

BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

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In the Matter of : DOCKET NO. 941101-EQ

Petition for determination that :  
 plan for curtailing purchases :  
 from qualifying facilities in :  
 minimum load conditions is :  
 consistent with Rule 25-17.086, :  
 F.A.C., by FLORIDA POWER :  
 CORPORATION. :

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SECOND DAY - AFTERNOON SESSION

VOLUME 4

Pages 480 through 634

PROCEEDINGS:

HEARING

BEFORE:

CHAIRMAN SUSAN F. CLARK  
 COMMISSIONER J. TERRY DEASON  
 COMMISSIONER JULIA F. JOHNSON  
 COMMISSIONER DIANE K. KIESLING  
 COMMISSIONER JOE GARCIA

DATE:

Tuesday, May 9, 1995

TIME:

Commenced at 9:00 a.m.

PLACE:

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

REPORTED BY:

SYDNEY C. SILVA, CSR, RPR  
 ROWENA NASH HACKNEY  
 Official Commission Reporters

APPEARANCES:

(As heretofore noted.)

DOCUMENT NO. DATE

04900 MAY 22 1995

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**I N D E X**

**WITNESSES**

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**EXHIBITS**

<b>NUMBER</b>		<b>IDENTIFIED</b>	<b>ADMITTED</b>
9	(Shanker) RJS-1 through 11	484	634

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

(Hearing reconvened at 1:37 p.m.)

(Transcript continues in sequence from Volume 3.)

CHAIRMAN CLARK: You have been sworn in, have you not?

WITNESS SHANKER: Yes, I have.

MR. MCGLOTHLIN: We call Roy J. Shanker.

- - - - -

ROY J. SHANKER

was called as a witness on behalf of Orlando CoGen, Ltd., L.P. and Pasco Cogen, Ltd. and, having been duly sworn, testified as follows:

## D I R E C T E X A M I N A T I O N

BY MR. MCGLOTHLIN:

Q Please state your name and address?

A My name is Roy J. Shanker. My address is 9113 Burning Tree Road, Bethesda, Maryland.

Q By whom are you employed, sir, and in what capacity?

A I'm appearing on behalf of Orlando CoGen Limited and Pasco Cogen Limited. I've been hired as a consultant in this proceeding.

Q I see you have your PhD, sir. How do you prefer to be addressed?

A For a formal proceeding, "Doctor" is preferred.  
Thank you.

1 Q Dr. Shanker, did you prepare and submit on behalf of  
2 those clients direct testimony and exhibits?

3 A Yes, I did.

4 Q Do you have that before you?

5 A Yes, I do.

6 Q Do you have any changes, corrections or additions to  
7 make at this time?

8 A No, I do not.

9 Q Do you adopt the content of the written testimony as  
10 your testimony here today?

11 A Yes, I do.

12 MR. MCGLOTHLIN: I request that the prefiled direct  
13 testimony of Dr. Shanker be incorporated in the record at this  
14 point.

15 CHAIRMAN CLARK: The prefiled direct testimony of  
16 Dr. Shanker will be inserted in the record as though read.

17 Q (By Mr. McGlothlin) Dr. Shanker, did you also  
18 prepare the exhibits which were captioned RJS-1 through 11 as  
19 part of your presentation?

20 A Yes, I did.

21 MR. MCGLOTHLIN: I ask that an exhibit number be  
22 assigned to those documents.

23 CHAIRMAN CLARK: Those exhibits will be Composite  
24 Exhibit 9.

25 (Composite Exhibit No. 9 marked for identification.)

1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                   **DIRECT TESTIMONY AND EXHIBITS**

3                   **OF ROY J. SHANKER, PH.D.**

4                   **ON BEHALF OF**

5                   **ORLANDO COGEN LIMITED, L.P.**

6                   **AND**

7                   **PASCO COGEN, LTD.**

8                   **DOCKET NO. 941101-EQ**

9                   **INTRODUCTION**

10    **Q.    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

11    A.    My name is Roy Shanker. My business address is 9113  
12            Burning Tree Road, Bethesda, Maryland 20817.

13    **Q.    BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

14    A.    I am self employed as a consultant in the natural  
15            resources area, with the majority of my practice being in  
16            the electric and natural gas fields, particularly in the  
17            areas of electric utility generation planning and  
18            implementation of Section 210 of the Public Utility  
19            Regulatory Policies Act of 1978 ("PURPA"), 16 U.S.C. §  
20            824a (1985), as it applies to qualifying facilities  
21            ("QFs").

22    **Q.    FOR WHOM DO YOU APPEAR IN THIS PROCEEDING?**

23    A.    I am appearing in this proceeding on behalf of Orlando  
24            Cogen Limited, L.P. ("OCL") and Pasco Cogen, Ltd.  
25            ("Pasco"), each of which executed virtually identical

1 negotiated power purchase contracts with Florida Power  
2 Corporation ("FPC"). These and six other virtually  
3 identical power purchase contracts (collectively, the  
4 "Negotiated Contracts") were entered into pursuant to a  
5 RFP process initiated by FPC in January, 1991, and  
6 approved by the Florida Public Service Commission (the  
7 "Commission") in Order No. 24734 on July 1, 1991. I will  
8 refer collectively to OCL, Pasco and the other six QFs  
9 which entered into Negotiated Contracts with FPC as the  
10 "Cogens."

11 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND**  
12 **QUALIFICATIONS.**

13 A. I have been involved in work related to natural resource  
14 issues since 1973, and specifically in work related to  
15 cogeneration facilities and their development since 1976.  
16 Since that time, I have worked for several state energy  
17 offices in developing cogeneration development plans, and  
18 have been involved in contract negotiations for numerous  
19 generation facilities. I have also worked for several  
20 state regulatory commissions. Finally, on behalf of  
21 electric utilities, industrial concerns, project  
22 financing interests and project developers, I have  
23 participated in general regulatory proceedings and relat-  
24 ed contract negotiations for over 260 engagements, in  
25 over 20 states for projects representing over 7,000 MW of

1 generation.

2 Representative clients have included: New England  
3 Electric System; Boston Edison Company; Commonwealth  
4 Electric Co.; Puerto Rico Electric Power Authority; Reedy  
5 Creek Utilities; Washington Gas Light Co.; Air Products  
6 and Chemicals, Inc.; Anheuser-Busch Companies, Inc.; The  
7 Boeing Company; International Business Machines; BASF  
8 Corporation; Stone Container Corporation; Westvaco  
9 Corporation; Chesapeake Corporation; Virginia Fibre  
10 Corp.; Merck & Co., Inc.; Cargill Inc.; Georgia-Pacific  
11 Corporation; Weyerhaeuser Company; International Paper  
12 Company; American Paper Institute; Finch Pryun;  
13 Hammermill Papers Business; Longview Fibre Company; Boise  
14 Cascade; Crown Zellerbach International Inc.; James River  
15 Corporation; Occidental Chemicals Corporation; the United  
16 States Army, Air Force, Navy, and Government Services  
17 Administration; Metropolitan Dade County, Florida; Broome  
18 and Dutchess Counties, New York; New York City; Montgomery  
19 County, Maryland; Montgomery County, Pennsylvania; Butler  
20 County, Pennsylvania; Cogen Technologies; U.S. Generating  
21 Company; Enron Corp.; Mission Energy Company; CRSS Capital;  
22 Tenneco; Sonat Inc.; Cogentrix Inc.; LG&E Power Systems;  
23 AES; Sithe Energy; Transco Energy Ventures;  
24 Montenay; Wheelabrator; Panda Energy; Diamond Energy;  
25 Energy Investors Fund; and Westmoreland Energy.

