast for the next --  
11 oh, excuse me, the weather forecast for the next day and any  
12 other significant events that would place how we run the  
13 system the next day.

14           Once we gain all that information, we feed or place  
15 that -- the projected load forecast and any unit limitations  
16 into a program called "unit commit." Once we get the unit  
17 commitment output runs, which gives us an economic outlook of  
18 how we should run the system -- and I stress that is an  
19 economic output, not a regulation or reliability output -- we  
20 make many recommendations based on our next day's planning  
21 based on regulation control, system security and economics.

22           So we get the output of unit commit, place that data  
23 on a daily worksheet where we examine all the different  
24 criteria that go into the coming day's events. From the  
25 worksheet it gives us a very good idea of whether we'll be

1 into a low load situation that night and how we are going to  
2 handle it and what will be required.

3           Once again, like I say, we've already contacted our  
4 units, so we know pretty much what our units can do. And at  
5 this point we know pretty much what the QFs can do.

6           If, as on October the 18th, we saw that we would  
7 have excess generation compared to our load, we made efforts  
8 to try to sell power off-broker. We called around to  
9 different locations in the state of Florida, as well as the  
10 southeast. We contacted Southern Company at that time to see  
11 if we have to take the Southern must-take. They were not able  
12 give us an answer that soon, that early in the day. As it  
13 turned out, we did not have to.

14           By about 11 o'clock on October the 18th we  
15 determined we would be into a low load situation, and we  
16 issued the first Level 1 minimum load alert. It was faxed out  
17 by means of a fax system that sends them out simultaneously to  
18 the all the QFs and our own power plants so that everyone is  
19 notified at the same time of the minimum load alert.

20           As the day progressed we went into what we call a  
21 Level 2 of the plan that Mr. Dolan described, where the  
22 dispatchers and the power supply engineering staff watch and  
23 monitor the system to see if it's proceeding on as we had  
24 forecast.

25           In the case of October the 18th, it was. The load



1 was following the forecast exactly, right on into the evening  
2 hours. During that time our dispatchers continued to try to  
3 sell power off-broker. And I'm talking about trying to sell  
4 power to other companies in terms of from 0100 to 0600, in  
5 that time frame, trying to get us through the eventual low  
6 load period.

7           As we approached 11:30, 2330 at night, the  
8 dispatchers notified me, and I came back to the control  
9 center. We made a determination at that time since the loads  
10 continued to fall and it was apparent that we were going to  
11 have more generation between the QPs and FPC's own  
12 generation than we could handle, we sent out a Level 3  
13 notification shortly after midnight. Level 3, as Mr. Dolan  
14 described, is notifying everyone of an imminent curtailment.

15           At 0140, after continual tries at selling power and,  
16 bear in mind, when everyone is in this situation it's very  
17 difficult to sell power; we were not able to. And contacting  
18 Southern Company, once again trying to determine whether or  
19 not we were going to have to take their Southern must-take, we  
20 sent out a message at 0140 that we would go into a Level 4  
21 effective at hour 2:00 for hour ending three. And we asked  
22 for specific megawatt amounts.

23           100% of A sales to Florida Power and 50% of B and A  
24 committed capacity effective at 2 o'clock for hour ending  
25 three.

1           We followed up each of these messages, the one at  
2 noon, Level 1; the one shortly after midnight, the Level 3 and  
3 the Level 4. We followed up all those faxes with phone calls  
4 to each of the QF suppliers so there would be no doubt in  
5 anyone's mind exactly that we wanted, and we explained the  
6 situation to them.

7           At 2 o'clock our load continued to fall. Many of  
8 the QFs responded to us at that time and started curtailing  
9 some of their load; some did not. As it turned out, we had  
10 asked for 150 megawatts; and we came very close to that  
11 150-megawatt amount.

12           The curtailment period lasted until 6 o'clock in the  
13 morning. At 5:30 we notified everyone that at 6 o'clock they  
14 could start ramping their units back up. And at 6 o'clock  
15 they did. We sent out a message that the curtailment period  
16 was over. The following day we notified the Commission as  
17 Level 5 dictates.

18           The other area of summary in my testimony was what  
19 we've done since then. We have initiated a new type of  
20 worksheet since then, compared to the very first one that we  
21 had where we can analyze things even closer on a computer  
22 spreadsheet. We've continued working with our own units to  
23 minimize Their levels of operation and maximize their control  
24 levels. And we've had very tremendous cooperation from  
25 several of the QFs in helping us to alleviate many, many of

1 what were potential curtailments.

2 MR. FAMA: I tender the witness for cross  
3 examination.

4 CHAIRMAN CLARK: Ms. Walker?

5 MS. WALKER: We don't have any questions for this  
6 witness.

7 CHAIRMAN CLARK: Mr. McGlothlin?

8 MR. MCGLOTHLIN: We don't have any questions.

9 CHAIRMAN CLARK: Mr. Presnell?

10 MR. PRESNELL: Chairman Clark, I know this may come  
11 as a shocker to everyone in the room, but I think that OCL and  
12 Florida Power may have reached somewhat of an accord on at  
13 least one of the issues in this proceeding. And with the  
14 agreement of Florida Power, I will defer my cross examination  
15 of Mr. Harper with respect to that particular issue. If we  
16 are not able to resolve it during the evening, then Florida  
17 Power has agreed with the Commission's approval that I could  
18 recall the witness for the limited purpose of finishing his  
19 cross examination. Is that acceptable to the Commission?

20 CHAIRMAN CLARK: Yes. That is acceptable. Thank  
21 you.

22 CROSS EXAMINATION

23 BY MR. PRESNELL:

24 Q Good afternoon, Mr. Harper. As I understand it, as  
25 manager of System Control, you're pretty much on the firing

1 line during these curtailment episodes, correct?

2 A Yes, sir.

3 Q You are the one responsible from a hands-on  
4 standpoint of doing everything conceivably possible to avoid  
5 an actual curtailment event, correct?

6 A Two sections of Energy Control are the ones directly  
7 responsible; the Power Supply Department and my area, yes,  
8 sir.

9 Q And the Power Supply Department, they are the people  
10 who, based on weather forecasting and generating resources,  
11 provide an estimate to you on a daily basis of what generating  
12 resources to expect and what load to expect, correct?

13 A Correct.

14 Q And the minimum load situation is primarily a  
15 product of weather conditions?

16 A Yes, sir, that's correct.

17 Q And because of the vagaries of whether you have  
18 maybe a one or two day advanced warning of a possible  
19 curtailment episode?

20 A Typically, one day; sometimes two at the very most.

21 Q So your window of planning is basically 48 hours?

22 A At the most for a -- we can get a broad view looking  
23 out several days as to what we could be getting into. But the  
24 closer we get to it, the more assured we are that we'll be  
25 into a low load situation.

1 Q Now, as I understand it, you have basically two  
2 responsibilities in order to try to alleviate a curtailment.  
3 The first is to bring down your own units to their absolute  
4 minimum operating level including the voluntary QF reductions.  
5 Is that an accurate statement?

6 A We bring down our own units to the minimum operating  
7 levels, taking into consideration control regulation, AGC,  
8 that type of thing and potential security on the system.

9 CHAIRMAN CLARK: Mr. Harper, AGC?

10 WITNESS HARPER: Automatic generation control.  
11 That's the ability to follow load.

12 CHAIRMAN CLARK: Okay.

13 Q (By Mr. Presnell) And in addition to that, you  
14 endeavor to the extent reasonably possible -- and we'll talk  
15 about the reasonableness aspect of this -- to sell surplus  
16 power, correct?

17 A Yes, sir, we do.

18 Q For example, if your minimum generating resources  
19 are at 2,200 megawatts, including your AGC requirement, and  
20 you are anticipating a load of 2,000 megawatts, then you have  
21 a 200-megawatt surplus to deal with, correct?

22 A Correct.

23 Q And theoretically there are two ways to deal with  
24 that. You can at that point curtail the QFs, or you can  
25 attempt to sell that 200 megawatts off-system, right?

1 A Correct.

2 Q Now, with respect to the October 19th episode, let's  
3 talk about that for a minute. As I understand your testimony,  
4 the way it's formatted in your exhibits, there's a tab, Tabs 1  
5 through 7 which correspond to each of the curtailment episodes  
6 that have been experienced to date?

7 A Yes, that's correct.

8 Q And if we turn to Tab 1, then that would give us a  
9 summary of the documentation pertaining to the October 19th  
10 episode?

11 A Right.

12 Q And several pages into it -- and I know they are not  
13 numbered -- but there's a chart that says "FPC Energy Control  
14 Center, Power Supply, Minimum Load Emergency Curtailment  
15 Summary." Do you see that?

16 A Yes, sir.

17 Q Is that a summary by hour beginning at 1 o'clock on  
18 the morning of the 19th with respect to the generation output  
19 of each of the facilities reflected on that list?

20 A Yes, it is. This summary, however, was done --

21 Q This was done after the fact?

22 A This was done after the fact. This particular  
23 spreadsheet was not available to us during the first  
24 curtailment episode.

25 Q Is this the new worksheet that you've indicated in

1 your testimony you've since developed for the new  
2 curtailments?

3 A No. There's a worksheet further on in here, and  
4 then later on in the other ones, this is the summary of events  
5 that happened; the worksheet we used going into the  
6 curtailment period in the morning.

7 Q But this is an accurate portrayal of the actual  
8 generation levels of all these units during the October 19th  
9 episode?

10 A I did not make this, but I would say, yes, it is.

11 Q Well, you're sponsoring the exhibit. You don't have  
12 any reason to believe it's not accurate, do you?

13 A No, I have no reason to believe it's not accurate.  
14 I'm just saying I did not particularly do this spreadsheet.

15 Q And Florida Power's units are listed in the bottom  
16 part of this chart?

17 A Correct.

18 Q Now, I notice, for example, Crystal River Unit  
19 No. 3, that's your nuclear unit, correct?

20 A Yes, sir.

21 Q And it has a minimal operating level of 800  
22 megawatts?

23 A Right.

24 Q And during the January curtailments, you brought  
25 that unit down to 800 megawatts?

1           A     The Crystal River 3 nuclear unit remains steady at  
2 800 megawatts at all times. That's a net figure after  
3 participants. Total output of the unit is somewhere around  
4 870 typically, and there's partial ownership by several other  
5 owners. So the 800 is actually the gross amount on to our  
6 system after we give the portion that belongs to the other  
7 people.

8           Q     Well, if you go over to the right it indicates that  
9 that unit was operating during the curtailment period at  
10 around 845 megawatts?

11          A     That's the net amount. You also have to take into  
12 consideration, the auxiliaries on the unit. So there's  
13 actually -- in different testimony you'll see a figure of 800,  
14 you'll see a number 880 and 755 at different places. Those  
15 are all just different ways of saying you're either giving to  
16 the co-owners the auxiliaries and the gross or the net on to  
17 our system.

18          Q     Well, was the additional 45 megawatts generated as  
19 reflected on the -- during the curtailment period? Is that  
20 the portion that went to the other owners of the unit?

21          A     I don't know what the gross -- the actual gross  
22 output was that night. It was probably around 870, and what  
23 we were giving to the other participants was probably 35 or 40  
24 megawatts at that time. It also could have been derated that  
25 night for some particular reason. I'm not sure. I don't



1 remember right now.

2 Q Well, wouldn't you agree with me, Mr. Harper, that  
3 on October 19th you did not bring your nuclear plant down as  
4 low as it could go?

5 A I have no options in reducing the output of the  
6 nuclear unit at all for any reason other than an extreme  
7 system emergency. It's a policy decision of Florida Power  
8 that the output of CR-3, the nuclear unit, will stay at its  
9 same load at all times. In other words, the maximum is the  
10 minimum at all times.

11 Q Well, let me ask you the question this way: During  
12 the January curtailment episodes, wasn't the nuclear plant  
13 taken down to a level below that which it was taken on October  
14 19th?

15 A The nuclear unit was never taken down as a result of  
16 the low load situation. At one time during one of the  
17 curtailments, it was down for maintenance, had come off-line  
18 for several days. And as it was coming back on line during  
19 one of the curtailments periods -- actually, it was not during  
20 one of the curtailment periods, it was prior to one -- we  
21 slowed the megawatt output of the nuclear unit as it came back  
22 from 4 or 5 megawatts a minute to, I think, 2 megawatts a  
23 minute. By them doing that, we avoided a curtailment.

24 Q Mr. Harper, turn to the last page of your exhibit.

25 A The last -- where at?

1 Q The absolute last page --

2 A In the total exhibit?

3 Q -- of your exhibit which is the last page under Tab

4 7. Now, that's a similar summary for what period?

5 MR. FAMA: Craig, I'm sorry, are you in the -- I  
6 think that might be Exhibit 2. Is there a green insert page  
7 before it?

8 MR. PRESNELL: Well, all I know is it's just  
9 prefiled testimony and it's the last page beyond Tab 7.

10 MR. FAMA: I think you are in the last page of his  
11 prefiled which is not behind tab -- can you read just what's  
12 at the bottom right?

13 MR. PRESNELL: It is says "FPC Witness Harper,  
14 Exhibit No. 'blank,' CJH 2, Page 202."

15 Q (By Mr. Presnell) Are you with me, Mr. Harper?

16 A I'm there.

17 Q Now, there it shows Crystal River Plant on the  
18 left-hand side with a committed capacity of 800 that was  
19 actually operated at 800, correct, during the evening hours  
20 and early morning hours?

21 A That's' exactly right. That's showing --

22 Q Now, why was your Crystal River nuclear plant turned  
23 down to 800 megawatts on that episode, but not turned down to  
24 800 megawatts on the morning of October 19th?

