

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of FLORIDA : DOCKET NO. 900796-EI
POWER AND LIGHT COMPANY for : HEARING
Inclusion of the Scherer Unit :
No. 4 Purchase in Rate Base, : SECOND DAY
including Acquisition Adjustment :
----- EVENING SESSION

VOLUME IV
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Florida Public Service Commission

Hearing Room 106
Fletcher Building
101 East Gaines Street
Tallahassee, Florida

December 12, 1990

Met pursuant to adjournment at 1:00 p.m.

BEFORE: COMMISSIONER MICHAEL McK. WILSON, Chairman
COMMISSIONER GERALD L. GUNTER
COMMISSIONER THOMAS M. BEARD
COMMISSIONER BETTY EASLEY
COMMISSIONER FRANK S. MESSERSMITH

APPEARANCES:

(As heretofore noted.)

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FLORIDA PUBLIC SERVICE COMMISSION

DOCUMENT NO.

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I N D E XWITNESSESName:Page No.

SAMUEL S. WATERS

Direct Examination by Mr. Butler	451
Prefiled Direct Testimony Inserted	457
Cross Examination by Mr. McGlothlin	489
Cross Examination by Mr. Howe	568
Cross Examination by Mr. Murrell	602
Cross Examination by Mr. Tellechea	615
Redirect Examination by Mr. Butler	626

1 Index Continued:

2	<u>Number:</u>	<u>EXHIBITS</u>	<u>Identified</u>	<u>Admitted</u>
3	18	(Waters) Composite of Documents 1 through 10	454	627
4	19	(Waters) Citizens Response to Second Set of Interrogatories	455	627
5	20	(Waters) IGCC Purchase Charts	455	627
6	21	(Waters) Cost Comparison of Scherer 4 Purchase to 1996 IGCC	455	627
7	22	(Waters) Adjustment to S.S. Waters' Document No. 10	455	627
8	23	(Waters) Assumption for Comparison of Generation Option Economics	456	627
10	24	(Waters) Options Capacity Factors 1990-2018	509	627
11	25	(Waters) Variations in Document 10 to Reflect Sherer Purchase Option at 70% Factor	521	627
13	26	(Nassau Power Corp) 1984-88 Generating Unit Statistics by North American Electric Reliability Council	537	627
14	27	(OPC) FPL's Response to the Citizens' Second Set of Interrogatories, Interrogatory No. 35.	575	627
15	28	(OPC) PROSCREEN Run Sheets	580	w/d
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

EVENING SESSION

1

2 (Transcript follows in sequence from Volume III.)

3

4 MR. BUTLER: Mr. Chairman, we have Mr. Waters
5 on the stand. Before he begins his summary, let me
6 describe what I have handed out during the break.
7 There are exhibits that we will be wanting to have
8 discussed with Mr. Waters. And first of all, I would
9 note that I had distributed yesterday at the beginning
10 of the hearing an errata sheet for the testimony of Mr.
11 Waters. I believe that all of the parties, the
12 Commissioners and the court reporter have copies of
13 this, and if not, I certainly have more copies, but if
14 so, I would propose not to have Mr. Waters run through
15 the changes to his testimony live.

15

CHAIRMAN WILSON: A wise course of action.

16

17 MR. BUTLER: Thank you. Let me describe what
18 I have handed out. Everybody should have a brown
19 folder, clipped to the top of it being a three-page
20 document that is entitled "Florida Power and Light
21 Company Assumptions for a Comparison of Generation
22 Option Economics." This, together with the materials
23 in the brown folder, are what we have prepared,
24 attempting to be responsive to Commissioner Gunter's
25 request for cost comparisons. And I'll describe what
was attached here first and then what is inside the

1 folder.

2 The document entitled "Assumptions for a
3 Comparison of Generation Option Economics" tries to run
4 down through and compare all of the assumptions and
5 then subsequent pages -- comparison actually, of the
6 economics of each of the -- excuse me, five options,
7 the Martin IGCC, Scherer purchase, Scherer UPS, and the
8 two standard offer variations.

9 This is going to be used by both Mr. Waters
10 and Mr. Gower, and we will ask that an exhibit number
11 be assigned to it separately.

12 The materials inside the brown folder we'll
13 ask to have an exhibit number assigned that are -- as a
14 composite exhibit, and this consists of a set of
15 responses by Mr. Waters to interrogatories detailing
16 cost categories shown on his Document 10.

17 In the orange folder is a set of those same
18 cost categories with some total numbers at the bottom
19 line of it. And then the long document on legal paper
20 is a cost comparison showing difference in cumulative
21 present value between the Scherer purchase option and
22 each of the other four options on Document 10.

23 Finally, what was laid on top there, a
24 one-page document entitled "Adjustment to S. S. Waters'
25 Document No. 10 to Reflect Supplemental Letter of

1 Intent Scherer 4 Purchase" is pretty much what it says.
2 This is an attempt to reflect in the numbers that would
3 appear on Mr. Waters' Document 10, the impact
4 quantified of the second supplemental Letter of Intent,
5 what had been identified as Exhibit 2 in this hearing.
6 So --

7 CHAIRMAN WILSON: All right.

8 MR. BUTLER: With that, let me introduce Mr.
9 Waters and we'll get to the asking for exhibit numbers
10 when we come to the end of the summary.

11 CHAIRMAN WILSON: Let me do something else
12 first. Let me see if I can get an idea how long we're
13 going to be here tonight. Do you have a reasonable
14 idea of how much cross you're going to have of Mr.
15 Waters?

16 MR. HOWE: It would be at least an hour,
17 based on what we had before. I haven't seen these
18 documents, and I would like the opportunity to review
19 them before I cross examine Mr. Waters on them, but if
20 this is going to be our only opportunity, I would
21 imagine -- this is the case, this is the comparison,
22 and we would have to spend quite a bit of time with Mr.
23 Waters on what has just been distributed.

24 CHAIRMAN WILSON: You mean we spent the last
25 day and a half on what isn't the case?

1 MR. HOWE: Well, I think this sums it all up,
2 puts it all together, and quite a few things have been
3 deferred to Mr. Waters, and we're finally getting to
4 the numbers and the bottom-line comparison, and this is
5 it.

6 CHAIRMAN WILSON: I've known that from the
7 beginning. I think it's pretty obvious from reading
8 the prefiled testimony that that was the case. Go
9 ahead.

10 MR. BUTLER: Mr. Waters, have you previously
11 been sworn?

12 WITNESS WATERS: No, I have not.

13 CHAIRMAN WILSON: You have not?

14 WITNESS WATERS: No, I have not.

15 (Witness sworn.)

16 SAMUEL S. WATERS
17 was called as a witness on behalf of Florida Power and
18 Light Company and, having been first duly sworn,
19 testified as follows:

20 CHAIRMAN WILSON: Be seated.

21 DIRECT EXAMINATION

22 BY MR. BUTLER:

23 Q Would you please state your name and address
24 for the record.

25 A My name is Samuel S. Waters. My business

1 address is Florida Power and Light Company, 9250 West
2 Flagler Street, Miami, Florida 33174.

3 Q By whom are you employed and in what
4 capacity?

5 A I'm employed by Florida Power and Light
6 Company as the Manager of Power Supply Planning.

7 Q Do you have before you a document consisting
8 of 21 pages of testimony and 10 attached documents
9 entitled "Florida Power and Light Company, Testimony of
10 Samuel S. Waters, September 28th, 1990"?

11 A Yes, I do.

12 Q Was this prepared by you or under your
13 supervision and control?

14 A Yes, it is.

15 Q And with the changes reflected in the errata
16 sheets that have been previously distributed, would
17 this accurately reflect your testimony today?

18 A Yes.

19 MR. BUTLER: Ask that Mr. Waters' prepared
20 testimony be inserted into the record as though read.

21 CHAIRMAN WILSON: Without objection, his
22 testimony will be so inserted into the record.

23 COMMISSIONER GUNTER: Is Mr. Waters going to
24 be the one to -- to support the spread sheets that have
25 been handed out?

1 MR. BUTLER: He is going to support on all of
2 what is in the brown folder. The document that was
3 attached to the top of that will be jointly supported
4 by him and Mr. Gower.

5 MR. MCGLOTHLIN: Which one is that, Mr.
6 Butler?

7 COMMISSIONER GUNTER: Whose figures are
8 correct here, the one on the front here or Mr. Gower's
9 testimony?

10 MR. BUTLER: I beg your pardon? I'm not sure
11 I understand the question.

12 COMMISSIONER GUNTER: Well, it doesn't take a
13 genius to look and see there's a significant difference
14 between the figures in Mr. Gower's exhibits and this
15 exhibit. So it would be either Mr. Waters or Mr.
16 Gowers to reconcile those differences.

17 MR. BUTLER: That's correct.

18 COMMISSIONER GUNTER: Okay. If I can pick it
19 up, you know it's not a genius. Go ahead.

20 MR. BUTLER: Mr. Chairman, I'd ask that an
21 exhibit number be assigned to the composite exhibit
22 consisting of ten documents attached to Mr. Waters'
23 prefiled testimony. I believe that would be Exhibit
24 18.

25 CHAIRMAN WILSON: Exhibit 18.

1 (Exhibit No. 18 marked for identification.)

2 MR. BUTLER: At this point I would like to go
3 ahead and ask that exhibit numbers be assigned to the
4 materials I had had handed out. I would propose that
5 materials in the brown folder, Citizens Second Set of
6 Interrogatories, Interrogatory No. 31(E), the variation
7 on that reflecting the totals on the bottom, and the
8 comparison sheet entitled "Cost Comparison of Scherer 4
9 Purchased to 1996 IGCC," be a composite exhibit that
10 would, I believe, be Exhibit 19.

11 CHAIRMAN WILSON: You know, I think it would
12 be easier, if we're going to be moving among these
13 documents is to give them separate numbers.

14 MR. BUTLER: Okay.

15 CHAIRMAN WILSON: It would be appropriate to
16 take the Interrogatory 31(E) and the sheets that are
17 attached to it by the paper clip and give that one
18 number?

19 MR. BUTLER: That would be fine.

20 CHAIRMAN WILSON: Let's give that Exhibit No.
21 19.

22 MR. BUTLER: All right. And then the next
23 would be materials that --

24 MR. MURRELL: I'm sorry, Mr. Chairman, I
25 missed your designation at that point in time. Which

1 document are you speaking of?

2 CHAIRMAN WILSON: This is the document that
3 was inside the brown folder that's entitled "Citizens
4 Second Set of Interrogatories No. 31(E)," I gave that
5 Exhibit 19.

6 The materials in the orange folder --

7 MR. BUTLER: Yes, sir, that would be Exhibit
8 20.

9 CHAIRMAN WILSON: That would be Exhibit 20.
10 (Exhibit Nos. 19 and 20 marked for
11 identification.)

12 MR. BUTLER: Finally, the materials on the legal
13 paper, "Cost Comparison of Scherer 4 Purchase" --

14 CHAIRMAN WILSON: That would be 21.
15 (Exhibit No. 21 marked for identification.)

16 MR. BUTLER: Then I would propose that the
17 next be the Adjustment to S. S. Waters' Document No. 10
18 to reflect supplemental Letter of Intent, that's the
19 one page.

20 CHAIRMAN WILSON: All right, that will be No.
21 22.

22 (Exhibit No. 22 marked for identification.)

23 MR. BUTLER: And finally, the document that
24 he would be discussing in conjunction with Mr. Gower,
25 "Assumptions for Comparison of Generation Option

1 Economics" be the final Exhibit 23.

2 CHAIRMAN WILSON: That's the one that's
3 clipped to the outside of the brown folder?

4 MR. BUTLER: That's right.

5 CHAIRMAN WILSON: That would be Exhibit 23.
6 (Exhibit No. 23 marked for identification.)

7 MR. MURRELL: The one clipped to the outside,
8 this one right here, Florida Power and Light Company
9 Assumptions for Comparison of Generation --

10 MR. BUTLER: Thank you.

11

12

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF SAMUEL S. WATERS

DOC'TET NO. 900796-EI

SEPTEMBER 28, 1990

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

2 **A. My name is Samuel S. Waters and my business address is 9250 West**
3 **Flagler Street, Miami, Florida 33174.**

4

5 **Q. By whom are you employed and what position do you hold?**

6 **A. I am employed by Florida Power & Light Company (FPL) as the Manager**
7 **of Power Supply Planning.**

8

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

10 **A. I manage the group that is responsible for the development of FPL's**
11 **generation expansion plans and other generation related activities, such**
12 **as system production cost projections. I also coordinate the annual**

1 Energy Capacity Study, which is FPL's primary cross-functional program
2 to develop an integrated plan for meeting future capacity needs.

3

4 **Q. Please describe your education and professional experience.**

5 **A. I graduated from Duke University with a Bachelor of Science Degree in**
6 **Electrical Engineering in 1974. From 1974 until 1985, I was employed by**
7 **the Advanced Systems Technology Division of Westinghouse Electric**
8 **Corporation as a consultant in the areas of Transmission Planning and**
9 **Power System Analysis Software. While employed by Westinghouse, I**
10 **earned a Masters Degree in Electrical Engineering from Carnegie-Mellon**
11 **University in 1976.**

12

13 I joined the System Planning Department of FPL in 1985 and have
14 worked in the Power Supply Planning area since that time.

15

16 I am a registered Professional Engineer in the States of Pennsylvania
17 and Florida and a Senior Member of the Institute of Electrical and
18 Electronics Engineers, Inc. (IEEE).

19

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

21 **A. The purpose of my testimony is to demonstrate how FPL's purchase of**
22 **Georgia Power Company's (GPC) Plant Robert W. Scherer Unit No. 4**
23 **(Scherer Unit No. 4) represents the most cost effective means of meeting**
24 **FPL's future need for new generating resources. I will discuss the**

1 Scherer Unit No. 4 purchase as it relates to FPL's most recently
2 developed expansion plan, as presented in the Petition to Determine
3 Need for Electrical Power Plant, Docket Nos. 890973-EI and 890974-EI
4 (Need Petition). In so doing, I will briefly review the planning process and
5 objectives employed at FPL, review FPL's base expansion plan as
6 presented in the Need Petition, present some significant changes which
7 have occurred since the Need Petition was filed and discuss how the
8 Scherer Unit No. 4 purchase provides other benefits to FPL customers.

9
10 Q. Are you sponsoring an exhibit in this case?

11 A. Yes. It consists of ten documents:

12

13 • *Document No. 1* is a summary of FPL's summer peak demand,
14 winter peak demand and net energy for load (NEL) forecast.

15

16 • *Document No. 2* is FPL's fuel forecast for residual fuel oil, natural
17 gas and coal.

18

19 • *Document No. 3* is a summary of the net to grid capacity forecast
20 to be available to FPL from Qualifying Facilities.

21

22 • *Document No. 4* is a summary of FPL's cost of capital
23 assumptions.

- 1 • *Document No. 5* is a summary of FPL's assumptions on cost and
2 performance of new generating units.
- 3
- 4 • *Document No. 6* is a summary of the O&M rates assumed for the
5 Scherer unit.
- 6
- 7 • *Document No. 7* is a graphic summary of FPL's base capacity plan
8 without the purchase of Scherer Unit No. 4.
- 9
- 10 • *Document No. 8* is a graphic summary of FPL's expected loss-of-
11 load probability (LOLP) through 1997 demonstrating a need for
12 new capacity.
- 13
- 14 • *Document No. 9* is a summary of FPL expansion plans with and
15 without the purchase of Scherer Unit No. 4.
- 16
- 17 • *Document No. 10* is a summary of the relative economics of the
18 alternatives available to meet the 1996 need.

Review Of The Planning Process And Objectives

Q. What is the objective of FPL's capacity planning process?

A. The objective of the capacity planning process at FPL is to provide adequate resources to reliably meet our customers' future demand for electric power in a cost-effective manner. While there are many alternatives to meet this future demand, the process attempts to identify a plan which properly balances cost and risk.

Q. What alternatives are considered in the planning process?

A. Both generating and non-generating resources are considered, including:

- Demand Side Management
- Qualifying Facilities
- Purchased Power
- New Generating Units

Q. How are these alternatives integrated into FPL's capacity plan?

A. The first step of the planning process is to identify the amount of resources needed to maintain power supply system reliability. An expansion plan consisting entirely of FPL constructed generating units is then identified. This expansion plan is identified solely for the purpose of establishing an "avoided cost" basis against which all other alternatives can be evaluated. Demand side programs are introduced into the plan

1 first, followed by qualifying facilities, then purchased power. Each of
2 these resources is added to the plan to the extent it is available and cost-
3 effective. Remaining needs are met through the addition of new
4 generating capacity.

5

6 **Q. Does the development of FPL's capacity plan require that a number**
7 **of assumptions or forecasts be made?**

8 **A. Yes.** Estimates of conditions must be developed for twenty to thirty years
9 into the future. These estimates define a scenario upon which the plan
10 will be based.

11

12 **Q. What are the most critical of the assumptions used to define a**
13 **planning scenario?**

14 **A. The most critical assumptions used in the planning process are:**

15

- 16 • Demand and Energy Forecast
- 17 • Fuel Price and Availability Forecast
- 18 • Qualifying Facility (QF) Forecast
- 19 • Cost of Capital Estimate
- 20 • Cost and Performance Estimates for New Generating Units

1 **Q. What is the source of the critical assumptions used to develop the**
2 **plan?**

3 **A. Several FPL departments provide the information required to develop the**
4 power supply plan. The demand and energy forecast is provided by the
5 Research, Economics and Forecasting Department. A summary of the
6 peak demand and net energy for load forecast is provided in my
7 Document No. 1. The fuel price and availability forecast is developed by
8 the Fuel Resources Department. A copy of the forecast for residual fuel
9 oil, natural gas and coal is provided in Document No. 2. The QF forecast
10 is provided by the Bulk Power Markets Department. A summary of the
11 QF megawatts (MW) assumed, by year, in the development of the plan
12 is presented in my Document No. 3.

13
14 The cost of capital estimates assumed for FPL-constructed units and for
15 the purchase of the Scherer Unit No. 4 is developed by FPL's Finance
16 Department. Document No. 4 summarizes the capital structure and the
17 cost of capital used in the economic analyses performed. The last of the
18 critical assumptions I have listed, the cost and performance for new
19 generating units, is developed by FPL's Project Management Department.
20 I have summarized this data in Document No. 5. The O&M assumptions
21 used for Scherer are shown in my Document No. 6.

1 **Q. How is the amount of capacity needed to maintain system reliability**
2 **determined?**

3 **A. FPL uses two reliability criteria to determine the quantity of resources**
4 **required to maintain system reliability: summer peak reserve margin and**
5 **loss-of-load probability (LOLP). The limits established for these criteria**
6 **are a minimum summer peak reserve margin of 15% and a maximum**
7 **LOLP of 0.1 days per year. These criteria and associated limits are**
8 **commonly accepted in the utility industry.**

9
10 **Q. How are the economics of alternative means of meeting capacity**
11 **needs compared?**

12 **A. Alternative means of meeting capacity needs are compared on a present**
13 **value of revenue requirements (PVRR) basis, i.e., the total PVRR of one**
14 **alternative is compared to the PVRR of another to identify the lesser cost**
15 **option. Revenue requirements include the capital, non-fuel operating and**
16 **maintenance and fuel costs of an option, as well as the fuel cost impacts**
17 **associated with changes in system operating characteristics.**

1 **Q.** You mentioned that the planning process attempts to balance cost
2 and risk. What risks must be accounted for?

3 **A.** The risks I refer to fall generally into two categories:

4

5 • The risk of not providing adequate resources to meet customers'
6 future demand for electricity.

7

8 • The risk of making capacity decisions which do not provide the
9 most favorable economics to the customer in the long term.

10

11 These risks are a result of uncertainty over future conditions, including
12 the amount of electricity which will be demanded, the price and
13 availability of fuel, the reliability of forecast in-service dates of non-utility
14 generation including QFs, general economic conditions, environmental
15 regulation and other factors.

16

17 **Q.** How is this uncertainty dealt with in the planning process?

18 **A.** The uncertainty from the planning perspective is dealt with in two ways:
19 through diversity and flexibility. Diversity means that future demand is not
20 met through an over-reliance on any one source of energy or capacity.
21 For example, the use of several fuel sources provides for a greater
22 insulation against price or availability changes in any one fuel. Flexibility
23 refers to the ability to change plans as conditions change; for example,

1 the ability to accelerate or defer in-service dates of new capacity
2 additions as demand projections change is advantageous.

3
4 These factors must be considered in addition to cost in the development
5 of a capacity plan.
6
7

8 Review Of FPL's Base Expansion Plan

9 Q. What is FPL's current base generation expansion plan, without the
10 Scherer Unit No. 4 purchase?

11 A. FPL needs approximately 5,400 MW of resources to meet projected
12 demand through the year 1997. FPL's current base expansion plan
13 consists of a mix of demand side programs, qualifying facilities,
14 purchased power and new generating capacity. The new generating
15 capacity includes the repowering of Lauderdale Unit Nos. 4 and 5, the
16 construction of combined cycle units, Martin Unit Nos. 3 and 4, and the
17 addition of approximately 800 MW of integrated coal gasification
18 combined cycle (IGCC) units, Martin Unit Nos. 5 and 6. This expansion
19 plan is summarized in graphic form in Document No. 7.

1 **Q. Of the 5,400 MW of resources planned through 1997, how much is**
2 **filled by currently contracted and approved resources?**

3 **A. FPL has received Public Service Commission (PSC) approval for demand**
4 **side management (DSM) programs, which include conservation,**
5 **interruptible rates and residential load control. The impact of these**
6 **programs will total approximately 1,317 MW through 1997. FPL has also**
7 **received a favorable determination of need from the PSC for the**
8 **repowering of Lauderdale Unit Nos. 4 and 5, and the construction of**
9 **Martin Unit Nos. 3 and 4, totalling approximately 1,342 MW of capacity.**

10

11 In addition to the above, in 1988, FPL contracted with the Southern
12 Companies for approximately 911 MW of capacity in a Unit Power Sales
13 (UPS) arrangement. FPL has also signed contracts with QFs and
14 received PSC approval for 538 MW of capacity. In addition, FPL has
15 signed negotiated contracts totalling 352 MW which have not yet received
16 PSC approval.

17

18 The total of these contracted and approved resources is 4,108 MW,
19 leaving approximately 1,335 MW of resource need remaining to be filled
20 through 1997.

1 **Q. In what year does FPL need to obtain this additional capacity?**

2 **A. Based on LOLP analysis in which only the contracted and approved**
3 **resources were included, FPL needs approximately 200 MW of additional**
4 **capacity by 1995. The results of this analysis, showing LOLP by year,**
5 **are shown in Document No. 8.**

6

7 **Q. How would FPL plan to meet this additional need, without the**
8 **purchase of Scherer Unit No. 4?**

9 **A. FPL anticipates that an additional 590 MW of QF capacity will be**
10 **available by 1997. The additional need would be met through the**
11 **construction of integrated coal gasification combined cycle (IGCC) units**
12 **totalling 768 MW. The IGCC units are the most cost-effective of the new**
13 **construction generating unit options available to FPL. These units could**
14 **be phased into a 1995/1996 in-service date and address the 1995 need**
15 **I previously discussed.**

16

17 **Q. How does this plan compare to the expansion plan presented to the**
18 **Commission in Docket Nos. 890973-EI and 890974-EI, FPL's Petition**
19 **to Determine Need?**

20 **A. The new construction requirements are identical to those identified in**
21 **these dockets. Conservation projections are somewhat higher in the**
22 **longer term and offset a higher demand forecast.**

1 **Q. Have there been any significant changes since FPL's Need Petition**
2 **was prepared?**

3 **A. Yes. There have been two significant changes since that time which**
4 **have an impact on the generation expansion plan. First, the FPL forecast**
5 **of summer peak demand shows an increase in the short term versus the**
6 **forecast used in the Need Petition. In 1991-92, this increase is**
7 **approximately 200 MW. The longer term forecast remains basically**
8 **unchanged due to the effects of increased conservation. The second**
9 **major change is a shifting of QF resources used in the Need Petition. In**
10 **the Need Petition, FPL had forecast that 1,095 MW of QF power would**
11 **be supplied by 1997. This total amount by 1997 has not changed**
12 **substantially; the currently forecasted total is 1,105 MW. However,**
13 **included in that total were two large facilities, 225 MW and 300 MW, to**
14 **be in-service to meet the summer peaks in 1993 and 1995, respectively.**
15 **These facilities represent a substantial share of FPL's total QF**
16 **purchases, and have subsequently been delayed to in-service dates**
17 **which will meet the summer peaks of 1994 and 1996, respectively.**

18
19 **Q. Have these changes threatened system reliability?**

20 **A. No. They do tend to reduce the projected reserves in FPL's capacity**
21 **plan and are, therefore, cause for concern. They also have occurred in**
22 **a time frame in which it is not feasible to economically construct**
23 **additional new capacity, if it were required. Even with these changes,**

1 FPL projects its next capacity addition would be in the 1995-96 time
2 frame, since reliability standards are not violated before that time.
3
4

5 **The Impact Of Scherer Unit No. 4 On The Plan**

6 Q. How does the purchase of Scherer Unit No. 4 fit into FPL's current
7 base expansion plan?

8 A. The purchase of Scherer Unit No. 4 would allow the deferral of Martin
9 Unit Nos. 5 and 6, the IGCC units, which were scheduled to begin
10 service in 1996, assuming that the additional 590 MW of potential QF
11 capacity is also obtained.
12

13 Q. Does the purchase of Scherer Unit No. 4 have any impact on the
14 scheduled capacity to be brought in-service prior to 1996?