1 I have also worked on a number of engagements  
2 related to electric utility system planning requirements.  
3 For example, I conducted a number of studies for the  
4 United States Department of Energy that reviewed the  
5 alternative system planning models available, and  
6 selected several for further use in planning and tech-  
7 nology development evaluations. I have also directed a  
8 private firm in the development of a proprietary  
9 production costing model similar to PROMOD which has been  
10 used in studies for regulators, utilities and industrial  
11 customers. Lastly, I have been involved in state admin-  
12 istrative proceedings related to QFs, production costing  
13 modeling and system expansion planning before the  
14 District of Columbia, Florida, Maryland, New Hampshire,  
15 New Jersey, New York, Oklahoma, Virginia and Vermont  
16 commissions, the Bonneville Power Administration and the  
17 Federal Energy Regulatory Commission ("FERC").

18 A summary of my educational background and profes-  
19 sional experience is attached as Exhibit No. 9 (RJS-1).

20 Q. PLEASE DESCRIBE YOUR EXPERIENCE WITH RESPECT TO THE  
21 TECHNICAL INTERPRETATION OF REGULATIONS IMPLEMENTING  
22 PURPA.

23 A. As can be seen in Exhibit No. 9 (RJS-1), I have been  
24 involved in numerous state regulatory proceedings related  
25 to PURPA over the past 13 years, including eight QF-



1 related proceedings before this Commission. My work in  
2 this area has included the development of draft regula-  
3 tions implementing PURPA for the Arkansas Public Service  
4 Commission, as well as numerous engagements related to  
5 the proper technical definition and measurement of  
6 avoided costs as defined in the FERC's regulations  
7 implementing PURPA. One such engagement involved working  
8 with a task force of the Virginia State Corporation  
9 Commission on the development of technical procedures for  
10 measuring avoided costs using both optimal expansion  
11 models and the PROMOD production costing model. I have  
12 also worked for several electric utilities to develop the  
13 correct technical and modelling procedures to implement  
14 PURPA. In addition, I have served as an arbitrator with  
15 respect to disputes over the measurement of avoided costs  
16 under PURPA. Each of these engagements has required that  
17 I be familiar with the FERC's regulations implementing  
18 PURPA and/or the modelling applications implementing  
19 various costing methodologies in accordance with PURPA.

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 **A.** I have been engaged to evaluate whether FPC's curtailment  
22 plan for "minimum load conditions" (the "Curtailment  
23 Plan") conforms with the Negotiated Contracts and PURPA  
24 and the regulations implemented thereunder. More  
25 specifically, I have been asked to determine whether the

1           Curtailement Plan and the actual curtailments announced to  
2           date comport with (i) section 292.304(f) of the FERC's  
3           regulations implementing PURPA, 18 C.F.R. § 292.304(f)  
4           (1994), and (ii) Commission rule 25-17.086, Florida  
5           Administrative Code, implementing PURPA.

6   **Q.   WHAT IS THE SIGNIFICANCE OF SECTION 292.304(f) OF THE**  
7   **FERC'S REGULATIONS?**

8   **A.   Section 292.304(f) is one of only two narrow exceptions**  
9           (the other being section 292.307 for "system  
10           emergencies") to the Congressionally mandated obligation  
11           of utilities to purchase QF power which the FERC  
12           recognized in its regulations implementing PURPA.  
13           Specifically, section 292.304(f)(1) provides, in relevant  
14           part:

15                   Any electric utility . . . will not be  
16                   required to purchase electric energy or  
17                   capacity during any period during which, due  
18                   to operational circumstances, purchases from  
19                   qualifying facilities will result in costs  
20                   greater than those which the utility would  
21                   incur if it did not make such purchases, but  
22                   instead generated an equivalent amount of  
23                   energy itself.

24                   18 C.F.R. § 292.304(f)(1) (1994).

25   **Q.   HOW DOES COMMISSION RULE 25-17.086 RELATE TO SECTION**

1           **292.304(f) OF THE FERC'S REGULATIONS?**

2    A.    Rule 25-17.086 was adopted to implement section  
3           292.304(f) and, as such, must give full effect to the  
4           FERC's regulation.    Therefore, in order for the  
5           Curtailment Plan to comply with rule 25-17.086, it must  
6           ultimately comply with section 292.304(f) of the FERC's  
7           regulations.    FPC concedes as much by its numerous  
8           references to and discussions of section 292.304(f) in  
9           this proceeding.    See, e.g., FPC's Petition, at 4-5 (Oct.  
10          13, 1994); FPC's Generation Curtailment Plan For Minimum  
11          Load Conditions, at 17-19 (Exhibit No. 1 (RDD-1)); Dolan  
12          Direct Testimony, at 12-16.

13    Q.    **WITH RESPECT TO THE OTHER EXCEPTION THAT YOU MENTIONED**  
14           **EARLIER, DO YOU BELIEVE THAT FPC CAN DISCONTINUE QF**  
15           **PURCHASES DURING THE ALLEGED LIGHT LOADING PERIODS BY**  
16           **CLAIMING THE EXISTENCE OF A "SYSTEM EMERGENCY" AS MR.**  
17           **DOLAN SUGGESTS?**

18    A.    No.    FPC has failed to provide any evidence which would  
19           support Mr. Dolan's assertion.    Indeed, the only  
20           information presented by FPC in this proceeding has dealt  
21           with the economic consequences to FPC of responding to  
22           light loading in terms of curtailing QFs or its own  
23           units.    FPC has not provided any evidence to support the  
24           existence of an "operational" emergency as contemplated  
25           by section 292.307 of the FERC's regulations.    Moreover,

1 the very fact that FPC is and has been aware of its  
2 "minimum load conditions" and could, through one or more  
3 actions, effectively respond to such "minimum load  
4 conditions" demonstrates that it is not experiencing a  
5 system emergency. FPC simply does not wish to take one  
6 of several actions available to it to respond to its  
7 "minimum load conditions," because it finds such actions  
8 economically unpalatable. This is not a "system  
9 emergency."

10 **Q. HAVE YOU COMPLETED YOUR EVALUATION OF FPC'S CURTAILMENT**  
11 **PLAN?**

12 **A. Yes.**

13 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

14 **A.** FPC's Curtailment Plan is inconsistent with PURPA and the  
15 regulations implemented thereunder, as is evident from  
16 careful consideration of the technical and operational  
17 considerations addressed in the legislative history of  
18 PURPA and the documents discussing the formulation and  
19 adoption of the FERC's regulations implementing PURPA.  
20 The clear intent of PURPA was to prefer and to promote  
21 cogeneration through the creation of a mandatory market  
22 for QF power and an obligation of utilities to purchase  
23 from QFs. Consistent with this overriding goal to  
24 promote QFs, the FERC recognized only two narrow  
25 exceptions to the utilities' mandatory purchase

1 obligation. Section 292.304(f) of the FERC's regulations  
2 is one of these exceptions.

3 Section 292.304(f) excuses utilities from their  
4 obligation to purchase QF power only under extraordinary  
5 "operational circumstances" for which they cannot plan  
6 and to which they cannot otherwise respond. In order to  
7 curtail QF purchases under section 292.304(f), utilities  
8 must demonstrate (i) that they will experience  
9 "operational circumstances" (ii) which give rise to  
10 "negative avoided costs" (i.e., the utilities' costs to  
11 generate during such "operational circumstances" with QFs  
12 exceeds their costs to generate without QFs) and (iii)  
13 that they have taken available measures to mitigate the  
14 very circumstances giving rise to the need to curtail.  
15 Absent such a showing, section 292.304(f) does not, and  
16 was not intended to, excuse utilities from their  
17 Congressionally mandated purchase obligation. FPC has  
18 not satisfied these requirements and, therefore, the  
19 Curtailment Plan must fail under both section 292.304(f)  
20 of the FERC's regulations and rule 25-17.086 of the  
21 Commission's rules.