25 A As I say, I'm not sure why that 845 number is in

1 there. I think at the time these spreadsheets were just being  
2 developed during that first curtailment period, the worksheets  
3 and the summary sheets, the minimum value on the nuclear unit  
4 during the CR-3 episode -- excuse me, during the October 19th  
5 episode -- and if you'll excuse me one moment while I look  
6 back. Okay.

7 The actual gross output -- and I'll get back to this  
8 last page in just a moment.

9 On Wednesday the 19th of October, the actual gross  
10 output of CR-3 to the system was 881 to 880 megawatts during  
11 the entire 0100 to 0700 time period. Why the 845 is showing  
12 on the one sheet, I'm not certain at this time. But I can  
13 guarantee you that the actual output to the system, net minus  
14 the participants, was approximately 800 megawatts during each  
15 of the curtailment periods.

16 Q So you are telling the Commission that despite what  
17 these exhibits show, the nuclear unit remained at 800 during  
18 all of the curtailment episodes?

19 A I cannot answer the 845 on that one specific page,  
20 but I can back it up by looking at the actual generation  
21 steam -- generation output found under October 19th, and it  
22 shows exactly under CR-3 what the gross output of the unit  
23 was.

24 Q The gross output was 880?

25 A 880.

1 Q And how much of that was delivered, either used or  
2 delivered to the other owners?

3 A Approximately 80 megawatts.

4 CHAIRMAN CLARK: So I think the answer to his  
5 question is, yes, it was the same both in October and January;  
6 is that correct?

7 WITNESS HARPER: Yes, ma'am, that's correct.

8 CHAIRMAN CLARK: And you have a difference in what  
9 you were adding into that amount in terms of participants?

10 WITNESS HARPER: I'm not sure what that 45 number is  
11 just right offhand right now.

12 CHAIRMAN CLARK: But you are sure it was generating  
13 at the same amount?

14 WITNESS HARPER: Yes, ma'am. And that's shown in  
15 our logs within the same exhibit.

16 Q (By Mr. Presnell) Well, can you explain then why the  
17 exhibit indicates it was generating at 845 net during the  
18 curtailment hours? Is that simply a mistake in your exhibit?

19 A Let me just take one moment to look at it again.

20 (Pause)

21 I would say what this is, is when this sheet was  
22 made, this is showing minus the auxiliaries of the unit, which  
23 would be approximately 40 megawatts hourly. And this is not  
24 showing -- as you mentioned a few moments ago, I mentioned  
25 that you could see three different amounts: Approximately

1 800, 880 and 755, I believe it is. I believe this is the net  
2 amount minus auxiliaries, or those -- the pumps and the type  
3 of thing that it takes to run the power plant, and then it is  
4 not showing the participants on this particular chart.

5 I've ran through and scanned all the other ones and  
6 it appeared that they're 800 on all the other charts.

7 Q So the bottom line is, there's no ability as you  
8 understand it to turn the nuclear plant down at all in order  
9 to help alleviate a minimum load situation?

10 A Yes, sir, that's correct.

11 Q Not even one megawatt?

12 A Not even one megawatt.

13 Q Right. Now, you would agree with me that your plan  
14 does contemplate, however, that you would turn off all your  
15 intermate and peaking units, correct?

16 A That is the plan as best we can, yes, short of any  
17 problems at those units or security needs.

18 Q And in looking, again, at your summary of your  
19 October 19th episode under the FPC units, Anclote No. 2,  
20 that's an immediate oil-fired unit?

21 A Yes, sir.

22 Q And you would agree with me that you didn't cycle  
23 that unit off, did you?

24 A That's correct.

25 Q And so there are some 25 to 30 megawatts of power

1 being generated by Anclote Unit No. 2 which contributed to the  
2 minimum load problem that evening, correct?

3 A Yes, sir. It was on line.

4 Q And, also, Bartow Unit No. 2 stayed on line, did it  
5 not?

6 A Yes, sir.

7 Q And so between 19 and 35 megawatts, I guess 19 to 20  
8 megawatts of power generated by that unit of Florida Power's  
9 contributed to its own curtailment problem that evening,  
10 correct?

11 A That's correct.

12 Q And then under that it shows UFCOG. That refers to  
13 the University of Florida Cogen?

14 A Right.

15 Q And that's a 40-megawatt unit in Gainesville?

16 A Approximately 40 megawatts.

17 Q And under your curtailment plan, you're supposed to  
18 turn that unit off, right?

19 A The plan calls for us to turn those units off, yes.

20 Q And you will agree with me that on the 19th you  
21 didn't turn that unit off either?

22 A That's correct. As to the Anclote unit, that  
23 evening -- that afternoon when we were in contact with the  
24 operations people at Anclote, the unit had turbine vibration.

25 Q Well, wait a minute, sir. There's no question

1 pending on Anclote.

2 A Anclote 2 you asked me about; why did we keep it on.

3 Q No, I'm sorry. I said the University of Florida  
4 project. I'm sorry if I said Anclote.

5 A I was going to summarize the Anclote, the Bartow and  
6 the University of Florida unit, why they were all on line.

7 CHAIRMAN CLARK: Mr. Harper, as I recall, that was  
8 in your direct testimony as to why that was on or somebody's  
9 direct testimony.

10 WITNESS HARPER: It was in mine, yes, ma'am.

11 CHAIRMAN CLARK: And your attorney will have the  
12 opportunity to ask you redirect.

13 WITNESS HARPER: Okay.

14 Q (By Mr. Pressnell) I'm simply trying to establish,  
15 Mr. Harper, that there was 15 megawatts of power being  
16 generated by Florida Power's own cogeneration unit at the  
17 University of Florida which contributed to its curtailment  
18 problem that evening, correct?

19 A That's correct.

20 Q So between Anclote, Bartow and the University of  
21 Florida, there's about 60 megawatts of the problem right there  
22 within your own system, right?

23 A Correct.

24 Q And that's because Florida Power has operational  
25 problems turning some of its units off, right?

1 A On occasion.

2 Q And it's because Florida Power has steam host  
3 requirements with respect to its cogeneration contract, right?  
4 Is that the reason?

5 A That is the reason that night, right, yes, sir.

6 Q And you would agree that QFs also have operational  
7 conditions and steam host requirements that might give them  
8 problems in terms of cycling their units down or off during  
9 the curtailment period, correct?

10 A Yes, sir. I would recognize that QFs do have  
11 operational temporary problems. And, in fact, I've issued a  
12 letter to the operations people at ECC stating that if a QF  
13 would call and say they had a short-term operational problem  
14 with a unit, that we will recognize that problem and fully  
15 allow that unit to stay on during a situation, too.

16 Q Okay. So you were looking for 150 megawatts. In  
17 other words, that's the surplus you were faced with that  
18 evening as a dispatcher, correct?

19 A Correct.

20 Q And if 60 of those were attributable to your own  
21 units, we then have 90 megawatts to talk about for purposes of  
22 my questioning. And the next level, I guess, of effort would  
23 be to get the voluntary NUGs to reduce their power by the  
24 amount that they had agreed or committed to reduce? Is that  
25 part of your job as the dispatcher?



1           A     Keeping in mind that the 60 megawatts of our units  
2 that were on line would still call for 150 megawatts total,  
3 the Level 1 alert that went out at noon would notify the QFs  
4 of voluntary curtailments, that we would be placing them into  
5 effect.

6           Q     Okay. Well, my question was assuming that you were  
7 able to turn off the units that Florida Power continued to  
8 operate through the curtailment episode, then you would have  
9 only needed 90 megawatts that evening, correct?

10          A     That's correct.

11          Q     Then did you have 90 megawatts of commitments from  
12 the voluntary QFs?

13          A     That would have been over and above the 150 that we  
14 requested.

15          Q     So if the Group A NUGs had just done what they said  
16 they would have done, done what they had committed to do,  
17 there would have been no necessity at all on the evening of  
18 the 19th to curtail the Group B NUGs, correct?

19          A     All our negotiated agreements were in effect and  
20 carried out.

21          Q     Well, they were?

22          A     When we went into the Level 4, yes, sir.

23          Q     No. I'm talking about the voluntary commitments;  
24 that is the commitments made by the Group A NUGs to voluntary  
25 turn down. If all of those NUGs had turned town to the extent

1 they had promised to turn down, would a Group B curtailment  
2 have been necessary at all?

3 A Excuse me just a moment while I look at the chart  
4 and see which ones did and didn't.

5 Q For the Commission's benefit, let's refer them under  
6 Tab 1 to the -- what, the third page there is what you're  
7 talking about, the Power Supply Notes Cog Curtailment Quick  
8 Summary? Do you see that?

9 A Yes, sir.

10 Q Is that a summary of what the Group A NUGs or  
11 actually all the NUGs did that evening?

12 A Yes, it is.

13 Q Well, why don't we just go down and break the -- the  
14 first one is Auburndale?

15 A Do you want to take it, or do you want me to?

16 Q Is the first one Auburndale?

17 A Auburndale, yes.

18 Q And according to that note, they had agreed to  
19 reduce to 98.5, correct?

20 A That's correct.

21 Q But they refused to comply with their commitment and  
22 they only came down to 105; is that correct? (Pause)

23 A I'm looking one other place. That's correct.

24 Q So they were six and-a-half megawatts short of their  
25 commitment?

1 A That's correct.

2 Q All right. DCRR complied. What about LCL, is that  
3 Lake?

4 A That's Lake, yes.

5 Q And that indicates that Lake refused to reduce its  
6 load?

7 A That's correct.

8 Q And did you have an agreement with Lake at that  
9 time?

10 A I'm not sure. I'm not certain whether we did or not  
11 at that time. I believe we did.

12 Q Okay. Do you know what deficiency there was in  
13 Lakes' commitment to curtail in that episode? (Pause)

14 A We anticipated them to come to 95 megawatts.

15 Q And what were they at?

16 A This shows they -- okay. This says that they stayed  
17 at their forecasted load. Now, their forecasted load very  
18 well could have been 95. And this chart on the next page  
19 shows that they did stay at 95. I don't know what their  
20 forecasted load was. I presume it was 95.

21 Q Well, doesn't this summary connote that Lake did not  
22 reduce its load to the point that Florida Power expected?

23 A What we're talking about on this note now is the  
24 Level 4 notification to reduce further.

25 Q I see. So even though you issued a Level 4 demand

1 that they reduce, they refused to do so?

2 A They refused to come below the 95, right.

3 Q All right. What about PSRR? Who is that?

4 A That's Pasco Resource Recovery.

5 Q Now, they have an agreement, do they not, they are a  
6 Group A NUG?

7 A Okay --

8 Q Or they were at the time?

9 A Yes, sir. And their negotiated minimum output was  
10 23, and they came down to an average of about 16 or 17 for the  
11 night.

12 Q So they were 6 megawatts short; is that correct?

13 A Let me find Pasco again. I'm flipping back and  
14 forth between this and the other page.

15 Pasco County Resource, their committed capacity is  
16 23, and they were about six short.

17 Q Okay. What about PCRR? That's Pasco County  
18 Resource Recovery?

19 A This one's Pinellas County Resource Recovery. They  
20 did not reduce load.

21 Q And they had a commitment to reduce?

22 A Yes, they did; and I'm not sure of the megawatt  
23 amount.

24 Q But there was a deficit, basically, in their  
25 voluntary commitment, correct?

1 A I'm not sure. I don't know. I don't know on that  
2 one.

3 Q Well, if they had a commitment to reduce load and  
4 according to your note they didn't reduce the load, wouldn't  
5 that say to you that they didn't do what they said they were  
6 going to do?

7 A I don't know the value that they were supposed to  
8 decrease.

9 Q I understand that, but you would admit that there is  
10 some value by which they were short?

11 A Yes, they were short.

12 Q Then we get -- let's go down to TIGC. That's Tiger  
13 Bay?

14 A Tiger Bay.

15 Q And they had committed to do what on a voluntary  
16 basis?

17 A Tiger Bay at that time was in their start-up mode.  
18 They were not commercial onto our system yet.

19 One of the things going into that evening, had that  
20 unit not been on line, we would have avoided a curtailment.  
21 We didn't know when the unit was coming on line. As it turned  
22 out, it came on right around midnight.

23 Q Didn't you have a commitment from Tiger Bay not to  
24 provide any test energy during that evening?

25 A Not that I'm aware of. In fact, we had made contact

1 with them several times during the day, and they told us they  
2 were coming on line.

3 Q So Tiger Bay, even though they were not in service  
4 and was only in the testing phase, ramped up and came on line  
5 despite your request or despite your advice that that would  
6 cause serious problems with respect to your curtailment,  
7 correct?

8 A I do not have the authority to tell a unit not to  
9 come on line to a QF. We were in touch with them several  
10 times during the day, the Power Supply Department, trying to  
11 ascertain whether or not they were going to be coming on line,  
12 but we certainly in no way told them to not come on line.

13 Q Did you ask them not to come on line?

14 A I'm not certain. I did not personally.

15 Q Well, did you instruct your dispatchers to tell them  
16 that?

17 A The dispatchers were not the ones making the phone  
18 call. The Power Supply Department was. I don't know  
19 whether -- they don't report to me. I'm not sure whether they  
20 asked that question or not. I know it was probably in the  
21 topic of conversation.

22 Q Well, you would agree with me that if Tiger Bay had  
23 simply honored a request not to deliver test energy on the  
24 early morning hours of October 19th, there would have been no  
25 curtailment; is that right?

1           A     If Tiger Bay had not come on line, there would have  
2 been no curtailment.

3           CHAIRMAN CLARK: Just so I'm clear, Tiger Bay had  
4 not at that time become a Group A cogenerator, had they?