15 A. No. Although, as described in Mr. Cepero's testimony, the purchase of
16 the unit begins in 1991, the Lauderdale repowering and construction of
17 Martin Unit Nos. 3 and 4 have not been deferred. Deferral of this new
18 capacity would be unwise at this time given the changes in the load
19 forecast and the expected in-service dates of QF capacity which I
20 discussed earlier. If these new units were to be delayed, and any further
21 changes were to occur resulting in additional capacity need, there may
22 not be sufficient lead time to reschedule these units back to their original
23 in-service dates.

1 **Q. Please describe the final impact of the Scherer Unit No. 4 purchase**
2 **on FPL's current base generation expansion plan.**

3 **A. The purchase of 646 MW of Scherer Unit No. 4 defers Martin Unit Nos. 5**
4 **and 6 from 1996 to 1998. Subsequent units in the base generation**
5 **expansion plan are also delayed by the purchase of Scherer Unit No. 4.**
6 **The net effect of the purchase of 646 MW is to avoid an approximately**
7 **equal amount of capacity in the base plan for the life of the unit. I have**
8 **summarized the expansion plans through 1998 with and without Scherer**
9 **Unit No. 4 in Document No. 9.**

10
11 **Q. Is this purchase of Scherer Unit No. 4 more cost effective than**
12 **construction of new capacity by FPL?**

13 **A. Yes. When compared to construction of the IGCC units, Martin Unit**
14 **Nos. 5 and 6, the purchase of Scherer Unit No. 4 produces a cumulative**
15 **net present value savings of \$584 million over thirty years.**

16
17 **Q. How do the economics of this purchase compare to the projects**
18 **proposed to FPL in its capacity RFP?**

19 **A. The evaluation of these projects is described in Mr. Denis' testimony.**
20 **The most economic proposal submitted in response to the RFP was, in**
21 **fact, the Georgia Power proposal offering Scherer Unit No. 4 in a UPS**
22 **arrangement. The analysis I have performed shows that the purchase**
23 **arrangement of Scherer Unit No. 4 produces approximately \$15 million**

1 more savings in present value terms than the UPS proposal. This does
2 not reflect certain other benefits associated with the purchase.

3

4 Q. Are there additional benefits provided by the purchase of Scherer
5 Unit No. 4 when compared to the UPS arrangement?

6 A. Yes. The purchase of Scherer Unit No. 4 offers several other benefits
7 when compared to the UPS offer, including:

8

9 • Facilitation of the expansion of the Southern-Florida transmission
10 interface.

11

12 • Inclusion of associated emission allowances in the sale.

13

14 • Assuming the unit life will extend beyond thirty years, FPL will not
15 have to replace the capacity, as it would under the UPS
16 arrangement.

17

18 Q. How does the Scherer Unit No. 4 purchase compare to purchases
19 from QFs?

20 A. The economics of the Scherer Unit No. 4 purchase compare favorably to
21 purchases from QFs under a Standard Offer contract. The purchase of
22 Scherer Unit No. 4 saves approximately \$427 million versus the 1996
23 Standard Offer at no risk factor and \$216 million versus the Standard

1 Offer at a 20% risk factor cumulative present value over thirty years. In
2 addition, the Scherer Unit No. 4 purchase offers less risk to ratepayers
3 than purchases from QFs, or from Independent Power Producers (IPPs).
4

5 Q. How does the purchase of Scherer Unit No. 4 present less risk to
6 FPL ratepayers than purchases from QFs or IPPs from a planning
7 perspective?

8 A. When compared to any unit which is not currently in-service, Scherer Unit
9 No. 4 has an advantage, in that it is already licensed, constructed and
10 operating. It offers proven technology and performance. Additional
11 comfort is provided by the fact that this is a sister unit to several others
12 at the same site which have a proven track record. New QF or IPP units
13 introduce uncertainty over operating performance and delivery schedules.
14 In addition, those QF facilities which operate under a Standard Offer
15 contract represent even greater risk since there is little certainty of
16 performance guaranteed in the contract.
17

18 Q. Would you please summarize the economics of the Scherer Unit
19 No. 4 purchase?

20 A. Yes. I have shown, in summary form, the components of cost of the
21 several expansion alternatives in Document No. 10.

1 **Q. Does FPL have sufficient transmission capacity to take delivery of**
2 **the Scherer Unit No. 4 purchase?**

3 **A. Yes, given the allocation of transfer capability associated with this**
4 **agreement.**

5

6 **Q. Has additional transmission capability been factored into your**
7 **economic analysis?**

8 **A. Yes. The availability to FPL of an additional 500 MW of transmission**
9 **transfer capability over the Florida-Southern interface, as discussed in**
10 **Mr. Cepero's testimony, has been modeled. The additional transfer**
11 **capability also allows FPL to take advantage of additional short term**
12 **economy purchases when available. Overall, the purchase of Scherer**
13 **Unit No. 4 and the addition of new interface capability provide increased**
14 **benefits versus the purchase alone. Assuming approximately \$180**
15 **million as a rough estimate for the cost of adding 500 MW of new**
16 **transmission interface capacity for FPL, the purchase of Scherer Unit No.**
17 **4, along with the increased ability to make economy purchases, provides**
18 **the approximately \$584 million of cumulative net present value revenue**
19 **requirement savings when compared to the base case expansion plan.**

1 **Q. Since Scherer Unit No. 4 is coal-fired, will pending acid rain**
2 **legislation have a negative impact on the economics of the**
3 **purchase?**

4 **A. No, pending acid rain legislation is not expected to have a negative**
5 **impact on the economics under currently proposed legislation. As**
6 **described in Mr. Cepero's testimony, FPL will be entitled to, as part of the**
7 **purchase, any emission and other such environmental allowances**
8 **associated with its undivided ownership interest in Scherer Unit No. 4 as**
9 **a result of the contemplated amendments to the Clean Air Act or any**
10 **other legislative or regulatory action. These allowances will be a**
11 **permanent increment to FPL's total.**

12
13 **Q. You mentioned earlier that you deal with uncertainty in the plan with**
14 **diversity and flexibility. How does the purchase of Scherer Unit**
15 **No. 4 contribute to these goals?**

16 **A. Scherer Unit No. 4 increases the amount of energy supplied by coal in**
17 **the FPL fuel mix. Currently, FPL produces approximately 2% of its**
18 **energy from coal-fired generation. With the purchase of Scherer Unit**
19 **No. 4, that will increase to approximately 8% by 1997. This increase in**
20 **coal-fired generation improves the diversity of the fuel mix. Flexibility,**
21 **which is contained in the FPL base plan without Scherer, is maintained**
22 **with the Scherer purchase, which provides early capacity capable of**

1 addressing changes in the very near term, some of which we have
2 already seen.

3

4 **Q. Would you please summarize the advantages of the purchase of**
5 **Scherer Unit No. 4, from a planning perspective?**

6 **A. First and foremost, the purchase of 646 MW of Scherer Unit No. 4**
7 **provides a savings of \$584 million versus construction of a new unit by**
8 **FPL. It also provides competitive economics versus the best project**
9 **offered in FPL's capacity RFP and versus potential qualifying facility**
10 **projects. Thus, it is the most cost effective means of meeting future**
11 **demand available to FPL at this time.**

12

13 In addition to favorable economics, the purchase offers a number of other
14 advantages. First, the unit is a known quantity with demonstrated
15 performance and identified costs. Second, it is a coal-fired unit with a
16 high availability which helps diversify FPL's fuel mix. The potential
17 downside of acid rain related costs has been addressed, as allowances
18 are included as part of the purchase.

19

20 Third, the purchase offers capacity in the short term, which will reduce
21 concern over volatile assumptions in the load forecast and QF supply.
22 The unit is dispatchable, and maintenance scheduling will be defined by
23 FPL. In addition, when packaged with the additional transmission

1 capability, FPL will be able to take advantage of future economy energy
2 availability. All of these advantages serve to benefit FPL customers.

3

4 Overall, the purchase of Scherer Unit No. 4 represents the best option
5 available to meet FPL's 1996 capacity need.

6

7 Q. Does this conclude your testimony?

8 A. Yes, it does.

1 Q (By Mr. Butler) Mr. Waters, would you please
2 summarize your testimony?

3 A Yes, my direct testimony presents the results
4 of an analysis of the purchase of Georgia Power
5 Company's Robert W. Scherer Unit No. 4.

6 To put this analysis in the proper context, I
7 discussed the planning process employed at FPL and show
8 that all resource alternatives, including demand side
9 programs, purchases from qualifying facilities and
10 power purchases from other sources are considered. I
11 demonstrate that even when all of the resources have
12 been considered. FPL has a need for new capacity in the
13 1995-1996 time frame, and that need, if met by FPL
14 construction of new generation, would be met by the
15 addition of IGCC capacity.

16 The economic analysis I have performed shows
17 that the purchase of Scherer Unit No. 4 provides a
18 savings of approximately \$584 million when compared to
19 construction of new generating capacity by FPL.
20 Compared to the purchase of capacity under a standard
21 offer arrangement, the purchase of Scherer Unit No. 4
22 produces a savings of approximately \$216 million. The
23 purchase also compares favorably to and is economically
24 competitive with the best alternative identified in
25 FPL's capacity solicitation.

1 However, unlike the proposal submitted in
2 response to that solicitation, acquisition of the
3 Scherer unit will provide other important benefits
4 including facilitation of the expansion of the Southern
5 Company/Florida transmission interface, which will
6 provide the ability for FPL, as well as other utilities
7 in the state, to take advantage of economy energy
8 transactions when available, receipt of emission
9 allowances associated with the unit which will become a
10 permanent increment to FPL's total, and the unit will
11 become a permanent asset to FPL and will not have to be
12 replaced at the end of a fixed contract term, as it
13 would under a unit power sale arrangement.

14 Based on the overall economics and the other
15 advantages I've discussed in my testimony, I believe
16 the purchase of Scherer Unit No. 4 represents the best
17 alternative available to meet FPL's 1996 capacity
18 needs, and that acquisition of the unit should be found
19 to be reasonable and prudent.

20 That concludes my summary.

21 MR. BUTLER: Mr. Chairman, if it would be
22 helpful, I could have Mr. Waters briefly go through
23 this series of documents, 19 through 23, to describe a
24 little bit what they represent, or we can go directly
25 to --

1 CHAIRMAN WILSON: I think it would probably
2 be helpful to do that, rather than trying to extract it
3 painfully question by question through cross
4 examination. So let's do that.

5 Q (By Mr. Butler) Mr. Waters, do you have
6 before you what has been identified as Exhibit 19?

7 A Yes, I do.

8 Q Would you please, starting with that and
9 running through what has been identified as Exhibit 23,
10 summarize briefly what these represent for the
11 Commission's benefit?

12 A Yes. What's been identified as Exhibit 19 is
13 really provided as a reference point, and needs to be
14 considered as a package with Nos. 20 and 21, and I'll
15 go through those three in combination.

16 19 was provided in response to Citizen's
17 Second Set of Interrogatories in response to a question
18 about my Document No. 10 in my direct testimony. These
19 spread sheets attached to the interrogatory show the
20 development of the individual components listed in
21 Document No. 10 on a year-by-year basis.

22 Now, having this as a reference point, I
23 merely wanted to demonstrate that these have been
24 provided during the discovery process and all backup
25 for Document No. 10 has been provided.

1 With that, I'd like to go to Exhibit No. 20,
2 which is really a restatement of 19 and contains the
3 same numbers as shown on Exhibit 19, with one
4 exception. And that is on Exhibit 20 for
5 clarification, we have shown the totals at the bottoms
6 of all the columns on those spread sheets. With that
7 exception, this is identical to the response provided
8 in Interrogatory Response in Exhibit 19.

9 CHAIRMAN WILSON: So with the addition of the
10 columns, 20 is identical to 19?

11 WITNESS WATERS: Yes.

12 CHAIRMAN WILSON: Which has been previously
13 provided through discovery, all right.

14 WITNESS WATERS: That's correct.

15 CHAIRMAN WILSON: I can understand that.

16 WITNESS WATERS: So I think for reference, 20
17 will probably be a little easier to follow than 19.

18 CHAIRMAN WILSON: All right.

19 WITNESS WATERS: Now, using the numbers, the
20 data contained in Exhibit 20, we can go to Exhibit 21,
21 which is the wider spread sheet, which is a comparison
22 of the different options listed in my testimony. All
23 of the alternatives listed in my testimony are compared
24 to the Scherer 4 purchase one at a time, and the
25 components of those alternatives are compared. For

1 example, on the first sheet in Exhibit 21, we're
2 comparing the Scherer 4 purchase to the construction of
3 the IGCC unit in 1996. We've separated the costs of
4 those alternatives into three components. The first is
5 capacity payments.

6 The second component is O&M expense, and the
7 third is fuel cost. And we've compared each of those
8 components on both a nominal and a cumulative present
9 value basis. So as we look from left to right in the
10 first column under "Capacity Payments," I have the
11 Scherer costs shown in the first column on a nominal
12 dollar basis: the IGCC revenue requirement shown in the
13 second column starting in 1996. The third column shows
14 the differential in nominal dollars between those two
15 series of payments, and the fourth column shows the
16 cumulative present value difference in 1991 dollars of
17 the two payment streams.

18 We have a similar comparison made on O&M and
19 fuel costs. Following those comparisons, I have a
20 column titled "Total System CPVR Including the Scherer
21 Purchase," which includes not only the first columns,
22 but includes the system fuel costs. I have a total
23 system, including the 1996 IGCC, and final column
24 compares those two.

25 The number at the bottom of the last column

1 on the spread sheet, the 583,304 is the basis for my
2 testimony, which says that Scherer saves approximately
3 \$584 million versus that 1996 IGCC.

4 The following pages have similar comparisons.
5 The following page would be a comparison of the
6 purchase to the UPS proposal. And on that page, the
7 last column, the last year shows a \$15 million savings,
8 which again I referenced in my testimony. And so on.
9 And I won't go through all the spread sheets unless
10 there's specific questions on those, but I also
11 compared the Scherer unit to the standard offer units
12 in a similar manner.

13 If I may move on to Document No. 22, Exhibit
14 No. 22, this reflects changes to the cost of the
15 Scherer 4 purchase based on the supplemental Letter of
16 Intent that's been introduced into the hearing
17 yesterday. And I've tried to break the components of
18 the changes into components related to my Document 10.

19 At the beginning of this document I show the
20 fixed costs shown in Document No. 10. That's as in my
21 testimony, 955,557, and then I show the changes to
22 those fixed costs which are reflected in the
23 Supplemental Letter of Intent.

24 I do the same for the O&M cost. There are no
25 changes to the unit fuel cost, no changes to the system

1 fuel cost shown on my Document 10. At the bottom I
2 have a total cost that reflects all changes, and I show
3 the net change in cost from Document 10, which is an
4 increase in cost of \$8,310,000.

5 The final document, No. 23, is a listing on
6 the first page of some of the assumptions that went
7 into the analysis of the different options underlying
8 the economic comparison. The following pages are
9 reconciliations derived from the analyses in both
10 nominal dollar and present value dollar terms.

11 And I believe, Commissioner, they do
12 reconcile to the sheets I have previously presented,
13 and I'd be glad to show how these compare, but this is
14 really a more detailed breakdown of the numbers that
15 went into the economic analysis. So with that I'd be
16 glad to answer any questions related to these
17 documents.

18 CHAIRMAN WILSON: Commissioners, do you have
19 any questions here before we start into cross
20 examination?

21 (No response.)

22 CHAIRMAN WILSON: All right, let's go then.

23 MR. BUTLER: Tender Mr. Waters for cross
24 examination.

25 COMMISSIONER GUNTER: I do have one I might

1 as well clear up.

2 CHAIRMAN WILSON: Let's go ahead --

3 Commissioner Gunter has a question. Let's go ahead and
4 let him ask it.

5 COMMISSIONER GUNTER: Have you got a copy of
6 Mr. Gower's testimony?

7 WITNESS WATERS: Yes, sir.

8 COMMISSIONER GUNTER: Go to his Document No.
9 1, Page 1 of 1.

10 WITNESS WATERS: Yes, sir, I have it.

11 COMMISSIONER GUNTER: I don't want to dwell
12 on it if there's a logical reason. Do you have Exhibit
13 23 before you?

14 WITNESS WATERS: Exhibit 23, yes, sir.

15 COMMISSIONER GUNTER: Go to Line 6 on Page 1.

16 WITNESS WATERS: Yes, sir.

17 COMMISSIONER GUNTER: I look at Scherer UPS,
18 which is Column 4, and they have a Georgia Power
19 Company initial investment of \$554,665,000, is that
20 correct?

21 WITNESS WATERS: Yes, sir, in Exhibit 23,
22 that's correct.

23 COMMISSIONER GUNTER: Now, go to the original
24 cost on Line 5 of Document 1 attached to Mr. Gower's
25 testimony of \$525,185,917, is that correct?

1 WITNESS WATERS: Yes, sir.

2 COMMISSIONER GUNTER: They both can't be
3 right.

4 WITNESS WATERS: I'll have to defer to Mr.
5 Gower to explain the difference, but I believe that the
6 number that we've shown on Exhibit 23 -- well, I'm not
7 certain. I'd have to ask Mr. Gower to reconcile those
8 two numbers since this is from his testimony.

9 COMMISSIONER GUNTER: Look at the footnote.
10 Would you begin to see where I have some questions?

11 WITNESS WATERS: Yes, sir.

12 COMMISSIONER GUNTER: I look at Footnote 3,
13 it says, "Georgia Power Company initial investment
14 1989." Plant came on in 1989, and on Mr. Gower's
15 testimony on -- and this is just the first of the
16 questions I want to ask you about these spread sheets,
17 but I want to wait and let everybody else have a shot
18 at it. I see a significant difference, which I think
19 bookkeepers would call a "material" difference,
20 wouldn't you?

21 WITNESS WATERS: Yes, sir, I believe they
22 would.

23 COMMISSIONER GUNTER: That would have some
24 effect on calculations that went through, all the way
25 through, if, in fact, the one on Exhibit 23 was

1 overstated by some \$29 million, or Mr. Gower's was --
2 one was overstated and the other one was understated.

3 WITNESS WATERS: Yes, sir.

4 COMMISSIONER GUNTER: So they both can't be
5 right.

6 WITNESS WATERS: Well, Since this is Mr.
7 Gower's document, I'll have to rely on him to --

8 COMMISSIONER GUNTER: You're saying he has to
9 be wrong on his because yours is right? Is that what
10 you're saying?

11 WITNESS WATERS: No, sir, I'm not sure that
12 he's wrong. I'm sure he can reconcile the numbers.

13 CHAIRMAN WILSON: But your numbers are right?

14 COMMISSIONER GUNTER: Your numbers are right?

15 WITNESS WATERS: My numbers are right.

16 COMMISSIONER GUNTER: So you're number of 554
17 -- so he's the guilty one, huh? Okay. We'll talk to
18 "Guilty" when he comes up. Because that's one of the
19 problems I have, and I would really like to have that
20 reconciled reasonably soon because there are some other
21 ones, because as you run through the calculations, you
22 got to find out which one is right, because you can --
23 I'm uncomfortable. I thought you were going to be able
24 to give me a good answer for that. I'm uncomfortable
25 now because there is a doubt as to which figure you

1 start from. An original investment has a -- you know,
2 with a 5% error one way or the other, a 5% question
3 mark, with some of the calculations, just looking at
4 them very quickly, you know, you had one that was, I
5 think, \$221 million versus 220 million. Well, if you
6 start with a \$25 million difference in the investment,
7 or \$29 million difference in investment, it can swing
8 the other way.

9 WITNESS WATERS: I understand, Commissioner.
10 We'll have to reconcile that.

11 COMMISSIONER GUNTER: And I hope that
12 somebody is listening and will be hotfooting it on over
13 here to explain while you're on the stand because I get
14 real goosy about that -- that's sort of a fundamental
15 on the front end. That's the thing I started looking
16 for and that's the first thing I saw, and that led me
17 to some other questions later on.

18 No more right now, Mr. Chairman.

19 WITNESS WATERS: What I can do for you is
20 reconcile the numbers that are on this list to the
21 numbers used in my analyses and the numbers presented
22 in my documents.

23 COMMISSIONER GUNTER: Okay. Well, I just
24 wanted you to kind of think about that a little bit.

25 CHAIRMAN WILSON: Mr. Murrell, are you again

1 deferring cross?

2 MR. MURRELL: Yes, sir, thank you.

3 CHAIRMAN WILSON: Mr. McGlothlin?

4 MR. MCGLOTHLIN: I'll try, Commissioners.

5 It's kind of hard to cope with this flurry of
6 additional documents. Some of these I've seen before.
7 Some may have some information I've seen before, but
8 you'll have to bear with me while I try to sort it all
9 out. (Pause)

10 CROSS EXAMINATION

11 BY MR. MCGLOTHLIN:

12 Q Mr. Waters, please turn to your Document 3,
13 Page 1 of 1.

14 A Yes, sir.

15 Q Do you have with you a copy of what's been
16 identified as hearing Exhibit 14, which is the
17 Qualifying Facilities Forecast?

18 A I probably have a copy of the forecast. I
19 don't have it identified as the exhibit. That's the
20 1990 forecast?

21 Q Yes.

22 A All right.

23 Q Flipping through what has been identified as
24 Exhibit 14, would you agree that the forecast contains
25 specifically identified projects on a year-to-year

1 basis and then quantifies the total megawatts of QF
2 capacity associated with each year?

3 A Yes, it does.

4 Q And the numbers in your Exhibit No. 3 tie to
5 the numbers that are stated as a cumulative total per
6 year within Exhibit 14, is that correct?

7 A Yes, they do.

8 Q And this is the source of the Document 3 to
9 your testimony?

10 A Yes, it is.

11 Q And as I understand it, planners utilize more
12 than one type of comparison, do they not? For
13 instance, there is the value of deferral type of
14 comparison, as well as the revenue requirements type of
15 comparison?

16 A In developing the expansion plan, no, I
17 wouldn't agree we use those two types of comparisons.
18 Value deferral is primarily aimed at cogeneration
19 pricing rather than developing an optimal expansion
20 plan.

21 Q I see. Is it true that with respect to the
22 value of deferral type of analysis, the analysis takes
23 into account the fixed costs, the fixed O&M costs and
24 the fuel costs of the avoided unit being compared?

25 A In value of deferral -- I'm not sure I

1 understand your question, but value of deferral, the
2 concept would only apply to the O&M and capacity
3 payment components of the costs.

4 Q I see. Is it true that recently in the
5 combined dockets involving the Indiantown contract,
6 that you compared the Indiantown contract with others,
7 based, not only a revenue requirements basis, but also
8 on a value of deferral basis?

9 A Yes, we did. We looked at the payment stream
10 on a value of deferral basis.

11 Q And with respect to the value of deferral
12 comparison you performed there, was that limited to the
13 fixed costs in O&M, or did it include some
14 consideration of the unit specific fuel costs?

15 A Well, it certainly included fuel, but I think
16 what I'm saying is that there's no change in the way we
17 handle fuel in the two methodologies in that there's no
18 restructuring of the cost. The fuel cost is very
19 simply the number of megawatt hours times the fuel
20 cost, whereas, on capacity we've really basically
21 restructured the payments.

22 MR. MCGLOTHLIN: Commissioners, I'm going to
23 ask some questions based on Mr. Waters' Document 10. I
24 have an enlargement of that I'd like to put on the
25 easel and go over with him, but -- it's an enlargement

1 of 10.