22 First, FPC has not demonstrated that it has or will  
23 encounter the very limited kind of "operational  
24 circumstances" that the FERC contemplated when it  
25 promulgated section 292.304(f) of its regulations.

1       Rather than the result of extraordinary "operational  
2       circumstances," FPC's alleged "minimum load conditions"  
3       have been the result of conscious, long term planning as  
4       well as short term purchase/sale and unit commitment  
5       decisions which are fully within its control and which  
6       can be rectified without recourse to involuntary  
7       curtailment of mandatory QF purchases. As such, they are  
8       outside the purview of section 292.304(f) and rule 25-  
9       17.086.

10       What FPC is attempting to do is shift the cost of  
11       excess generation during minimum load conditions --  
12       excess generation which is the result of FPC's own  
13       deliberate decisions -- to the Cogens. Thus, the  
14       Curtailment Plan ultimately is not directed at lessening  
15       operational risks beyond FPC's control, but instead is  
16       designed to shift to the Cogens the economic risks FPC  
17       chose to accept in its contracts with them. The  
18       Commission should not permit FPC to achieve, through a  
19       distortion of its curtailment regulation, that which it  
20       otherwise did not bargain for in the contracts it  
21       negotiated with the Cogens -- the ability to control the  
22       output of firm non-dispatchable QF resources.

23       Second, before FPC can even begin involuntary  
24       curtailment of QF purchases, FPC must, consistent with  
25       PURPA, take available measures to mitigate the very

1 conditions that may give rise to the need for  
2 curtailment. This FPC has not done. Thus, even if FPC  
3 could demonstrate a legitimate "operational circumstance"  
4 of the kind contemplated by section 292.304(f) of the  
5 FERC's regulations, FPC cannot justify either its  
6 Curtailment Plan or any of the curtailments announced to  
7 date, because it has not undertaken available measures to  
8 mitigate the occurrence of excess generation.

9 There are at least four types of mitigation efforts  
10 that are available to FPC which it has not taken, but  
11 which it must take in order to be eligible to curtail QF  
12 purchases. First, FPC has not established a policy of  
13 interrupting its purchases from the Southern Companies or  
14 other utilities prior to curtailing purchases from QFs,  
15 as it must do to comply with the requirements of PURPA.  
16 Second, FPC has failed to take available measures that  
17 would enhance its ability to reduce its own generation or  
18 to reconfigure the commitment of its own units so as to  
19 mitigate the potential for excess generation. Third, FPC  
20 has failed to aggressively pursue off-system sales of its  
21 excess generation both on the Florida Energy Broker (the  
22 "Energy Broker") and elsewhere at prices that would be  
23 favorable to buyers, but nonetheless preclude FPC from  
24 experiencing "negative avoided costs." Fourth, FPC has  
25 failed to modify its retail pricing during periods of

1 excess generation so as to encourage large users to move  
2 more of their consumption to these periods.

3 Finally, even if one were to assume (for the sake of  
4 argument) that FPC had taken all available steps to avoid  
5 an imbalance between generation and load, FPC's method  
6 for determining the existence of "negative avoided costs"  
7 is flawed. First, FPC fails to base its analysis of  
8 avoided costs (i.e., the difference between the costs FPC  
9 would incur with and without the Cogen purchases) on its  
10 system as it should, consistent with PURPA, be operated  
11 rather than how it actually is operated. Second, FPC  
12 uses an inappropriate time frame for its avoided costs  
13 analysis and incorporates costs that do not belong in its  
14 calculations. In these ways, FPC skews the results and  
15 ensures that its prediction of "negative avoided costs"  
16 is self-fulfilling.

17 Q. HOW IS THE REMAINDER OF YOUR TESTIMONY STRUCTURED?

18 A. The remainder of my testimony is divided into two major  
19 sections. In the first section, I discuss the  
20 legislative history of PURPA and the documents  
21 considering the formulation and adoption of the FERC's  
22 regulations implementing PURPA in light of the technical  
23 and operational considerations that PURPA and the  
24 regulations were designed to address. In particular, I  
25 focus on these documents as they relate to section



1 292.304(f) of the FERC's regulations. In the second  
2 section, I discuss my conclusion that the Curtailment  
3 Plan is not consistent with PURPA and the regulations  
4 implemented thereunder. Specifically, I discuss my  
5 conclusions that FPC has failed (i) to establish the type  
6 of "operational circumstances" contemplated by the FERC  
7 in section 292.304(f) of its regulations, (ii) to  
8 undertake available measures to mitigate the potential  
9 for excess generation on its system, and (iii) to  
10 correctly measure "negative avoided costs."

11 **SECTION I**

12 **Q. WHY IS A REVIEW OF THE TECHNICAL AND OPERATIONAL**  
13 **CONSIDERATIONS ADDRESSED IN THE LEGISLATIVE HISTORY OF**  
14 **PURPA AND THE DOCUMENTS DISCUSSING THE FORMULATION AND**  
15 **ADOPTION OF THE FERC'S REGULATIONS IMPLEMENTING PURPA**  
16 **RELEVANT TO THESE PROCEEDINGS?**

17 **A.** This review is necessary because consideration of the  
18 legislative history of PURPA and these documents in light  
19 of the technical and operational settings to which they  
20 were being applied is essential to an understanding of  
21 the proper context in which the Commission should reach  
22 its decision in this proceeding. By way of example, the  
23 Commission should recall its recent development and  
24 consideration of the PURPA-related jurisdictional issues  
25 in Docket Nos. 940771-EQ and 940357-EG. In those

1 dockets, the Commission's labors ultimately took it  
2 "beneath the surface" to a detailed analysis of  
3 underlying legal principles that led it to conclude that  
4 the utility was misinterpreting PURPA.

5 The Commission is confronted with an analogous  
6 situation here. I can appreciate that, on its face,  
7 FPC's proposition may have some initial appeal. However,  
8 as one digs deeper into the subject matter, it is  
9 apparent that the FERC's regulations upon which FPC  
10 ultimately relies for its authority to curtail have an  
11 instructive history that discloses a very limited purpose  
12 and intent -- one which FPC's Curtailment Plan does not  
13 meet.

14 Q. WHAT LEGISLATIVE HISTORY ARE YOU REFERRING TO?

15 A. In particular, I am referring to the House Conference  
16 Report (the "Conference Report"), H.R. Conf. Rep. No.  
17 1750, 95th Cong., 2d Sess. (1977), which discusses PURPA  
18 and the objectives which Congress intended it to achieve,  
19 a copy of which is attached as Exhibit No. 9 (RJS-2).  
20 As is evident from the Conference Report, PURPA was  
21 designed to promote cogeneration. Id. at 97-99 (Exhibit  
22 No. 9 (RJS-2)). To that end, PURPA was intended to  
23 remove the impediments to cogeneration, including  
24 burdensome federal and state regulation. Id. at 97-98  
25 (Exhibit No. 9 (RJS-2)). Moreover, because Congress

1 viewed traditional utilities' reluctance to purchase  
2 power from non-traditional facilities as a powerful  
3 obstacle to the development of cogenerators, PURPA  
4 obligated utilities to purchase power from QFs. See 123  
5 Cong. Rec. 32,403 (1977) (remarks of Sen. Durkin); id. at  
6 32,437 (remarks of Sen. Haskell); id. at 32,419 (remarks  
7 of Sen. Hart), copies of which are attached as Exhibit  
8 No. 9 (RJS-3). In addition, Congress required utilities  
9 to provide necessary services to QFs at non-  
10 discriminatory rates. Conference Report, at 98 (Exhibit  
11 No. 9 (RJS-2)). All of these requirements evidence  
12 Congress' goal to promote cogeneration by removing the  
13 impediments to QF power sales.