5           WITNESS HARPER: To the best of my knowledge, it was  
6 not. It was still in the test mode.

7           MR. PRESNELL: They already had an agreement,  
8 though.

9           CHAIRMAN CLARK: That's what I'm really asking. If  
10 Tiger Bay had an agreement, a side agreement, to curtail  
11 during the October 19th --

12          WITNESS HARPER: I'm not certain as to the date  
13 whether they did or not. Mr. Dolan could tell us that, but I  
14 don't know.

15          CHAIRMAN CLARK: Okay.

16          Q     (By Mr. Presnell) With respect to Tiger Bay --  
17 also, if you'll turn the page there to the Energy Control  
18 Power Supply Summary that we're talking about.

19          A     Right.

20          Q     It shows Tiger Bay's committed capacity of 217.75?

21          A     Right.

22          Q     Now, would you agree with me that Tiger Bay did not  
23 become commercially in-service until January of '95?

24          A     I believe they -- keep in mind I'm not the contract  
25 person, but I believe the final phase of their contract became

1 effective January 1st. I think another phase of their  
2 contract was effective in the late fall.

3 Q Well, let me ask it this way and maybe refresh your  
4 recollection. Isn't it true that all portions of the contract  
5 except the Avon Park came on line in January, and that 40  
6 megawatts of that unit will not become commercially in service  
7 until July of this year?

8 A That could be. I'm not certain.

9 Q And if that's true, their committed capacity as of  
10 today is somewhat -- is 40 megawatts less than 217, correct?

11 A I would not be the person that could comment on  
12 that.

13 Q And looking further at your power supply notes,  
14 LCRR?

15 A Lake County Resource Recovery.

16 Q They apparently didn't comply with their voluntary  
17 commitment either, did they?

18 A They did not.

19 Q Now, the next one is Orlando CoGen?

20 A Right.

21 Q And Orlando CoGen did comply with your request, did  
22 they not?

23 A Orlando CoGen called. In fact, they talked to one  
24 of the dispatchers, and they referred it to me, and said that  
25 they had an air compliance problem, I believe it was, and said



1 they could not comply to the full amount of the request, and  
2 they would have to come off line. So they more than helped.

3 Q Basically, Orlando made up for the -- almost made up  
4 for the Tiger Bay energy that was delivered, correct?

5 A No. They provided 98 megawatts of the total amount  
6 needed.

7 Q And does Florida Power in its cogeneration plan have  
8 any procedure or methodology for compensating OCL for the  
9 overage it supplied on that occasion?

10 A No. We have no plans such as -- for anything like  
11 that.

12 Q You will agree with me that under the curtailment  
13 plan, since Orlando CoGen was a Group B NUG, they would have  
14 been required to curtail it 50%, correct?

15 A That's what we requested.

16 Q And because of their operational situations,  
17 situations similar to what Florida Power has operating its own  
18 units, they had to turn their unit off entirely, correct, and  
19 reduce to 100%. Right?

20 A I'm not a power plant person. It's my understanding  
21 that OCL's problem was not a short-term problem but rather a  
22 long-term and would not be able to do that at anytime, where  
23 our unit problems were short term.

24 Q You understood that there was a level below which  
25 Orlando cannot operate and comply with its environmental air

1 permits, correct?

2 A That's my understanding, right.

3 Q So even though Orlando was forced by your  
4 curtailment plan to give 100% rather than 50, there's no  
5 mechanism to equal up or even up curtailments over time so  
6 that Orlando is not penalized by its own operational or air  
7 permitting concerns?

8 A No, we have no plan nor do we have a plan for our  
9 own units which go beyond the scope of the plan.

10 Q Now, in addition to trying to bring your own  
11 generation facilities down to a minimum, if you do that and  
12 you still have an excess of, say, 150 megawatts which you had  
13 on the 19th, you then have the option of attempting to sell  
14 power off-system, correct?

15 A Yes, sir.

16 Q And I take it that during the day on the 18th when  
17 you were facing the possibility of a curtailment episode, you  
18 made efforts to sell power off-system, right?

19 A That's correct.

20 Q And on Page 17 of your testimony, you reflect the  
21 message that went out on what's called the Bulletin Board?

22 A It went out on the Florida Messaging System.

23 Q And who does that go to?

24 A That particular message went out to all the  
25 operating companies in the state of Florida.

1 Q And how many of those are there?

2 A I believe there are 23.

3 Q When was this message first sent?

4 A This message was sent out sometime in the afternoon  
5 of the 18th.

6 Q And when it indicates "FPC should have some power to  
7 sell," how much power at that point in time were you offering  
8 to sell?

9 A At that time we were talking in terms of 200 to 300  
10 megawatts.

11 Q And was that included in your bulletin board  
12 message?

13 A That's the entire message that went out. However,  
14 phone calls were made to other companies and to many of the  
15 Florida companies and to several companies in the southeast  
16 where we gave megawatt amounts.

17 Q So you sent different messages, some with and some  
18 without the megawatts that you were willing to sell?

19 A That's correct.

20 Q Why was that?

21 A When we call people specifically, we wouldn't call,  
22 for example, Gainesville and tell them we have 300 megawatts  
23 to sell; but we would call FPL, Florida Power & Light, and  
24 tell them we have 300. We try to sell power according to who  
25 we're calling. It's the ability of a company to purchase

1 power.

2 Q Well, couldn't you send a message indicating to all  
3 the utilities that you were interested in selling 200 to 300  
4 megawatts of power and anyone interested in purchasing all or  
5 a portion of it should let you know?

6 A We could. On an operational basis, however, most of  
7 these people, in fact, all of them, would know what we were  
8 talking about.

9 Q Now, you indicate that you're offering to sell in  
10 the \$14 to \$15 range. Now, how was that price determined?

11 A That price was determined in mid-afternoon by  
12 anticipating where our units would be and what load level we  
13 would be at, and we looked at our hourly pricing sheet and  
14 came up with a price based on those criteria, based on that  
15 criteria.

16 Q Who determines the price that will be offered on  
17 these off-broker sales?

18 A This particular price was determined by the  
19 dispatchers on -- the generation dispatcher.

20 Q That would be your people?

21 A My people.

22 Q And how do they make that determination?

23 A They make that determination from a pricing sheet  
24 which is generated from the unit commit program.

25 Q Is that price essentially what you estimate your

1 as-available price will be during that period of time; that is  
2 between 1 a.m. and 5 a.m. on the 19th?

3 A I don't know.

4 Q Did you receive any responses to your offer to sell  
5 power in the \$14 to \$15 range on the afternoon of October  
6 18th?

7 A No. As a matter of fact, we did not; and that  
8 prompted even more phone calls. The typical answer was:  
9 "We're in the same situation you are, and the last thing we  
10 want is more power."

11 Q You would agree with me, Mr. Harper, that  
12 electricity is fungible. Your power is no better than Florida  
13 Power & Light's?

14 A As a very prejudiced person, I would have -- yes,  
15 sir, I agree with you.

16 Q And that the only distinction in terms of the market  
17 for electricity is delivered cost, correct?

18 A Would you repeat that again?

19 Q Well, in the market for purchasing electricity, the  
20 only real factor is price, delivered price?

21 A Delivered price depending upon the delivery point,  
22 yes.

23 Q So, for example, if the City of Gainesville needs  
24 power and you're offering to sell them power at, say, a  
25 delivered price of 14, and Florida Power & Light can sell it

1 to them at 13, they are going to buy it from Florida Power &  
2 Light, correct?

3 A Yes, sir.

4 Q All right. So what effort did you make on the  
5 afternoon of the 18th to lower your price in order to become  
6 competitive?

7 A We don't make efforts to lower our prices based upon  
8 a -- how can I say this -- based upon a used car salesman's  
9 mentality. We base our prices based upon strict limitations  
10 of incremental pricing.

11 Q You make no effort to compete with the other  
12 utilities at the wholesale level by pricing your energy lower  
13 than the others, correct.

14 MR. FAMA: I'm going to object. I don't think that  
15 was his testimony.

16 MR. PRESNELL: Well, he can tell me.

17 Q (By Mr. Presnell) Do you make any effort to compete  
18 by price with any of the other utilities with respect to  
19 wholesale sales?

20 A Are you talking wholesale sales in the terminology  
21 of what we would put on the broker or sell off broker.

22 Q Off broker.

23 A We do not --

24 Q You've got 150 megawatts of surplus power. You've  
25 got a real problem; you need to get rid of it. Rather than

1 curtail the QFs, what I want to know is whether you make any  
2 effort to compete with the other utilities in Florida by  
3 pricing your energy at a level sufficient to sell it?

4 A The only way we are allowed to compete is by quoting  
5 prices that we can back up from a cost pricing sheet. Once  
6 again, we are not allowed to, at this point in our history  
7 anyway, go out and peddle power.

8 Q And who told you that you?

9 A For broker sales, for example, it's in the FCG  
10 broker manual.

11 Q Off --

12 A For off broker sales, it's part of our training  
13 process. It has been handed down. It's an industry standard.  
14 I'm not sure of anyone in the industry, in my  
15 knowledge anyway, that markets power at this time, on October  
16 the 19th, on a free-market based sale.

17 Q So it's your understanding that if your computer  
18 model comes up with a price of 15, based on your unit commit  
19 computer model, you have no flexibility in attempting to lower  
20 that price in order to make a sale?

21 A The only flexibility I have is within the guides  
22 that allow for where the units are located on the incremental  
23 price scale. And our unit commit program typically shows  
24 that.

25 Q Is what you're saying that you believe Florida Power

1 is required to quote a price equal to its incremental cost?

2 A We quote prices based on the next incremental  
3 megawatt of power.

4 Q Now, do you quote those in 50 megawatt blocks?

5 A We have the ability to quote those typically in  
6 hundreds, but in any megawatt block.

7 Q You would agree with me the price would be different  
8 depending on the size of the block?

9 A Yes.

10 Q What block was being used to price the \$14 to \$15  
11 range that you put in your off broker bulletin on the 18th?

12 A The reason we had \$14 to \$15 was, once again,  
13 because it was for a 200 to 300 megawatt block of power. And  
14 we had the dispatcher just average the first three blocks of  
15 power, and it came out actually around between \$14 and \$15.

16 Q So it's your testimony that whatever the computer  
17 model shows, that's the price you have to charge?

18 MR. FAMA: Are you saying that -- Gregory, are you  
19 asking for what Florida Power has to charge as a matter of  
20 law?

21 MR. PRESNELL: No.

22 MR. FAMA: Or his understanding as an operator as to  
23 what he has to do?

24 Q (By Mr. Presnell) No. You're understanding as an  
25 operator. Whatever that price sheet comes up with, you have



1 no flexibility charging -- offering energy for more or less,  
2 correct?

3 A As I said earlier, it's the incremental pricing  
4 based on where the units are loaded. If our units fall below  
5 a certain level, we have other mechanisms that we can price  
6 from. But it's all based on incremental pricing.

7 Q Well, let's take the situation that existed on the  
8 morning of October 19th. What was the generating level you  
9 were faced with and the load level? I know there's 150  
10 megawatt difference, but what were those levels?

11 A Loads that night got down to around 2160. 2147, I  
12 believe, was the actual low load, which would have put our  
13 units pretty much according to that curtailment summary  
14 loading. Crystal River 1 at 120, No. 2 at 140, No. 3 at  
15 around 800, 4 at 150 and 5 at 300.

16 CHAIRMAN CLARK: Mr. Presnell, when you get to a  
17 convenient point, we need to take a break.

18 MR. PRESNELL: Sure. Anytime is fine.

19 CHAIRMAN CLARK: We'll take a 10-minute break.

20 (Brief recess.)

21 - - - - -

22 CHAIRMAN CLARK: Go ahead, Mr. Presnell.

23 MR. PRESNELL: Thank you, Chairman Clark.

24 Q (By Mr. Presnell) Mr. Harper, to get back on track  
25 here, as I understand, on the 18th you made efforts to sell

1 power off-broker in anticipation of the minimum load problems  
2 but were not able to find any buyers?

3 A Correct.

4 Q And, of course, you don't know whether you could  
5 have found buyers had you been able to lower your price?

6 A As I said earlier, when we contacted people, no one  
7 seemed interested in buying power because they were telling us  
8 they were in the same situation we were, too much generation,  
9 too little load.

10 Q Well, are you saying there were no buyers out there  
11 at any price, or that there were no buyers interested in power  
12 at your price?

13 A There was no buyers at our price. However, as the  
14 night progressed, in watching the broker sheets, it became  
15 evident there was no buyers at any price.

16 Q Okay. Well, I'm going to hold you to that statement  
17 when we get the the broker part of it, but I'm not quite there  
18 yet.

19 I want to try to understand how you price your  
20 energy when you're at minimum load. If I could use the chart,  
21 Commissioners, I would appreciate it.

22 Mr. Harper, what I would like for you to do is  
23 assume for me your minimum generation is 2,200 megawatts for  
24 the purpose of simplicity, that's as low as you can get your --

25 CHAIRMAN CLARK: Mr. Presnell, you should turn on

1 that last mike there and turn it towards you.

2 Q (By Mr. Pressnell) If you would assume with me for a  
3 minute, Mr. Harper, that 2,200 megawatts is the generating  
4 capacity at a minimum that you have been able to bring your  
5 system down to in order to avoid the possibility of a  
6 curtailment but that your load estimate is at 2,000 megawatts,  
7 meaning that you have a 200-megawatt surplus of energy; are  
8 you with me so far?