2 MR. BUTLER: May I ask, to be sure we don't
3 get fouled up with something, is that an enlargement of
4 the revised Document 10 we supplied with the errata
5 sheets, or is that from the original filing of the
6 testimony?

7 MR. MCGLOTHLIN: This has the revised numbers
8 that were provided to us at the deposition.

9 MR. BUTLER: Okay.

10 Q (By Mr. McGlothlin) Mr. Waters, focusing on
11 the present value columns of fixed cost, O&M fuel cost
12 and system fuel cost and, again, comparing this, for
13 example, with the type of value deferral comparisons
14 you performed to compare the ICL contract, on the one
15 hand, with the discounted standard offer on the other.
16 Would that comparison include the fixed cost, O&M cost,
17 and unit fuel cost columns as they appear on Document
18 No. 10?

19 A Which comparison would include those?

20 Q The value of deferral type of comparison.

21 A The value of deferral as we presented in the
22 previous docket, would include those three components,
23 yes.

24 Q If we were to compare, on that basis, the
25 proposed purchase of Scherer, which is known as the

1 second entry under the option, with the depiction of
2 the discounted standard offer, would you agree that
3 with respect to the present value of the capacity costs
4 shown on Document 10, the discounted standard offer is
5 considerably less than the Scherer purchase?

6 A If you simply add those three components,
7 yes, but there is several flaws in that approach in
8 this case.

9 Q Yes, sir. I'm sure we'll get to those, but
10 please answer my question. Would you agree that the
11 capacity cost, present value of the discounted standard
12 offer, are considerably less than the purchase of the
13 Scherer?

14 A The capacity costs, yes.

15 Q Would you agree that the present value of the
16 fuel cost associated with the standard offer discounted
17 are considerably less than the Scherer purchase?

18 A Yes, they are.

19 Q With respect to the O&M, the discounted
20 standard offer is considerably higher, is it not?

21 A Yes, it is.

22 Q Is that because the standard offer is based
23 upon the scrub unit, whereas Scherer is not?

24 A Primarily, I believe that's the major
25 difference between the two.

1 Q All right. I have a second chart I'd like to
2 show you. (Pause) If you'll take a moment and verify
3 that, these entries were simply extracted from your
4 Document 10, and represent the same present value
5 numbers for the fixed cost, O&M cost and unit fuel cost
6 columns, and verify that I've totaled these correctly.

7 Again, on the value of deferral basis, would
8 you agree that the sum of those three components of
9 costs for the standard offer discounted 20% is far less
10 than the corresponding present value cost for the
11 Scherer purchase option? (Pause)

12 A Okay. The first thing I noticed, Mr.
13 McGlothlin, these were the revisions I gave in my
14 deposition, there are some slight changes, very slight,
15 in the latest version, which I don't think impact the
16 comparison here. With that exception, these numbers
17 are basically correct.

18 Q All right.

19 A As I mention, they are slightly different
20 than the current version of Document 10.

21 Q Based on Document 10, the discounted standard
22 offer would be far -- the sum of the present value of
23 the costs for fixed costs O&M and unit fuel costs are
24 also less expensive than the IGCC or the Scherer UPS
25 options, is that correct?

1 A Yes, sir. But as I mentioned, that would be
2 an invalid comparison in this case.

3 Q I'm sure we'll develop all of those points,
4 Mr. Waters.

5 Just putting it on a percentage basis, that
6 difference between the discounted standard offer and
7 the Scherer purchase would indicate on the present
8 value of the three components of costs, the percentage
9 difference is the order of magnitude, 43%, taking into
10 account your minor changes?

11 A Okay. I'll trust your calculations at the
12 moment.

13 Q Okay. Now, as I understand it, when you
14 prepared Document No. 10, you built into the fixed
15 costs of the Scherer purchase scenario a consideration
16 of the cost of additional transmission facilities, is
17 that correct?

18 A That's correct.

19 Q And that cost is not included in the
20 discounted standard offer, is that correct?

21 A That's correct. It is not.

22 Q So it would be appropriate, in looking
23 further into this comparison, to back out of the fixed
24 cost associated with the Scherer purchase the present
25 value of the cost of that additional transmission line,

1 is that correct?

2 A For the purposes of adding up the numbers,
3 yes, that would be a more comparable set of numbers.

4 Q Now, according to your testimony, you
5 associate with that investment in additional
6 transmission facilities some benefits in the form of
7 additional economy of sales, is that correct?

8 A That's correct.

9 Q Economy purchases.

10 A Economy purchases on the FPL side, yes.

11 Q Is it true that they would be reflected in
12 the system fuel cost column of Document 10?

13 A Yes, they would.

14 Q And would not be included in the value of
15 deferral type of comparison?

16 A That's correct.

17 MR. MCGLOTHLIN: I'd like to take a moment
18 and pass out a document. (Pause)

19 As it happens, Mr. Waters, this document has
20 already been distributed in the package that we
21 recently received, and it's FPL's response to Public
22 Counsel's Interrogatory 31-E. Do you have that with
23 you?

24 A Yes, I do.

25 Q Exhibit 19. (Pause)

1 Turn to Page 3 of 6 of this interrogatory
2 response and look at Column 10, Transmission Revenue
3 Requirements.

4 A Yes.

5 Q Does that indicate the assumption that
6 beginning in 1997 FPL would begin realizing the annual
7 revenue requirements with the additional transmission
8 line you've described in your testimony?

9 A That would be FPL's portion of a new
10 transmission line, that's correct.

11 Q And that's shown, I believe in nominal
12 dollars on this chart, is that correct?

13 A Yes, it is.

14 Q So would it be possible to convert those
15 yearly entries into a present value basis and then back
16 that out of the fixed costs shown for the Scherer
17 purchase on Document No. 10?

18 A Yes, it would.

19 Q Now, did your counsel provide to you a work
20 sheet of a calculation designed to do that, we asked
21 you to review?

22 A No, I don't believe I've seen that.

23 Q Do you know what that amount would be? Have
24 you performed the calculation?

25 A I think it's on the order of \$136 million.

1 CHAIRMAN WILSON: \$136 million is what?

2 WITNESS WATERS: The present value of those
3 revenue requirements shown in Column 10 on Page 3 of 6
4 of Exhibit 19.

5 COMMISSIONER EASLEY: At what point would
6 that be \$136 million?

7 WITNESS WATERS: That's the 1991 dollars,
8 which are the units we're working in right here.

9 COMMISSIONER EASLEY: Okay.

10 CHAIRMAN WILSON: That's the present value --

11 WITNESS WATERS: Yes. Of that stream of
12 payments.

13 CHAIRMAN WILSON: -- of that stream of
14 payments?

15 WITNESS WATERS: Yes.

16 Q (By Mr. McGlothlin) So one refinement of the
17 type of comparison that we're discussing would be to
18 look to the difference in the present value streams
19 which we identified as \$637 million and back out 136
20 million to reflect that's an additional adjustment in
21 transmission that is not reflected in the standard
22 offer case.

23 A That's one refinement. I would agree with
24 that. That's not the refinement that keeps all of this
25 from being invalid, but it is one refinement we could

1 make.

2 Q Now, is it true on Document 10 you have
3 assumed with respect to the discounted standard offer,
4 646 megawatts.

5 A That's true.

6 Q And have you included in the fixed cost the
7 dollar amount that would be associated with the 646
8 megawatts as standard offer capacity?

9 A Yes, we have

10 Q Is it true that the subscription limit
11 associated with the standard offer is 500 megawatts?

12 A That's my understanding. Yes.

13 Q So to that extent there would have to be some
14 recognition that the fixed costs associated with the
15 standard offer are more than is possible under the
16 limitations of the regulation?

17 A I don't believe there needs to be that
18 recognition for this comparison. We would want to
19 compare, where possible, equal megawatts of capacity
20 options. Otherwise, again, we have an apples and
21 oranges type comparison.

22 Q All right. Now, with respect to the
23 additional column for system fuel cost, is it true that
24 in order to arrive at some value for system fuel cost,
25 it's necessary to utilize a computer program called a

1 "production cost simulation," to quantify and take into
2 account all of the variables that are involved in the
3 system fuel cost?

4 A That's correct.

5 Q You utilize something called PROSCREEN to
6 perform that calculation, is that correct?

7 A Yes, we did.

8 Q Now, do I understand correctly that the
9 purpose of the computer program is to, on paper or
10 mathematically, mimic the way the system determines the
11 most economical way to meet the load on the system at a
12 given point in time, and then to quantify the costs
13 that are incurred to meet that load?

14 A That's essentially correct, yes.

15 Q Now, certainly in terms of a mathematical
16 device designed to track the system dispatch, there is
17 going to be some room for error in the calculation, is
18 that correct?

19 A Error in what sense? Versus how the system
20 would actually operate?

21 Q Yes.

22 A It is possible that we would have -- looking
23 at individual unit operation, yes, there would be some
24 difference with how the system would operate. In
25 general the total system costs are relatively close to

1 what we see.

2 Q Has there been identified with the use of
3 PROSCREEN for this purpose some accepted margin of
4 error?

5 A We generally -- it's a rather involved
6 process. We start with a much more detailed program,
7 the PROMOD program, which has a greater level of
8 detail. We attempt to match that to the system as much
9 as possible, what we know about the system. We then
10 use that as our basis for benchmarking PROSCREEN, which
11 is a smaller program, runs quicker and enables us to
12 run a lot more scenarios in a shorter time. We
13 generally try and benchmark the system production cost
14 within about 2%.

15 Q That's with respect to PROSCREEN or PROMOD?

16 A With respect to PROMOD.

17 Q All right. PROMOD, I believe you said, was
18 the more detailed, sophisticated version, is that
19 correct?

20 A Yes, it is.

21 Q And PROSCREEN which was used in this
22 exercise, is a smaller model?

23 A It's less detailed.

24 Q Would I understand correctly then that the
25 margin of error would be greater for PROSCREEN than for

1 PROMOD?

2 A Well, it's a matter of perspective. Again,
3 measuring it against actual system performance, looking
4 at how some of our units might operate it may vary.

5 But in this case I have to point out that the
6 units we're talking about here are not subject to that
7 kind of error. We're talking about coal units
8 introduced into a system that's roughly 80% coal, oil
9 and gas. Expecting any error in the dispatch of that
10 kind of unit on the system that's mostly running on oil
11 I think would be unlikely. In other words, we would
12 not expect the actual operation of units to vary much
13 from what the programs are actually projecting. The
14 error will come into things like gas turbine operation,
15 which only operate a few hours a year anyway in some of
16 the higher cost units.

17 Q I think you said earlier that in
18 benchmarking, and I think -- let me back up.

19 By benchmarking, do you mean some attempt to
20 calibrate the accuracy of the computer program against
21 actual results?

22 A In the PROMOD case, that's right.

23 Q And with respect the ability of PROMOD to
24 accurately reflect what happens in the real world when
25 the system is actually dispatched, there is an attempt

1 to come within 2% of system costs, is that correct?

2 A No, that was PROSCREEN versus PROMOD. In
3 reality we use PROMOD on a regular basis in the oil
4 backout proceedings to verify system productions cost.
5 We have been within 1% consistently for quite sometime
6 using that model.

7 Q All right. PROMOD actual results is within
8 1%, is that correct?

9 A That's been the case, yes.

10 Q And then comparing results received with
11 PROSCREEN to PROMOD, there is a variance of possibly
12 2%, or an attempt to hold it to 2%, is that correct?

13 A That's correct.

14 Q Is the margin of error ever more than that?

15 A We don't benchmark every single case so it's
16 hard to say whether it's ever more than that. I think,
17 in general, our benchmarking of PROMOD over the last
18 three years has been within that margin.

19 Q Did you benchmark this case?

20 A This particular case, no, sir.

21 Q So you don't know how close to the PROMOD
22 results this application of PROSCREEN would have
23 resulted?

24 A No, sir. I would not run every case with
25 PROMOD to benchmark it. That would defeat the purpose

1 of running PROSCREEN.

2 Q Now, there are a lot of variables that affect
3 system cost, is that correct?

4 A That's correct.

5 Q And so the reliability of the results is a
6 direct function of the validity of the assumptions and
7 the data that goes into the exercise itself?

8 A The outputs are all a function of those, yes.

9 Q With respect to the operation of the units
10 being studied, do I have Document 10 back up?

11 CHAIRMAN WILSON: Yes.

12 Q (By Mr. McGlothlin) Is it true that you
13 assumed for the operation of Scherer under the Scherer
14 purchase scenario a capacity factor of 85% over time?

15 A Well, if I can correct that slightly, we
16 don't assume a capacity factor. That's the purpose of
17 the model, to determine what the capacity factor
18 actually is. We assumed an availability of 85% so that
19 it could run up to that level.

20 Q All right. I'm going to take a moment and
21 pass out a document. (Pause)

22 COMMISSIONER GUNTER: On that last point,
23 while that's coming, on the calculations that you've
24 used in your spread sheets, you've made the assumption,
25 have you not, that you would have a 85% capacity

1 factor. If you had -- on UPS you were talking about a
2 90%. And that walks through the calculations. It
3 can't be one or the other.

4 WITNESS WATERS: No, sir. We assume the
5 availability. The numbers that you see in my spread
6 sheets were read from the model. We actually went in
7 and took the year-by-year numbers out. The capacity
8 factors will be very close to 85 and 90% respectively.
9 Because it is a coal unit, I would expect it to run
10 most of the time, but it's not exact. There is a small
11 difference.

12 COMMISSIONER GUNTER: Well, for understanding
13 your spread sheets, though, you have made the
14 assumption that they would run at 85%, have you not?

15 WITNESS WATERS: That's probably the easiest
16 way to look at it, yes, sir. I did not make that
17 assumption in developing the spread sheets, no, sir,
18 but the results are very close to that.

19 COMMISSIONER GUNTER: Which one of these was
20 this on? I've lost it.

21 CHAIRMAN WILSON: Let me see if I understand
22 what the difference is you're talking about.

23 You made an assumption that there was going
24 to be 85% availability, and since it's baseload, and
25 you would be running at 100% of the time, or trying to,

1 that you would end up with --

2 WITNESS WATERS: At very nearly the same
3 capacity factor. That's correct.

4 CHAIRMAN WILSON: Very nearly the same
5 capacity factor.

6 WITNESS WATERS: The difference is more
7 marked if we were talking combustion turbines. I have
8 a 90% availability but it only runs 5% of the time.
9 Here they are very nearly the same number.

10 COMMISSIONER GUNTER: Okay. So I'm talking
11 about a distinction without a difference?

12 WITNESS WATERS: In this case. There is
13 almost no difference.

14 COMMISSIONER GUNTER: All right. Because
15 when you say those, it sort of gives me real goosies,
16 because that followed all the way through on the
17 calculation, on the 85%.

18 WITNESS WATERS: Right.

19 MR. MCGLOTHLIN: While this document is being
20 distributed, I'd like to just clarify a couple of those
21 terms, if I may. I think it might be helpful.

22 Q (By Mr. McGlothlin) With respect to
23 availability, you have assumed an equivalent
24 availability factor, is that correct?

25 A That's correct.

1 Q And the equivalent availability factor, it
2 takes into account the forced outage and maintenance
3 outage, both full and partial, is that correct?

4 A That's correct.

5 Q And the capacity factor is a measurement that
6 relates the energy actually produced to the total of
7 energy that could possibly have been produced, is that
8 correct?

9 A Over 100% of the hours of the year, that's
10 correct.

11 Q So in order for the capacity factor to equal
12 the equivalent availability factor, one would have to
13 assume that the unit is running full blast every minute
14 of every hour that the unit is available for service?

15 A That's basically correct.

16 Q All right. You have before you a document
17 captioned "Interrogatory No. 31-F of Citizens Second
18 Set of Interrogatories."

19 COMMISSIONER GUNTER: Joe, can I ask you a
20 question on this matter?

21 MR. MCGLOTHLIN: Yes, sir.

22 COMMISSIONER GUNTER: You all are going so
23 fast I can't think and catch up and get a question
24 formulated.

25 If the heat rate of this plant is -- and I

1 can't refer you to a document, but you're talking
2 somewhere in the 9400 Btu rate, is that correct?

3 WITNESS WATERS: Yes, sir, that's right.

4 COMMISSIONER GUNTER: Except for your nuclear
5 facilities, this would be the most efficient plant on
6 your system?

7 WITNESS WATERS: Most efficient, yes, sir.
8 We have to take line losses into account, which will
9 bring it pretty close to St. Johns.

10 COMMISSIONER GUNTER: You're talking 3% line
11 loss, and run that calculation. So what's the next
12 nearest efficient plant you have, St. Johns Power Park?

13 WITNESS WATERS: St. Johns. As far as the
14 total energy price-out of the unit, that's the next
15 most --

16 COMMISSIONER GUNTER: Even with your line
17 loss calculations you have got nuclear, St. John's
18 Power Park and then Scherer?

19 WITNESS WATERS: Right.

20 COMMISSIONER GUNTER: You're going to come
21 pretty close to running that wide open all the time
22 anyway, aren't you?

23 WITNESS WATERS: Yes, sir, pretty close.

24 COMMISSIONER GUNTER: Anytime it's available.
25 We would probably be whipping you with a stick if you

1 weren't running it.

2 WITNESS WATERS: Yes, sir. There is one
3 other factor here that goes into these numbers that
4 have just been passed out.

5 The IGCC that we showed in '96 was projected
6 to be the first of a series of units, and as those are
7 built, they are the most efficient units on the system
8 burning coal. They run flat out, the remaining units
9 on the system, which are still there even though we
10 haven't talked about the remainder of the expansion
11 plan. They are running flat out. They would be more
12 efficient than Scherer and probably tend to run ahead
13 of it. But with that exception, you're right, it's one
14 of the first units to come in.

15 COMMISSIONER GUNTER: Joe, I apologize, I
16 just --

17 MR. MCGLOTHLIN: That's all right. Could I
18 have an exhibit number assigned to this?

19 CHAIRMAN WILSON: Yes. That would be Exhibit
20 No. 24.

21 (Exhibit No. 24 marked for identification.)

22 Q (By Mr. McGlothlin) Mr. Waters, as I
23 understand it, the Letter of Intent that's the subject
24 of this hearing contemplates that Southern would
25 provide energy from Scherer 4 or from other units

1 sufficient to give you a 90% -- is it availability or
2 capacity factor through 1995?

3 A I look at it as availability but again it
4 will be pretty close to the same number, through
5 mid-'95.

6 Q But as the parties contemplate this proposed
7 transaction, beyond '95, there would be no such support
8 or backup from other units on the system, and it would
9 be a function of what the unit could achieve by itself,
10 is that correct?

11 A At this point that's correct.

12 Q With respect to the years '97 through 2005,
13 you show that after that provision terminates, the
14 capacity factor that is produced by your exercise here
15 varies from 80 to 84 and a fraction, is that correct?

16 A That's correct.

17 Q And beyond 2005, there is a straight 85%
18 capacity factor. Is that the basis of either an
19 assumption or some consideration that results in no
20 variation above or below 85 from that point forward?

21 A I'm not sure I understand your question. Is
22 that why people assume that it's 85?

23 Q No. The question is this: Between the years
24 '97 and 2005, there is some variation. Beyond that,
25 there is no variation. Why is that?

1 A Well, there are a number of different reasons
2 that go into that. It has to do with the availability
3 of economy energy that we show gradually declining over
4 time. In the year 2010 there is a change in that our
5 UPS contract or 1988 contract ends, so there is -- that
6 energy is no longer available to the system in that
7 form. And there is an expansion plan going forward
8 from 1998 that has some impact on how all these units
9 dispatch, so you will see some changes from time to
10 time.

11 Q If I understand your answer correctly, the
12 resulting capacity factor is less than 85 in some years
13 because of the assumption of the availability of some
14 economy sales, is that correct?

15 A I think that's partially correct. Also in
16 the '98 through 2005 time frame, we're adding IGCC
17 units, as I mentioned, in the expansion plan which
18 would tend to displace it some. But then as load
19 continues to grow, as the economy declines, the economy
20 purchase level declines, Scherer starts to increase.

21 Q Isn't it true that the emission allowances
22 that have been designated for this unit are based upon
23 a 65% capacity factor?

24 A The tonnage calculation was based on 65% at
25 its allowable rate of 1.2 pounds per million Btu,

1 that's correct.

2 Q And in responses to interrogatories you've
3 indicated that you expect to be able to switch fuels
4 and up that to 72%, is that correct?

5 A I don't think it's correct to say we switched
6 fuels. I believe the fuel the unit is currently
7 burning will support a 72% capacity factor.

8 Q All right. Thank you for that clarification.
9 But isn't it true that to operate the unit above a 72%
10 capacity factor, some provision for allowances will
11 have to be secured to enable you to achieve capacity
12 factors of this high range?

13 A There would have to be some allowances ranged
14 above 72. That's true of any coal-burning unit or
15 sulfur-emitting unit, including the other options shown
16 on this page.

17 Q Are those provisions in place now?

18 A I'm not sure to what extent I can answer
19 that. Each system has allowances, an expected level of
20 allowances based on the legislation as we understand it
21 today. That would include FPL. We will have to apply
22 those allowances either to the IGCC unit, if we
23 construct it, or we may apply it to the increment
24 required from Scherer. So I would say yes, we expect
25 to have those allowances.

1 Q But the necessity of arranging for allowances
2 sufficient to increase the capacity factor from 72% to
3 the range of 80 to 85% is one constraint or one
4 limiting factor on your ability to achieve in real
5 practice the assumptions or the results of the math
6 here, is that correct?

7 A I don't consider it a constraint anymore than
8 I would consider it a constraint in the IGCC, which
9 would require roughly the same number of incremental
10 allowances. If what you are saying is we can't get the
11 15,000 or so allowances, whatever the number is and I'd
12 have to check, if we can't get it for Scherer, then
13 there is no reason to suspect we could get it for the
14 IGCC, or any other unit.

15 Q Do you know the capacity factor for the IGCC
16 upon which the allowances are based or would be based?

17 A I honestly don't know how that will work with
18 the new unit. I don't think the IGCC, at its low rate
19 of emissions, I don't think there will be any problem
20 with allowance totals. I think the allowances are
21 based on our system averages, 85 through 87. Any units
22 under construction and so on, I'm not sure the IGCC
23 plays on that or increases our total.

24 Q Either I didn't understand your answer or you
25 didn't understand the question.

1 Under the legislation, is there associated
2 with a particular type of unit an expected capacity
3 factor which is then a factoring in the calculation of
4 the emission allowances associated with the unit?

5 A No, sir. That's not my understanding of the
6 legislation.

7 If I understand correctly what you're asking,
8 the assumption is that anytime we build a new unit
9 we'll automatically be granted allowances. I don't
10 think that's the case. I think the allowances are
11 granted based on existing system, basically, and that
12 those allowances will be used up by future units. So
13 it's a question of how many would be required to run
14 the unit, not how many it will be granted.

15 Q The validity of the calculated system fuel
16 costs would also depend on the accuracy of the unit
17 fuel cost assumptions that's an input to the program,
18 is that correct?

19 A It will depend on the fuel forecasts, the
20 fuel price forecasts, that's correct. But I can't
21 accept the word "accuracy," because I think we would
22 all sit here and agree that fuel forecasts are
23 inaccurate. I don't expect the price in 2008 to be
24 exactly what is in my forecast. What I expect is that
25 the relationship between fuels and the long-term trends

1 are reasonable and I have to make a decision based on
2 that assumption that they are reasonable. So
3 "accuracy" I'm not sure applies here.

4 Q Well, if the system fuel costs realized are
5 close to what you've calculated here, it's because the
6 unit fuel costs are close to what you've assumed in the
7 calculation, isn't there that relationship?

8 A Well, I wish it were that simple. But it's
9 not, really. The system fuel costs have to come out --
10 or happen to come out relatively close to what I
11 predicted. There are a number of factors that went
12 into that, as we've been discussing. It's not just
13 simply a function of the unit fuel costs.

14 Q Turn to your Document 2, Page 1 of 4.

15 A All right.

16 Q Does that reflect the assumed cost of coal
17 for the supply of Scherer 4 that you have utilized in
18 this comparison?

19 A In the purchase of Scherer 4, that's correct.

20 Q Do you make a different assumption for the
21 UPS version?

22 A Yes. It is slightly different in the UPS
23 based on Southern Company's fuel forecast.

24 Q I'm going to distribute -- well, there's no
25 need for that. I'm going to find The Southern Company

1 submission under the UPS -- The Southern Company UPS
2 submission under the RFP and ask a couple of questions
3 about that.