14 Q. PLEASE IDENTIFY THE DOCUMENTS WHICH DISCUSS THE  
15 FORMULATION AND ADOPTION OF THE FERC'S REGULATIONS  
16 IMPLEMENTING PURPA TO WHICH YOU EARLIER REFERRED.

17 A. In order to understand the full context in which section  
18 292.304(f) of the FERC's regulations implementing PURPA  
19 was developed, I have reviewed the technical and  
20 operational considerations addressed in (i) the notice of  
21 proposed rulemaking prescribing proposed regulations  
22 implementing PURPA (the "NOPR"), Small Power Production  
23 and Cogeneration-Rates and Exemptions, 44 Fed. Reg.  
24 61,190 (1979), a copy of which is attached as Exhibit No.  
25 9 (RJS-4), (ii) the summary of comments put forward to

1 the FERC regarding the proposed regulations (the "Summary  
2 of Comments"), FERC, Office of General Counsel, Summary  
3 of Comments on Cogeneration and Small Power Production in  
4 Docket No. RM 79-55 (1980), a copy of which is attached  
5 as Exhibit No. \_\_ (RJS-5), (iii) the final rule and full  
6 preamble to the PURPA regulations (collectively, the  
7 "Preamble"), Order No. 69, Small Power Production and  
8 Cogeneration Facilities; Regulations Implementing Section  
9 210 of the Public Utility Regulatory Policies Act of  
10 1978, 45 Fed. Reg. 12,214 (1980), a copy of which is  
11 attached as Exhibit No. 9 (RJS-6), and (iv) all of the  
12 PURPA regulations, 18 C.F.R. §§ 292.101-.602 (1994).

13 Q. PLEASE DESCRIBE HOW YOU TRACED IN THESE DOCUMENTS THE  
14 TECHNICAL AND OPERATIONAL CONCERNS THAT THE FINAL  
15 REGULATION WAS INTENDED TO ADDRESS.

16 A. I began my analysis by examining the history of the  
17 FERC's regulations implementing PURPA and how that  
18 history manifests itself in the final regulations adopted  
19 by the FERC. One of the first discussions of curtailment  
20 appears in the NOPR in which the FERC presented proposed  
21 regulations implementing PURPA. There the FERC provided  
22 that utilities would be excused from their  
23 Congressionally mandated obligation to purchase QP power  
24 only under the extraordinary circumstances of a system  
25 emergency or a period during which QP purchases might

1 result in net increased operating costs to the utility.  
2 NOPR, at 61,193, 61,204 (Exhibit No. 9 (RJS-4)).

3 This last exception excused utilities from their  
4 obligation to purchase QF power during periods when  
5 "purchases from qualifying facilities might result in  
6 costs greater than those which the utility would incur if  
7 it did not make such purchases, but instead generated or  
8 purchased an equivalent amount of electric energy." Id.  
9 at 61,204 (Exhibit No. 9 (RJS-4)). It is clear from the  
10 NOPR's discussion of this proposed "curtailment"  
11 regulation, that the FERC was concerned only with changes  
12 in utility costs due to unexpected, short term  
13 operational impacts, and not changes in utility revenues.

14 In comments responding to the NOPR, the FERC noted  
15 a recurrent concern that the proposed "curtailment"  
16 regulation might be abused by or deemed an escape  
17 provision for utilities to circumvent their primary obli-  
18 gation to purchase power from QFs. Summary of Comments,  
19 at 89-94 (Exhibit No. 9 (RJS-5)). Accordingly, these  
20 commenters urged the FERC to narrowly restrict the scope  
21 and application of the exception. Id. (Exhibit No. 9  
22 (RJS-5)). The New York Public Service Commission  
23 further suggested that the proposed "curtailment"  
24 regulation be modified to make clear that it could not be  
25 used by a utility to avoid existing contractual

1 obligations to purchase power. Id. at 94 (Exhibit No. 9  
2 (RJS-5)). This same concern was again apparent at the  
3 public hearings which followed, as several commenters  
4 expressed their concern that the proposed regulation be  
5 clarified so as to assure that it could not be used by  
6 the utilities to escape their contractual purchase  
7 obligations. See Public Hearings on Docket Nos. RM79-54  
8 and RM79-55, Implementing Sections 201 and 210 of PURPA,  
9 statement of Maura O'Neil, Consumer Action Now, Nov. 28,  
10 1979, New York, New York; statement of John J. Plunkett,  
11 Staff Economist, Institute for Local Self-Reliance, Dec.  
12 5, 1979, Washington, D.C., copies of which are attached  
13 as Exhibit No. 9 (RJS-7).

14 Q. DID YOUR REVIEW REVEAL WHETHER THE FINAL REGULATION WAS  
15 REVISED TO ADDRESS THE TYPE OF CONCERNS EXPRESSED BY  
16 THESE COMMENTERS?

17 A. Yes. In the final regulation, the proposed "curtailment"  
18 regulation was modified to put the burden on the utility  
19 first to notify any affected QFs prior to curtailment and  
20 second to substantiate its claim for curtailment as  
21 required by its state regulatory authority. Preamble, at  
22 12,228 (Exhibit No. 9 (RJS-6)). Reflecting the FERC's  
23 concern for QFs, the final regulation further provided  
24 that, absent such prior notice and substantiation, the  
25 utility must reimburse the affected QFs for energy or

1 capacity supplied as if such light loading period had not  
2 occurred. Id. (Exhibit No. 9 (RJS-6)).

3 The Preamble to the final regulations states that  
4 these modifications were adopted in direct response to  
5 the concerns of the commenters discussed above:

6 Many of the comments received reflected a  
7 suspicion that electric utilities would abuse  
8 this paragraph to circumvent their obligation  
9 to purchase from qualifying facilities. In  
10 order to minimize that possibility, the  
11 Commission has revised this paragraph to  
12 provide that any electric utility which seeks  
13 to cease purchasing from qualifying facilities  
14 must notify each affected qualifying facility  
15 prior to the occurrence of such a period, in  
16 time for the qualifying facility to cease  
17 delivery of energy or capacity to the electric  
18 utility.

19 Id. at 12,227-28 (Exhibit No. 9 (RJS-6)). The FERC's  
20 overriding concern in adopting these revisions to the  
21 proposed "curtailment" regulation was to protect QFs, in  
22 general, and the primacy of the utilities' QF purchase  
23 obligation, in particular.

24 **Q. HOW ELSE DID THE FERC REVISE THE PROPOSED "CURTAILMENT"**  
25 **REGULATION IN ORDER TO AVOID ABUSE?**

1 A. In the final regulation, the FERC limited those  
2 circumstances under which a curtailment would be  
3 permissible. First, the FERC eliminated the cost of  
4 purchased power from the utility's calculation of  
5 "operating costs" that potentially could justify  
6 curtailment. As a result, the FERC limited the  
7 calculation to true "operating costs" only.

8 Second, the FERC clarified in the final regulation  
9 that increased "operating costs" alone are not sufficient  
10 to justify curtailments; they also must be "due to  
11 operational circumstances." This term was not defined in  
12 the final regulations; however, the FERC did offer a  
13 characterization of "operational circumstances" in the  
14 Preamble:

15 This section was intended to deal with a  
16 certain condition which can occur during light  
17 loading periods. If a utility operating only  
18 base load units during these periods were  
19 forced to cut back output from the units in  
20 order to accommodate purchases from qualifying  
21 facilities, these base load units might not be  
22 able to increase their output level rapidly  
23 when the system demand later increased. As a  
24 result the utility would be required to  
25 utilize less efficient, higher cost units with



1           faster start-up to meet the demand that would  
2           have been supplied by the less expensive base  
3           load unit had it been permitted to operate at  
4           a constant output.