9 A Yes, sir.

10 Q Now, would you agree with me, sir, that if your must  
11 run level is 2,200 megawatts and your demand is only at 2,000,  
12 that, in order to generate between 2,000 and 2,200 megawatts,  
13 your incremental cost is zero? (Pause)

14 A If I was actually generating at 2,200 megawatts, the  
15 fuel costs involved in generating each of those megawatts  
16 would have a value to it.

17 Q But in terms of incremental cost and as a matter of  
18 logic, Mr. Harper, would you not agree with with me, sir, that  
19 if you can go no lower than 2,200 megawatts on your system  
20 that the cost of going from 2,000 to 2,200 on an incremental  
21 basis is zero?

22 MR. TENPAS: I'm going to object, I think this is  
23 well outside the scope of his direct testimony. This is  
24 asking him to draw conclusions on how the power should  
25 appropriately be priced. Florida Power has tendered other

1 witnesses on that issue. He can explain how in fact Florida  
2 Power does it; but asking him to opine on how it should be  
3 done is a policy issue more appropriately directed to other  
4 Florida Power witnesses.

5 MR. PRESNELL: If I could respond, Chairman Clark?  
6 This was covered at his deposition. Mr. Harper is the  
7 dispatcher responsible for making off-system sales. We're  
8 attempting to establish that they can sell their power if they  
9 can simply price it at a competitive level.

10 He indicated he does not have that flexibility, and  
11 I'm simply trying to inquire as to how he reaches that  
12 conclusion. As a matter of logic, it is patently wrong.

13 CHAIRMAN CLARK: Mr. Presnell, what part of his  
14 prefiled direct testimony does this relate to?

15 MR. PRESNELL: It relates to his consistent  
16 statements that they aggressively attempt to market power  
17 off-broker. My position is --

18 CHAIRMAN CLARK: Would you show me, Mr. Presnell, if  
19 you would show me in the direct testimony and give me the page  
20 and the line, that would help me.

21 MR. PRESNELL: First of all, beginning on Page 17,  
22 where he talks about the efforts to sell power on the 18th;  
23 and then further on Page 18, in the middle of the page, that  
24 middle paragraphs where he says, "The generation dispatcher  
25 also aggressively continued his efforts to sell energy both on

1 and off the Florida energy brokered system." And my cross  
2 examination is intended to show there was nothing aggressive  
3 about it.

4 CHAIRMAN CLARK: Go ahead, Mr. Presnell.

5 MR. PRESNELL: Thank you.

6 Q (By Mr. Presnell) Could you answer my question with  
7 respect to the logic of whether there's any incremental costs  
8 in going from 2,000 megawatts to 2,200 if 2,200 is your  
9 minimum run condition? (Pause)

10 A Quite frankly, I, I agree with your statement. The  
11 cost of megawatts produced, of course, would be fuel between  
12 2,000 and 2,200. Incrementally, I agree.

13 Q Okay. And yet that incremental block of power for  
14 this 200 megawatts -- which on the 19th was actually 150, but  
15 my example -- you're pricing that 200 megawatts at \$14 or \$15  
16 a megawatt-hour, correct?

17 A The pricing that we put out on the messaging system  
18 was between \$14 and \$15 to see if we could get someone  
19 interested in power sale. No one came back, even though we  
20 tried to call them, too. So that was not a specific price we  
21 were trying to sell at, but rather a range.

22 Q And you made no effort, not having found a buyer at  
23 that price, to price this block of energy at any level between  
24 14 and zero, did you?

25 A I do not have that authority to price it lower than

1 the incremental pricing that I have off of the price sheet.

2 Q Then your answer is no, you made no effort, correct?

3 A I made effort to sell power based on the authority  
4 that I have to sell.

5 Q I understand you had no authority, therefore the  
6 answer to my question is you made no effort because you had no  
7 authority, correct?

8 A I continue to say I made numerous efforts during the  
9 evening to sell power. Not using this scenario, necessarily,  
10 that you're trying to subscribe to.

11 Q You made no effort to lower your price in order to  
12 find a buyer for your power, correct, because you felt you had  
13 no authority to do so?

14 A I have no pricing mechanism to lower.

15 Q So even though the incremental cost of this block of  
16 power is zero to Florida Power, you feel that you had no  
17 authority to lower the price in order to make a market for  
18 that surplus power?

19 A Well, as I say again, the power generated did cost  
20 Florida Power money. Obviously, the 200 megawatts costs  
21 money. I would have to quote at the 2,200 level.

22 Q Do you price this block of energy -- that is, going  
23 from 2,000 to 2,200 -- the same way you would price this block  
24 of energy as if you were going 200 megawatts above your must  
25 run level? Would you arrive at the same \$14 to \$15 range

1 regardless of that situation?

2 A In this particular case, if I was pricing between  
3 2,000 and 2,200, I would go to the proper block on our pricing  
4 sheet, pick up the first two blocks of energy at 100 megawatts  
5 apiece, determine that price range and that's what we would  
6 quote.

7 Q Would you get a different result if you were going  
8 from 2,200 and ramping up to 2,400, assuming 2,200 was your  
9 minimum generation?

10 A Yes, you would. It would be a small amount  
11 different, but.

12 Q But very small?

13 A It would be a small amount difference.

14 Q In light of the fact you had no authority to quote a  
15 lower price, in light of the fact that electricity is  
16 fungible, what was aggressive about your marketing efforts in  
17 terms of off-broker sales?

18 A First of all, what does "fungible" mean?

19 Q Yours is the same as FP&L's and as TECO's, that  
20 electricity is electricity.

21 A Our aggressive efforts to sell power that night up  
22 till the time of the curtailment were based on our attempts on  
23 the messaging system, our attempts to call people, using,  
24 within the price guidelines that we have and the power supply  
25 department had, using our price that we have.

1           Our prices are not necessarily the lowest within the  
2 state. Another company did sell power that night.

3           Q     As a matter of fact, on virtually all of your  
4 curtailment episodes, other utilities were buying and selling  
5 power on the wholesale market during those periods of time,  
6 weren't they?

7           A     Without looking at them, I couldn't comment.

8           Q     Well, they're all in here, and I'm sure the  
9 Commission doesn't want us to spend the day doing it. But  
10 would you not agree with me, Mr. Harper, that with respect to  
11 the exhibits contained in your testimony that in virtually  
12 every curtailment episode, every hour of every curtailment  
13 episode, there were utilities buying and selling power at  
14 wholesale on the broker?

15          A     I would go so far as to say that -- without looking  
16 at every one of them, if I have to, I will -- that there could  
17 have been power sold, energy bought and sold, throughout the  
18 curtailment periods, depending on the megawatts we're talking  
19 about. Some hours there were no sales.

20          Q     Did you -- did Florida Power make an effort to  
21 become more aggressive in its pricing with respect to the  
22 Carter's Dam contract?

23          A     To become more aggressive?

24          Q     Yes, sir.

25          A     Throughout all of 1994, we would, on Thursdays, bid,



1 if they asked for one, we would bid on Carter's Dam pricing,  
2 Southeastern Electric.

3 Q That was a weekly bid?

4 A They would send us a request on Thursdays if they  
5 were going to request power, a bid. And we would bid every  
6 week.

7 Q And since that time, have they submitted that  
8 request for a bid every week?

9 A Yes.

10 Q And at some point in time, did Florida Power decide  
11 that it needed to become more aggressive in its pricing  
12 philosophy in order to try to win that bid?

13 A I don't know that you could say we became more  
14 aggressive in pricing. We priced our prices based on our  
15 incremental price.

16 Q Well, look at Page 24 of your testimony. The first  
17 full paragraph there, the third sentence says, "The Company  
18 also has made aggressive efforts to market power to third  
19 parties. Two good examples are," and then you mention the 142  
20 megawatt sale to the SEPA's Carter pumping station; is that  
21 correct?

22 A That's correct.

23 COMMISSIONER KIESLING: I'm sorry, I can't find  
24 where you are at. Could you say that page number again?

25 MR. PRESNELL: Page 24, the first full paragraph,

1 third sentence where it says, "The Company also has made  
2 aggressive efforts --"

3 COMMISSIONER KIESLING: I don't have that on my  
4 Page 24.

5 MR. PRESNELL: Of his prepared testimony?

6 COMMISSIONER KIESLING: Yeah. That's what I'm  
7 looking at. Oh, okay, Line 9. Thank you.

8 MR. PRESNELL: I'm sorry, I should have given you  
9 all -- These bifocals, I can't get used to them.

10 COMMISSIONER KIESLING: Thank you.

11 Q (By Mr. Presnell) Now, the Carter, the SEPA Carter  
12 pumping station contract, 142 megawatts would be a significant  
13 contribution to your curtailment problem, would it not?

14 A Yes, it would.

15 Q So for every week you won the Carter Dam contract  
16 you could, if not eliminate, substantially alleviate the  
17 necessity of any curtailments during that week, correct?

18 A That would be one of the things that would mitigate  
19 the problem.

20 Q All right. Now, if you did not become more  
21 aggressive in your pricing, what did you do on the Carter Dam  
22 contract to be aggressive other than just submit a bid?

23 A We became more aggressive overall in sales to help  
24 reduce the possibilities of curtailments. We aggressively  
25 called them; if they, for example, missed sending the quote to

1 us, we made sure we called them and sent the bid in to them.  
2 We went out to other people, the Rocky Mountain Cooperative,  
3 numerous other people.

4 Each day of the week our power supply department is  
5 contacting other companies throughout Florida and throughout  
6 the Southeast trying to sell power. That's what I mean by we  
7 became much more aggressive over the last two years.

8 Q But the only thing aggressive about your effort to  
9 obtain the Carter Dam contract was to make sure you had an  
10 opportunity to bid?

11 A And to make sure that we priced the power correctly.

12 Q Priced it correctly?

13 A That we took everything into consideration. We went  
14 to a ten-day weather forecasting rather than a five-day so  
15 that we could optimize our look ahead as best we could --  
16 bearing in mind a ten-day forecast is a guess at best in many  
17 cases. But we did all those efforts that we could do as a  
18 Company to look forward to make sure the price we quoted was  
19 the correct price.

20 Q So as I understood it, you tried to jimmy the  
21 assumptions a little bit in your model to get a lower price?

22 MR. TENPAS: I object.

23 A No, sir, we did not jimmy. And we do not do that at  
24 Florida Power.

25 Q Well, you used different assumptions?

1           A     I think I correctly stated we looked ahead as best  
2 we can to try to determine the correct price. When you are  
3 looking out ten days to come up with a price, it is very  
4 difficult anticipating loads and weather.

5           Q     Did you come up with a new method for bidding that  
6 contract?

7           A     We used the same method.

8           Q     You used the same method?

9           A     To determine the price?

10          Q     You did. Look at Tab 2. The fourth page, the front  
11 of that, do you see the entry on January 5, 1995?

12          A     You're in the curtailment log?

13          Q     I'm on the fourth page behind -- yes, the  
14 curtailment log, the last entry on the curtailment log.

15          A     Is that the one that starts out 0342?

16          Q     No, it's 1505. 1-5-95, see that, TLW. What does  
17 that TLW stand for?

18          A     Tamara Waldmann.

19          Q     That's a person?

20          A     She is an engineer that works in the power supply  
21 department.

22          Q     According to Tamara, power supply developed a new  
23 method for bidding on the Carter's pumping energy. Is she  
24 wrong?

25          A     Her terminology here, "a new method" is not new a

1 method for being more competitive or pricing as one could take  
2 from reading here. Her methodology is we became more  
3 competitive in how we went after the sale.

4 Q Well --

5 A As I just described.

6 Q Is it fair to say that power supply was trying to  
7 come up with a new method for bidding the Carter's Dam energy  
8 by making your price more competitive or lower?

9 A The price would become more competitive if we made  
10 sure based on a ten-day forecast that we were doing everything  
11 right. Her new method that she came up with was a spreadsheet  
12 that laid out loads and the heat rate curves and that and  
13 developed a price from that. It was not a change in pricing,  
14 pricing methodology.

15 Q Well, as a result of this new method were you able  
16 to bid the Carter Dam contract on a lower or more competitive  
17 basis than you had in the past?

18 A Because of the refinements that we came up with in  
19 staying with the previous criteria that I mentioned, we had  
20 been a tad bit more successful. I think so far in '95, I  
21 believe we've won the bid four or five times.

22 Q And you would concede that you may have won it more  
23 times if you had just been a little bit more price competitive  
24 than this new method produced, correct?

25 A We try to be as competitive as we can be within the

1 prices that we are allowed to offer.

2 Q Is it conceivable, Mr. Harper, that you could win  
3 the Carter's Dam contract every week if you would price your  
4 energy lower than you have?

5 A Is it conceivable?

6 Q Yes, sir.

7 A I imagine if we were willing to give our power away  
8 they would give us that sale every week.

9 Q Let's don't be that extreme. You have been winning  
10 that contracts at around 14?

11 A Somewhere between 12.50 and 14.

12 Q So you would agree if you would price at 10 you  
13 would probably get it every week?

14 A I have seen the bid given to MEAG at lower than 10.

15 Q All right. But at some price between zero and 15  
16 you could probably win the bid virtually --

17 A If our price was low enough, we could probably win  
18 the bid. Of course, that's not necessary to say that they  
19 continue that during the week. Many times when we have won  
20 that bid we'll go two or three days into selling that power  
21 and they'll send it back to us and then don't take it any more  
22 for the rest of the week.

23 Q Flip on through, we're here dealing with the episode  
24 on the Tab 2, which is the January 1 episode. I just want to  
25 make sure I understand some of these supporting exhibits and

1 the Commission follows along with us.

2 Do you see the handwritten sheet where it apparently  
3 lists some efforts to sell power to other utilities?

4 A Where are we at, please?

5 Q If you go from where we were, the end of the  
6 curtailment log, if you go another three pages, there's some  
7 handwritten notes on Florida Power letterhead. Do you see  
8 that?