4 Do you have that available to you, Mr.
5 Waters?

6 A No. I do not.

7 CHAIRMAN WILSON: What exhibit?

8 MR. MURRELL: 10.

9 MR. McGLOTHLIN: Thank you.

10 MR. MURRELL: Yes, sir.

11 Q (By Mr. McGlothlin) Please turn to Exhibit
12 7.1.3, Page 8 of 9.

13 CHAIRMAN WILSON: Page what?

14 MR. McGLOTHLIN: 8 of 9.

15 CHAIRMAN WILSON: Of what now?

16 MR. McGLOTHLIN: This is Hearing Exhibit 10.

17 CHAIRMAN WILSON: Okay, I've got it.

18 MR. McGLOTHLIN: About three-fourths of the
19 way into that is Exhibit 7.1.3, Page 8 of 9, captioned,
20 "Plant Scherer Coal Supply."

21 CHAIRMAN WILSON: I've got it.

22 WITNESS WATERS: Okay, I have it.

23 Q (By Mr. McGlothlin) There are three columns
24 there, "Current Contract," "Projected Spot," and,
25 "Projected New Contracts."

1 Do I understand correctly that the column
2 called "Current Contracts" would be those contracts for
3 which FPL would have some responsibility if the
4 transaction materializes?

5 A I'm only guessing at this point, Mr.
6 McGlothlin, I'm not that familiar with this document.

7 Q Is it your understanding that under the
8 provisions of the Letter of Intent, FPL would have
9 responsibility to assume a portion of the contracts
10 which presently serve Scherer 4?

11 A Yes. It is.

12 Q The third column, "Projected New Contracts,"
13 tell me, if you know, whether those are the late 1989
14 proposed contracts from Appalachian sources that were
15 described by Southern and considered in its calculation
16 of projected fuel costs in the UPS submission.

17 A I don't know.

18 Q Would you agree that -- well, first of all,
19 is this the coal price that you assumed in the
20 calculations that bear on the Scherer and UPS scenario?

21 A Mr. McGlothlin, the only thing I can testify
22 to is the prices or the values we used in our modeling
23 are shown on Exhibit 8.2.1, Page 7 of 14. That was the
24 source of our modeling. That shows an energy price in
25 dollars per megawatt hour delivered at the border, so

1 it includes Southern's assumptions on losses and heat
2 rate.

3 Q 8.2.1 from this same UPS submission?

4 A Yes.

5 Q Is your response that this may or may not be
6 tied to the Exhibit 7.1.3, you don't know?

7 A I don't know how it ties to that other
8 exhibit, no.

9 Q But 8.2.1 was also, the source of that was
10 also Southern Company's projections, is that correct?

11 A That is correct. That's what they submitted
12 in their RFP bid.

13 Q All right. Now, I would like to compare the
14 assumptions you made for the Scherer UPS case with the
15 price of coal that you include in the calculations of
16 system fuel costs in the Scherer purchase scenario.
17 Can you tell me the differences?

18 A The differences between this exhibit and the
19 fuel forecast?

20 Q Yes.

21 A According to the footnote on this schedule,
22 it says, "The energy price is composed of fuel and
23 losses," so one obvious difference is Southern has
24 included losses in this particular number.

25 The other, I guess, difference I would read into

1 this is that, based on the fact that it's an energy
2 projection and not a dollars per million Btu
3 projection, Southern has made an assumption on the heat
4 rate of the unit or units that will provide this
5 energy, and I don't believe that's stated in the
6 footnote. I'm not aware whether it's stated anywhere
7 else in the document.

8 Q Do you present anywhere in the documentation
9 supporting your exhibit the comparison in terms of
10 dollars per million BTUs of the costs assumed from the
11 Scherer UPS case and the costs assumed for the Scherer
12 purchase case?

13 A I do not in my testimony. I believe what
14 we've presented in response to Public Counsel's request
15 for production and so on are the actual modeling inputs
16 that went into the cases which we've provided in my
17 testimony. Those modeling inputs were based on this
18 column of numbers.

19 Q Well, look at Exhibit 23 in the new document,
20 Mr. Waters. Lines 20 through 25? And looking at the
21 columns for Scherer Purchase and Scherer UPS, does this
22 reflect a comparison of the assumed coal costs for
23 Scherer UPS case and the assumed coal costs for the
24 Scherer purchase case?

25 A Yes. It does. And this is working

1 backwards, again, from the energy price and making some
2 assumptions on the heat rate and the loss assumptions
3 that went into the development of this energy price
4 stream.

5 Q You've assumed that FPL could buy coal for
6 the Scherer plant at 56.16 a ton, whereas Southern
7 comparable cost would be 65.89?

8 A I don't believe those are comparable coals, I
9 believe the heat content is different. Mr. Silva could
10 explain the difference between the two forecasts.

11 Q What is the basis for the assumption that
12 FPL's fuel costs for Scherer 4 would be materially
13 lower than Southern's fuel costs for Scherer 4 if it
14 acquires the unit?

15 A Mr. Silva will have to answer that question
16 in greater detail. But as I understand it, there are
17 two primary reasons why we would expect to be able to
18 obtain a better price. The first is I think we can
19 make a much more secure projection of capacity factor.
20 As we've seen on the previous exhibit, we expect this
21 unit to run a lot of hours providing energy to FPL. I
22 would expect those capacity factors to be higher than
23 this unit would exhibit on Southern System. That
24 bullet should enable us to make longer term commitments
25 for higher levels of coal purchase.

1 The other factor I think that plays in this
2 is we would go about obtaining coal to minimize the
3 cost of this unit. Southern strategy, I think, is more
4 of a system-wide acquisition basis, so I think there
5 would be some differences there. But Mr. Silva could
6 fill in the details.

7 Q I will talk to Mr. Silva about that. But
8 it's fair to say that the difference in the fuel costs
9 reflected in the calculations that show up in the
10 system fuel costs for the Scherer purchase and the
11 Scherer UPS scenarios are based in part upon FPL's
12 expectation that its strategy will enable it to lower
13 the fuel costs experienced by Southern, is that
14 correct?

15 A Yes, I think that would be correct.

16 Q Expectations that have not yet materialized?

17 A Well, we don't own the unit, nor have we
18 acquired any coal for the unit at this point.

19 MR. McGLOTHLIN: I'm going to distribute a
20 document now.

21 COMMISSIONER GUNTER: Will be identified as
22 Exhibit No. 25.

23 (Exhibit No. 25 marked for identification)

24 MR. McGLOTHLIN: I'm sorry, Commissioner
25 Gunter, what was that exhibit number?

1 COMMISSIONER GUNTER: 25.

2 MR. MCGLOTHLIN: I'm going to change subjects
3 back to the capacity factor.

4 Q (By Mr. McGlothlin) Mr. Waters, at my
5 request, did you prepare a version of Document 10 that
6 included the assumption that Scherer 4 would realize
7 capacity factor of 70% as opposed to the 85 that is
8 included in your earlier assumptions?

9 A Yes. I did.

10 Q And is this document that has been marked
11 Exhibit 25 the result of that request?

12 A Yes. It is.

13 Q Would you agree that a change in that single
14 variable from 85 to 70% has the effect in terms of
15 total costs of moving the Scherer acquisition to a
16 point more expensive than the standard offer and more
17 expensive than the UPS assumptions?

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

19 Q Yes. Would you agree that the change in this
20 one variable, the impact of the change in assumptions
21 on the total costs, has the effect of moving the
22 Scherer purchase scenario to a point more expensive
23 than both the discounted standard offer and the Scherer
24 UPS cases?

25 A Yes. I would agree with that. I think it

1 shows precisely why Scherer is more cost effective than
2 a standard offer and what the value of high
3 availability and higher capacity factor is when
4 compared to the original Document 10, which is shown in
5 the first five rows.

6 Q That also shows the extent to which the
7 outcome is dependent upon the variables that go into
8 the calculation, is that correct?

9 A Well, in this case, we've artificially
10 constrained one of the variables, and I guess that
11 shows how you can certainly sway the results by doing
12 that, yes.

13 Q I think you've pointed out or it has been
14 pointed out in this case that the standard offer unit
15 is not dispatchable as the Scherer would be, is that
16 correct?

17 A Yes. There's no comparison between the two.

18 Q For purposes of performing a production
19 costing simulation that compares the Scherer unit with
20 646 megawatts of standard offer capacity, what
21 assumptions did you make to enable you to calculate
22 system costs of that nondispatchable source of
23 capacity?

24 A We simply ran it at a constant 70% capacity
25 factor, year round.

1 Q If the assumption of a constant 70% capacity
2 factor had the effect of placing 646 megawatts of
3 standard offer capacity in off-peak periods greater
4 than would actually result, would that penalize the
5 standard offer scenario in terms of the calculated
6 system fuel costs?

7 A I'm not sure I understand your question. Are
8 you asking if the standard offer costs, energy costs,
9 were higher than our off-peak costs, would that
10 penalize the unit?

11 Q Let me strike the last question, and perhaps
12 I don't quite understand your methodology yet.

13 You said you assumed a constant 70% capacity
14 factor. What impact does that assumption have on the
15 timing of the standard offer unit in off-peak periods?

16 A I don't think it has any impact. It would
17 assume that the standard offer unit would provide
18 energy at a 70% capacity factor during those off-peak
19 periods and on-peak periods, it's a relatively constant
20 number. And I don't think that presents any penalty
21 of the standard offer since it's priced at St. Johns
22 coal prices. I don't think there's any time in the
23 year, either now or in the future, where we would
24 project our system off-peak costs to be lower than
25 that.

1 Q In responses to interrogatories, you
2 indicated that for purposes of these calculations you
3 did not optimize the generation mix beyond the Year
4 2008, is that correct?

5 A That's correct. We basically held load
6 constant beyond 2008 and let only fuel prices escalate.

7 Q Does that mean that for the Years 2009
8 through 2018, you made the assumption that load would
9 not change and you made the additional assumption that
10 the generating mix would not change for that 10-year
11 period?

12 A That's correct. As far as what the installed
13 capacity, megawatt hours out of different types of
14 units would change in proportion to fuel prices.

15 Q Say that again, I'm sorry.

16 A When you say "generation mix," there are two
17 ways to interpret that. The generation capacity mix
18 would not change, total megawatts installed on the
19 system. Megawatt hours generated from year to year may
20 change as the relationships between fuels change during
21 that period.

22 Q Well, the assumption that the generation mix
23 will not change and that the load will remain constant
24 over a 10-year period is something of a simplifying
25 assumption, would you agree with that?

1 A Well, it's a simplifying assumption with a
2 purpose. It's common in any planning study using any
3 model to capture what are called "end effects." After
4 the plant has been optimized, you try to capture
5 several years of fuel effects and what effect they may
6 have on the overall economics. Very common practice.

7 Q It's possible, though, is it not, to optimize
8 the generation mix throughout the 30-year period being
9 studied as opposed to making those assumptions?

10 A It is possible, yes.

11 Q You did not do that in this calculation?

12 A No, we did not for several reasons. One, we
13 do not forecast load through that period.

14 Two, it takes a tremendous amount of
15 resources to optimize over a 30-year period like that.

16 Three, it would probably not change much of
17 what we have done in the first 10-year period because
18 the options you are selecting from are basically the
19 same throughout the 30-year period.

20 Q One of the variables that goes into the
21 calculation of total system costs is the price and
22 availability of purchased power, is that correct?

23 A That's correct.

24 Q And that would include economy transactions,
25 is that correct?

1 A That would primarily be economy transactions,
2 yes.

3 Q Now, for that purpose, is it true that
4 planners have devised a computer program that is
5 multijurisdictional and that can coordinate the
6 variables on two systems that go into a determination
7 of when economy transactions would be available and at
8 what price?

9 A Yes. If I understand your question
10 correctly, we do use models that are multiarea and are
11 capable of doing the transaction accounting between the
12 areas.

13 Q Did you use a multijurisdictional model to
14 calculate the economy purchases that are reflected on
15 Document 10?

16 A If I can correct you slightly,
17 multijurisdictional, to me, from what I've seen, has
18 accounting and financial implications. All we're
19 talking about here is multiareas, modeling more than
20 one area. And yes, PROSCREEN is capable of handling
21 more than one area and doing that accounting.

22 Q What areas did you take into account in the
23 application of PROSCREEN to the calculation of economy
24 sales that is reflected in Document 10?

25 A We basically have three areas. We have the

1 Florida Power and Light system, we have the Southern
2 System, and we have an area that we just call Florida
3 Economy, which is representing transactions within the
4 state.

5 Q Now the price and availability of the economy
6 transactions is dependent upon not only the conditions
7 on FPL's system but also the conditions on the
8 neighboring systems that are the other parties to those
9 transactions, is that correct?

10 A That's correct.

11 Q What information did you have with respect to
12 the Southern System and Florida Economy with respect to
13 load and fuel price and generation mix over the 30-year
14 period?

15 A Well, we received projections from Southern
16 that include the availability by blocks of energy. In
17 other words, they look at blocks of 750 megawatts above
18 native load as to availability and price, and they give
19 us those projections.

20 Within FPL, those projections are modified to
21 account for firm sales that we're aware of to other
22 utilities and other transactions, so we take a
23 relatively conservative approach.

24 We then also, over the long term, show a
25 decline to the point where beyond the Year 2008 I would

1 say there's very little, if any, on-peak economy. We
2 basically assume there isn't any there.

3 Q Beyond what year?

4 A About 2008. We completely take to zero the
5 on-peak economy and represent some small measure of
6 off-peak economy, relatively small number.

7 Q You said Southern gives you quotations of
8 blocks of 750 megawatts of power. For what time period
9 do they give you that?

10 A I believe they carry those projections out
11 into the 2020 time frame but I'm not certain, I would
12 have to check the documents. They do go out a
13 considerable amount of time.

14 Q Have you included anywhere in your documents
15 and supporting exhibits, either those that were part of
16 your case in chief or those supplemental today, a
17 quantification of the economy energy that you've
18 included in Document No. 10, Total System Fuel Costs?

19 A In my testimony, those projections are not
20 included but they have been provided as part of the
21 support of Document No. 10; both the price and the
22 projections have been provided as an integral part of
23 Citizen's production of documents. They're internal to
24 the program.

25 Q Is it true that for purposes of calculating

1 the total costs shown on Document No. 10 you assumed
2 that the Florida/Southern interface would be expanded
3 only in conjunction with the Scherer UPS or the Scherer
4 purchase transactions?

5 A For Document No. 10, that's correct.

6 Q And does that assume then that no enhancement
7 of the interface would occur with respect to the other
8 scenarios for a period of 30 years?

9 A That's correct.

10 Q Have you seen the exhibits entered earlier in
11 this case in which Southern indicated that it was
12 anxious to sell the capacity of Scherer 4 as a result
13 of the decision by the Georgia Regulatory Commission
14 not to include it in rate base?

15 A I have not seen those documents, no.

16 Q Well, are you aware of that situation?

17 A Yes.

18 Q Would it be fair to assume that, absent a
19 Scherer UPS or Scherer acquisition transaction,
20 Southern would attempt to market that Scherer capacity
21 to others?

22 A I think that would most likely be the case,
23 yes.

24 Q As a matter of fact, FPL has built into a
25 Letter of Intent some ability to restrain Southern's

1 ability to market the Scherer capacity to others?

2 A That's my understanding, yes.

3 Q Would those others reasonably include other
4 Florida utilities, do you think?

5 A Yes, I'm certain they would try and market to
6 other Florida utilities.

7 Q And do you think, as a part of another
8 transaction, that could possibly include some
9 enhancement to the interface to make that transaction
10 possible?

11 A Well, we're in the hypothetical. You're
12 talking about an agreement between Southern and another
13 party, and it's difficult to say what that might or
14 might not include. For example, if they were selling
15 to Tampa, I'm not sure how that might, whether that
16 would or would not facilitate expansion of the
17 interface since Tampa is not a participant in the
18 interface at this point. But it could under certain
19 circumstances include it. On the other hand, it might
20 not.

21 Q Do you think it's reasonable to assume that
22 for purposes either of reliability for both systems or
23 for purposes of firm sale transactions an enhancement
24 to the interface could occur absent the Scherer
25 transactions sometime between now and 2018?

1 A Well, certainly it's reasonable to assume
2 that at some point. But I'm not sure that that in any
3 way lessens the value of this contract in facilitating
4 that expansion.

5 Q It does bear on the assumption, however, that
6 economy sales and transactions other than the Scherer
7 UPS and the Scherer purchase scenarios are constrained
8 by the amount of the import capability, is that
9 correct?

10 A It would influence that assumption, but
11 that's not the only constraint on economy purchases.
12 As I mentioned, we assume that economy purchases
13 declined to zero. The reason we do that is more a
14 function of availability than transmission interface.
15 We are assuming that eventually Southern will be in a
16 position where they do not have a lot of excess coal
17 resources to sell as economy energy.

18 COMMISSIONER GUNTER: Would it be an
19 incorrect assumption to think that, through
20 implementation of the Clean Air Act, that economy may
21 no longer be economy coming from The Southern Company
22 on an economic basis?

23 WITNESS WATERS: I think it may be a
24 different price altogether, Commissioner, depending on
25 how they treat it.

1 COMMISSIONER GUNTER: They're going to try
2 and recover their costs, aren't they?

3 WITNESS WATERS: Yes, sir, would I expect
4 them to.

5 Q (By Mr. McGlothlin) With respect to the cost
6 of energy from Scherer 4 under the Scherer purchase
7 scenario in Document 10, did you assume that after 1995
8 all energy would be the actual cost of producing energy
9 at the Scherer 4 facility?

10 A I'm sorry, I didn't get that. Could you
11 repeat that for me?

12 Q Let me back up. You've heard the discussion
13 with other witnesses regarding the availability of
14 alternate energy in conjunction with the existing UPS
15 sales?

16 A Yes.

17 Q If FP&L purchases the Scherer Unit, is it
18 true that after the transitional energy arrangements
19 are contemplated through 1995, it will not have the
20 alternate or Schedule R sources available to it and
21 that all of its energy from Scherer 4 will be that
22 generated by that unit as opposed to others on
23 Southern's system?

24 A Right.

25 Q Is that reflected in the price of energy that

1 you've assumed in Document 10?

2 A Yes, it is.

3 Q With respect to the Scherer/UPS scenario, did
4 you make the same assumption as to the cost of energy
5 for Scherer 4?

6 A Well, let me answer that in pieces. The
7 modeling assumes the energy is coming from Scherer 4.
8 However, the pricing of that energy -- what we have is
9 a slightly different heat rate on the unit to reflect
10 the fact that to get that 90% number, that they quote
11 in UPS, they will have to make up from the rest of the
12 system additional energy. It has to come from
13 somewhere and that somewhere is an unknown. We do try
14 and account for it in the modeling, but it's only a
15 rough estimate.

16 Q But basically you've assumed that all of the
17 energy delivered under the UPS scenario will be Scherer
18 4 energy, is that correct?

19 A It's coming out of the Scherer Unit for
20 modeling purposes, yes.

21 Q Does it follow that you assumed that Schedule
22 R energy and alternate energy, as defined in the UPS
23 agreements, would not be available to you under the UPS
24 scenario, for purposes of calculating the system costs
25 in Document 10?

1 A That was our assumption, yes.

2 Q Did Southern indicate in its RFP submission
3 that the submission included alternate energy?

4 A I don't recall. I think they did. I confuse
5 the terms occasionally, "alternate" and "supplemental"
6 and some of the other terms that they use. Obviously,
7 to get to a 90% availability, they are providing energy
8 from other units other than Scherer 4. That's in their
9 assumption. So under which of the many definitions
10 they've given, I'm not sure where that falls, but there
11 is additional energy.

12 Q Mr. Waters, I represent to you that earlier
13 in the hearing a reference to the Southern Company UPS
14 submission indicated that alternate energy was part of
15 that submission. Will you accept that subject to check
16 for the purpose of the questions?

17 A Yes, sir.

18 Q Is it true that in 1989 Scherer 4 operated at
19 a capacity factor of 17%?

20 A I don't know the exact number. I know it
21 was a low capacity factor, so I'll accept that subject
22 to check.

23 Q And am I correct that the low capacity factor
24 was because Scherer 4, operating economic dispatch, was
25 not the economical source of energy to deliver to FP&L

1 under UPS commitment obligations for much of the time?

2 A Yes, I believe that's correct.

3 Q And the bulk of the difference between the
4 17% capacity factor and your energy entitlement would
5 have consisted of alternate and Schedule R energy?

6 A That's correct.

7 Q And both alternate and Schedule R energy
8 delivered to you under economic dispatch necessarily
9 were more economical than the energy that was generated
10 by Scherer 4, that would have been generated by Scherer 4?

11 A That should be the case. That's the purpose
12 of that replacement energy.

13 Q Are you familiar with the capacity factors
14 achieved by units of this -- coal units of this size
15 throughout the industry?

16 A No, sir, not from memory, not without
17 referring to the source documents.

18 Q Let me pass out a document for the next
19 question.

20 Mr. Waters, are you familiar with the data
21 compiled in the form of generating unit statistics by
22 the North American Electric Reliability Council?

23 A Yes, I am.

24 Q Is it fair to say that this is a source -- a
25 statistical source on which the industry frequently

1 relies?

2 A Yes, I think that would be fair.

3 MR. MCGLOTHLIN: May we have a number please,
4 sir?

5 CHAIRMAN WILSON: Yes, you may. All right
6 would be marked for identification as Exhibit No. 26.

7 (Exhibit No. 26 marked for identification.)

8 Q (By Mr. McGlothlin) Mr. Waters, Exhibit No.
9 26 is an excerpt from the '84 to '88 Generating Unit
10 Statistics, compiled by the North American Electric
11 Reliability Council. Let me ask you to turn to 1, 2, 3
12 -- the fourth page, and direct you to the column for
13 "Coal Primary." Now, Scherer 4 is 800 megawatts plus,
14 is that correct?

15 A That's correct.

16 Q So it would fall in the category of those
17 units that are compiled under the 800 and 999 megawatt
18 size, is that correct?

19 A That's correct. Let me make sure I've got
20 the right page. At the top of the page it says, "1984
21 to 1988 Generating Unit Statistics?"

22 COMMISSIONER EASLEY: No.

23 MR. MCGLOTHLIN: No, it says --

24 WITNESS WATERS: 1988 Generating Unit
25 Statistics?

1 MR. McGLOTHLIN: Yes.

2 WITNESS WATERS: Got it.

3 Q (By Mr. McGlothlin) Would you agree with me
4 that this compilation reflects that in '88 similar
5 large coal units experienced an equivalent availability
6 factor, of EAF of 85.4 on the average, but a net
7 capacity factor of 62.6?

8 A Yes, I'm assuming that the abbreviations at
9 the top of the page have those definitions, since I
10 don't have anything attached to show what they are.

11 CHAIRMAN WILSON: That's on Page 2.

12 Q (By Mr. McGlothlin) Did the production cost
13 simulations that are reported in Document 10 assume
14 that the Scherer/UPS transaction would not have been
15 available earlier for years prior to 1994?

16 A There was no representation of UPS before
17 '94, that would be correct.

18 Q It would have been possible to perform a
19 simulation with that assumption, is that correct?

20 A Yes. In fact, we've performed that
21 simulation in response to discovery, and I have copies
22 of that if you'd like to see the results. I can tell
23 you what else I have.

24 Q Maybe someone else will ask you for it. I
25 just wanted to see if that had been reflected in

1 Document 10?

2 A No, it was not.

3 Q If I could have a minute to look through my
4 notes, I'll see if I can wrap up quickly.

5 COMMISSIONER GUNTER: While you're doing
6 that, I have a couple questions I might ask. I'm
7 trying to put these various exhibits together, and I
8 need some help. Exhibit 23 was intended to do what?

9 WITNESS WATERS: Well, Commissioner, Exhibit
10 23 is a detailed breakdown of the numbers on the other
11 spread sheets that we have.

12 COMMISSIONER GUNTER: Okay. Now, how about
13 helping me out. I just want to walk through. I've got
14 some questions. On Page 1 of Exhibit 23 on Lines 10,
15 11, and 12, what are the differences in Columns 2, 3, 4
16 -- I mean 2, 3, 5 and 6?

17 WITNESS WATERS: On 23? Page 1?

18 COMMISSIONER GUNTER: That's correct. I'm
19 trying to understand --

20 WITNESS WATERS: The difference in the
21 capital costs rates?

22 COMMISSIONER GUNTER: Uh-huh.

23 WITNESS WATERS: Okay, Columns 2 and 3 would
24 reflect FPL's capital cost, and below that, in addition
25 to the capital costs, we have the capital structure.