5           Id. at 12,227 (Exhibit No. 9 (RJS-6)).

6           As is evident in the description of "operational  
7           circumstances" quoted above, the final "curtailment"  
8           regulation clearly focused on preventing increases in the  
9           utility's costs caused by the inability of one of its  
10          cheap base load units to return to full service after a  
11          reduction in its output forced by a low load period.  
12          Thus, one of the factors relevant to determining the  
13          existence of "operational circumstances" must be an  
14          increase in costs due to the purchase of QF power during  
15          low load periods versus the level of costs the utility  
16          would incur in the absence of QF power purchases during  
17          such periods.

18          As with the proposed "curtailment" regulation, the  
19          circumstances the final regulation was intended to  
20          address were expected to be short term and unexpected in  
21          nature. In its description of "operational circum-  
22          stances," it is clear that the FERC contemplated  
23          circumstances for which the utility could not plan and to  
24          which the utility could not otherwise respond. This is  
25          entirely consistent with the FERC's general view of the

1 primacy of the QF purchase obligation and the very  
2 limited nature of the curtailment exception.

3 Q. WERE THERE OTHER CLARIFICATIONS TO THE FINAL REGULATION  
4 WHICH ADDRESSED CONCERNS ABOUT UTILITY ABUSE WHICH  
5 IMPACTED YOUR DETERMINATION WITH REGARD TO THE PROPER  
6 TECHNICAL IDENTIFICATION OF OPERATIONAL CIRCUMSTANCES?

7 A. Yes. The Preamble also clearly stated that the final  
8 regulation was not intended to override contractual or  
9 other obligations of the utility to purchase from a QF.

10 The Commission does not intend that this  
11 paragraph override contractual or other  
12 legally enforceable obligations incurred by  
13 the electric utility to purchase from a  
14 qualifying facility. In such arrangements,  
15 the established rate is based on the  
16 recognition that the value of the purchase  
17 will vary with the changes in the utility's  
18 operating costs. These variations ordinarily  
19 are taken into account, and the resulting rate  
20 represents the average value of the purchase  
21 over the duration of the obligation. The  
22 occurrence of such periods may similarly be  
23 taken into account in determining rates for  
24 purchases.

25 Id. at 12,228 (Exhibit No. 9 (RJS-6)). Thus, the PERC

1 recognized that the relative costs of QF purchases would  
2 vary in comparison to utility costs as the utility's  
3 costs rise or fall, but that those expected variations  
4 were or could be taken into account in the overall  
5 avoided cost rate to be paid for QF power. By  
6 comparison, "operational circumstances" justifying cur-  
7 tailment occur during short term, unexpected periods of  
8 increased operating costs.

9 **Q. WHAT DO YOU CONCLUDE FROM YOUR REVIEW OF THESE DOCUMENTS**  
10 **REGARDING THE TECHNICAL AND OPERATIONAL CONCERNS WHICH**  
11 **THE FINAL REGULATION WAS DESIGNED TO ADDRESS?**

12 **A.** I believe that the FERC's regulations implementing PURPA  
13 faithfully reflect the Congressional mandate favoring  
14 cogeneration through the creation of a mandatory market  
15 for QF power and an obligation of utilities to purchase  
16 from QFs. This obligation to purchase is one of the  
17 cornerstones of PURPA and as such, is, with only two  
18 exceptions, treated as sacrosanct under the FERC's  
19 regulations. Section 292.304(f), which the Commission  
20 has implemented in its rule 25-17.086, is one of the  
21 these limited exceptions.

22 As is evident from the previous review, section  
23 292.304(f) was not intended to override the contractual  
24 obligations of a utility to purchase from a QF, but  
25 instead was intended to respond to a short term,

1 extraordinary occurrence during which a utility would,  
2 absent curtailment, have to turn off its own base load  
3 generation due to QF purchases, resulting in net  
4 increased operating costs (i.e., "negative avoided  
5 costs"). Section 292.304(f) excuses a utility from its  
6 obligation to purchase QF power only in the limited,  
7 short term context of extraordinary "operational  
8 circumstances" which give rise to "negative avoided  
9 costs." Absent such a showing, section 292.304(f) does  
10 not relieve a utility of its obligation to purchase QF  
11 power. FPC has not made such a showing and, therefore,  
12 should not be permitted to curtail its purchases of QF  
13 power pursuant to rule 25-17.086.

14

#### SECTION II

15 Q. WHAT ARE THE REQUIREMENTS OF SECTION 292.304(f) OF THE  
16 FERC'S REGULATIONS THAT THE COMMISSION MUST IMPLEMENT  
17 THROUGH RULE 25-17.086?

18 A. In order to be excused under section 292.304(f) from its  
19 primary obligation to purchase QF power, a utility must  
20 demonstrate (i) that "operational circumstances" within  
21 the meaning of section 292.304(f) exist which would cause  
22 the utility to incur "negative avoided costs" if it  
23 purchased QF power, (ii) that it has exhausted available  
24 measures to mitigate the circumstances giving rise to the  
25 need to curtail QF power purchases, and (iii) that it has

1 properly measured and established the existence of  
2 "negative avoided costs" associated with the QF  
3 purchases.

4 Q. WITH RESPECT TO THE CURTAILMENT PLAN, HAS FPC SATISFIED  
5 THESE REQUIREMENTS?

6 A. No. As I discuss below, FPC has failed to demonstrate  
7 any of these requirements.

8 SECTION A -- THE FIRST REQUIREMENT

9 Q. HAS FPC IDENTIFIED THE KIND OF "OPERATIONAL  
10 CIRCUMSTANCES" WHICH THE FERC CONTEMPLATED IN SECTION  
11 292.304(f) AND WHICH WOULD JUSTIFY CURTAILMENT UNDER RULE  
12 25-17.086?

13 A. No. FPC's "minimum load conditions" do not represent the  
14 kind of "operational circumstances" the FERC contemplated  
15 when it adopted section 292.304(f). As discussed above,  
16 section 292.304(f) addresses "operational circumstances"  
17 in the very limited context of short term, unexpected and  
18 extraordinary circumstances where, absent curtailment, a  
19 utility would be compelled to incur increased operating  
20 costs as a result of having to turn off its own base load  
21 generation due to purchases from QFs. Similarly, FPC has  
22 acknowledged that rule 25-17.086 of the Commission's  
23 rules has a "limited application . . . to extreme  
24 conditions only." FPC's Cogeneration Review: An  
25 Assessment of Florida Power's Qualifying Facility

1 "Cogeneration" Purchases, at 46 (Dec. 1993) (hereinafter  
2 "Cogeneration Review") (Exhibit No. 9 (RJS-8)). FPC's  
3 alleged "minimum load conditions" are neither unexpected,  
4 extraordinary nor extreme and therefore do not justify  
5 curtailment under section 292.304(f) or rule 25-17.086.  
6 Moreover, the contractual relationship between the QFs  
7 and FPC was defined in the context of long term  
8 negotiated contracts. There was nothing short term or  
9 unexpected about FPC's purchase obligations under the  
10 Negotiated Contracts.

11 Of specific importance is the fact that the  
12 Negotiated Contracts establish the various Cogens as firm  
13 must run (must take) suppliers to FPC. These contracts  
14 set the compensation and operational obligations of the  
15 Cogens based on the explicit recognition that they would  
16 be supplying firm generation resources and associated  
17 benefits (e.g., the avoidance of utility construction)  
18 over terms as long as 30 years. As discussed above,  
19 section 292.304(f) was explicitly not intended to  
20 interfere with the relative quid pro quo of compensation  
21 and performance established in such contracts. To the  
22 extent that these QF purchase obligations may be at odds  
23 with FPC's "minimum load conditions", it must be  
24 recognized that this is the result of, among other  
25 things, a conscious planning decision to pursue non-

1 dispatchable QF contracts, rather than more expensive,  
2 dispatchable contracts which would have provided FPC with  
3 control over the output of QF generation.