9 A Okay.

10 Q And down at the bottom it says, "Power supply tried  
11 prearranged sales on 12-30." Are you with me?

12 A Right.

13 Q Are these the notes of one of the dispatchers that  
14 was calling trying to make sales?

15 A This handwriting appears to be and I believe it to  
16 be the top portion was once again -- excuse me, the top  
17 portion was by Sanford Buckles, I believe. He's an  
18 engineering assistant in the power supply department. And I  
19 believe that written note is from Tamara Waldmann.

20 Q They're both in the power supply side?

21 A Both in power supply, right.

22 Q Okay. Now, if we turn the page, there's a series of  
23 what looks like computer messages that relate to Schedule X  
24 bulletin board sale. Do you see that?

25 A Yes.

1 Q If you go to the page on the right hand where at the  
2 top it says "12-30-94, 14:41." Do you see that?

3 A Yes.

4 Q Does that indicate that at 2:41 p.m. on the 30th of  
5 December you sent out a message on the bulletin board that  
6 Florida Power was seeking to sell 100 megawatts of power  
7 between the hours of 1:00 a.m. and 6:00 a.m. on January 1?

8 A Yes, it does.

9 Q That is because that afternoon you identified the  
10 potential for a low load situation that night, correct?

11 A This was on the 30th, the day before that, for a bid  
12 on the 1st, yeah.

13 Q That's right, it's 2:30 in the afternoon of the  
14 day --

15 A The 31st came next, then the 1st.

16 Q Okay, you're correct. This one you're anticipating  
17 two days in advance?

18 A Right.

19 Q And what amount of curtailment were you looking at  
20 at that time in terms of what your needs would be?

21 A I was on vacation at that time. I got called in to  
22 work from vacation for the curtailment of the late night of  
23 the 31st and the morning of the 1st. But when this particular  
24 quote was put out, I don't know what we were looking at unless  
25 I just look back at the summary, as we all can. I'm not sure



1 where they were at on this particular date.

2 Q Do you have documents that can tell you?

3 A Yeah. Like I said, I could look back and see, I  
4 don't know first-hand.

5 Q If you could, I'm just trying to establish a  
6 baseline there. (Pause)

7 A It appeared at that time that we were looking at  
8 generation in excess of 200, between 200 and 300 megawatts  
9 during the night, early morning hours of the 1st.

10 Q If you are looking for 200 to 300 megawatts of  
11 curtailment, why are you putting on the broker and offered to  
12 sell only 100?

13 MR. TENPAS: Object, I don't think it's been  
14 established that there was only an offer to sell 100.

15 MR. PRESNELL: Well, maybe I'm reading it wrong.

16 Q (By Mr. Presnell) Are those three separate offers  
17 of 100 for a total of 300? Is that the way you read it?

18 A Those are three separate offers of 100 megawatts  
19 each.

20 Q Each one carries a different price?

21 A Yes.

22 Q Why would you calculate the price differently for  
23 that block of power?

24 A For each block of power that you sell, your price  
25 goes up. This is looking forward now two days out and --

1 Q Even when you are at a minimum load condition and  
2 you're talking about curtailing QPs, the price of each block  
3 goes up?

4 A Incrementally, each block of power would go up on a  
5 price scale, yes, sir.

6 Q Okay. Now these are not brokered quotes, right,  
7 these are what are called the Schedule X bulletin board?

8 A Right, they go out on a messaging system.

9 Q Were you successful on the 30th on selling any power  
10 off-broker?

11 A No, we were not.

12 Q And did you make any effort to lower your price  
13 during that 48-hour period in order to make a market for the  
14 excess?

15 A Like I say, I was not there. I don't believe they  
16 did but I'm not sure. They would have sold -- they would have  
17 quoted a price incrementally from a price sheet.

18 Once again, we can't just come up with prices.

19 Q Okay. I want to find an example here of brokered  
20 quotes. And maybe the best thing is to go back to Tab 1 on  
21 the October 19th. And if you go nine pages in on that,  
22 there's some computer information with a C-2 handwritten in  
23 the top right-hand corner. Do you see that?

24 A Left-hand page?

25 Q Yes, sir.

1 A It's 0100. 01.

2 Q This is one for ten-19-94 at 12:44 a.m., on the top,  
3 for the schedule hour ending 0200, ten-19-94?

4 A Okay, that's 0200, okay.

5 Q Does that mean that you put out on the broker an  
6 offer to sell for the hour ending at 2:00 a.m. on the 19th,  
7 and you were offering to sell 5 megawatts?

8 A No, sir. On the previous page you'll see a quote  
9 midway through the page that says \$1, 100/14.77.

10 Q Yes, sir.

11 A That was our quote for that hour. That means sell  
12 one 100 megawatts, 14.77. The next page, where it says 02, is  
13 the broker printout sheet -- this is on the FCG brokering  
14 system. It says FPL purchased 5 megawatts, their price was  
15 17.28, our price was 14.77, we split it, \$16.03.

16 Q So you would agree with me you're in a curtailment  
17 episode at 2:00 a.m. on the 19th, right? You're curtailing  
18 the QFs?

19 A We started at 2:00 a.m., right.

20 Q During that hour you sold power to FPL at a profit,  
21 right?

22 A 5 megawatts, yes.

23 Q 5 megawatts, but you sold it at a profit, \$16 over  
24 your 14.77 sell put?

25 A That's correct.

1 Q You would agree with me that during the same hour  
2 TECO was also selling power?

3 A That's correct.

4 Q As a matter of fact, TECO sold 200 megawatts of  
5 power, correct?

6 A Correct.

7 Q And their sell price was 13.82?

8 A That's right.

9 Q So you would agree with me that if you had dropped  
10 your price to 13.50 you could have sold 200 megawatts and  
11 avoided a curtailment on that date, right?

12 A Based on these price, if our price had been 13.50,  
13 we would have sold the 200.

14 Q TECO and Florida Power and Light, they are able to  
15 produce electricity at a lower cost than Florida Power? Is  
16 that why you are not making these sales on the broker when  
17 these other utilities are?

18 A Obviously, Florida Power and Light is not producing  
19 power at the same price as TECO, since they are the ones that  
20 bought it at a much higher price. But I cannot speak to what  
21 their prices are, nor how they develop their prices.

22 Q Mr. Harper, during these various curtailment  
23 episodes, has Orlando CoGen always complied with Florida  
24 Power's requests?

25 A Yes, they have.

1 MR. PRESNELL: I think that's all I have, Chairman  
2 Clark; I was checking my notes since we have eliminated an  
3 issue here to make sure. I think that will do it.

4 Thank you very much, Mr. Harper, for your patience  
5 with me.

6 CHAIRMAN CLARK: Mr. Watson?

7 MR. WATSON: No questions.

8 CHAIRMAN CLARK: Ms. Rule?

9 MS. RULE: No questions.

10 CHAIRMAN CLARK: Mr. Zambo?

11 MR. ZAMBO: No questions.

12 CHAIRMAN CLARK: Mr. Wright?

13 MR. WRIGHT: Yes, ma'am, thank you.

14 CROSS EXAMINATION

15 BY MR. WRIGHT:

16 Q Good afternoon, Mr. Harper.

17 Before I get into my prepared cross, I wanted to try  
18 to clarify part of the discussion you had with Mr. Presnell  
19 regarding Lake Cogen's, my client's, actions during the  
20 October 19th curtailment event.

21 In questioning, I think that you agreed with  
22 Mr. Presnell's characterization that Lake refused to reduce  
23 its load below a certain level. Do you recall saying that?

24 A I believe it was Lake that would not come below the  
25 95.

1 Q Do you have any basis to know whether Lake willfully  
2 refused to come below the 95 megawatts?

3 A Yes, I do. As a matter of fact, and I didn't follow  
4 through on that entire questioning. Lake, along with numerous  
5 other QFs that night -- that was the night of the first  
6 curtailment -- several of the QFs had not even been notified  
7 by their management of the situation, even though we had held  
8 a discussion on it in St. Petersburg and had invited numerous  
9 of all the companies, the QFs.

10 There was a lot of confusion. When we called the  
11 different operators on duty that night at the power plants,  
12 some of them had no idea what we were talking about. We had  
13 to identify who we were, what we were trying to accomplish.

14 Some of them said their management had given them no  
15 authority to proceed under conditions like that. So there was  
16 just in general a lot of confusion that night and this very  
17 well may have been one of them. All that confusion has since  
18 gone away.

19 Q And again, would you believe that part of that  
20 confusion, if not a whole lot of it, was attributable to the  
21 fact that it was the first event?

22 A Yes, I do. I attribute most of it to that.

23 Q On that occasion, did Lake Cogen go to its  
24 committed, its preagreed, committed curtailment level by which  
25 it became a Group A NUG?

1           A     It went down from I believe 105 or 103 down to 95,  
2 something like that. Yes, it did.

3           Q     So it did comply with its --

4           A     Right.

5           Q     -- first cut agreement?

6           A     Yes. It did not comply with the second, with the  
7 actual curtailment.

8           Q     Did you personally talk to anybody at Lake?

9           A     I don't believe I did. I believe Tamara Waldmann  
10 did.

11          Q     I looked in the curtailment log for that event and I  
12 could not find any reference to any such communication. Could  
13 you?

14          A     There may be a sheet in here that shows who talked  
15 to who. I know they were in some of the later curtailments.  
16 Once again, on this first curtailment, we were experiencing a  
17 new phenomenon ourselves.

18                 No, it is not in this one, so I'm not sure who  
19 talked to them. But each company was called, each QF.

20          Q     I would like to ask you, if you would, to turn to  
21 Tab 2 in your exhibit and turn to the back of the second  
22 sheet. It is a curtailment log.

23                 I would like to ask you to look at the entry for  
24 hour 0018, January 1, 1995. My reading of that is that Lake  
25 cogen did not receive a Level 3 fax order and apparently

1 because the fax sending list that Florida Power was using at  
2 least at that time had an incorrect area code.

3 Is that an accurate interpretation of what that  
4 says?

5 A Yes, it is. And that's why, because of our  
6 experience during the first one, that's why we continued right  
7 on down through the very last curtailment to call everyone for  
8 each of the levels. In this case, it was Linda Brousseau who  
9 called.

10 Q Right. In fact, Lake Cogen called them, did they  
11 not?

12 A Yeah, Lake called, yeah, and talked to her.

13 Q I want to continue and follow along a couple of  
14 questions that Mr. Preshnell posed to you.

15 I was struck by your response that even at minimum  
16 load conditions your incremental energy costs are positive for  
17 each block.

18 MR. WRIGHT: Could I use the flip chart for a  
19 minute, Madam Chairman?

20 Q (By Mr. Wright) This will be brief, I'm sure you  
21 will be able to straighten me right out. If let's say this is  
22 the cost to generate in dollars per megawatt-hour and this is  
23 load on the horizontal axis in megawatts?

24 A Okay.

25 Q I had been given to understand that there's some



1 level somewhere along this horizontal axis that would be the  
2 minimum operating level. And that the heat rate curve, which  
3 should translate into a cost curve, has at least some kind of  
4 little U shape at the beginning of that level something like  
5 that. Is that not right?

6 A I'm not familiar with that at all, how we develop  
7 it.

8 Q Okay.

9 With respect to the projections for January 1 and  
10 your attempts to sell power off-system, given that you are  
11 looking at a minimum load condition with all four -- I'm  
12 sorry -- three out of your four coal units at or slightly  
13 below their normal minimum operating levels, why were you only  
14 offering to sell 300 megawatts of power during that projected  
15 0100 to 0600 hours period?

16 A That's what they attempted to sell off-broker based  
17 upon a load forecast done two days earlier. They also tried  
18 to sell on-broker during the curtailments and just prior to  
19 the curtailments.

20 Q If I recall the sheet we were looking at, those  
21 quotes were for 100 megawatts also; is that correct?

22 A Typically, up to the the time of curtailment. Once  
23 you go into a curtailment period, you certainly would want to  
24 lessen your broker sales so you don't get a yo-yo effect on  
25 our units or the cogens.

1 Q Right. So my question is why were you only offering  
2 to sell 300 megawatts off-broker in advance to the anticipated  
3 event? I mean it just looks to me like you have a whole lot  
4 more, like 1,000 megawatts, counting the excess output  
5 available from Crystal River 1, 4 and 5 for that period.

6 A 300 megawatts was more than a sufficient amount to  
7 offer to sell, we didn't sell any of it. Seldom, seldom in my  
8 experience during the middle of the night do you see companies  
9 buying more than 300 megawatts. It happens on occasion, but  
10 not often.

11 Q On the handwritten sheet that you and Mr. Presnell  
12 discussed briefly regarding your attempts to arrange  
13 prearranged sales December 30, there's a phrase at the top I  
14 want to ask about. It says, "Quoted incr with no adders." I  
15 assume that means quoted incremental energy costs with no  
16 adders?

17 A That's exactly what that means.

18 Q What would that be? What does that incremental  
19 energy cost with no adders mean?

20 A As I understand it, in the power supply when they  
21 quote prices using different schedules, certain schedules call  
22 for an adder to be based on to the incremental price. In this  
23 case there was just no adder added on to it. I'm not sure  
24 why.

25 Q In response to some questions by Mr. Presnell, you

1 indicated that I believe Ms. Waldmann had developed an advance  
2 spreadsheet scheduling analysis method for attempting to  
3 identify lower sale prices for bidding the Carter's Dam  
4 pumping power sale. Is that pretty accurate?