1 COMMISSIONER GUNTER: I understand.

2 WITNESS WATERS: Column 4 would reflect the
3 capital cost --

4 COMMISSIONER GUNTER: 5 and 6.

5 WITNESS WATERS: Oh, 5 and 6.

6 COMMISSIONER GUNTER: I read the contract on 4.

7 WITNESS WATERS: 5 and 6 would reflect really
8 the statewide designation of capital structure to go
9 with the calculation of the payment stream on the
10 statewide avoided unit.

11 COMMISSIONER GUNTER: Where did you get that?

12 WITNESS WATERS: Commissioner, I believe I
13 have the backup for that. That's in -- I believe in
14 the Commission order.

15 COMMISSIONER GUNTER: Is it? I don't know.
16 I need some help.

17 WITNESS WATERS: I believe so. I can track
18 that down for you.

19 COMMISSIONER GUNTER: We'll go on and come
20 back to this. Let's whip over to the third page of
21 Exhibit 23, and if you'll pull Exhibit 20, that's in
22 the orange folder.

23 WITNESS WATERS: Okay. 20. Okay.

24 COMMISSIONER GUNTER: Go to the sheet with
25 the title, "Scherer Purchase."

1 WITNESS WATERS: Okay, I have it.

2 COMMISSIONER GUNTER: Now, I'm just trying to
3 understand some differences that I'm finding. We took
4 the cover, which was Exhibit 23, and it's supposed to
5 sort of pull together everything on the other exhibits,
6 isn't that right? Isn't that just what you said?

7 WITNESS WATERS: It's a detailed breakdown,
8 that's right.

9 COMMISSIONER GUNTER: Okay. Let's go to
10 Column 3 on the third page of Exhibit 23 and look at
11 Line 9. Got that?

12 WITNESS WATERS: Yes, sir.

13 COMMISSIONER GUNTER: \$78,416,000, is that
14 right, Line 10?

15 WITNESS WATERS: Line 10.

16 COMMISSIONER GUNTER: Line 10, Column 3.

17 WITNESS WATERS: I have that.

18 COMMISSIONER GUNTER: Now, on your Exhibit 20
19 you got that Scherer Purchase, just lay it up on top
20 because there's a couple questions about that. Look at
21 Column 2, the last line.

22 WITNESS WATERS: Yes, sir.

23 COMMISSIONER GUNTER: Can you tell me the
24 difference in those two?

25 WITNESS WATERS: Yes, sir, the Page 3 that

1 you have there, look at the third line of the title, it
2 says, "CPVRR?"

3 COMMISSIONER GUNTER: Do what, now?

4 WITNESS WATERS: The title of that third page
5 right at the top in parentheses, it says, "CPVRR."

6 Those are present values. If you flip back a page, one
7 page, and look on Line 10 of that same Column 3.

8 COMMISSIONER GUNTER: So you've taken nominal
9 and these are present value?

10 WITNESS WATERS: We've broken it down both
11 ways. This is the nominals.

12 COMMISSIONER GUNTER: Now, help me a little
13 bit. One of the things I'm trying to understand as I'm
14 going through these analyses and I'm trying to see if
15 they make sense, you have under "Scherer/UPS", you were
16 talking about a 90% capacity factor, whether it came
17 from Scherer or not.

18 WITNESS WATERS: Yes, sir.

19 COMMISSIONER GUNTER: And that equates to X
20 number of kilowatt hours or gigawatt hours, whatever
21 term you want to do at 90%, isn't that correct?

22 WITNESS WATERS: That's correct.

23 COMMISSIONER GUNTER: And on to the purchase,
24 you talk about 85%, isn't that right?

25 WITNESS WATERS: That's correct.

1 COMMISSIONER GUNTER: So that gives you X
2 number of gigawatt hours.

3 WITNESS WATERS: Yes, sir.

4 COMMISSIONER GUNTER: And the standard offers
5 are at --

6 WITNESS WATERS: 70%.

7 COMMISSIONER GUNTER: -- 70%.

8 WITNESS WATERS: Yes.

9 COMMISSIONER GUNTER: Now, where do I find --
10 you can come up with the total cost, but where does
11 that total cost -- where can I cross-walk that and find
12 out what the delivered kilowatt hour charge is? If you
13 don't carry that all the way through -- not necessarily
14 the kilowatt hours, but if you don't carry it all the
15 way through, if you've got gross figures and if you
16 make an automobile, you make one automobile and you
17 spend \$10 million, and the guy next door, he spends \$11
18 million, but he makes 400 of them. Well, you know, all
19 of a sudden you're being able to carry that forward.
20 And through these I'm having a real problem because I
21 don't know -- I don't have production figures in these.

22 WITNESS WATERS: Well, Commissioner, I have a
23 bottom line here, and I'd be glad to pass out copies.
24 Cents per kilowatt hours, is that what you -- does that
25 help?

1 COMMISSIONER GUNTER: well, it really doesn't
2 matter. The thing I'm after, Mr. Waters, is I've taken
3 these analyses, I go through, for instance, on one of
4 the sheets it shows -- hell, out of \$200-odd million,
5 there's less than \$2 million difference in all of them
6 across the way. And one of the big components in there
7 is fuel cost. And we both, I think, agree that the
8 only thing sure about fuel estimates is they're going
9 to be wrong. That's the only certain thing about them.

10 WITNESS WATERS: Yes, sir.

11 COMMISSIONER GUNTER: And when you have less
12 than \$2 million -- which you have less than a 1% spread
13 in all the alternatives, then it would look to me, if
14 we're really looking after, you know, where we get down
15 to the interest of the customer, is what's the
16 production that's related to those -- each one of those
17 individual items? And I can't find that here.

18 WITNESS WATERS: Okay.

19 COMMISSIONER GUNTER: Understand what I'm
20 saying?

21 WITNESS WATERS: Yes, sir. And we have those
22 numbers. What I've done, which may help clarify a
23 little bit, I have done a cents-per-kilowatt hour
24 comparison amongst all the options if that would help
25 at all.

1 COMMISSIONER GUNTER: But does it fit here?

2 WITNESS WATERS: It corresponds to these
3 numbers. It's just a summary form, what I have with me
4 right now.

5 COMMISSIONER GUNTER: Well, whatever. I'm
6 just telling you, based on what I have here, and God
7 knows we've been trying to listen and read and what
8 have you, I have some -- have some difficulty. I might
9 as well see them unless somebody has got some horrible
10 objection to it. I'm trying to get down to the bottom
11 line and see what this means. It may mean, you know,
12 that's the best deal since sliced bread, but I
13 apologize for groping through the way I'm groping
14 through this.

15 WITNESS WATERS: Well, Commissioner, I don't
16 know whether this will help or not. I guess we can
17 look at it and see if it clarifies anything.

18 COMMISSIONER GUNTER: Excuse me, Mr.
19 McGlothlin, I'll look at it while you're going.

20 MR. BUTLER: Would you like us to hand it
21 out?

22 CHAIRMAN WILSON: Yes, please.

23 WITNESS WATERS: Commissioner, I put this in
24 basically the same form. When we were here with our
25 need filing, I did a similar document that, of course,

1 did not show the Scherer purchase at the time, but I've
2 put it in this case with the options which we've
3 considered here through the year 2000 just to give you
4 some idea what the relative costs are.

5 COMMISSIONER GUNTER: Well --

6 MR. MCGLOTHLIN: Commissioner, I'd like to
7 pose an objection for the record. I understand that
8 you're trying hard to get a handle on some of these
9 things, but from the standpoint of an affected party
10 trying to assess the company's case and respond to it,
11 I'd like to point out that we have already in this case
12 offered, as supplemental to his direct testimony, some
13 responses to interrogatories that public counsel asked
14 for, plus some documents that could have been part of
15 his direct testimony, but was not by choice --

16 COMMISSIONER GUNTER: This, this document?

17 MR. MCGLOTHLIN: Some of the others that were
18 part of the 19 through 23 package that we got when he
19 took the stand, and here comes yet another document,
20 obviously, intended to make his case, and something
21 that we're seeing for the first time.

22 COMMISSIONER GUNTER: Well, I want to tell
23 you, I am not trying to make his case. I'm trying to
24 understand it. And that's part of -- that's part of
25 these proceedings, to educate the Commission, and I

1 apologize for being pro active. I'm just trying to
2 say, I can't make a decision based on what I have
3 before me, and that's the reason I asked for the spread
4 sheets. You can blame me for that, not them.

5 MR. MCGLOTHLIN: No, sir, I don't blame you
6 for reacting to the case the same way that public
7 counsel's witness reacted to it and my witness reacted
8 to it. But from the standpoint of an affected party,
9 my point is that they had a chance to make that case
10 earlier than the second day of the hearing. So I
11 understand that it's your prerogative to allow this,
12 but I just felt --

13 COMMISSIONER GUNTER: Not mine, it's his.

14 MR. MCGLOTHLIN: I felt compelled to make
15 that at least what is an observation, if not an
16 objection.

17 COMMISSIONER GUNTER: This is not really what
18 I'm asking for. It's fine, but it's not what I'm
19 asking for.

20 CHAIRMAN WILSON: Let me ask you a question,
21 what is this?

22 WITNESS WATERS: That's really just --

23 CHAIRMAN WILSON: It may make a difference.

24 WITNESS WATERS: That's just translating the
25 numbers that I've given you, total dollars, dividing

1 them by the total production. As Commissioner Gunter
2 said, there's so many gigawatt hours out of each unit.
3 I've just taken total dollars and divided by the output
4 of the unit and I get these numbers.

5 COMMISSIONER GUNTER: Well, I can do the same
6 thing. I can take the size of the unit that you have.
7 I can take your capacity factors and run the math. I
8 was just trying to get from doing that. I can do that
9 and cross-walk to see if these figures come to be the
10 same. You know, that's not a terribly difficult thing
11 to do, but I was just trying to get out of manually
12 calculating it myself, but I would use those
13 assumptions of those capacity factors alone.

14 CHAIRMAN WILSON: Is that what you've done
15 here?

16 WITNESS WATERS: Yes, sir, I've taken those
17 capacity factors and I've divided into the total
18 dollars to get those numbers.

19 CHAIRMAN WILSON: So the ---

20 WITNESS WATERS: So there's no new numbers
21 here, I've just taken one column and divided by another
22 to show it a different way.

23 COMMISSIONER GUNTER: Well, let me ask him
24 one more question, Joe, and then I'll quit on this for
25 right now. I'll wait until my turn comes, but I'm

1 really trying to understand something here.

2 CHAIRMAN WILSON: Well, before we go on,
3 we've got this piece of paper here, and Mr. McGlothlin
4 has interposed an objection to the use of it. Of
5 course, we haven't used it yet, so --

6 COMMISSIONER GUNTER: Haven't even identified
7 it.

8 MR. MCGLOTHLIN: And as I understand it, it
9 hasn't even been asked for by the parties or
10 Commissioners.

11 CHAIRMAN WILSON: Well, let's just wait and
12 see what happens to it. If it grows legs and starts
13 walking all over the bench here, we'll decide what we
14 have to do with it. Your objection is premature, I
15 guess.

16 COMMISSIONER GUNTER: Mr. Waters, let me ask
17 you one question. Let's go to Page 2 of Exhibit 23.
18 Again, I'm just trying to understand how this thing
19 works.

20 Column 4, we're in nominal dollars now. I'm
21 getting away. I'm getting nominal dollars.

22 WITNESS WATERS: Yes, sir.

23 COMMISSIONER GUNTER: Now, Scherer purchase
24 is 85%, right?

25 WITNESS WATERS: Scherer purchase 85%

1 capacity factor, that's right.

2 COMMISSIONER GUNTER: Scherer UPS was at 90%.

3 MR. MCGLOTHLIN: I need to catch up. What
4 page are you on, sir?

5 COMMISSIONER GUNTER: I'm on the second page
6 of Exhibit 23, and I'm down -- just right now I'm
7 talking about the columns and the capacity factor that
8 we've been talking about here.

9 MR. MCGLOTHLIN: All right.

10 COMMISSIONER GUNTER: Got 85% on Column 3,
11 90% on Column 4.

12 WITNESS WATERS: Yes, sir.

13 COMMISSIONER GUNTER: Am I right there so
14 far?

15 WITNESS WATERS: Yes.

16 COMMISSIONER GUNTER: I come down -- go down
17 to Line 26 and I look at transmission line losses with
18 lesser electricity running across, with the 85% that's
19 significantly higher by -- what is that, \$100 million?

20 WITNESS WATERS: Yes, sir.

21 COMMISSIONER GUNTER: -- than it is with a
22 greater amount of electricity running across. And I
23 thought, you know, last time I remember physics, which
24 was about a decade -- about a century ago, if you put
25 more through, it has a tendency to heat up. You have a

1 little more resistance, so your line loss is greater.
2 You have lesser going through, but it costs you \$100
3 million more. Somehow or other the logic of those two
4 figures escapes me.

5 WITNESS WATERS: Okay, that's probably the
6 most confusing entry on all these forms, and let me --

7 COMMISSIONER GUNTER: No, I have other ones
8 that confuse me just that badly.

9 WITNESS WATERS: Maybe not. But let me
10 explain. You remember when I discussed the UPS
11 proposal and I said we started from Southern's energy
12 rates that they quoted on specific exhibit? Southern
13 made an assumption on losses that were included on
14 those rates. Those, because of the way the methodology
15 works, is we started with their energy projection. We
16 don't pick up the dollar component of losses on their
17 side. When we buy the unit, now we're making our
18 assumption on losses, which correlates, but now it's
19 shown in this column instead of in fuel costs. The
20 bottom line here is what's really comparable. The
21 losses are not because we've split them up. We've
22 done the accounting differently in the two different
23 cases is what it amounts to.

24 COMMISSIONER GUNTER: Well --

25 CHAIRMAN WILSON: I don't understand that.

1 COMMISSIONER GUNTER: I don't understand that
2 either because the fuel costs, see, I was going to come
3 on down. I'm trying to -- the fuel costs, there's more
4 -- if you took a 5% differential, the fuel cost doesn't
5 quite balance.

6 WITNESS WATERS: Okay, let me try again.

7 COMMISSIONER GUNTER: And if you add \$100
8 million into it, it really throws it out of balance.

9 WITNESS WATERS: Right.

10 COMMISSIONER GUNTER: So I already tried Line
11 25 and Line 26. I thought you were to spring that one
12 on me, but the math doesn't work. It doesn't stand on
13 its own bottom with math.

14 WITNESS WATERS: Okay. Let me go back to the
15 bid again. The price that Southern quoted for energy
16 was a price delivered at the border, dollars per
17 megawatt hour. So it included an assumption on losses,
18 and we used that number to determine the overall fuel
19 prices, the fuel costs in our simulation here. In
20 other words, what I'm showing as fuel cost includes
21 some of the losses because that's what Southern assumed
22 in their projection for the UPS case only.

23 CHAIRMAN WILSON: So what is on Line 26?

24 WITNESS WATERS: So what is Line 26? Only
25 the losses from the border to the load center. On Line

1 26 in Column 3, I have losses from Scherer Unit to the
2 load center which, of course, includes all the losses
3 in Georgia, which gives me a lot more dollars in that
4 column. The sum total of the two picks up all the
5 losses between the unit and the load center, but
6 they're accounted for differently.

7 CHAIRMAN WILSON: Line 27 --

8 WITNESS WATERS: Line 27 has 9% losses in
9 both cases, once you add both of those components.

10 COMMISSIONER GUNTER: Let me tell you where I
11 have a problem. I just went -- say there was a 5%
12 difference, I said, okay, the 85 and I took Line 27.
13 I took 5%. I took that differential and worked that
14 ratio, and I lost that \$100 million. I ratioed that,
15 take care of that difference between 85 and 90, and I
16 -- it still somehow doesn't wash.

17 WITNESS WATERS: One other ratio,
18 Commissioner, if you apply, I think it will get a
19 little closer, try 9% versus 6%. 9% on the left number
20 is the assumption, 6% on the right.

21 COMMISSIONER GUNTER: You're saying your line
22 losses are 9%?

23 WITNESS WATERS: From the Scherer purchase
24 case between the unit and our load center it's 9%.

25 COMMISSIONER GUNTER: We had testimony

1 earlier today that line loss in the calculation was
2 approximately 3%.

3 WITNESS WATERS: In the Southern System,
4 that's correct. And 6% in the FPL System.

5 COMMISSIONER GUNTER: They have a better
6 system than you have?

7 WITNESS WATERS: I don't know that they do,
8 but it's a different system, and the megawatts are
9 transmitted differently.

10 COMMISSIONER GUNTER: If you lose twice as
11 much, it's certainly not half as good, but it would
12 indicate that perhaps they're flowing electricity more
13 efficiently than you.

14 WITNESS WATERS: Well, Commissioner, I
15 haven't checked the mileage, but I think it's about
16 twice as far from Jacksonville to here as it is from
17 there to Scherer, but that would be my guess.

18 COMMISSIONER EASLEY: Is that that 400 miles
19 again?

20 COMMISSIONER GUNTER: It's 400 miles to
21 Macon, don't you forget that, and that's 70 miles north
22 of there, and it's only 360 miles from Jacksonville to
23 Miami.

24 WITNESS WATERS: Well, then my math wouldn't
25 be right with those numbers.

1 COMMISSIONER GUNTER: Okay, I just want you
2 to understand that.

3 CHAIRMAN WILSON: What was the 3%?

4 WITNESS WATERS: The 3% is the loss from the
5 Scherer Unit, the location of the Scherer Unit to the
6 border of the state of Florida.

7 CHAIRMAN WILSON: All right.

8 COMMISSIONER GUNTER: Okay, I'll wait. I
9 have some other ones. I'll wait until he gets through.

10 Q (By Mr. McGlothlin) Mr. Waters, earlier I
11 asked you about how you had handled the discounted
12 standard offer scenario, the fact that it was not a
13 dispatchable unit, and your response was that you
14 assumed cost of 70% capacity factor. Now, as I
15 understand the production cost in simulation, one
16 assumes availability and the program yields the
17 capacity factor, is that correct?

18 A For a dispatchable unit, that's correct.

19 Q And that would indicate to me that you had to
20 somehow massage or modify or alter how you would
21 ordinarily perform the simulation to accommodate the
22 fact that you had a situation here that was not
23 dispatchable. Can you explain to me, methodologically,
24 what you had to do to reflect that assumption of
25 constant capacity factor?

1 A The method is very simple. The model, as
2 with most production costing models, accommodates what
3 are called must-run units, which simply says that the
4 unit must run to its availability basically. That's
5 what we've done here. We've assigned a 70%
6 availability. We told it to must-run. It gave us a
7 70% capacity factor. It did not dispatch the unit.

8 Q Earlier you indicated you would take
9 exception to some of the comparisons I led you through
10 in what I described as the value of deferral comparison
11 of the units being studied.

12 Why do you believe that it's invalid to
13 compare on a value deferral basis the fixed costs, O&M
14 costs and the unit-specific fuel costs of the Scherer
15 purchase, the Scherer UPS scenario and the discounted
16 standard offer?

17 A Well, there is something wrong with the
18 premise of your question there. I'm not objecting to
19 that at the moment. I'll get to that.

20 The original comparison you did here was
21 simply to take the fixed cost, O&M cost and unit fuel
22 cost of the two options and add them up, and let me
23 tell you, with a very simple example the fallacy of
24 that approach.

25 If I had a combustion turbine that I was

1 adding to my system and it ran let's say ten hours a
2 year and I add the fixed cost, the O&M cost and fuel
3 cost for that unit and compare it to any kind of unit,
4 it will be cheaper; a very simple comparison. It is
5 the lowest capital cost unit I can install, has very
6 low O&M, and if it doesn't run, it doesn't have any
7 unit fuel cost, so obviously it's not valid to compare
8 units that way.

9 What I have to take into account is the fact
10 that that combustion turbine by not running forces
11 other units to run, which have a cost, which then must
12 be compared to the equivalent case.

13 These cases in my Document 10, particularly
14 the standard offer versus the IGCC, or versus the
15 Scherer purchase, do not have equal capacity factors
16 and cannot be compared by simply adding up the three
17 components.

18 Now, in the other case where we've
19 artificially set the capacity factor to 70%, that
20 comparison has very limited value, because the only way
21 that comparison is valid is if we assume that Scherer
22 is only capable of running 70%, and if we set the
23 capacity factor to 70%, maybe we should be adjusting
24 some of the other components here also, which we did
25 not do this case.

1 For instance, I think Mr. Cepero has
2 testified that we would reduce the payments to Southern
3 Company based on poor performance or lower than our
4 target availability. We have not done that in this
5 case. We've made no adjustments. So I think there is
6 some other things that we'd have to account for.

7 But the bottom line is the ultimate
8 comparison between any two options should reflect
9 effects on system fuel cost and should reflect how we
10 actually expect them to run.

11 Q And you do that primarily by making
12 assumptions of a similar level of operation of the
13 units being compared? Is that the major distinction?
14 We don't make assumptions on that, no. The ultimate
15 way we do is to model how they would run.

16 Q When you compared the Indiantown unit with
17 the discounted standard offer, what assumptions did you
18 make with respect to the operation of those two units
19 and the value of deferral comparison you made of those
20 units?

21 A In those cases, as we did in this Late-filed
22 Exhibit No. 25 that's been identified, we set the
23 capacity factor of the ICL unit to 70%. But we also
24 reflected a reduction in payments consistent with the
25 contract structure in that case.

1 Q Approximately, what was the -- perhaps, at
2 least, in order of magnitude, what was the offsetting
3 level of reduced payments that was associated with the
4 reduced capacity factor of 70% in that case?

5 A I don't really recall. I'd say the capacity
6 payments were reduced from base level by something --
7 like on the order of 30%.

8 Q Now, in the supplement to the Letter of
9 Intent, there is a paragraph that fleshes out the
10 sliding scale that the parties contemplate will
11 describe the operating bonus, operating fee bonus, is
12 that correct?

13 A Yes, I believe there is.

14 Q And that addresses a range from 74 to 92%, is
15 that correct?

16 A I don't recall. I think that's roughly the
17 range, yes.

18 Q Do you recall the size of the operating fee
19 bonus that is contemplated by that supplement to the
20 Letter of Intent?

21 A If I recall previous testimony correctly, it
22 was on the order of \$400,000 for a point of
23 availability.

24 Q And below 74%, according to Letter of Intent,
25 Georgia Power would receive no bonus, is that correct?

1 A I don't recall. I think that may be correct.
2 Below 70, which level?

3 Q 74 is my recollection.

4 A Okay, I believe that's roughly --

5 Q But if we were to apply to this comparison an
6 approach similar to the one you performed with your
7 comparison of ICL to the discounted standard offer,
8 that could possibly be done by looking at the exhibit
9 which places the two units on a comparable capacity
10 factor, and then reflecting elsewhere in the comparison
11 the reduced or the eliminated operating fee that would
12 be paid to Georgia Power in the event of a availability
13 less than 74%, is that right?

14 A It could possibly be done, yes.

15 Q And that would compare the discounted
16 standard offer to the Scherer purchase transaction in a
17 manner similar to your own approach on a value deferral
18 basis performed in the Indiantown case when you
19 compared ICL to the discounted standard offer?

20 A That would be a similar comparison, yes.

21 Q On Exhibit No. 23 -- no, 25.

22 A Okay.

23 Q Do you have a calculator, Sam?

24 A Yes.

25 Q This is the case that assumes a 70% capacity

1 factor for the Scherer purchase scenario. Would you
2 take a moment for me and add the columns that
3 correspond to the net -- the present value for revenue
4 requirements for fixed costs, O&M costs, and unit fuel
5 costs for the 70% capacity factor Scherer purchase
6 column, which is the last one shown there?

7 MR. MURRELL: I'm sorry, I couldn't hear.
8 What were you having him do?

9 MR. MCGLOTHLIN: Well, I'm asking him to
10 total the present value revenue requirements for fixed
11 costs, O&M costs and unit fuel costs that relate to the
12 Scherer purchase 70% capacity factor run that he
13 performed.

14 CHAIRMAN WILSON: Okay, I have that.

15 Q (By Mr. McGlothlin) What is that number?

16 A I get 1,900,947.

17 Q And that's in thousands, so that \$1.9
18 billion, is that correct?

19 A Yes.

20 Q Now the totals for the standard offer
21 scenario would be unchanged, would they not?

22 A That's correct.

23 Q And, let's see, I'm away from my exhibit.

24 (Pause)

25 Would you agree the corresponding number is

1 1,460,753?