4 Q. WHAT DO YOU MEAN WHEN YOU STATE THAT THE "MINIMUM LOAD  
5 CONDITIONS" ARE THE RESULT OF CONSCIOUS PLANNING BY FPC?

6 A. I think it is very important for the Commission to  
7 recognize that FPC made a conscious choice to negotiate  
8 must run versus dispatchable contracts with the Cogens.  
9 At the time that it was developing these contractual  
10 arrangements, FPC conducted a number of analyses and  
11 debated internally whether it should include dispatch  
12 provisions in its contracts. See FPC internal  
13 correspondence attached as Exhibit No. 2 (RJS-7).

14 At the time it made the decision not to pursue  
15 dispatchable contracts, FPC weighed whether the expected  
16 benefits from being able to dispatch a QF (e.g., control  
17 the level of generation and thereby reduce output during  
18 low load conditions) were sufficient to justify the  
19 increased payments that it would have had to make to  
20 obtain dispatchability rights in the contract. See *id.*  
21 In exchange for dispatch rights, FPC would have had to  
22 offer compensation for the associated start-up and  
23 cycling costs for the avoided unit, as well as the  
24 increased capacity payments that would be associated with  
25 the design of a more expensive avoided unit that would be

1 better able to vary its output in response to fluctuating  
2 loads. FPC apparently concluded that it would not need  
3 the dispatch rights from QFs and/or that it did not want  
4 to incur the costs of obtaining those rights from QFs.  
5 Having declined to obtain dispatch rights and to pay the  
6 costs associated with such rights, FPC should not now be  
7 allowed to obtain those benefits at no cost under the  
8 pretext of curtailment.

9 Yet, that is precisely the result FPC seeks to  
10 achieve in this proceeding. FPC's motivations are  
11 clearly revealed in its own Cogeneration Review and its  
12 "Cogeneration and Purchased Power Strategic Proposal",  
13 dated March 18, 1994 ("Strategic Proposal"), portions of  
14 which are attached as Exhibit No. 9 (RJS-10). In these  
15 documents, FPC sets out its strategy to use 25-17.086 to  
16 obtain at no cost contract rights which it recognizes it  
17 does not have.

18 First, FPC acknowledges that, other than certain  
19 dispatch and scheduling rights FPC recently negotiated,  
20 its QF power purchase contracts are not dispatchable.  
21 Strategic Proposal, at 18 (Exhibit No. 9 (RJS-10)).  
22 However, FPC also recognizes that although it needs the  
23 QF capacity for meeting demand now, and perhaps even more  
24 so in the future (see Cogeneration Review, at 45 (Exhibit  
25 No. 9 (RJS-8))), the current "energy needs from QFs is



1 variable with load, maintenance outages, and fuel costs."  
2 Id. at 46 (Exhibit No. 9 (RJS-8)). FPC further observes  
3 that "[i]deally, FPC would schedule, dispatch, and  
4 operate the various cogenerator units in the same manner  
5 its other plants are operated/dispatched." Id. (Exhibit  
6 No. 9 (RJS-8)).

7 Second, FPC acknowledges that rule 25-17.086 has a  
8 "limited application" and was intended to address  
9 "extreme conditions only." Id. (Exhibit No. 9 (RJS-8)).  
10 FPC further acknowledges that unilateral implementation  
11 of involuntary curtailments would "undoubtedly result in  
12 immediate cogenerator litigation" and that "[i]t has not  
13 been determined if FPC waived certain [curtailment]  
14 rights by signing contracts with the various parties."  
15 Id. (Exhibit No. 9 (RJS-8)).

16 These documents reveal that FPC is knowingly using  
17 the Commission's curtailment rule to circumvent its  
18 contractual obligation to purchase power and to obtain  
19 contract rights it was unwilling to pay for during  
20 initial contract negotiations. Neither rule 25-17.086 of  
21 the Commission's rules nor section 292.304(f) of the  
22 FERC's regulations permit such abuse. As the Preamble to  
23 the FERC's regulations explicitly states, section  
24 292.304(f) was not intended to "override contractual or  
25 other legally enforceable obligations incurred by the

1 electric utility to purchase from a qualifying facility."  
2 Preamble, at 12,228 (Exhibit No. 9 (RJS-6)).

3 At the time it entered into the Negotiated  
4 Contracts, FPC committed itself to a long term bargain  
5 with the Cogens to be non-dispatchable based on the trade  
6 off of the value of dispatch versus the additional costs  
7 to obtain such rights. As part of this bargain, FPC  
8 explicitly assumed the downside costs of not having the  
9 capability to dispatch the Cogens. Presumably, FPC's  
10 decision was based upon the long term benefits it foresaw  
11 over the entire course of the Negotiated Contracts from  
12 lower payments versus the potential costs associated with  
13 not being able to dispatch the Cogens. Indeed, most of  
14 the Negotiated Contracts have terms of at least 20 years,  
15 and even FPC concedes that its alleged "minimum load"  
16 problem should be resolved within a few years. It is  
17 altogether inappropriate for FPC to now focus on those  
18 periods where it may be incurring some of the anticipated  
19 costs it bargained for, ignore all of the associated  
20 benefits that it has already received and will receive in  
21 the future, and use this as a justification for  
22 curtailment.

23 SECTION B -- THE SECOND REQUIREMENT

24 Q. WOULD YOU EXPLAIN WHAT YOU MEAN WHEN YOU STATE THAT FPC  
25 MUST TAKE AVAILABLE MEASURES TO MITIGATE THE VERY

1           CIRCUMSTANCES GIVING RISE TO THE NEED TO CURTAIL QF  
2           POWER?

3    A.    Yes.  Implicit in section 292.304(f) is the requirement  
4           that a utility seeking to be excused from its obligation  
5           to purchase QF power must first take available measures  
6           to mitigate the circumstances giving rise to the need for  
7           such curtailment.  This requirement follows from the  
8           overall goal of PURPA to promote QFs, and from the more  
9           limited goal of PURPA to create a mandatory market for QF  
10          power by obligating utilities to purchase from QFs.  
11         Without such a requirement, section 292.304(f) could  
12         effectively frustrate both of these goals by allowing  
13         utilities to circumvent their mandatory purchase  
14         obligation.

15                 It is clear that under both PURPA and the Negotiated  
16                 Contracts, FPC has a direct obligation to purchase the  
17                 firm power being sold by the Cogens.  With respect to  
18                 PURPA, it would make a mockery of section 292.304(f) of  
19                 the FERC's regulations, if all FPC had to do to evade its  
20                 contractual purchase obligation under the Negotiated  
21                 Contracts was to over-commit generation resources or  
22                 other utility purchases on its system and claim  
23                 "operational circumstances."  Similarly, with respect to  
24                 the Negotiated Contracts, the "must run" firm purchase  
25                 obligation that FPC has agreed to in these contracts

1 would be rendered meaningless if FPC could simply evade  
2 this obligation by over-committing generation resources  
3 on its system and/or by failing to live up to its  
4 commitments. Yet, that is precisely the result FPC  
5 attempts to achieve in this proceeding under the guise of  
6 "curtailment." Prior to invoking the narrow exception  
7 for curtailment, FPC must attempt to comply with its  
8 contractual purchase obligations under the Negotiated  
9 Contracts by attempting to avoid the very "operational  
10 circumstances" which give rise to curtailment in the  
11 first place.