5 A She developed a new spreadsheet, not necessarily  
6 with the intention of developing lower prices but to make sure  
7 that we, I guess you could say, crossed all our T's and dotted  
8 our I's and made sure everything was in the right place. That  
9 in turn had the potential for making sure we optimized sales.

10 Q I thought I understood your earlier answer to  
11 indicate that the spreadsheet identified a lot of variables  
12 over a ten-day forward horizon that enabled the Company to  
13 identify its incremental costs at which it could sell to SEPA.

14 A That's part of what the spreadsheet did, it took  
15 into -- like I say, we developed a ten-day weather forecast  
16 type thing. That was one of them.

17 Q My question is: Couldn't you adapt that same  
18 spreadsheet method to pricing for other off-broker, off-system  
19 sales to Florida utilities?

20 A As it turns out, our unit commit hourly pricing the  
21 dispatchers used for hourly brings us to our minimum pricing  
22 category at all times. Beyond that, as I say, they have  
23 other, they have other methods but it is all based on unit  
24 loading. We can in our pricing go below what the unit commit  
25 says, but it is based upon where the units are loaded.

1 Q Well, just to recap, you developed a system that  
2 enables you to make better, more competitive, to use  
3 Mr. Weldon's phrasing, bids to sell power to the Southeastern  
4 Power Administration for Carter's Dam pumping. You have done  
5 that by refining your projections of incremental costs over a  
6 ten-day planning horizon? Is that about right?

7 A That's looking ahead. That's not -- (simultaneous  
8 conversation) -- I mean versus looking ahead versus hourly or  
9 semihourly quoting? By the time we get to the hourly quoting  
10 we're right on top of the situation.

11 Q Of course. And you have to do that for the Carter's  
12 Dam potential sale because you have to bid that on Thursday  
13 for the following whatever it is, the weekend or the next week  
14 or whatever?

15 A Right.

16 Q Right? Okay. My question is, couldn't you adapt  
17 that ten-day forward-looking pricing method to use in  
18 aggressively marketing power off-broker, not hourly but  
19 off-broker to other Florida utilities within the same kind of  
20 time limit?

21 A We do use that method.

22 Q Thank you.

23 Now, if I looked through your extensive exhibits --  
24 for example, like the one that you and Mr. Presnell were  
25 discussing about the day-and-a-half-ahead effort to sell 300

1 megawatts in the early morning of January 1, 1995 -- are you  
2 telling me that at least after January 5, 1995, that method  
3 should be reflected in these prices?

4 A I think you had better repeat the question. I  
5 misunderstood something there.

6 Q I apologize, it was a long question.

7 You discussed with Mr. Presnell a Schedule X  
8 bulletin board sell of 300 megawatts at three different prices  
9 during the 0100 to 0600 period on January 1, 1995. Those  
10 prices were quoted about right at a day and a half ahead of  
11 the period in which the power was offered for sale.

12 I read the log as indicating that the pricing method  
13 for the Carter's Dam sale was developed on or about January 5,  
14 at least that's the day it shows up in the log as having been  
15 done.

16 My question is: If we would look at comparable  
17 information to the part of your exhibit that we have been  
18 discussing here, would those prices reflect the pricing method  
19 that you now use for the Carter's Dam sale and, as you just  
20 told me, that you use for pricing other off-broker sales to  
21 Florida utilities?

22 A Since that method wasn't developed until the 5th,  
23 I'm not sure whether these prices that were used on the 30th  
24 would have come up with the same results or not.

25 Q Well, how about after the 5th?

1           A     I don't know whether they would have come up with  
2 these prices or not, without running them.

3           Q     That's all right. I didn't mean to inquire as to  
4 the specific prices, I meant to inquire as to whether the  
5 prices reflected in the comparable report for something after  
6 the 5th would have been developed using the same  
7 forward-looking method and spreadsheet program?

8           A     Yes, they would. And once again, not saying what  
9 the prices would be.

10          Q     Fair enough.

11                    Could you show us an example, say maybe in Tab  
12 No. 4, 5 or 6 of your exhibit, where that was done?

13          A     Where we used forward-looking pricing?

14          Q     Yes, sir. I just mentioned those as examples,  
15 because those are, as I understand it, respectively the  
16 exhibit packages for the January 7, January 8 and January 14  
17 curtailment events.

18          A     I'm not sure if there's anything in here like that  
19 handwritten page.

20          Q     I really wasn't talking about the handwritten page,  
21 I was trying to talk about the example of the Schedule X  
22 bulletin board sale.

23          A     It appears that there's -- no.

24                    If you can find one before me, I'll explain it to  
25 you.

1 Q Okay. (Pause)

2 MR. TENPAS: Sheff?

3 MR. WRIGHT: Yes, sir.

4 MR. TENPAS: If you don't mind, I can offer a  
5 suggestion and you can look at it and tell you if that's one.  
6 Is that okay with you?

7 MR. WRIGHT: Do you want to come down and show it to  
8 him?

9 MR. TENPAS: Yeah, or I can read you the page.

10 MR. WRIGHT: Sure, that's fine, either way.

11 MR. TENPAS: If you are at Tab 6, look at the page  
12 at the bottom that's ML24547. You can ask him perhaps if that  
13 was one. It's the page that immediately -- this is about the  
14 fourth page in immediately following the big projection sheet.

15 MR. WRIGHT: Thank you, Mr. Tenpas. That does  
16 appear to be an example of that.

17 Q (By Mr. Wright) Is it?

18 A That's an example, yes.

19 Q If I understand this correctly, the bid at the top  
20 of that page was offered on January 13 at about 3:00 p.m. for  
21 sale on January 14 from 1:00 to 7:00 a.m.; is that accurate?

22 A That's correct.

23 Q And the same thing would be true for the second  
24 quote there, and the third one?

25 A Right.

1 Q Would these sheets represent a complete set of that  
2 particular type of sales that you attempted to make with  
3 respect to this curtailment event?

4 A I don't know how you would term the word "complete"  
5 but this was our attempt at off-system sales. There could  
6 have been others, but this was the bulletin board attempt.

7 Q When you bid the Carter's Dam sale on Thursday, when  
8 is it projected that that sale will begin?

9 A Typically, it starts at hour ending 0100 Sunday  
10 morning or Monday morning, the following Sunday or Monday  
11 morning and runs for five or six days.

12 Q I missed something. Does it run for five or six  
13 days?

14 A It runs typically for five or six days.

15 Q Thank you.

16 A However, on numerous occasions after two or three  
17 days they have cancelled the sale.

18 Q Yes, sir, I did understand that from your previous  
19 answer.

20 In response to a question by Mr. Presnell, you made  
21 reference to being bound in the prices at which you can sell  
22 power by the strict limitations of incremental cost pricing.  
23 Do you recall that response?

24 A Yes.

25 Q My question for you is: Do your incremental costs



1 reflect any cost savings that Florida Power may realize if it  
2 can make a sale?

3 A Do our sale -- do our quotes reflect savings?

4 Q Yes, that is my question.

5 A I don't believe so, but I'm not certain. You'd have  
6 to ask probably Mr. Southwick that question.

7 Q I shall.

8 In your opinion -- and I'm going to ask you to  
9 assume that there are no regulatory impediments to do so --  
10 would you agree that it would be prudent for your incremental  
11 cost price quotes to reflect such savings if they were  
12 available?

13 A I don't think I know enough about that subject to  
14 have an opinion on that.

15 Q Okay. Before I go on, do you have a copy of the  
16 curtailment summary sheet for the January 30th curtailment  
17 event? In your exhibit, I was able to find the work sheet for  
18 January 30th, but not a copy of the summary; and I did notice  
19 that there was one of each included in your exhibits of every  
20 other one.

21 A I don't. There's probably one in the building. If  
22 not -- we do have one?

23 MR. TENPAS: Commissioner Clark, it apparently was  
24 inadvertently omitted. We have a copy of it here and can make  
25 that available.

1 CHAIRMAN CLARK: Do you need that now, Mr. Wright?  
2 Can you make it available later and we can go on?

3 MR. WRIGHT: Sure.

4 CHAIRMAN CLARK: Do you need it for your question?

5 MR. WRIGHT: I will need it for my questioning  
6 before I'm done.

7 CHAIRMAN CLARK: Why don't you go ahead, and why  
8 don't you get some copies made?

9 MR. TENPAS: Thank you.

10 MR. WRIGHT: Thank you.

11 Q (By Mr. Wright) Mr. Harper, I just want to make  
12 sure I understand what your exhibits are to make sure we're  
13 communicating as well as we can in our questioning.

14 You had included a lot of informative documents.  
15 The two types that I will probably focus on the most are the  
16 minimum load emergency curtailment summary and then the  
17 minimum load emergency curtailment work sheet.

18 Do I understand correctly that the work sheet is a  
19 preevent work sheet that's designed to help the Company  
20 develop a strategy for meeting a low load condition?

21 A That's correct. It's used during the daytime,  
22 typically developed mid-morning and used throughout the day.

23 Q And the curtailment summary, is it true that the  
24 curtailment summary is an after-the-fact report of what  
25 actually happened during the curtailment?

1           A     That's correct.

2           Q     Is it true that Florida Power has routinely cycled  
3 its coal units down to their minimum or approximately their  
4 minimum normal operating levels before and during every  
5 curtailment event?

6           A     Yes, that's true.

7           Q     And is it also true that Florida Power has routinely  
8 cycled its coal units down to near minimum operating levels on  
9 other occasions when it has had relatively low loads, say in  
10 the order of 2,200 to 2,500 megawatts?

11          A     Numerous other occasions.

12          Q     If you know, has Florida Power incurred additional  
13 maintenance costs on those units by doing so?

14               MR. TENPAS:  Objection.  I think it's outside the  
15 scope of his direct testimony.

16               CHAIRMAN CLARK:  Mr. Wright?  (Pause)

17               MR. WRIGHT:  Madam Chairman, I don't know if I can  
18 find a specific reference to this in his testimony or not.  It  
19 is a pretty simple question.  He's the chief dispatcher on the  
20 Company's system; if he knows the answer, I think he should be  
21 allowed to answer.  It's certainly within your discretion to  
22 permit the inquiry.

23               CHAIRMAN CLARK:  Mr. Wright, please go on with your  
24 questions.

25               Do you know the answer?

1           WITNESS HARPER: I don't know the technical answer.  
2 I have heard some -- I have heard comments that there has been  
3 additional costs but I couldn't tell you what or how much.  
4 That would be way out of my realm.

5           MR. WRIGHT: Thank you, Madam Chairman.

6           Q     (By Mr. Wright) Mr. Harper, I understand that  
7 Florida Power Corporation has modified its agreement with the  
8 Southern Company relative to its unit power sales or purchases  
9 from the Southern Company to help mitigate the need to curtail  
10 QF purchases. Is that accurate?

11          A     That's correct.

12          Q     Do you know approximately when that arrangement was  
13 finalized between Florida Power and Southern Company or  
14 Companies?

15          A     The exact date, no, but it was toward the very end  
16 of February of this year.

17          Q     Do you know what effect that arrangement has had  
18 between then and now in limiting the number of curtailment  
19 events that might otherwise have occurred?

20          A     One time it definitely avoided a curtailment. A  
21 second time -- one time it definitely avoided the curtailment.  
22 The second time it would not have -- it just we didn't have  
23 curtailment.

24          Q     On Page 27 of your testimony, you make the statement  
25 that, "Florida Power prefers to phase out individual telephone

1 calls because it requires a substantial time commitment." Is  
2 that part of you all's plan or is that just something that  
3 found its way into your testimony?

4 A Our plan was to phase out the phone calls and to  
5 turn the actual curtailment procedures over to the dispatchers  
6 rather than having any one of the numerous supervisors down  
7 there during the curtailment periods.

8 However, since the end of January, we have not had  
9 another curtailment. I would imagine that if we were to have  
10 the next one, several of us would be down there again and we  
11 would continue calling.

12 The curtailments have not happened that often. It  
13 happened six times in January, we have not had one since. So  
14 I would think that we would be back there and call again -- at  
15 least if they became more active we would phase out of it, but  
16 I don't see that happening. I don't see more curtailments  
17 happening any time soon.

18 Q Okay. Are you asking the Commission to approve a  
19 plan whereby you would stop making the phone calls?

20 A Making phone calls is not part of the plan.

21 Q Well, I'll proceed.

22 Mr. Presnell asked you a question about the  
23 Company's capability of reducing and then increasing the  
24 output of Crystal River Unit No. 3 to help mitigate  
25 curtailments. Do you recall him asking you that question?

1 A Yes.

2 Q My notes indicate that your answer was that it is a  
3 policy decision of Florida Power Corporation to run Crystal  
4 River 3 at its full load. Do you recall making that answer?

5 A Right.

6 Q Do you recall that you and I discussed the same  
7 issue at your deposition on March 8, I think -- March 9?

8 A I don't recall it.

9 Q Okay. My question to you was, "Can a unit be  
10 operated at anything other than full output? For example,  
11 could it be -- could its output level be reduced by 200 or 300  
12 megawatts at a reasonable ramp rate for a reasonable period of  
13 time, say 8, 12, 16 or 24 hours, and then brought back up?"

14 Your answer was, "Within the guidelines of the NRC,  
15 whatever regulations they have to control the unit's output  
16 levels, as far as just the output of the unit, yes, it could  
17 be."

18 Is that still your answer?

19 A That's correct, based on could the unit -- can the  
20 unit move? It can do that. It's a policy decision of Florida  
21 Power's upper senior management that Florida Power's nuclear  
22 unit will maintain its maximum output level at all times.

23 CHAIRMAN CLARK: Mr. Wright, how much more do you  
24 have?

25 MR. WRIGHT: It's difficult for me to say, Madam

1 Chairman. Somewhere between ten and 30 minutes.

2 CHAIRMAN CLARK: We'll take a break now for ten  
3 minutes.

4 (Brief recess.)