2 A If I can see your -- okay.

3 Q Would you subtract that from the combined net
4 present value of cost for the 70% Scherer case?

5 A Let me, if I can, see the number. (Pause)
6 Okay, I have \$440 million, which I'm not sure what this
7 really tells us, other than if the Scherer Unit
8 consistently performs at 70% and brought us absolutely
9 no other benefits and resembled a standard offer, the
10 standard offer with a 20% discount would be more cost
11 effective, but that's not the case, and I don't really
12 think this is a valid comparison.

13 Q Now, is it possible to extract from the
14 Supplement to the Letter of Intent the yearly operating
15 fee that is contemplated in the supplement?

16 A I imagine it is, Mr. McGlothlin. If the
17 point of the exercise is to calculate how much we'd
18 save by lowering O&M, I think without going through
19 that exercise I can say it won't make up \$440 million,
20 since we don't have that much present value in the O&M
21 cost, but again, I don't think it's valid to make the
22 comparison. We're completely neglecting the value of
23 the higher availability of the unit, the higher
24 capacity factor, the energy displacement and the other
25 factors which have been discussed previously.

1 Q Mr. Waters, in the Indiantown case, isn't it
2 correct that when you compare the ICL contract to the
3 discounted standard offer, you do so only on a value
4 deferral basis and did not include a revenue
5 requirement comparison?

6 A That's correct. We did it that way.

7 Q Is it also true that when you made that
8 comparison, you reduced the capacity factor of
9 Indiantown unit to 70% so that it would line up with
10 the discounted standard offer?

11 A Yes, I believe that's the case. I believe
12 it's also true that we showed a loss in that case of
13 \$61 million. That was not really the point. We made
14 the same -- we had the same discussion there that
15 there's more to it than simply setting those components
16 equally and comparing the numbers. There are other
17 benefits to that contract and this one.

18 Q Did you agree with me that -- a few moments
19 ago, that to make a comparison similar to the one you
20 sponsored in the Indiantown case, one would look at the
21 70% scenario and take into account the reduction in the
22 amounts paid to the operator for the operating
23 arrangements?

24 MR. BUTLER: I've been letting this go on a
25 long time, but I'm going to object at this point. It's

1 hard for me to see how this comparison or rehashing of
2 a comparison done in a different docket is shedding any
3 light on the issues relevant here.

4 MR. MCGLOTHLIN: Well, if the witness says he
5 doesn't think it's valid here, but if it was valid in
6 another docket, why can't we apply the same approach
7 here?

8 CHAIRMAN WILSON: I'm going to allow the
9 question, although I think it's pretty close to being
10 answered by now.

11 MR. MCGLOTHLIN: All right, sir, I'm ready to
12 move on.

13 CHAIRMAN WILSON: Joe, how much more do you
14 have?

15 MR. MCGLOTHLIN: Another minute or so.

16 Q (By Mr. McGlothlin) On Exhibit 23, Mr. Waters.

17 A Yes.

18 CHAIRMAN WILSON: You never worked in the
19 construction business, did you, Joe?

20 MR. MCGLOTHLIN: No, sir. No --

21 What I'm looking for is the -- what number
22 was given to the documents in the orange pouch?

23 COMMISSIONER GUNTER: 20. That was the short
24 spread sheets.

25 Q (By Mr. McGlothlin) Do the spread sheets in

1 the Exhibit 20 reflect the most current calculation of
2 total system costs on a present value basis?

3 A Total system cost. The -- what's shown as
4 Column 5 on this? I'm looking at the first page, the
5 IGCC page. Are you looking at a different page?

6 Q I'm looking at -- what I would like for you
7 to do is turn to those pages which reflect the most
8 current calculation of total cost for the UPS purchase
9 and the discounted standard offer case.

10 A UPS and the discounted standard offer?

11 Q UPS purchase and the discounted standard
12 offer.

13 A Okay, I have those.

14 Q I believe the numbers corresponding to the
15 UPS are 43,021,755,000, is that correct?

16 A That's correct.

17 Q And for the discounted standard offer, it's
18 42,805,601,000?

19 A I think you've reversed these. The
20 discounted standard offer is 43,021,755,000. The
21 42,805 you gave me, that's the Scherer purchase case,
22 not the UPS case.

23 Q I beg your pardon. Would you agree that the
24 difference in those two numbers is 216,154,000?

25 A Yes, sir.

1 CHAIRMAN WILSON: Which two numbers?

2 MR. MCGLOTHLIN: The total costs for the
3 discounted standard offer and the total cost present
4 value for the Scherer purchase.

5 CHAIRMAN WILSON: All right.

6 Q (By Mr. McGlothlin) Would you divide that
7 difference, 216,154,000, by the present value total
8 cost for the discounted standard offer and they're --
9 would you agree that's about one half of 1% difference?

10 A Yes, sir, that's the number I get, but before
11 we leave that point, let me make a point about doing
12 that division, because this comes up in every single
13 planning study I'm involved in. There are costs in
14 that total cost figure that I would call embedded
15 costs, which change not a bit between cases. For
16 instance, nuclear fuel costs would not change from one
17 case to the next. Many of the other costs could
18 essentially be considered fixed, like the remaining
19 expansion plan in each of the cases, would be the same
20 in all the cases. I think if you want to do this
21 division, there are other ways to do it and show it on
22 a percentage basis, rather than divide by the system
23 total. I guess I consider 216 million a lot of money.
24 It's roughly equivalent, on present value terms, to one
25 of the units we're adding in the study.

1 And if I take -- look at it on that basis,
2 one whole generating unit to me is a significant
3 difference. So I know we always do this, divide by the
4 total. I don't necessarily think that's a very good
5 way to look at it.

6 Q Well, let's look at it maybe one other way.
7 I believe you said that you strive in the application
8 of the more sophisticated PROMOD model to come within
9 2%, is that correct?

10 A 2% of the PROMOD run, that's correct.

11 Q All right. In this instance, would that be
12 about \$800 million?

13 A That would be about correct, and if that 2%
14 were to occur in any of these runs, it would occur in
15 all of the runs so they would be all off in the same
16 direction. So it would not really influence my
17 results.

18 The purpose of benchmarking is, again, we
19 don't do it with every single case. We do it to get
20 relatively close and then look for changes.

21 Q And you're speaking of benchmarking the
22 PROSCREEN model that you used to the PROMOD model as
23 opposed to actual results, is that correct?

24 A That's correct.

25 Q Is it true that FP&L has under consideration

1 now, has filed and requested a consideration of
2 adjustment in the six-month fuel factor that reflects
3 an expected underrecovery of about 9% for the six-month
4 period?

5 A I don't know what the number is. I'm not
6 familiar with the fuel cost recovery request.

7 MR. MCGLOTHLIN: No further questions.

8 CHAIRMAN WILSON: Go off the record for a
9 minute.

10 (Brief recess.)

11 - - - - -

12 CHAIRMAN WILSON: All right.

13 CROSS EXAMINATION

14 BY MR. HOWE:

15 Q Good evening, Mr. Waters.

16 A Good evening.

17 Q I'd like to first refer to what has been
18 identified as Exhibit 21, the large spread sheet that
19 you presented at the beginning of your testimony.

20 A Yes, sir.

21 Q If you'd please refer over there to the next
22 to the last column on the first page where you're
23 comparing Scherer 4 purchase to the 1996 IGCC?

24 A Okay.

25 Q Then in particular, just to pick a number,

1 let's go down to the fourth entry, 7,614,817. Do you
2 see that, sir?

3 A Yes.

4 Q Now, if you'd skip the second sheet, which
5 deals with the UPS, and go the third sheet, and you'll
6 find that same number in the same location, 7,614,817.
7 Do you see that?

8 A Yes.

9 Q And on the fourth sheet you see the same
10 number in the same location, is that correct?

11 A Correct.

12 Q But on the second sheet, that fourth entry on
13 that next to the last column, we see 7,641,458.

14 Now, just looking at the spread sheets
15 overall. In the first sheet I've got zeros for IGCC
16 the first six years, for the second sheet I've got
17 zeros for the RFP the first four years, and on the
18 third and fourth sheets, I've got zeros for the
19 standard offer the first six years.

20 Why would the UPS, the total system
21 cumulative present value revenue requirement, including
22 Scherer UPS be approximately \$27 million more in 1993
23 and approximately, if my math is correct, \$66 million
24 more in 1994?

25 A Well, '94 is easily explainable. That number

1 in '93 ought to be the same as the other cases, the
2 7,614. '94, of course, is the beginning of the UPS
3 contract, or the UPS offer. So we would have in '94
4 all of the capacity charges, whatever fuel impacts
5 there would be buried in that number in 1994. So I
6 would expect it to be higher than the numbers that you
7 pointed to on the IGCC case, or the standard offer
8 case, which don't impact the system until 1996.

9 Q But why the difference in years -- I guess we
10 can see the difference in 1991, 1992, and 1993. And do
11 those differences appear then in the total down at the
12 bottom of 42,820,793, which appears to be the base for
13 the comparison between UPS and purchase in this case.

14 A Well, I'll have to go to a different sheet
15 here. (Pause)

16 I have very small differences shown in that
17 UPS case, which I really can't account for from the
18 sheets. I don't know whether they carry into the total
19 or not.

20 Q If they do carry into the total, would it be
21 reasonable to assume that if that \$27 million
22 difference for 1993 carries down to the total, and I'm
23 looking at the second page of Exhibit 21, that the
24 cumulative -- total system cumulative present value
25 revenue requirements for Scherer UPS would then be less

1 than the total system cumulative present value of
2 revenue requirements for the Scherer purchase?

3 A No. Even with that, I don't think it would
4 be less.

5 Q Well, when you introduced your testimony and
6 you made a modification, I believe, to take into
7 consideration the December 10th supplement to the
8 Letter of Intent, is that correct?

9 A That's correct.

10 Q And that ate up about 8 million something of
11 the \$15 million difference, did it not?

12 A 8.3 million.

13 Q 8.3 million. As we're going down this next
14 to the last column on the second page of Exhibit 21,
15 are those figures cumulative?

16 A Yes.

17 Q If there were a \$27 million error in 1993,
18 wouldn't it necessarily carry through in the subsequent
19 entries, down to the total?

20 A I'm not sure where you're getting the \$27
21 million from.

22 Q Well, I'm just looking in -- we're still
23 looking at the next to the last column, and for 1993 it
24 shows 7,641,458. Do you see that, sir?

25 A Yes.

1 Q And I'm just comparing that to what appears
2 on the three other pages which is 7,614,817. And just
3 applying my lawyer's math, I'm figuring we've got a 24
4 or, I'm sorry, \$27,000 difference on here but since
5 it's expressed in thousands it's a \$27 million
6 difference. (Pause)

7 A Okay. I see where the number is coming from.
8 I don't know that that necessarily carries into the
9 last column, though, since you're comparing those cases
10 to the other sheets and they should be the same, but
11 the relevant comparison here is the column on the left.
12 And I have no reason to believe that the numbers don't
13 add when I take into account those three columns there
14 and system fuel cost, just comparing those two cases.
15 In other words, you know, the only comparison I can do
16 here is between these two cases and the net difference
17 between them. I don't know if I were comparing the UPS
18 to IGCC, for example, I might be off by a certain
19 amount. But I don't know that that's the case here.

20 Q How could that be if there is no difference
21 in the first four years under any scenario? IGCC,
22 standard offer/no risk, standard offer/20% risk factor.
23 If there is no difference in the first four years, how
24 could it possibly be explained that way?

25 A Well, I don't know. I don't know what the

1 difference is here.

2 Q Mr. Waters, I might be returning to this
3 exhibit but I'll need to go through some of these other
4 things you've given us this evening. Well, wait, maybe
5 I'll stay with this for a second. Doesn't this Exhibit
6 21, in general, demonstrate that Florida Power and
7 Light is better under any scenario, not doing anything
8 before 1996?

9 A On strictly a cost basis?

10 Q Yes, sir.

11 A Yes, I think there is a net cost to the
12 purchase or any of the other scenarios before 1996, and
13 in my testimony I have addressed the fact that Scherer
14 is intended to address a 1996 need.

15 Q If we look at, for example, the 1994 figure
16 on the second page of Exhibit 21, and I'm looking at
17 the system cumulative present value revenue requirement
18 at the end, very last column. For 1993 we have a
19 figure of a negative \$42,809,000, is that correct?

20 A Correct.

21 Q Does that indicate that up to that time,
22 1993, that you're better off not purchasing the unit
23 versus UPS, which shouldn't be in here either because
24 nothing is happening those first few years?

25 A Well, that's correct. In the UPS case there

1 is nothing happening, and, I guess, from a economic
2 viewpoint, you would say that we're incurring more
3 expense in the purchase scenario. If there were an
4 option to purchase the unit and not take the early
5 years, that might be a better option. In other words,
6 just wait longer to buy the unit. I don't believe
7 that's an option. I think there are certain values in
8 here, too, which we really haven't reflected here.

9 For example, we've talked about 1991. There
10 would have been power purchases associated with the
11 coverage of the Turkey Point unit dual outage. Just so
12 there is value in the earlier years, but certainly not
13 in every year and not to that extent to make up for
14 those dollars. The long-term economics, though, are
15 favorable.

16 Q You say they are favorable but would they be
17 more favorable as the numbers are expressed on your
18 Exhibit 21 if there were no purchase, no UPS, no
19 standard offer, either with a 20% risk or without,
20 until 1996?

21 A Yes. The savings would be greater just as
22 the savings would be greater if we accelerated any of
23 the other options; for example, took the early UPS
24 before 1994.

25 MR. HOWE: Mr. Chairman, we're distributing a

1 document. I'd like to have an exhibit number for it,
2 please. It's the Company's response to the Citizens
3 Second Set of the Interrogatories, Interrogatory No. 35.

4 CHAIRMAN WILSON: Give it Exhibit No. 28.

5 MR. BUTLER: Our records don't reflect on our
6 exhibit list sheet a 27. Could I inquire what 27 is?

7 CHAIRMAN WILSON: I'm sorry, this should be
8 27. Thank you.

9 (Exhibit No. 27 marked for identification.)

10 Q (By Mr. Howe) Mr. Waters, did you prepare
11 this response?

12 A Yes, I did.

13 Q Now, I'd like to first address the first
14 sentence of the answer. It says, "The first year cost
15 for the FPL power supply system is \$1,489,755,000, is
16 that correct?

17 A Yes.

18 Q Shouldn't I be able to find that same figure
19 in those schedules you provided at the beginning of
20 your testimony? In particular I'm looking at Exhibit
21 19, Page 3 of 6. Do you have that, sir?

22 A Yes.

23 Q Column 13, the third entry down, which is --
24 and I'm referring to Exhibit 19, Page 3 of 6, Column
25 13, the entry for 1991 and it reads 1,475,946,000, is

1 that correct?

2 A That's correct.

3 Q Shouldn't they be the same?

4 A The difference, Mr. Howe, is primarily
5 represented in Column 3. Where we have assumed here
6 that -- for the purposes of total cost, we've assumed
7 that if we did not have the Scherer purchase or any
8 other purchase, for instance, from UPS, we would obtain
9 power from another source. We've priced that at the
10 \$14,400,000 shown in Column 3 and given a credit to
11 this purchase, which goes into the net total in Column
12 13. So that would bring your totals much closer
13 together and I would have to look at the other columns
14 to reconcile the small difference that remains. But
15 that's most of the difference.

16 Q Column 3 on Page 3 of 6 of Exhibit 19 refers
17 to capacity credits, is that correct?

18 A Correct.

19 Q Is this a deduction, a negative number in
20 this calculation?

21 A Yes.

22 Q And who is paying this credit to Florida
23 Power and Light under your assumption?

24 A No one is paying the credit. This has the
25 effect of putting all of the options, all the

1 alternatives on a equal basis. What it says is there
2 is some value to capacity in the early years.
3 Short-term coverage on possibly a non-firm basis, which
4 is the way these prices were developed, for example, in
5 1991 with the dual outage at Turkey Point. We've
6 stated several times that we needed to obtain purchased
7 power as part of our approach to cover that outage.
8 That purchased power, this is an approximate price in
9 recognition of that purchase. So we're saying what it
10 in effect has the effect of saying is the net cost to
11 FPL is the price of Scherer, less what we would have
12 paid in another scenario.

13 Q On the next page in Exhibit 19, which is just
14 the Scherer UPS, then you don't have any capacity
15 credits, is that correct?

16 A That's correct. Because we have no costs in
17 that year. In the purchase scenario, we represent the
18 net cost to FPL. In this case, the net cost would be
19 done differently, but the net effect is putting them on
20 a comparable basis.

21 Q Mr. Waters, could we return to what's been
22 identified as Exhibit 27. Does this document show that
23 in three-month increments that a delay in the
24 consummation of the purchase of Scherer Unit No. 4
25 leads to progressively lower first-year costs to FP&L?

1 A Yes. That's what it shows. And to be
2 responsive to this particular request, we've made some
3 gross assumptions. And that is that none of the other
4 terms of the agreement would change. In other words,
5 we could simply substitute UPS power for a Scherer
6 capacity payment in this year, that the transmission
7 arrangement is in place and all other arrangements
8 would remain. So I don't know that it's necessarily
9 valid, but it's the only assumption we could make to
10 answer this question.

11 Q That's what the contract specifically allows
12 for, at least for six months until June of 1991, does
13 it not?

14 A Well, until June. Yes. But beyond that, we
15 simply extended it, and I don't know that that's the
16 case.

17 Q But would this identify savings for a delay
18 until June of 1991?

19 A All other things being equal, yes, and
20 assuming we could buy UPS power at existing rates,
21 which, again, is another assumption.

22 Q Is that latter provision you just mentioned
23 in the Letter of Intent at all?

24 A I don't recall.

25 CHAIRMAN WILSON: Is there any reason to

1 assume you couldn't get purchased power or UPS at this
2 current rate?

3 WITNESS WATERS: No, sir, not at this point.
4 I think for a short period of time we'd certainly be
5 able to do that.

6 Q (By Mr. Howe) Could you deliver it through
7 the existing 500 kV transmission system?

8 A Yes.

9 MR. HOWE: Commissioners, I'm going to
10 distribute a document. Now, it's an excerpt from a
11 PROSCREEN run. I'd like you to have it before you.
12 I need to ask the witness a couple of questions, and it
13 may not even be worthwhile identifying this as an
14 exhibit, excuse me.

15 CHAIRMAN WILSON: We don't want to use that
16 as a standard, though, do we?

17 Q (By Mr. Howe) Mr. Waters, I've handed you a
18 fairly large document. It's a copy we made in our
19 office from a blue bound document that was provided to
20 our office, I guess, we picked it up Sunday afternoon.
21 It is a -- I believe it's a PROSCREEN run. Are you
22 familiar with those, sir?

23 A Yes, I am

24 Q Could you identify that first page, what does
25 that state?

1 A It says, "RFP Project No. 22 at 646 megawatts."

2 Q What does that mean?

3 A Basically, what we've done here, I believe
4 this was in response to an interrogatory, and I could
5 check my index to see which one, but let me see. I
6 believe that was in response to Citizens 31-K, if I
7 recall correctly, where we were asked to put this on a
8 comparable basis to what was in Document 10, and
9 determine the economics of this particular project.

10 Q Now, when you say comparable basis to
11 Document 10, what did that entail?

12 A In this case, we set the capacity of the unit
13 to 646 megawatts for the purposes of comparison. That
14 is not what was proposed in this particular offer. The
15 unit size would not correspond to this size, 646.

16 Q I see. And, Commissioners, perhaps we should
17 identify these two pages. Mr. Waters, the two pages
18 we've handed out are those that are at that red tab in
19 the large PROSCREEN run. Could we have a number for
20 that identification?

21 CHAIRMAN WILSON: 28.

22 (Exhibit No. 28 marked for identification.)

23 Q Now, Mr. Waters, I must apologize. I'm
24 afraid our copy machine has deleted 1996 from that
25 first page. But for purposes of my questions I think

1 we can address what we have here.

2 Is this the reference to Scherer No. 4 in the
3 PROSCREEN run? What we see on the first page of what
4 has been identified as Exhibit 28 as "Prof 22."

5 A No, sir. This is one of the projects from
6 the RFP response.

7 Q Oh, I see.

8 A It was designated as Project 22. When we did
9 the analyses in my department, they were basically done
10 blind. And by that I mean they were assigned numbers,
11 we were given the parameters, we ran the cases and
12 returned the results. Project 22 is not Scherer.

13 MR. HOWE: Okay. Commissioner, I would remove
14 -- delete that number then. It was -- we weren't certain
15 because of the reference on the front of that.

16 Q (By Mr. Howe) Can you tell me how the Scherer
17 No. 4 unit is referenced in that PROSCREEN run?

18 A Scherer No. 4 would not be in this run at
19 all. This is one of the cases to evaluate the many
20 alternatives to Scherer, so there would be another
21 PROSCREEN run which was probably in a stack of PROSCREEN
22 runs that reference Scherer.

23 MR. HOWE: Okay. Commissioners, I'm sorry.
24 That explains --

25 CHAIRMAN WILSON: We're going to delete that

1 exhibit.

2 MR. HOWE: Delete that completely. We can
3 number the next exhibit 28 if that's okay with you.
4 Pretend that never happened.

5 (Exhibit 28 withdrawn.)

6 CHAIRMAN WILSON: Or we could hold this up as
7 an example and -- never mind.

8 Q (By Mr. Howe) Mr. Waters, I'd like to refer,
9 now, to your Exhibit 23, which is the cover exhibit
10 that you introduced. And I'm going to be focusing on
11 the comparison between Scherer purchase and Scherer
12 UPS.

13 A Okay.

14 Q Now, I believe that you stated the Scherer --
15 CHAIRMAN WILSON: What the document are you
16 on?

17 MR. HOWE: Exhibit 23.

18 CHAIRMAN WILSON: All right.

19 COMMISSIONER GUNTER: That's the summation
20 document.

21 MR. HOWE: That's the summation document.

22 COMMISSIONER GUNTER: Yeah.

23 Q (By Mr. Howe) The Scherer UPS was actually in
24 a 848 megawatt configuration as Georgia Power responded
25 to the RFP, was it not?

1 A That was the bid. That's correct. That was
2 what they bid. Yes.

3 Q And you refer to it here as 646 megawatts.
4 How did you reduce the capacity of that unit?

5 A Their quote was simply on a dollars-per-
6 kilowatt basis so we simply reflected the 646 in the
7 analysis for the comparison.

8 Q Now, just looking at all of this on kind of a
9 macro level, it appears to me that just comparing the
10 purchase versus UPS, we have initial capital investment
11 cost per kW is lower for the UPS; that's reflected on
12 Line 5 of the first page of Exhibit 23. The investment
13 basis is lower is reflected on Line 6. The return on
14 common equity is lower is reflected on Line 12. The
15 weighted cost of capital is lower is reflected on Line
16 17. If we go to the third page of Exhibit 23 on Line
17 28, the total unit-specific cost are lower for Scherer
18 UPS. So I'm trying to find the difference.

19 Now, I note that the fuel cost is significantly
20 higher as shown on Line 24, is that correct?

21 A Which page? Page 3?

22 Q Of the first page of Exhibit 23.

23 A First page. The fuel cost is higher under
24 the UPS arrangement. Yes.

25 Q Approximately \$9.73 a ton, is that correct?

1 A That's correct.

2 Q Is it basically Florida Power and Light's
3 position that if it buys the unit, it can buy the coal
4 cheaper than the Southern Company can?

5 A Again, Mr. Silva will have to address the
6 details, but, as I have stated before, I think there
7 are reasons we ought to be able to obtain coal at a
8 lower price than what we would expect Southern to
9 obtain it for and pass the cost through to us.

10 Q Does that differing coal price cause a
11 significant difference in the dispatch used in the
12 PROSCREEN run that you used to generate the total
13 system fuel cost and the total system cumulative
14 present value revenue requirements on your Exhibit 21,
15 which is the large spread sheet?

16 A There's really -- it does not cause a
17 significant difference. The both dispatch basically to
18 their availabilities, roughly, which we saw on a
19 previous exhibit. The only reason for difference in
20 output between the two is primarily availability, not
21 the unit fuel cost.

22 Q What's the historic availability of Scherer
23 Unit No. 4?

24 A I've only looked at 1989. That particular
25 year, per Southern's reporting, it was in the mid-90%

1 range for availability. In fact, I think 9 of the 12
2 months it was 100%, and the only significant outage was
3 a planned outage.

4 Q Excuse me, and during 1989 -- or during the
5 time it was in commercial operation, 1989, it ran at
6 approximately 17% capacity factor, is that correct?