12 This is neither an extreme nor an unusual position.  
13 As a matter of course, one would expect that FPC would  
14 attempt to honor other firm take obligations such as  
15 minimum or must take contracts for fuel supplies such as  
16 coal. It is perfectly reasonable to expect that FPC  
17 should honor its firm purchase contracts with the Cogens  
18 with respect to which it has a strong regulatory  
19 obligation to purchase.

20 **Q. HAS FPC TAKEN ANY EFFORTS TO MITIGATE THE OCCURRENCE OF**  
21 **EXCESS GENERATION ON ITS SYSTEM?**

22 **A. Yes.** Under the Curtailment Plan, FPC is required to  
23 reduce peaking and intermediate output and cut back on  
24 base load production, all of which help to reduce excess  
25 generation on FPC's system.

1 Q. **AREN'T THESE EFFORTS ENOUGH?**

2 A. No. PURPA requires that FPC take available measures to  
3 mitigate the very circumstances that give rise to the  
4 need to curtail. There remain several measures available  
5 for FPC to take which would reduce the possibility of  
6 excess generation on its system.

7 Q. **WHAT TYPES OF ADDITIONAL MITIGATION EFFORTS SHOULD FPC BE**  
8 **TAKING?**

9 A. There are at least four general types of mitigation  
10 efforts that FPC can, and should, undertake to reduce the  
11 likelihood of excess generation occurring on its system.  
12 First, FPC can curtail its non-QF purchases during  
13 periods when generation is expected to exceed load.  
14 Second, FPC can modify its unit commitment practices to  
15 meet its expected load requirement. Third, FPC can  
16 properly price its offers of economy energy for sale  
17 either on or off the Energy Broker in order to encourage  
18 additional sales during periods when it forecasts that  
19 generation may exceed load. Fourth, FPC can reduce its  
20 retail price during periods of excess generation to  
21 encourage more consumption.

22 Q. **HAS FPC UNDERTAKEN ANY OF THESE MITIGATION EFFORTS IN A**  
23 **MEANINGFUL WAY?**

24 A. No. It appears that all FPC has done is attempt (i) to  
25 pursue additional sales on the Energy Broker during

1 potential curtailment periods at prices which do not  
2 encourage such sales and (ii) to reduce (but not  
3 eliminate) the purchases that it makes under the Unit  
4 Power Sales Agreement ("UPS Agreement") under certain  
5 circumstances. Other than these very limited actions, I  
6 am not aware of FPC having taken -- nor is FPC required  
7 to take under the Curtailment Plan -- any of the other  
8 types of mitigation efforts described above.

9 **Q. PLEASE EXPLAIN WHY FPC SHOULD CURTAIL ITS OTHER FIRM**  
10 **PURCHASES PRIOR TO REDUCING PURCHASES FROM THE COGENS.**

11 **A.** As an initial step in the mitigation process, FPC should  
12 curtail its other firm utility purchases prior to  
13 attempting to curtail purchases from the Cogens. This  
14 conclusion is required by PURPA and the regulations  
15 implemented thereunder.

16 In the proposed "curtailment" regulation discussed  
17 earlier, FERC identified the costs of other power  
18 purchases as a factor to be considered in justifying  
19 curtailment. NOPR, at 61,204 (Exhibit No. 9 (RJS-4)).  
20 In the final regulation, however, this language was  
21 eliminated, and costs of purchases were no longer  
22 included as a justification for curtailment. Therefore,  
23 it seems clear that purchases, such as those from the  
24 Southern Companies under the UPS Agreement, should not be  
25 part of the FPC resources considered in determining

1 whether "operational circumstances" exist.

2 This interpretation is also consistent with the  
3 meaning of "operational circumstances" as provided for in  
4 the Preamble:

5 This section was intended to deal with a  
6 certain condition which can occur during light  
7 loading periods. If a utility operating only  
8 base load units during these periods were  
9 forced to cut back output from the units in  
10 order to accommodate purchases from qualifying  
11 facilities, these base load units might not be  
12 able to increase their output level rapidly  
13 when the system demand later increased.

14 Preamble, at 12,227 (emphasis added) (Exhibit No. 7  
15 (RJS-6)). In no way can FPC claim that the "operational  
16 circumstances" referred to in the Preamble are created by  
17 purchases from another utility, because the FERC presumed  
18 that such purchases would not be made if the purchases  
19 would effect the operation of the utility's own must run  
20 units. It follows that such purchases should be  
21 curtailed prior to those from QFs.

22 This conclusion also makes sense in the broader  
23 context of PURPA. To allow QF purchases to be curtailed  
24 before purchases from another utility would essentially  
25 make the QF purchase obligation inferior to that of the

1 purchase obligation between utilities. Such a result is  
2 contrary to the entire thrust of PURPA, which was to  
3 establish a clear preference for such QF sales.

4 Q. ISN'T A CONSEQUENCE OF THIS CONCLUSION THAT FPC MIGHT BE  
5 REQUIRED TO PAY FOR POWER FROM ANOTHER UTILITY WHICH IT  
6 DOES NOT USE?

7 A. Yes. However, this is purely a consequence of FPC's  
8 contractual obligations with the Southern Companies and  
9 does not justify involuntary curtailment of mandatory QF  
10 purchases. This is just one example of the possible  
11 downside costs that FPC bargained for when it entered  
12 into the minimum purchase contract with the Southern  
13 Companies. In this respect, it is no different than any  
14 other situation where a utility incurs short term costs  
15 in exchange for long term benefits in the context of a  
16 long term planning decision.

17 What is most significant in the current situation,  
18 however, is the special requirements imposed by PURPA on  
19 utilities to purchase QF power. It is unreasonable to  
20 believe that the very same legislation Congress adopted  
21 to promote QFs and overcome utilities' reluctance to  
22 purchase from QFs would also have been intended to  
23 subordinate firm generation by QFs to generation or  
24 purchases by utilities. As discussed above, this  
25 conclusion is supported by the fact that the term



1 "operational circumstances" was not intended to cover  
2 utility purchases.

3 Q. WITH RESPECT TO THE SECOND MITIGATION EFFORT, WOULD YOU  
4 EXPLAIN WHAT YOU MEAN BY MODIFICATION OF FPC'S UNIT  
5 COMMITMENT PRACTICES?

6 A. Yes. In general, utilities go through a decision process  
7 to determine which of their generation units they will  
8 bring on line in order to meet their expected load  
9 requirements. This decision process is referred to as  
10 unit commitment. Typically, a utility considers the  
11 maximum load that it may be required to serve over a  
12 specific time frame or planning period. The utility then  
13 attempts to "turn on" or commit to operation the least  
14 cost combination of units that will allow it to meet  
15 those load requirements. This decision process would  
16 normally include considerations such as the start-up and  
17 operational costs of each unit, as well as its maximum  
18 generation capacity.

19 Q. HOW SHOULD FPC MODIFY ITS UNIT COMMITMENT PRACTICES TO  
20 MITIGATE THE NEED TO CURTAIL QF PURCHASES?

21 A. I will just comment briefly here about how FPC's unit  
22 commitment planning process can be modified to mitigate  
23 the need to curtail its firm QF purchase obligations.  
24 Mr. Slater will testify in significant detail on this  
25 subject. Typically, a utility making unit commitment

1 decisions will only consider getting the cheapest  
2 generation on line to meet peak load requirements, and  
3 ignore minimum load conditions. Where light load periods  
4 are expected, however, a utility must modify its unit  
5 commitment planning process to take into account the  
6 implications of its minimum load problems.

7 Notwithstanding the fact that FPC has recognized for  
8 over two years the problems that might exist during light  
9 load periods, FPC does not appear to have modified its  
10 unit commitment planning process to recognize the  
11 implications of its minimum load problems. As Mr.  
12 Slater's analysis shows, the necessary adjustments are  
13 not difficult and, if made, could reduce or eliminate the  
14 occurrence of FPC's "minimum load conditions."