5 - - - - -

6 CHAIRMAN CLARK: Mr. Harper?

7 WITNESS HARPER: Right here. I was trying to sneak  
8 out. (Laughter)

9 CHAIRMAN CLARK: Go ahead, Mr. Wright.

10 Q (By Mr. Wright) Mr. Harper, typically as you get  
11 toward the end of a curtailment event, I have noticed that  
12 several times the Company has been able to make an off-system  
13 sale in the last hour or two of curtailment events. How far  
14 in advance do you know when such sales are going to be made?

15 A Are the sales you're talking about on the broker?

16 Q I can't tell from your exhibits, they may or may not  
17 be.

18 A Typically, those are on-broker sales. As the load  
19 starts to come up in the morning, the dispatchers have a very  
20 difficult task in front of them. The curtailments that take  
21 place late Saturday night or early Sunday morning are  
22 extremely difficult. We have ended most of the curtailments  
23 maybe at 6:00, maybe 7:00, one of them. The loads on Sunday  
24 morning typically don't start to climb until around 8:00. You  
25 get some variation of loads from 6:00 and then 7:00, but not a

1 whole lot on Sunday mornings, typically, unless there's a cold  
2 front coming through.

3           What the dispatchers will try to do is sell power in  
4 anticipation of another company keeping their units down and  
5 allowing one of our control units to pick up load a little  
6 bit. So that, for example, if the curtailment ends at 6:00,  
7 we not only are ending the curtailment and a lot of excess  
8 power coming back on our system but we also have units, those  
9 that Mr. Dolan mentioned, Mulberry and maybe Orange Co, coming  
10 on line at 6:00. So we have a tremendous influx of power on  
11 our system at 6:00 in the morning, or at 7:00.

12           So what the dispatchers have tried to do is sell  
13 power, once again using correct pricing, and hoping that  
14 another company out there is going to keep its units down and  
15 buy economical power -- which will allow our coal units to  
16 rise. And then as the power comes back in, the coal units  
17 will back back down on control.

18           Q     If I could ask you to look at the curtailment  
19 summary for January 8? It's the back of the third sheet into  
20 Tab No. 5.

21           A     The third sheet?

22           Q     Yeah, the third sheet, the back of the page.

23           A     Okay.

24           Q     Is that kind of what happened there? I notice that  
25 beginning an hour ending 0300, you were able to make between



1 52 and 66 megawatts of sales each hour.

2 A I probably have the broker sheets in here, I can  
3 tell you in just a moment.

4 Q Okay.

5 A We put on at hour ending 0300, it appears, it is  
6 very difficult to read. Let me find something here. (Pause)

7 Excuse me just a moment while I try to read the  
8 pages that I have in the book here. (Pause)

9 It appears one hour we sold 20 megawatts to  
10 Tallahassee. Tallahassee is a company that will typically  
11 leave their units down in the morning and then buy economical  
12 power. And I believe another morning I saw in here we sold to  
13 Kissimmee. They do the same thing. Those are two of the  
14 smaller companies.

15 Q I'm also noticing with respect to that particular  
16 event that after 0200 Crystal River 1 and 2 were both  
17 operating right at their normal minimum operating levels and  
18 Crystal River 4 and 5 were both operating at least a moderate  
19 amount above their normal minimums, 710 megawatts combined in  
20 hour ending 0300, and 732 in hour ending 0400, and 822  
21 combined in hour ending 0500.

22 Is that an accurate interpretation of your exhibit?

23 A Yes. And I can explain that. On January 8 -- okay,  
24 yeah. Late in the evening on January 8, a cold front  
25 proceeded through. Our original load predictions on Friday

1 afternoon -- this was a Sunday -- on Friday afternoon called  
2 for southwest winds in our area, service area. When, in fact,  
3 late Saturday afternoon the weather service sent through a  
4 message to us that said the cold front was coming further  
5 south than we thought, winds shift from the southwest to the  
6 northwest.

7 Of course, any of us living in Florida knows what  
8 that means. Even though the temperatures don't drop  
9 necessarily, the loads certainly increase with northwest winds  
10 10 to 20.

11 Later on in the day, as a result of that, our units  
12 were having to respond to load picking up. We went to 4,000  
13 or 4,500 load that day. 4,400 that morning and then 4,500  
14 that afternoon on the 8th. So it was a case of the loads were  
15 low going into curtailment on the 8th, the cold front came  
16 through and started shifting, and our loads -- our units  
17 starting picking up and we came out of the curtailment.

18 Q My question is, why didn't you terminate the  
19 curtailment event earlier than you did, given that your big  
20 coal units were operating above their normal operating minimum  
21 by more than the amount of curtailment that you had requested?

22 A The first thing you have to understand is that as an  
23 operator on duty during the middle of the night you are now  
24 seeing the load fluctuate tremendously from what you had  
25 anticipated. The next thing you have to understand, and I'm

1 speaking as an operator now, is the load going to continue to  
2 do that? Is it a fluctuation? Is the load going to turn  
3 around? What's happening out there?

4 The load picking up at 3:00 or 4:00 in the morning  
5 on a morning that was not supposed to be a cold morning is  
6 certainly an abnormality and the dispatchers typically don't  
7 see that type of thing.

8 Once you commit those big units to moving, it's just  
9 not a matter of, like I always say, you don't dispatch the  
10 system from a spreadsheet, one hour they're here, one hour  
11 they're there, it takes a long time to move those large units  
12 around, CR-4 and 5.

13 We committed them up, let me see what the hours  
14 were. Hour 400. For example, CR, we talk about the minimum  
15 loads on CR-4 and 5 being at 300 megawatts; it was not until  
16 hour 5 that both of them had gotten to 400 megawatts. To  
17 reduce those back down to 300 at 5:00 in the morning and then  
18 to curtailment when you have an hour to go would be a very  
19 difficult situation. And then with the dispatcher uncertainty  
20 of possibly having to go back and curtail again if the load  
21 stops.

22 I believe that are curtailment ended at -- let me  
23 look back real quick. Curtailment must have ended right at  
24 5:00. So the dispatchers were doing the very best they could,  
25 based upon this load picking up. So at 5:00 they ended the

1 curtailment.

2           The units, as I mentioned earlier, now they are both  
3 up to 400 megawatts, they're on control, you have about 100  
4 megawatts of control level there. You can bring the  
5 curtailment amount back into the system when you have 100  
6 megawatts each on CR-4 and 5 to maneuver the system around.

7           Q     I thought I understood the Company's plan in other  
8 documents as reflecting that both units were on control at 300  
9 megawatts with 150 megawatt cushion per unit for automatic  
10 carrier control. Did I miss something?

11           A     CR-5 has to be at 300 megawatts at all times when  
12 CR-3 is on line for security reasons to back up fire and  
13 voltage control in the system. That's not mentioned in the  
14 curtailment plan; this came about in mid February due to some  
15 system studies that we have had done. Since that time, the  
16 study of our system you will note the CR-4 has been down in  
17 the 150 range numerous times where we have kept CR-5 up to 300  
18 to 350. With a minimum level of 300, that would be its rock  
19 bottom on CR-5 on control. To have a control range, you'd  
20 have to pick the unit up to, let's say, 350 to have some  
21 downward movement on control for AGC.

22           Q     I would like to ask you to look at Page 2 of 6 of  
23 the daily plant and interchange report for Sunday, January 8.  
24 It's that much further back in your exhibits, almost to the  
25 Tab 6.

1           A     Okay.

2           Q     I'm looking at the Crystal River site subset there.  
3     And it says, "For Unit 4 load control testing 150 megawatts  
4     minimum available if needed provided CR-5 is 300 megawatts."  
5     CR-5 is at 300 megawatts at one hour, then 298. Why didn't  
6     you take CR-4 to 150 or even to 200 that night to mitigate  
7     curtailment?

8           A     As I said earlier, we were experiencing a load  
9     pickup. Dispatchers were not sure why the load was picking up  
10    at that hour of the morning and where it was going to. It  
11    would have been very imprudent on the dispatcher's part to end  
12    the curtailment with the possibility of having to go back and  
13    curtail again.

14          Q     Well, why, if the daily plant and interchange report  
15    indicated it was available to go to 150, didn't your work  
16    sheet in advance have it going to 150? I didn't notice  
17    anything special about the event, like a severe weather  
18    emergency that existed in another event, that warranted  
19    keeping it at 300.

20          A     When this sheet was published on Friday afternoon,  
21    we didn't know that that weather front was coming through  
22    early Sunday morning.

23          Q     How far in advance can Florida Power predict low  
24    load events?

25          A     That is a very, very hard question. I can look out

1 right now and tell you that there will be certain days in  
2 January of next year when we will have low loads. We get to  
3 the point -- we've had seven curtailments. We could probably  
4 speak and I can safely say in the range of 50 upwards since  
5 the beginning of this year where we have had low loads. And  
6 numerous times there has not even been a Level 1 notice sent  
7 out. Other times, there's been a Level 1 notice sent out and  
8 we've not had to curtail at all.

9 Florida Power has certainly taken the lead in  
10 reducing the load levels of our units to absolute minimum  
11 levels.

12 Q I really tried to ask you a fairly specific  
13 question.

14 Using your ten-day weather forecast and your ten-day  
15 production costing forecast, how far in advance can you  
16 predict low load events that will result in Level 1, 2, 3 and  
17 4 events under the plan?

18 A I have to go through this scenario to get to that  
19 answer.

20 Q Okay.

21 A In lowering our own units, so many times we've  
22 gotten to 10 or 15 megawatts out of 2,000 or 2,200 that meant  
23 the difference between curtailment or not. It's very  
24 difficult to know a curtailment period before you're right on  
25 top of it. Some nights it's pretty evident. You know, in

1 those nights you saw we curtailed 250 megawatts, I think on  
2 two different occasions in that range, those we could predict  
3 two or three days ahead of time that they were coming and  
4 there was pretty good assurance of it. But so many of the  
5 other nights where there haven't been curtailments or where  
6 there's only like 50 megawatts curtailments on one night,  
7 those are very difficult to predict.

8 Q Mr. Harper, I'm going to hand out two documents I'm  
9 going to ask be marked as identification for exhibits. One is  
10 an interrogatory response that you prepared the answer to; the  
11 other is two of the late-filed exhibits to Mr. Southwick's  
12 deposition. They are initialed CKH, which I believe to be  
13 your initials, that's why I'm going to ask you to authenticate  
14 them. Okay?

15 CHAIRMAN CLARK: Mr. Wright, FPC's Answer to  
16 Interrogatory 12 will be Exhibit 4 and the Deposition Exhibit  
17 will be Exhibit 5.

18 MR. WRIGHT: Thank you.

19 (Exhibit Nos. 4 and 5 marked for identification.)

20 Q (By Mr. Wright) Mr. Harper, while I have been  
21 handing these out, have you had the chance to look at these  
22 documents and confirm that they are what I said they are?

23 A Tell me again what you said they are?

24 Q What has now been marked for identification as  
25 Exhibit No. 4 is Florida Power Corporation's Response to

1 Interrogatory No. 12 propounded by Orlando CoGen Limited? I  
2 believe you sponsored that response?

3 A I did so many of them; if my initials are on there,  
4 I probably did this one, too.

5 Q Do you recognize this?

6 A I remember requesting this data to be -- this was a  
7 printout of loads for the year 1994.

8 Q I'm sorry, Mr. Harper --

9 A I'm sorry, you want No. 4?

10 Q I'm sorry, I think I am confusing about which  
11 document is which.

12 A Okay, got you.

13 Q Do you recognize that interrogatory response,  
14 Mr. Harper?

15 A You say I did this one?

16 Q Yes, sir.

17 A Where does it say that?

18 Q Well, apparently it says it on the document that I  
19 do not have with me, but I believe there was an affidavit  
20 attached to the back of it and I apparently inadvertently did  
21 not copy it. Maybe your counsel has a copy of the response  
22 and can confirm that my recollection is correct.

23 MR. TENPAS: Chairman Clark, we are endeavoring to  
24 locate the full answer right now.

25 CHAIRMAN CLARK: Mr. Wright, do you have some



1 questions on these?

2 MR. WRIGHT: I do have questions on them, yes,  
3 ma'am. Well, on the Exhibit No. 4, I do. I may have a couple  
4 on Exhibit No. 5.

5 CHAIRMAN CLARK: They're looking for it. Go ahead  
6 and answer it, if you can.

7 Q (By Mr. Wright) Do you recall answering the  
8 interrogatory, Mr. Harper?

9 A I don't recall answering it. But like I say, I  
10 answered so many of them.

11 Q Why don't we just pass on that until we have a  
12 chance to confirm whether you are in fact the respondent.

13 Before you move to that, I will ask you one more  
14 question about the work sheets and the summaries. I noted  
15 that on a couple occasions, perhaps more, Florida Power, from  
16 observing the summaries, that Florida Power has gotten more  
17 curtailment than it indicated that it needed or than the  
18 summary indicates was needed for a given event. Do you recall  
19 that happening?

20 For example, on the January 7, 1995, curtailment,  
21 the strategy on the curtailment summary indicates that you  
22 needed QFs to reduce to 427 and they actually reduced to  
23 between 322 and 368 during the duration of the curtailment  
24 event.

25 A I believe our maximum curtailment that we have asked

1 for is around 280.

2 Q I'm sorry, I was referring to the generation levels  
3 to which the QFs as a group reduced procuring the curtailment  
4 event when I was reciting those numbers.