7 A I've heard that number quoted. I believe
8 that's roughly correct, yes.

9 Q Referring to the first page of Exhibit 23 and
10 looking at Line 24, the dollar per ton cost of coal,
11 did I understand you correctly, in response to Mr.
12 McGlothlin, state that you did not assume any alternate
13 energy being available for Scherer Unit No. 4 in the
14 UPS configuration?

15 A We basically priced it at this price, the
16 extra energy coming from the unit, that would be
17 correct.

18 Q If you would refer to the second page of
19 Exhibit 23, and again there, I've just kind of worked
20 my way down trying to note significant differences, and
21 starting on Line 6, you have 56,191,000 in transmission
22 line losses for Scherer in the UPS configuration, but
23 none under the Scherer purchase. Is that encompassed in
24 your explanation to Commissioner Gunter dealing with
25 the transmission line losses on 25?

1 A No, sir, that's a different, different cause.
2 Southern in their rate structure, that they quote for
3 UPS, builds in a loss factor into their monthly
4 capacity rate, and that's one of the additional costs
5 of the UPS deal that we are not reflecting in our
6 purchase. In other words, they simply charge us for
7 it, in capacity as well as energy. So there are two
8 different components to it here in the rate structure.

9 COMMISSIONER GUNTER: If I'm checking the
10 sanity of that -- and I'm working on that -- if I checked
11 the sanity of that, that represents 3%, is that
12 correct? Is that what you told me previously?

13 WITNESS WATERS: That's 3% that they built
14 into capacity, that's right.

15 COMMISSIONER GUNTER: And that would be the
16 only difference there in that line loss?

17 WITNESS WATERS: From a capacity point of
18 view, that's right.

19 COMMISSIONER GUNTER: Okay. And that 3%
20 represents about \$30 million, 33 million, something
21 like that?.

22 WITNESS WATERS: Well, the reconciliation
23 we've got here is about \$56 million over the course of
24 the --

25 COMMISSIONER GUNTER: Well, the difference in

1 the two --

2 WITNESS WATERS: They built into their O&M
3 rate too. I need to point that out. It's both in the
4 production capacity charge and in the O&M rate. There's
5 a markup for losses.

6 COMMISSIONER GUNTER: So we don't really know
7 what all is in there?

8 WITNESS WATERS: In their rates?

9 COMMISSIONER GUNTER: Yeah.

10 WITNESS WATERS: We have limited information
11 about what all is in their rates.

12 COMMISSIONER GUNTER: Well, I sure don't
13 know. So I guess that tells me that I don't what's in
14 there, what accounts truly for the difference.

15 WITNESS WATERS: To the extent --

16 COMMISSIONER GUNTER: You got a 90%, which
17 his line loss factor is less because some of the cost
18 has been shifted somewhere else, but I don't know what
19 that cost is or how much the individual components are.

20 WITNESS WATERS: We can reconcile it on the
21 capacity side because we know how they're deriving
22 their rate structure under UPS, and we can show a 3%
23 markup on the capacity rate.

24 COMMISSIONER GUNTER: Well, the purpose of
25 the proceeding is to educate the Commission. Because,

1 you know, that's great, but never forget, you don't get
2 to vote.

3 WITNESS WATERS: I won't forget that,
4 Commissioner.

5 Q (By Mr. Howe) Mr. Waters, I've tried to
6 identify the single largest variable here, and the
7 purpose of my evaluation seems to turn on the second
8 page of Exhibit 23, Lines 18 and 19. It looks like the
9 difference in total fixed costs between Scherer and a
10 purchase configuration and Scherer and UPS can be
11 virtually fully explained by the Southern transmission
12 charges.

13 A That's most of the differential, yes.

14 Q And in a UPS configuration, Florida Power and
15 Light would expect to pay \$821,501,000 in transmission
16 charges, and under the purchase, \$499,442,000. There's
17 a difference there of what, \$322 million. This is the
18 -- what is the difference, precisely, in the
19 transmission charges between those two alternatives?

20 A Well, precisely, I can refer you to the rates
21 that are proposed under both arrangements, and I think
22 the explanation for why the rates are different, that
23 Southern proposes a charge. Under a UPS deal, we've
24 already mentioned that they're talking in 90%
25 availability, and that obviously is not going to come

1 all from Scherer since we project about an 85%
2 availability for the unit. What Southern is doing in
3 their transmission rate structure, and again only
4 Southern could answer the question, but they appear to
5 be charging us transmission rates based on having
6 energy available over their entire system. It's not
7 just energy transmitted from Scherer. We're looking at
8 backup energy coming from potentially any unit on their
9 system, which guarantees the high availability, but it
10 is reflected in the transmission costs.

11 Q We have an inconsistency here then. On the
12 one hand you've recognized the fact that transmission
13 costs will be incurred, and the receipt of alternate
14 energy from lower priced units in transmission. But on
15 the first page of Exhibit 23 in the cost of fuel per
16 ton, you have not recognized the fact that that energy
17 will, in fact, be at a lower fuel cost.

18 A I don't think it's inconsistent, Mr. Howe.
19 It's -- we have to speculate that there is lower cost
20 available, energy from other units than what is being
21 projected in this rate structure. We don't really know
22 that because we don't know what the other units on
23 their system look like. If there were any consistency,
24 I think the transmission rate is correct as proposed.
25 The energy side is just difficult to say. You have to

1 know what the other units look like. And just as I
2 mentioned earlier, we're projecting decreases in
3 economy energy. I expect a decrease in the
4 availability of lower cost energy across their system
5 as time goes on. There's no reason to expect that will
6 be available over a 30-year period.

7 Q And because of that uncertainty, did you
8 hesitate to predict any variation here?

9 A In which?

10 Q In the fuel cost under the UPS configuration.

11 A I had no reason to change their numbers, I'll
12 put it that way. There is no reason to suspect their
13 numbers would be anything different.

14 Q When you said "change their numbers," one of
15 the things that we've gone through earlier with an
16 earlier witness, Mr. Denis, was what has been admitted
17 as Exhibit 10, and the fact that Georgia Power Company
18 in its RFP response provided both Scherer 4 fuel costs
19 and system fuel costs in recognition of the fact that
20 energy would be provided out of other units besides
21 Scherer Unit No. 4.

22 Which figures did you use in your comparison
23 of the purchase versus the UPS?

24 A I'm not sure which figures you're referring
25 to in that particular exhibit. I think I testified

1 earlier as to which numbers we used in the UPS proposal
2 were off a specific schedule from that RFP proposal.

3 Q Could you give to me again which schedule you
4 used? What is the heading on that schedule, if you
5 would, please, sir?

6 A The rates that we used are shown on Exhibit
7 8.2.1, Page 7 of 14. It's called Section B Price Data.

8 CHAIRMAN WILSON: How many times are you
9 going to have to say that? I mean, this has got to be
10 the seventh time I've heard that same question and same
11 answer, and we go back to the same page of the exhibit
12 and he says that's what he used. How many times are we
13 going to have to do this? I hope this is the last time
14 because --

15 MR. HOWE: Mr. Chairman, I think the reason
16 we're doing this is because of the way this case has
17 been filed. We are confronted with --

18 CHAIRMAN WILSON: Yeah, but you're listening
19 to the same testimony I'm hearing. I've heard him
20 answer that question five to seven times. Every time
21 he's asked the question he's given the same answer.
22 Don't ask him again. We know what he used.

23 Q (By Mr. Howe) In your modeling for the
24 Scherer purchase, did you assume additional economy
25 purchases beginning in 1997 when the third 500 kv

1 transmission line is supposed to be in place?

2 A Let me clarify my answer.

3 When I say -- in a sense, yes, but basically
4 when you add the additional line and you take the
5 Scherer purchase, you're back to where you were in the
6 base case with no line and no Scherer purchase. That's
7 the net effect. So, yes, it's more economy purchases
8 than if there were no line there, but it's not more
9 than we had in the base case.

10 Q Mr. Waters, did you assume in your Scherer
11 purchase figures -- and I'm referring here to Exhibit
12 23, the summary, did you assume that Florida Power and
13 Light would be able to dispatch Scherer No. 4 beginning
14 in 1991?

15 A The net effect of the modeling is, yes, we
16 did dispatch the unit in effect.

17 Q You will not, in fact, be able to dispatch
18 the unit in '91, will you?

19 A Well, let me be clear that the -- if you're
20 referring to tying the machine, the unit, into our
21 computer and having it on automatic generation control,
22 no. What we will be able to do is commit the unit or
23 schedule the energy in a manner very similar to being
24 able to dispatch the unit. I guess from a modeling and
25 planning viewpoint, if I ask for a hundred and I get a

1 hundred, whether I've dispatched the unit technically
2 or not doesn't matter very much. I have the same net
3 result. So for modeling purposes, yes, we assume it's
4 dispatchable.

5 Q When we were talking about your Exhibit 21, I
6 believe you referred to a -- and I must apologize, it
7 might have been with your Exhibit 20, I'm sorry, the
8 short-term capacity need.

9 A Yes.

10 Q And was that attributable to two factors,
11 increased projections of load on the system and the
12 loss of Turkey Point 3 and 4 to extended outage?

13 A Yes.

14 Q Was the short-term forecast of the load on
15 FP&L's system changed because of a price change
16 projection in which you projected the cost of fuel to
17 be lower?

18 A In comparison to the previous year's
19 forecast, yes, that's the primary driver, that and the
20 small increase, I believe, in population.

21 Q Are you still projecting the price of fuel to
22 be lower, since --

23 A It wasn't the price of fuel. It was a price
24 change that reflected both rates and fuel. I believe
25 in the previous year's forecast there had been

1 assumption about rate adjustment, possibly through a
2 rate case, I don't know, but it was not just in fuel
3 that the price assumption was derived.

4 Q Was it attributable to price elasticity; you
5 expected the price of electricity to go down and that
6 the consumption would go up?

7 A That's correct.

8 Q Since then you've had the increase in oil
9 prices attributable to Iraq's invasion of Kuwait, have
10 you not?

11 A Yes. What we're actually experiencing today,
12 certainly.

13 Q Would that not tend to indicate that because
14 of elasticity, that your electricity consumption is, in
15 fact, going to go in a direction opposite of what you
16 expected?

17 A At the current moment that would be true, but
18 let's talk term of the forecast. I think the
19 expectation is in our previous forecast we had prices
20 going up, of course, from year to year. In the current
21 situation, I think we expect prices to take a jump but
22 return to what we had forecast, basically over the
23 next, say, two to three years. So in that short term,
24 yes, I would expect load to be driven down slightly by
25 price elasticity, but eventually we'd be back to the

1 same point.

2 Q Would that affect your projections for 1991,
3 '92, '93, where on the first page of your Exhibit 20
4 you show those capacity credits for a 200 megawatt of
5 early needs?

6 A It would not impact 1991 because we still
7 have the Turkey Point outage. So there would be no
8 impact there. I don't think there would be a
9 significant impact on '92. That's where we start to
10 see things returning to normal at the present time. In
11 '93, we would be back to basically where we were. '93
12 also had to do, as I mention in my testimony, shifting
13 of QFs, or a QF project, so there are other factors.

14 Q Excuse me. Are these capacity credits costs
15 that you will incur if you go out and buy this capacity
16 during these time periods?

17 A They're costs that we estimate we would
18 incur, yes. If we bought it, we'd look at it as
19 basically going out to the market and buying, say,
20 peaking capacity.

21 Q In your Exhibit 19, page -- you might -- I
22 need some help here, on your Page 6 of 6, this refers
23 to a revised Page 6 of 6.

24 A Yes.

25 Q When this was first provided to us, did it

1 show identical entries under Column 2 and Column 3?

2 A Yes, it did. That's why it was revised.

3 Q That's why it was revised?

4 A Yes.

5 Q Am I correct though, that Column 4 was not
6 revised?

7 A That's correct.

8 Q If you revised fuel cost and O&M expenses,
9 why would total system costs not change?

10 A The only way they would change is if the
11 spread sheet was set up to simply sum across, and it
12 was not. We were extracting these from other places
13 for the purposes of presentation. So, really, we had
14 the wrong numbers in there in just one column. The
15 sums would not change by making that adjustment.

16 Q Are you saying when you added fuel cost and
17 O&M expenses, which were identical together, and got
18 the right totals all across, that we don't --

19 A What I'm saying is in Column 5, which is the
20 sum of the first four.

21 Q Yes, sir.

22 A The sum there did not reflect the numbers
23 that were in Column 3. They reflected the right
24 numbers. So we simply went back and substituted the
25 right numbers.

1 Q Do you have that original exhibit, sir, the
2 one that you corrected?

3 A I don't know that I do.

4 Q The reason I asked is we added those numbers
5 and they added up in the original exhibit, and they add
6 up in the revised exhibit.

7 A Okay, well, let me check and see if Column 6
8 changed, if I have that original. (Pause)

9 Okay, you're right, we did revise those
10 totals because they were adding across. I thought we
11 had extracted these from one of the other versions of
12 the spread sheet.

13 Q So you've changed the totals as well as the
14 individual column entries?

15 A That's correct, and the revised copy is
16 right.

17 Q Is this an output from a program or model?
18 Are any of these columns outputs from models you've
19 run?

20 A Yes, the fuel cost and O&M expenses are
21 extracted from a computer run to reflect the actual
22 operation of the unit. The capacity payments are not
23 really extracted from the run, although they are inputs
24 into the computer run, but they're calculated in a
25 different way. And then, of course, total system costs

1 would be the result of a computer simulation.

2 COMMISSIONER EASLEY: Are you trying to find
3 out why he made the mistake to begin with?

4 MR. HOWE: Well, in part -- in these filings,
5 we've gotten certain revisions, and we're just trying
6 to understand why some revisions in numbers have
7 changed, and we're seeing new numbers.

8 COMMISSIONER EASLEY: Wouldn't it be simpler
9 just to ask him what the mistake was than to go through
10 the whole shooting match? Maybe?

11 MR. HOWE: Yes, ma'am, it probably would have
12 been.

13 CHAIRMAN WILSON: Not if you're a lawyer.

14 COMMISSIONER EASLEY: Oh, well, that may be
15 my drawback.

16 MR. HOWE: I must, in my own defense, he had
17 first stated that the totals had not changed and that
18 led me on to the other.

19 COMMISSIONER GUNTER: The problem is when she
20 was talking about drawback, she's talking about drawing
21 this back, and I'm the only one sitting close enough
22 for her to get.

23 Q (By Mr. Howe) Mr. Waters, if the totals
24 changed, why didn't the bottom line change? In our
25 original response to Page 6 of 6 to our Interrogatory

1 No. 31(E) showed a total in Column 7 of 43,232,952, and
2 we have that same total in the revised exhibit.

3 MR. BUTLER: Mr. Waters, do you have the
4 original? Have you been able to locate that?

5 WITNESS WATERS: I think I do. I do have the
6 original, and it does say 43,232,952.

7 Well, based on my previous speculation, I
8 knew there was a column here that was an additive, but
9 I got the wrong one. Actually, I'd have to go into the
10 spread sheet and look at the formulas that are embedded
11 in there, but as I recall, we did not simply add across
12 and do the math. We were pulling columns from
13 different spread sheets for the purposes of the
14 comparison here, and we did not, obviously, do the math
15 in that particular column. We just took the numbers.

16 Q (By Mr. Howe) Would you agree that under
17 both the original and the revised, the numbers do add
18 across and the totals are the same?

19 A Yes. Let me explain where that last number
20 comes from. All of the first three columns are, I'll
21 say, input into the PROSCREEN model. In other words,
22 the capacity payments are input. The fuel price and
23 the O&M expense rates are input into PROSCREEN.
24 PROSCREEN then determines what is basically shown in
25 Column 7. So when we create this spread sheet, we are

1 in effect working backwards. We take the first three
2 columns and input those or we extract those from
3 PROSCREEN. We know that the totals must add into
4 Column 7 because that's what the computer run shows.
5 And then we work backwards to some of these other
6 costs, like system fuel cost, which is not a direct
7 output of PROSCREEN. And that's why the last column
8 doesn't change.

9 Q Did you extract similar numbers for the
10 compilation of the summary shown on Exhibit 23, for the
11 respective total fuel cost for the purchase versus UPS?

12 A Yes. And those are done manually, so they
13 are subject to errors in transcription occasionally,
14 which is what we had in this particular case. We ended
15 up with two columns that looked identical.

16 Q Mr. Waters, did I understand you correctly to
17 say the first three columns were the inputs?

18 A No, not the numbers, the rates and the fuel
19 price. The program would determine total dollars, and
20 we take that back out.

21 Q Mr. Waters, again referring to the first page
22 of Exhibit 23, how do you show the UPS option
23 dispatching at a higher capacity factor than the
24 purchase option when the UPS fuel cost is higher and
25 the heat rate is higher?

1 A Well, there is no surprise in that, Mr. Howe,
2 because you're not dispatching them in the same case
3 against each other, you're dispatching both of those in
4 parallel cases against FP&L's oil and gas units.
5 There's a large price differential between that coal
6 cost at Scherer and our next unit. For instance, St.
7 Johns, we go from the St. Johns fuel cost, then we're
8 basically into oil and gas at that point. So there's a
9 large gap. You could vary the fuel cost quite a bit
10 and you would still see full dispatch of the unit,
11 which is what you're seeing in this case.

12 Q And would you expect then because of that to
13 see the same dispatch in both units? Each unit would
14 have the same dispatch because of the reasons you just
15 gave?

16 A Do you mean by "dispatch" the same gigawatt
17 hours, the same output?

18 Q Yes, sir.

19 A No, by same dispatch I'm talking about their
20 relationship to their availability. If one is more
21 available, which in this case is true, they would each
22 dispatch and run the maximum number of hours, which is
23 what we have here, over the long term.

24 MR. HOWE: Thank you, Mr. Waters. I have no
25 further questions.

CROSS EXAMINATION

BY MR. MURRELL:

Q Mr. Waters, let me ask you to take a look at Exhibit 23 again and look at Line 25.

A On which page?

Q I'm sorry, thank you, the first page.

A Okay.

Q That's the average escalation factor used for the various cases that are shown there, is that correct?

A That's correct, over the term of the study.

Q And you used a 7.15% escalation factor for the Martin fuel case, which is high sulfur coal, is that correct, sir?

A That's correct.

Q And you used a 4.99% escalation rate or escalation factor for the Scherer purchase, is that correct?

A The Scherer --

Q And that's also -- that's low sulfur coal, compliance coal?

A Scherer 4 purchase, that's correct.

Q Do you know why Florida Power elected to use such a higher escalation rate for the high sulfur coal than for the low sulfur coal?

1 A I'll have to let Mr. Silva answer the
2 question on any differences between them, but I would
3 suspect at least part of the difference, there's a
4 higher transportation component, I would expect, of
5 Martin than to Scherer. I would expect that to account
6 for at least part of the differential.

7 Q Let me ask you this, just to check my math,
8 if you would, since you've got a calculator there,
9 would you tell me on just a percentage comparison,
10 isn't it true that 7.15% is, in fact, 43% higher than
11 4.99% on a --just comparinng those two numbers?

12 A You're just dividing 7.99 -- or 7.15 by 4.99,
13 I take it?

14 Q That's what I tried to do. And you're
15 telling me that that's attributable in your opinion to
16 transportation?

17 A No, sir, I said that would probably be part
18 of the reason. Mr. Silva would have to address the
19 specific differences.

20 Q But for this Commission to accept the results
21 of your studies, they have to buy into this difference
22 in escalation factor, don't they?

23 A I think they have to accept the fuel
24 forecasts we've used as reasonable. Certainly that's
25 part of the element. But, we have to consider

1 sensitivity here. I have and can provide the numbers
2 running the Martin IGCC at a Scherer fuel price just to
3 show how much -- how sensitive the results are, and I
4 can tell you that the IGCC still does not provide lower
5 cost than Scherer, even when I make that adjustment.
6 And that comparison is probably not very valid since I
7 wouldn't expect to have the same fuel costs at Martin
8 as I have at Scherer, identical fuel costs.

9 Q And you've come to this conclusion based upon
10 a lot of experience in the coal industry?

11 A No, sir, I'm just taking the difference. I
12 guess common sense tells me that Martin is farther away
13 from the coal fields than Scherer is, so I would expect
14 a little bit higher price down there.

15 Q That's a very good point. I would like to go
16 to Document 2 in your prefiled testimony, and I'm
17 looking at Page 1 of 4. Have you got that in front of
18 you, Mr. Waters?

19 A Yes, I do.

20 Q Let's take a look at the year 1994. On the
21 left-hand column is St. Johns River Power Park. What
22 is that number reflected there, Mr. Waters?

23 A In 1994, that's 1.95.

24 Q And for Scherer, the dollars per million
25 Btus?

1 A 2.12.

2 Q Can you tell me whether St. Johns River Park
3 is farther south than Plant Scherer?

4 A Yes, sir, I'm pretty sure that it is, but I
5 would note again with my limited understanding of fuel
6 relationships, that St. Johns has water-borne coal, has
7 access to water-borne coal, and I would again expect
8 that to have some influence on the prices. Mr. Silva
9 can address the specifics, I think.

10 Q Did you personally apply any kind of a sanity
11 test when you saw the 7.15% escalation factor coming up
12 for the Martin IGCC plant and the 4.99% factor used for
13 Scherer purchase?

14 A No, sir, not at that point. These numbers
15 are not randomly generated. The forecasts that we are
16 using for St. Johns and certainly Martin go through an
17 extensive review process within the Company, are
18 reviewed by a forecast review board at FPL. So I take
19 it that greater minds than mine have reviewed these and
20 found them to be acceptable.

21 CHAIRMAN WILSON: What is the average
22 escalation factor?

23 WITNESS WATERS: That is simply taking the
24 last number in the string here in my Document 2, and
25 the first number, and figuring what escalation rate

1 gets you from the first number to the last number.

2 It's sort of an average escalation from year to year.

3 CHAIRMAN WILSON: Reflective of what kind of
4 price change you're going to see --

5 WITNESS WATERS: The price change in nominal
6 dollars.

7 CHAIRMAN WILSON: And that would -- I would
8 assume from that that the high sulfur coal, the price
9 of high sulfur coal is going to escalate more rapidly
10 than compliance coal?

11 WITNESS WATERS: I don't think --

12 CHAIRMAN WILSON: Can I draw that conclusion
13 from looking at that?

14 WITNESS WATERS: I think the cost of coal
15 delivered to Martin reflects not only what our
16 assumption on the coal escalation, but the type of
17 procurement strategy which Mr. Silva could testify to.
18 I think, based on second-hand knowledge, that in this
19 forecast of Martin, we've got more spot coal
20 assumptions here than long-term fuel contracts, and
21 that basically shows just a market escalation over time
22 rather than a capping of the forecast. But, I think he
23 could straighten out the differences.

24 CHAIRMAN WILSON: All right. He's a better
25 witness to ask.

1 Q (By Mr. Murrell) Mr. Waters, if you --

2 CHAIRMAN WILSON: Let me understand. But the
3 point that you made earlier was you ran this using
4 exactly the same fuel costs and escalation as Scherer
5 has?

6 WITNESS WATERS: That's right.

7 CHAIRMAN WILSON: In terms of the sensitivity
8 of the analysis, it did not make a material difference.

9 WITNESS WATERS: It made a substantial
10 difference in present value, but it didn't reduce the
11 584 of savings to zero or anything small.

12 CHAIRMAN WILSON: All right.

13 Q (By Mr. Murrell) If you did use an average
14 escalation factor of 4.99% in the Martin IGCC
15 evaluation, it would improve the economics of that
16 evaluation, wouldn't it?

17 A Well, that's what I've just said, yeah.
18 That's precisely what we did by putting in the Scherer
19 fuel cost.

20 Q Do you know why a heating value in the
21 Scherer purchase case of 12,000 Btus per pound was
22 used?

23 A No, sir.

24 Q Do you know why a heating value in the Martin
25 IGCC case of 13,000 Btus per pound was used?

1 A Again, I'd have to defer to Mr. Silva. I'd
2 assume that's an assumption on the type of coal that's
3 being delivered to those sites.

4 Q Well, all right, we can inquire of Mr. Silva
5 on that, but I think you'll find that on the Scherer
6 case that their coal contract is more like what you
7 have in the UPS, the 12,500 Btus.

8 CHAIRMAN WILSON: We'll give that testimony
9 the weight that it -- go ahead.

10 COMMISSIONER GUNTER: Raise your right hand.

11 MR. MURRELL: Old habits die hard.

12 COMMISSIONER GUNTER: Assume the position.

13 MR. MURRELL: Some of my questions have
14 already been asked, and I'm just trying to go through
15 the areas that I was interested in.

16 Q (Py Mr. Murrell) Mr. Waters, the last coal
17 contract currently in place for Scherer unit expires
18 what year, do you know?

19 A I don't know.

20 Q Do you know who in your company would have
21 that information?

22 A I think Mr. Silva might be more familiar with
23 it than I am.

24 Q Well, subject to check would you just take my
25 word for it right now it's around 2008, and just

1 subject to check, just for the purposes of this,
2 looking at the St. Johns River Power Park coal price of
3 -- in the Year 2009, it's still substantially below the
4 Scherer coal price, is that correct?

5 A Yes, sir, it's about 75 cents.

6 Q Per million Btus?

7 A Uh-huh.

8 COMMISSIONER GUNTER: Let me ask a question.
9 You can't let these go because the record gets kind of
10 squirrely when you go back and look at it.

11 Do you know what the quality of the coal is
12 that's burned at St. John's Power Park?

13 WITNESS WATERS: I don't know the details.

14 CHAIRMAN WILSON: I think you've got the
15 wrong witness for this entire line of questions.
16 You're just asking the wrong guy. He's going to tell
17 you every time he's going to defer the questions. I
18 don't think there is a lot of reason to pursue this
19 line with this witness.

20 MR. MURRELL: I just want to make sure I
21 don't lose the witness and then find out that the next
22 witness defers back.

23 CHAIRMAN WILSON: If you find out that Mr.
24 Silva doesn't know the answers to these questions,
25 we'll bring this gentleman back to answer your

1 questions.

2 MR. MURRELL: Let me just skim through here
3 and get to what I think is appropriate for this
4 witness. (Pause.)

5 Q (By Mr. Murrell) Mr. Waters, what average
6 escalation factor did you use for -- well, you used
7 5.6% for the standard offer, is that correct?

8 A For what component?

9 Q For the average escalation factor; Line 25 on
10 Page 1 of Exhibit 23.

11 A That's correct.

12 Q Is that the number, did I understand you to
13 say that was the number that was generated from the St.
14 Johns River Power Park fuel study?

15 A That would correspond to the St. Johns
16 pricing, yes.

17 Q In response to, I think, Mr. McGlothlin's
18 questioning of you you said that -- you made a
19 statement of something like, "Accuracy I'm not sure
20 applies here," talking about the use of the word
21 "accuracy" when you're dealing with a long-term fuel
22 study.

23 But can you tell us what you do to try to get
24 as good a result as possible, as true a result as
25 possible. What kind of things go into your analysis

1 and your process to try to come up with the most
2 accurate information available?

3 A Well, I think I mentioned before that the
4 fuel forecast here is subject to review by a forecast
5 review board within FPL, which has representatives from
6 several departments throughout the Company who are
7 basically users of the forecast.

8 I think the best you can hope to do is rely
9 on the knowledge of experts. I know that the fuel
10 forecast -- and again, Mr. Silva, his department is
11 responsible for generating that forecast, but they can
12 point out that they rely on consultants, they compare
13 our forecast to other consultants for reasonableness;
14 it's reviewed within the Company and issued for general
15 use of an approval process. So I think that's the best
16 you can do with a forecast.

17 Q I'd like you to look back on Exhibit 23 again
18 to the depreciation used. I can't remember right off
19 the top of my head exactly what line that was. Maybe
20 you can help me with it. Oh, yeah, Line 8.

21 Can you tell me why there is a difference in
22 depreciation between the Martin IGCC unit and the
23 Scherer unit?

24 A It's an assumption on the life of the unit.
25 We've set the depreciation rate in this case equal to

1 the Southern assumption. They use, I believe, a
2 40-year life on their coal units, expected life. FPL
3 does and has used a 30-year life on its units for
4 planning purposes. We also represent what I'll call a
5 negative salvage value, almost a decommissioning cost
6 in that depreciation rate as does Southern in their
7 assumption. But the basic difference is just unit
8 life.

9 Q We already discussed the fact if you used the
10 escalation factor for the Martin IGCC unit as you used
11 for Scherer, that you would improve the economic
12 evaluation for the Martin IGCC unit that would be even
13 more true and you'd have even a greater improvement if
14 you used an even lower fuel price for the Martin IGCC
15 unit than the Scherer, is that correct?

16 A We'll, certainly. I guess it goes without
17 saying that the lower you make the fuel price, the
18 better the unit looks.

19 Q Now, I'm not going to ask you why the
20 difference in Florida Power and Light buying the fuel
21 for Scherer is 30 cents a million Btu lower because I
22 think you've already addressed that. But isn't it true
23 that in order for this Commission to buy into your
24 analysis, that this Commission must find that it is
25 likely that Florida Power and Light would be able to

1 buy fuel at Scherer for 30 cents per million Btus
2 cheaper than the largest coal-buying entity in the
3 world as far as I know. Doesn't this Commission have
4 to buy into that assessment?

5 A The editorial comment notwithstanding, I
6 think Mr. Silva will be the appropriate witness to
7 address the difference and will present his basis for
8 the difference.

9 Q I'm not asking for the basis for the
10 difference. But I'm just saying this Commission has to
11 accept that; the Commission will have to believe that?

12 A Certainly. They have to find that we've done
13 a reasonable job here.

14 Q Did I understand you to say, and I just need
15 you to tell me because I wasn't sure I heard this, that
16 the line loss from Scherer 4 to the load center is 9%?

17 A That's our assumption, yes.

18 Q Is that over the entire life? That doesn't
19 change from year to year?

20 A I'm sure in reality it will change from year
21 to year but the only way we could determine a specific
22 factor for all 30 years is run a series of load flows
23 over that period of time, which I don't think is
24 practical. I think the assumption of 9% is a good
25 assumption.

1 Q Do you know or should I ask another witness
2 why the heat rate for Scherer UPS is higher than the
3 heat rate for Scherer purchase; is that because other
4 system power is used?

5 A No. I'll address that.

6 I have really developed this heat rate as an
7 assumption. Looking at their UPS proposal in response
8 to our capacity solicitation, the 9450 is really my
9 estimate of what they used. The only way we could ever
10 determine what they used is to go back and get their
11 computer runs and see what they input.

12 But looking at the energy prices, which I
13 previously referred to, I believe this is a reasonable
14 estimate of what they input. I don't consider the 50
15 Btus a kilowatt hour difference very significant in the
16 analysis. It could be easily explained by my
17 estimating of their heat rate.

18 Q And do you know, for purposes of your
19 analysis, or should I ask Mr. Silva, this: What is
20 meant by high sulfur coal, compliance coal and medium
21 sulfur coal?

22 MR. BUTLER: I object to this. It's pretty
23 clear that these are Mr. Silva's questions.

24 MR. MURRELL: I want to find that out.

25 CHAIRMAN WILSON: If you're going to get an

1 answer from a competent witness that you can use in the
2 record you're going to need to ask the witness who is
3 familiar enough with that subject to answer those
4 questions. I think it's just wasting your time and
5 ours by asking this witness those kinds of questions.

6 MR. MURRELL: That's fine, Mr. Chairman.
7 I'll withdraw the question under those circumstances.

8 MR. MURRELL: Those are my questions. Thank
9 you.

10 CROSS EXAMINATION

11 BY MR. TELLECHEA:

12 Q Mr. Waters, on Page 5, Lines 12 through 15 of
13 your prefiled testimony you've listed generating and
14 nongenerating resources that were considered in FPL's
15 capacity planning process there with demand-side
16 management, QFs, UPS and new generating units.

17 When introducing into your planning process
18 demand-side programs, do potential lost revenues impact
19 the decision to add additional conservation programs?

20 A Yes, they do.

21 Q What conservation programs have you
22 eliminated, scaled down or rejected in your analysis
23 which you see as having the potential for lost
24 revenues?

25 A I don't know what specific programs have been

1 rejected. Basically the basket of programs which we're
2 presented with go through an analysis process, which
3 has been presented to this Commission in the FEECA
4 docket. We're using those same programs and megawatt
5 levels as were presented in that particular docket in
6 this case.

7 Q Does the impact of lost revenues decrease as
8 the in-service date of the avoided unit of construction
9 or of generation units approaches?

10 A I really don't know without looking at an
11 analysis but I wouldn't expect it to change based on
12 the in-service date of the unit. Maybe I'm
13 misunderstanding the question.

14 Q Okay. On Page 12, Lines 2 through 5 of your
15 prefiled testimony you stated that based on the LOLP
16 analysis in which only the contracted and approved
17 resources are included, FPL needs approximately -- is
18 it 200 megawatts of additional capacity by '95?

19 A That's correct.

20 Q Since FPL's actual need does not occur until
21 '95, should FPL be prohibited from reflecting the
22 purchase price of Scherer in permanent rates until
23 needed?

24 A No. I think that would be -- I guess you're
25 asking me for an opinion on ratemaking which I'm

1 certainly not -- that's not my area. But it seems to
2 me that if you prohibit FPL from recovering any costs
3 until the unit is actually needed, that's kind of
4 punitive and would prevent the Company from taking
5 advantage of what appears to be a good deal.

6 Q Has anything changed or will change in FPL's
7 energy expansion plans, UPS contracts, early purchase
8 options, conservation program savings or other
9 alternatives which may have caused FPL to have 150
10 megawatt capacity need for '91, and was it 416
11 megawatts of capacity need for '93?

12 A I'm not familiar with those numbers. The 850
13 I recognize as the megawatts of countermeasures that
14 will be applied during the Turkey Point outage. So to
15 answer that part of your question specifically, the 850
16 for that one year is to address the Turkey Point dual
17 outage.

18 Q I was saying 150 megawatt, not 850.

19 A Oh, 150.

20 Q Uh-huh

21 A In '91.

22 Q It coincides with the phase-in of the
23 purchase?

24 A Oh, the phasing of the purchase. Okay. A
25 separate question.

1 I don't think the phasing of the purchase
2 corresponds to specific capacity needs in specific
3 years.

4 The first year, 1991, we did identify a need
5 to purchase roughly 200 to 300 megawatts of power so in
6 that sense the purchase of Scherer fits in very nicely
7 with that need in the first year. But beyond that we
8 did not identify specific megawatts of capacity in
9 later years that it's filling.

10 Q How many megawatts are going to be needed to
11 compensate for the outages of the Turkey Point nuclear
12 units?

13 A We've identified roughly 800 megawatts of
14 countermeasures and we've presented that to the
15 Commission. That includes purchase power and other
16 options to meet the need for that year or cover the
17 outage for that year.

18 Q What is FPL's '90-91 winter reserve and
19 '90-91 summer reserve margin when taking into account
20 the outage of the nuclear units at Turkey Point?

21 A I think I did this from memory last week and
22 I misquoted it. I think the summer peak reserve margin
23 based on my review after last week is approximately 17%
24 based on enactment of the countermeasures that we have
25 planned for that year. The winter peak reserve margin

1 is in the area of 13%, again with the countermeasures
2 we have planned for that year.

3 CHAIRMAN WILSON: What did you tell me last
4 week?

5 WITNESS WATERS: I think I told you,
6 Commissioner, about 15 and 10. I was a little low as
7 it turns out. When I went back and looked I think I
8 quoted numbers that didn't have all the countermeasures
9 in them.

10 Q (By Mr. Tellechea) How about when not
11 including Turkey Point nuclear units, can you give me
12 the same figures?

13 A Not including the Turkey Point -- that's not
14 including the Turkey Point units. That's assuming they
15 are out for that period.

16 Q Okay. Could you provide the 1990 through '96
17 reserve margins reflecting the phased in Scherer
18 purchase?

19 A Can I? Yes. I think, yeah, we can provide
20 those.

21 CHAIRMAN WILSON: Can you do that by the time
22 you get back on the stand for rebuttal?

23 WITNESS WATERS: Yes, sir.

24 CHAIRMAN WILSON: What we can do is just make
25 a note of that. When he comes back, if he's got it,

1 give it an exhibit number. If he doesn't, then we'll
2 make it a late-filed.

3 WITNESS WATERS: That's no problem.

4 Q (By Mr. Tellechea) So Page 13, Lines 4
5 through 7 of your prefiled, you identify an increase of
6 200 megawatts of summer peak demand for the period of
7 '91 through '92.

8 A Yes.

9 Q What factors contributed to this increase?

10 A Per our previous discussion, that's primarily
11 price elasticity in the last forecast. There was an
12 assumption that the electric -- the price of
13 electricity would be somewhat lower than had been
14 forecast the prior year. So that resulted in an
15 increase in load which really was a short-term
16 phenomenon; it only affected those years.

17 Q Has FPL considered revising or more
18 aggressively pursuing demand-side measures such as
19 thermal storage and increasing nonfirm load targets for
20 load management saturations?

21 A We've certainly considered it. I think in the
22 nonfirm docket we've presented cases that showed levels
23 beyond the targets that we currently have of roughly
24 1,000 megawatts of nonfirm load are not cost effective
25 and I believe that's still the case. As far as the

1 other program you mentioned, thermal storage, FPL
2 certainly looked into it and pursued it on I'll call it
3 a research-type basis and is pursuing other
4 alternatives on the demand side.

5 CHAIRMAN WILSON: What happened last time you
6 brought a thermal storage program to the Commission?

7 WITNESS WATERS: I believe the Commission
8 rejected it, and as I recall, had something to do with
9 energy usage increased versus the case without thermal
10 storage, even though it reduced peak demand.

11 Q (By Mr. Tellechea) Would the phase-in
12 purchase of Scherer Unit No. 4 -- excuse me. Would
13 that the phased-in purchase of Unit 4 were
14 approximately 460 megawatts will be available in '93
15 allow FPL additional planning flexibility as related to
16 the demand-side reductions identified in the Generation
17 Expansion Plan?

18 A I'm not quite sure I understand the question.
19 Maybe if you can rephrase it a little bit.

20 Q Let's see if we can understand this way.
21 Would that the phased-in purchase of this
22 unit were approximately 460 megawatts will be available
23 in '93 allow FPL additional planning flexibility?

24 A In a sense, yes. I think what I've mentioned
25 in my testimony, I guess I could almost refer to it as

1 insurance.

2 We've seen short-term load changes on the
3 order of 1 to 200 megawatts and per our discussion the
4 invasion of Iraq may send it the other way, but in the
5 short term we're seeing changes of that order of
6 magnitude, including large QFs, which may shift their
7 schedule six months to a year. So I think it does
8 offer some flexibility to have the early purchase.
9 Scherer is not going to shift already being in service.
10 That's something we can count on.

11 Q Has any effort been made to quantify the
12 differences in the environmental externalities related
13 to the IGCC units and the Scherer unit?

14 A The only effort that's been made specifically
15 is we have looked at what we have called the acid rain
16 impact, the value or the cost of allowances, and we've
17 compared those, and to give you -- I guess I could give
18 you the numbers, if you like, based on the pricing but
19 we have done the comparison.

20 Q Can you file that tomorrow when you come back
21 on rebuttal also?

22 A I've filed those as my late-filed deposition
23 Exhibit No. 9 and I could provide that, if you like, or
24 copies of that tomorrow. I don't have copies with me
25 but I can certainly provide that to show those

1 analyses.

2 Q If you could provide that tomorrow I would
3 appreciate that.

4 Are you familiar with Mr. Woody's prefiled
5 testimony?

6 A Yes.

7 Q Okay. He references four short-term benefits
8 that derive from the Scherer purchase.

9 Has FPL quantified or estimated the monetary
10 value of each of those benefits? I think it's on Page
11 6, Lines 3 to 23 of his prefiled if you're there, in
12 front of you.

13 A If I can just review those for a moment. I
14 don't know them from memory. (Pause.)

15 Okay. Reduction of FPL's dependency on oil.
16 That is quantified, in effect, in the analysis,
17 although it's not identified as explicitly as a
18 separate benefit. In other words, the purchase of the
19 units and the energy provided from those units in the
20 '91 to '93 time frame has displaced oil, which is
21 accounted for in the system totals that I have on my
22 figures.

23 Number two, reduction in FPL's total
24 investment, I don't -- to my knowledge, would not
25 quantify that benefit.

1 The provision of capacity needed in 1991, if
2 I refer back to Exhibit No. 21, I believe it's -- no,
3 21 is not the right one. Okay.

4 19 or 20, I'm referring here to 20, but on
5 the page of Exhibit 20 that's titled the "Scherer
6 purchase", under Column 3 we've shown a credit of
7 \$14.4 million and we've discussed this previously. The
8 value of Scherer is really to provide capacity in that
9 user which we've priced at \$14.4 million based on
10 short-term power purchases, so in effect we have
11 quantified that in our overall analysis.

12 And for the added flexibility while we've
13 discussed it we've not quantified that. Again, I
14 almost categorized that as insurance against changes in
15 the future.

16 Q Did FPL factor in the planned outage of
17 Turkey Point nuclear units prior to issuing the RFP for
18 '96 capacity?

19 A No, not to my knowledge.

20 Q What are the reserve margins and associated
21 LOLP during the upgrade period?

22 A After the countermeasures, I mentioned those
23 before and I think I'll provide in my late-filed
24 Exhibit No. 1 the actual reserve margins, the precise
25 numbers. LOLP is below .1 days per year. I do know

1 that. That was the intent of enacting the
2 countermeasures. I don't know the precise number.

3 MR. TELLECHEA: Okay. That's all I have now.
4 Thank you.

5 CHAIRMAN WILSON: Before we go to redirect, I
6 want to ask you to do something, and you can have it
7 ready tomorrow morning or you can do it when you go
8 back on redirect. I want you to indulge me in a little
9 fantasy here for a moment. I want you to pretend like
10 you ran into me in the hallway out there and all we had
11 between the two of us was this pencil and one piece of
12 paper, and I want you to put this case for me on one
13 piece of paper. I want a back-of-the-envelope analysis
14 of what factors are in these cases, this case, the
15 numbers associated with it, and I want you to be able
16 to persuade me or try to, based on that.

17 I've really enjoyed being dragged from spread
18 sheet to spread sheet from all these exhibits and
19 numbers. I'm looking for some sort of unified field
20 theory of this case that allows me to bring it
21 altogether conceptually and I'd like for you to do
22 that, if you would. I don't know whether you're going
23 to end up showing me what the cost delivered to the
24 load center is or whatever but exercise a little
25 imagination.

1 WITNESS WATERS: I'll see what I can do.

2 CHAIRMAN WILSON: You can put this on one
3 piece of paper.

4 COMMISSIONER EASLEY: Do it so a little old
5 lady in tennis shoes can understand it.

6 CHAIRMAN WILSON: Redirect.

7 COMMISSIONER GUNTER: And an old boy that
8 fell off the turnip truck still wearing overalls.

9 MR. BUTLER: In the spirit of minimalism I
10 have one question on redirect.

11 REDIRECT EXAMINATION

12 BY MR. BUTLER:

13 Q If you could turn, please, to Exhibit 24,
14 Mr. Waters, that was the answer to Interrogatory 31-F,
15 Page 2 of 2.

16 A I have it.

17 Q Okay. Starting in Approximately Year 2004,
18 the Scherer purchase unit column shows a straight 85%
19 capacity factor. Did you testify earlier that that is
20 because you're assuming from that point further no
21 further economy or a substantial drop off in the
22 economy purchases?

23 A Yes, that's one of the primary drivers.

24 Q Would the same factors that led to that
25 assumption lead you to conclude there would be a

1 reduction in the time frame of the amount of economic
2 Schedule R power available?

3 A Yes, it would. The factors that would drive
4 a reduction in economy and Schedule R are one, Southern
5 is selling their coal resources, an example which is
6 here. And also as load grows and their expansion plan
7 shows combustion turbines and combined cycles they'll
8 have less coal resources to provide. So Schedule R I
9 would expect to show the same pattern as economy
10 energy.

11 MR. BUTLER: That's all the redirect that I
12 have. And I would move Exhibits 18 through 23.

13 CHAIRMAN WILSON: 18 through 23 without
14 objection are admitted into evidence.

15 MR. McGLOTHLIN: I'll move 24, 25, 26.

16 CHAIRMAN WILSON: 24, 25, 26 without
17 objection.

18 MR. HOWE: And I would move 27.

19 CHAIRMAN WILSON: 27 is moved into evidence
20 without objection.

21 (Exhibit Nos. 18 through 27 admitted into
22 evidence.)

23 CHAIRMAN WILSON: Let me get an idea of how
24 much time we're going to take tomorrow so we can decide
25 what time we need to join together again in the

1 morning.

2 We've got Mr. Gower. How much time would you
3 estimate on Gower?

4 MR. HOWE: 20 minutes.

5 CHAIRMAN WILSON: Joe.

6 MR. MCGLOTHLIN: I can do that in 15 minutes.

7 MR. MURRELL: Five minutes.

8 COMMISSIONER EASLEY: Wait a minute. I don't
9 believe any of you. (Laughter)

10 COMMISSIONER GUNTER: As officer of the
11 court, surely they would not misrepresent us.

12 CHAIRMAN WILSON: Can you name that tune in
13 -- (Laughter)

14 MR. CHRIST: Five minutes.

15 CHAIRMAN WILSON: All right. Mr. Wright.
16 How much cross examination? 8 minutes? God, I love
17 the precision with which you all --

18 COMMISSIONER GUNTER: We're writing this
19 down.

20 MR. MCGLOTHLIN: Little or none.

21 CHAIRMAN WILSON: Counselor.

22 MR. MURRELL: Very little.

23 CHAIRMAN WILSON: Mr. Bartels? Is that
24 pronounced correctly?

25 MR. CHILDS: 15 minutes.

1 CHAIRMAN WILSON: Questions.

2 MR. MURRELL: I'm sorry. Five minutes.

3 CHAIRMAN WILSON: I'm sorry.

4 MR. MURRELL: Based on fast answers.

5 COMMISSIONER EASLEY: What you've done is
6 gotten it for the questions. We haven't asked how long
7 the answers will take.

8 CHAIRMAN WILSON: How about Mr. Wells?

9 MR. CHILDS: Probably five minutes.

10 CHAIRMAN WILSON: Is this late-night optimism
11 or what?

12 MR. MURRELL: He's my witness. I'm just
13 going to --

14 MR. MCGLOTHLIN: Five minutes.

15 MR. HOWE: None.

16 CHAIRMAN WILSON: None. Now on rebuttal,
17 company witnesses.

18 MR. HOWE: Is anything new going to be
19 introduced on rebuttal through the company witnesses?

20 CHAIRMAN WILSON: Well, I don't know. I'll
21 tell you now I'm going to get that one sheet in so you
22 can be ready for that. I may be asking other witnesses
23 for the same kind of back-of-the-envelope analysis of
24 positions.

25 MR. HOWE: I'd say about half a hour on each

1 rebuttal witness at the most.

2 MR. MCGLOTHLIN: I might have half a hour --
3 no, I don't think so. Less than half a hour on Mr.
4 Waters, less than 15 minutes for the others.

5 MR. TELLECHEA: We foresee nothing at this
6 time, but maybe and it won't be much.

7 MR. MURRELL: Mr. Chairman, on witness Silva
8 I'll have probably 45 minutes.

9 CHAIRMAN WILSON: All right. My impression
10 is that if we went ahead and started at 9:00 we could
11 probably finish tomorrow at a reasonable time. Does
12 that sound reasonable?

13 COMMISSIONER EASLEY: Can we finish before
14 midnight tomorrow?

15 CHAIRMAN WILSON: I don't want to be sitting
16 here 10:00 tomorrow night. I didn't want to be sitting
17 here tonight at 10:00. We can leave you all. I can't
18 believe you all have only got about four hours worth of
19 questions.

20 MR. TELLECHEA: Give or take a couple more.

21 CHAIRMAN WILSON: I see self-doubt rising on
22 the faces out here.

23 MR. HOWE: You didn't ask how long our direct
24 was going to be.

25 CHAIRMAN WILSON: I know how long your direct

1 is going to be.

2 MR. HOWE: Seriously, our witnesses are going
3 to be addressing some of these specifics in particular.

4 CHAIRMAN WILSON: Tell me that then, how long
5 is your direct going to be? 20 minutes, 30, an hour?

6 MR. HOWE: A half hour each.

7 MR. MURRELL: 20 minutes, 20 to a half;
8 little bit more.

9 COMMISSIONER GUNTER: We're getting closer to
10 7:30.

11 CHAIRMAN WILSON: We'll start at 8:00 in the
12 morning then. Thank you very much.

13 (Thereupon, the hearing adjourned at 10:10
14 p.m., to reconvene at 8:00 a.m., Thursday, December 13,
15 1990, at the same location.)

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