5 A Give me a specific example.

6 Q Sure. Well, if you look at whatever is easiest for  
7 you to get to. If you can look at the curtailment summary for  
8 January 2, 1995?

9 A Okay.

10 Q When I said "needed," I was trying to follow the  
11 nomenclature on the report there on your table. If you look  
12 at the curtailment summary, it says, in the first, second  
13 column of the data block, it says, "Request for 0100, 200  
14 megawatts." Down at the bottom there it says, "Needed 496."  
15 I interpreted that to mean you needed the QFs to get down to  
16 496.

17 Is that accurate? And in reading over the hour --  
18 the questions for 0230, it indicated you needed the QFs to get  
19 to 439 megawatts.

20 My observation is that in fact the QFs got well  
21 under that, they got to 417 for hour 0300 and then to between  
22 315 and 330 for the remaining hours. So they were  
23 approximately, actually, 100 to 130, maybe 125 megawatts below  
24 where you needed them to be for the duration of that event.

25 Is that an accurate interpretation of that table?

1           A     Sure. Let me add that column real quick. I believe  
2 that's the total of that column. (Pause)

3                     What that column at the bottom is is the total. For  
4 example, hour 0300 is 417, that's the total generation that  
5 was being output by the QPs at that hour.

6                     If you add that number plus the curtailment  
7 requested, which would have been 278, it appears, it would  
8 bring you up to 696 and it would have been the total of cogen  
9 on line at the time. Which would have been exactly what we  
10 asked for. (Pause)

11           Q     Okay. Then can you tell me why in the second  
12 request column it says, "Request for 0230," it says, "Needed  
13 439."

14           A     That's where we needed their total output of their  
15 units to be. After the second curtailment amount, the first  
16 one was 201 and the second one was 77, that would have had  
17 everyone curtailed to the amount shown, that would have  
18 brought their units down to 439.

19           Q     And that is how I interpreted it. Then I observed  
20 that in the succeeding hours ending 0300 through 0700, they  
21 got down to 417 for 0300 and then down to 315 to 330 for the  
22 remainder of the period. Okay?

23           A     Okay. If you will look at the notes column on the  
24 right-hand side? When they reach that level, you will see  
25 Tiger Bay had to come off-line. They could not maintain their

1 NOX compliance at 115 megawatts?

2 Q Yes, I see that.

3 A And OCL loads reflect 35 megawatts of deliveries to  
4 Reedy Creek. The big amount, though, was the Tiger Bay coming  
5 off line. At the time, they had told us they were going to  
6 come back on line, too. Once again, it left the dispatchers  
7 in a position of you're at a certain curtailment level and you  
8 don't know whether a unit that you have no control over is  
9 coming back or not.

10 Q Thank you.

11 A Okay.

12 Q If I could ask you now to look at what has been  
13 marked as Exhibit No. 5, the tabular information.

14 A Mine says Exhibit No. 3.

15 Q Yeah. At the bottom of the first page, it is going  
16 to say Deposition Exhibit 3 Late-Filed. The Chairman has  
17 instructed us to put in the blank at the top of the cover  
18 sheet to Exhibit No. 5 for the purposes of the hearing.

19 A Okay.

20 Q Did you do these or were these done at your request?

21 A These were done at my request.

22 Q Are they what they purport to be, that is, first a  
23 schedule of the daily minimum and maximum loads for every day  
24 of 1994 and, second, a schedule showing Florida Power's units  
25 and in one case Tiger Bay going below their minimum operating

1 levels during December of '94 and January 1995 curtailment  
2 alerts, warnings and emergencies?

3 A Yes, they are.

4 Q And the information contained herein is true and  
5 correct to the best of your information and belief?

6 A Yes.

7 Q I would like to ask you to look at the other  
8 interrogatory now. I'm not trying to prolong this, but during  
9 the period that you were reviewing the documents I did verify  
10 with your counsel that you signed the affidavit accompanying  
11 this interrogatory response.

12 A Okay.

13 Q Are you qualified to talk about it or should I  
14 direct my questions about this to Mr. Southwick or  
15 Ms. Brousseau?

16 A Let me finish reading through it just a second.

17 Q Certainly. (Pause)

18 A I believe Ms. Brousseau and I worked on this  
19 together. I provided part of the information, she provided  
20 the cost information, if I'm remembering this particular one  
21 right.

22 Typically, reliability issues are the type of thing  
23 that I would handle. We worked together on many of these  
24 interrogatories.

25 Q I didn't mean to interrupt you, Mr. Harper.

1 I wanted to ask you about the sentence in the second  
2 paragraph that reads, "FPC would note that the precise amount  
3 of costs cannot be fully known in advance because it is not  
4 until the curtailment period had been experienced and actual  
5 load level and existing conditions are known that the full  
6 extend of such costs are susceptible to determination."

7 If you want to tell me that some questioning about  
8 that would be better directed to Mr. Southwick or  
9 Ms. Brousseau, I will move on.

10 A I would say it would be directed to Mr. Southwick.

11 MR. WRIGHT: Thank you, I'm going to ask that this  
12 be admitted in that he is the signed affiant who sponsored the  
13 interrogatory response.

14 CHAIRMAN CLARK: I assume that we'll do that at the  
15 conclusion of his testimony.

16 MR. WRIGHT: Of course.

17 Q (By Mr. Wright) Mr. Harper, do you anticipate that  
18 if the Public Service Commission approves Florida Power's plan  
19 that Florida Power will try to continue to run its system the  
20 way it has been since the plan was promulgated in October of  
21 1994?

22 A If you determine or if you are saying "as it has  
23 been" as meaning that we will exercise all due caution before  
24 we use curtailments, then yes, we will curtail only as  
25 necessary and only as a last resort when all other mitigation

1 methods have failed.

2 MR. WRIGHT: You exactly answered my questions.  
3 Thank you, that's all I have.

4 CHAIRMAN CLARK: Any other intervenors? Ms. Brown?

5 MS. BROWN: Staff has no questions.

6 CHAIRMAN CLARK: Commissioners? Redirect?

7 MR. TENPAS: Just a couple of items.

8 REDIRECT EXAMINATION

9 BY MR. TENPAS:

10 Q Mr. Harper, you recall having Mr. Presnell ask you  
11 some questions about the effects with respect to the first  
12 curtailment, the effects of keeping the Anclote, University of  
13 Florida and Bartow units on line?

14 A Yes.

15 Q Do you generally recall that? Can you tell me  
16 whether keeping those three units on line and in operation  
17 allowed PPC to take any other action with respect to any other  
18 units?

19 A They certainly did. On the October 19th time frame,  
20 that was when, as you mentioned, Bartow, Anclote and  
21 University of Florida stayed on line. And those amount to  
22 approximately 60 megawatts. The curtailment plan calls for,  
23 as Mr. Wright just pointed out, CR-4 and 5 holding at 300  
24 megawatts. Because for security and reliability reasons,  
25 because CR-4 -- excuse me, because Anclote, Bartow and the

1 University of Florida Cogen was on line, we made a decision  
2 that night to reduce that unit, CR-4, from 300 megawatts down  
3 to 150 megawatts.

4 So if you use those numbers in reverse order, we, in  
5 fact, saved 90 megawatts that night by doing what we did.

6 We took a risk, a risk to the system. We had a unit  
7 on in Pinellas County, actually two units, Anclote and Bartow;  
8 we felt fairly secure on our 230 kV grid that it would be okay  
9 to go ahead and lower CR-4 from its 300 level to 150 due  
10 primarily because those units were on line.

11 Q Thank you. Do you recall also Mr. Presnell asking  
12 you some questions about your message that was sent to the  
13 message board on the 19th -- or I guess on the 18th -- with  
14 respect to power available to be sold on the 19th?

15 A Right.

16 Q Can you explain to us how you would typically expect  
17 a transaction to mature out of such a message if that were to  
18 happen?

19 A Certainly. That type of messages go out all the  
20 time on the messaging system, bulletin board. It is companies  
21 offering power to buy or sell at a given price range. What we  
22 are doing, and all other companies are doing the same thing,  
23 is just seeing interest out there in anyone buying power. It  
24 goes on all the time.

25 People respond to those messages. To back that up



1 is why we call all the different companies.

2 Q You have used the term "AGC," automated generation  
3 control, on several occasions. Can you explain to a lay  
4 person what AGC is.

5 A AGC, automatic generation control, is what allows  
6 our units that we have on line to meet the moment-to-moment  
7 system load.

8 For example, if the load, every minute of every day,  
9 the load fluctuates. It goes up and down depending upon the  
10 day. In the morning, the load goes up and sustains a level;  
11 in the evening, it starts to come down.

12 To match the load with our generation, we have to  
13 have units what we call on control or on AGC. Those units  
14 follow the system load automatically without the dispatchers  
15 having to move the load by hand. NERC, the North American  
16 Reliability Council, the FCG, the SERC, all demand that every  
17 electric utility have units on control to meet to follow the  
18 load.

19 MR. TENPAS: Thank you.

20 CHAIRMAN CLARK: How many units do you have to have  
21 on that automatic control? You don't have to have all of them  
22 on there, do you?

23 WITNESS HARPER: Typically, for a system our size in  
24 a daytime, we have five or six units on control. The more  
25 units you have on control, the better you are to follow the

1 load.

2 Our EMS or energy management system, our compute  
3 that runs the load following, the AGC, it bases load following  
4 once again on economics so that each of our units that's on  
5 control at any given time it will pulse or move that unit in  
6 the direction it should go up or down, based on economics.

7 So, for example, if we had Crystal River 4 and 5,  
8 which is our two most economical units, if we had those on  
9 control and we had, let's say, two Anclote units on control at  
10 the same time, what would happen is the energy management  
11 system would automatically try to load up the more economical  
12 units first, followed by the more expensive units.

13 So the more units you have on control, the better  
14 able you are to respond to the changing load.

15 CHAIRMAN CLARK: I really wanted to know if there  
16 was like a minimum amount of megawatts that had to be subject  
17 to that control.

18 WITNESS HARPER: There's not a minimum subject to  
19 control by any particular rules. We at all times try to keep  
20 X number of units on control, though. Typically, 100  
21 megawatts is the minimum we try to allow on our system that's  
22 able to respond.

23 CHAIRMAN CLARK: Okay.

24 WITNESS HARPER: May I go one step further on that?

25 CHAIRMAN CLARK: Go ahead.

1           WITNESS HARPER:  When I say four or five units on  
2 control, that's during the day.  Many times during these low  
3 load conditions when we bring our units down to minimum levels  
4 those are not minimum local control levels, those are minimum  
5 operating levels.  When we talk about leaving CR-4 or 5 on,  
6 that's the only thing available to give the dispatcher any  
7 control at all and to respond to reserves.

8           CHAIRMAN CLARK:  Go ahead.

9           MR. TENPAS:  Thank you.

10          Q     (By Mr. Tenpas)  You have had some exchange with  
11 Mr. Presnell about Tiger Bay and its performance on the 19th.  
12 Just to be clear, you don't know what -- you personally don't  
13 know what Tiger Bay's contractual status was as of the 19th?

14          MR. PRESNELL:  Madam Chairman, that's a leading  
15 question on redirect, which is improper.

16          CHAIRMAN CLARK:  Rephrase your question.

17          MR. TENPAS:  I'll rephrase.

18          Q     (By Mr. Tenpas)  Mr. Harper, do you know Tiger Bay's  
19 contractual status with respect to the events of the 19th?

20          A     As I said earlier, I do not know.

21          Q     Do you know whether any curtailment agreement was in  
22 place between Florida Power and Tiger Bay on the 19th?

23          A     No, I do not.

24          Q     You indicated that, in response to Mr. Presnell's  
25 question about whether Florida Power would be doing anything

1 to take account of Orlando CoGen's decision to go to zero  
2 megawatts on the 19th, that Florida Power would not be doing  
3 anything. In that answer, were you intending to exclude the  
4 possibility of PPC honoring agreements between the  
5 cogenerators to sometimes overcurtail and sometimes  
6 undercurtail in working out the balance themselves?

7 A No, certainly not. We fully encourage the  
8 cogenerators to work amongst themselves to come up with any  
9 plan that could help the situation.

10 Q Finally, can you look at Tab 3, the curtailment  
11 summary that Mr. Wright was just directing you to?

12 A Okay.

13 Q And you see in the column with respect to the 0100  
14 curtailments, it says, "Needed," and then under that, "496."  
15 And in the following three columns there are entries of 693,  
16 523 and 516?

17 A Right.

18 Q Does that indicate that the cogenerators continue to  
19 produce an amount of energy greater than needed?

20 A Yes, I believe it does.

21 MR. TENPAS: I have nothing further, thank you.

22 CHAIRMAN CLARK: Thank you, Mr. Tenpas. You're  
23 excused, Mr. Harper.

24 (Witness Harper excused.)

25 - - - - -

1 CHAIRMAN CLARK: Tomorrow morning at 9:00, we will  
2 start with Mr. Southwick. Okay, 9:00, thank you very much.

3 I'm sorry, I was just reminded we need to admit  
4 exhibits?

5 Mr. Tenpas, do you move Exhibit 3?

6 MR. TENPAS: Yes, I do.

7 CHAIRMAN CLARK: Without objection, Exhibit 3 is  
8 admitted. Exhibits 4 and 5?

9 MR. WRIGHT: I move them.

10 CHAIRMAN CLARK: Without objection, 4 and 5 are  
11 admitted. Thank you.

12 (Exhibit Nos. 3, 4 and 5 received in evidence.)

13 (Thereupon, the hearing adjourned at 5:20 p.m., to  
14 reconvene at 9:00 a.m., Tuesday, May 9, 1995, at the same  
15 address.)

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17 (Transcript continues in sequence in Volume 3.)

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