15 The other point that I would like to make here is  
16 that FPC must plan for and adjust its operations in  
17 recognition of the contractual obligations it has entered  
18 into with the Cogens. FPC has essentially ignored the  
19 fact that the Negotiated Contracts represent long term  
20 non-dispatchable purchase obligations. In particular,  
21 during the past two years there has been no indication  
22 that FPC has planned for or adjusted its commitment  
23 process in recognition of these firm purchase  
24 obligations, despite its awareness of potential low load  
25 conditions.

1           Having failed to properly plan for or accommodate  
2 its Cogen purchase obligations, FPC now seeks to escape  
3 its problems by curtailing these very same purchase  
4 obligations under rule 25-17.086. FPC's "minimum load  
5 conditions," however, remain fully subject to its control  
6 and can be rectified without recourse to involuntary  
7 curtailments of Cogen purchases. As discussed above, FPC  
8 must take available measures before seeking to curtail  
9 Cogen purchases. Until FPC has taken those actions, it  
10 cannot seek to solve its self-imposed problems through  
11 rule 25-17.086.

12           The simplest solution for FPC is to recognize that  
13 the Negotiated Contracts are firm, non-dispatchable  
14 purchase obligations and to plan and adjust its  
15 operations accordingly. Just as FPC apparently  
16 recognizes and plans around its minimum take obligation  
17 under the UPS Agreement, so it should recognize and plan  
18 around its minimum purchase obligations under the  
19 Negotiated Contracts. This means that FPC's unit  
20 commitment process should start with a recognition of its  
21 total minimum purchase obligations, and then seek to  
22 identify the best combination of its own units to meet  
23 total generation requirements. "Planning around"  
24 operational constraints is not unusual, and as Mr. Slater  
25 demonstrates, not that difficult with respect to avoiding

1 the need to curtail.

2 Q. ARE THERE ANY OTHER COMMITMENT TYPE ACTIONS THAT FPC  
3 COULD TAKE TO MITIGATE THE NEED FOR CURTAILMENT?

4 A. Yes. The above discussion and Mr. Slater's analysis  
5 focus particularly on the short term (i.e., approximately  
6 one week) types of actions that FPC can employ to  
7 alleviate operational constraints. There are, however,  
8 several longer term actions which FPC could take. For  
9 example, FPC might consider putting a unit on reserve  
10 status on a seasonal basis. Alternatively, FPC might  
11 consider a mix of actions such as actually increasing  
12 purchased power that is fully dispatchable coupled with  
13 either seasonal reserve or adjusted maintenance schedule.  
14 The point to emphasize here is that there is a wide range  
15 of options open to FPC that are consistent with  
16 traditional utility planning practices, that apparently  
17 FPC has totally ignored.

18 Q. WITH RESPECT TO THE THIRD TYPE OF MITIGATION YOU  
19 IDENTIFIED, WOULD YOU PLEASE EXPLAIN HOW FPC CAN MITIGATE  
20 THE NEED TO CURTAIL QF PURCHASES BY ADJUSTING THE PRICE  
21 AT WHICH IT OFFERS ENERGY ON THE ENERGY BROKER?

22 A. Yes. By increasing off-system sales during potential  
23 light load periods, FPC can reduce the need to curtail  
24 Cogen purchases. FPC can increase such sales by lowering  
25 its offering price on or off the Energy Broker.

1 Q. WHY HASN'T FPC LOWERED ITS PRICE ON THE ENERGY BROKER TO  
2 ENCOURAGE MORE SALES DURING PERIODS WHEN CURTAILMENTS  
3 WERE EXPECTED?

4 A. FPC has stated that it is unable to reduce its price  
5 quotes on the Energy Broker because it is not permitted  
6 to sell economy energy below its incremental cost.

7 Q. ARE YOU PROPOSING THAT FPC SELL ECONOMY ENERGY ON THE  
8 ENERGY BROKER BELOW ITS INCREMENTAL COST?

9 A. No. The simple fact is that FPC is incorrectly  
10 calculating and significantly overstating its incremental  
11 costs during low load periods. As a result, FPC has been  
12 offering its energy on the Energy Broker at a price which  
13 discourages rather than encourages sales. By correctly  
14 understanding and calculating its incremental costs, FPC  
15 would be able to lower its offering price and increase  
16 its sales on the Energy Broker. My analysis of the  
17 limited empirical evidence available to date suggests  
18 that FPC could significantly reduce, if not eliminate,  
19 the need for curtailment if it were to lower its price  
20 for economy energy transactions on the Energy Broker to  
21 competitive levels. Based on what I have learned in the  
22 discovery process, FPC apparently would agree with my  
23 conclusions, but would disagree as to what constitutes  
24 its incremental costs during low load periods.

25 Q. HOW DOES FPC SET ITS INCREMENTAL COSTS FOR PURPOSES OF

1           **PRICING ITS SALES ON THE ENERGY BROKER?**

2    A.    In a typical situation (e.g., not during light load  
3           periods) FPC would calculate its total production costs  
4           with the sale of power on the Energy Broker (say 100 MW)  
5           for an hour, and again calculate total production costs  
6           without the sale (e.g., operating at a lower level of  
7           production). The difference in total production costs  
8           divided by the 100 mWh would be FPC's estimate of its  
9           incremental costs for such sale, and, in turn, would be  
10          the price at which FPC would offer to make the sale on  
11          the Energy Broker. This method results in the  
12          calculation of the average incremental price over the 100  
13          MW sales block of energy. During periods when FPC has  
14          the flexibility to increase its generation to meet  
15          additional economy sales this is an appropriate method to  
16          estimate incremental costs.

17    Q.    **IS THIS METHOD APPROPRIATE TO ESTIMATE INCREMENTAL COSTS**  
18           **DURING PERIODS WHEN GENERATION IS EXPECTED TO EXCEED**  
19           **LOAD?**

20    A.    No. FPC inappropriately uses this same method to  
21           calculate its incremental costs during periods of  
22           curtailment. It is very important to understand why the  
23           use of this same method is wrong when setting the  
24           incremental cost for a block of energy that, but for an  
25           additional sale, would constitute excess generation.

1           This may best be understood in the context of a  
2 hypothetical. Assume that FPC has 2100 MW of must run  
3 capacity on line, 1800 MW of its own base load units, 100  
4 MW of must run Southern Companies purchases, and 200 MW  
5 of must run non-dispatchable Cogen power. Further,  
6 assume that FPC has only 2000 MW of load on its system.  
7 This means that it has 100 MW of excess generation. In  
8 this situation, FPC calculates its offer price for sales  
9 on the Energy Broker as the average incremental cost of  
10 serving megawatts 2001 through 2100 by increasing the  
11 output of its own units.

12           This calculation is clearly wrong, because it  
13 incorrectly assumes that FPC has some discretion in  
14 generating incremental energy at less than 2100 MW. IF  
15 FPC had such discretion, however, there would be no need  
16 for curtailment because FPC would simply reduce  
17 generation to meet load. What is being offered for sale  
18 on the Energy Broker in this surplus situation is the  
19 output between megawatts 2001 and 2100, during a period  
20 when FPC has no ability to reduce its output below 2100  
21 MW. In this context, FPC can not save any money by  
22 producing less, because it cannot produce less. Thus,  
23 the true marginal cost that should be associated with the  
24 surplus 100 MW is at most zero.

25 Q. IS IT A SURPRISING RESULT THAT MARGINAL COSTS WOULD BE AT

1           **MOST ZERO UNDER THESE CIRCUMSTANCES?**

2    A.    No.  It is perfectly logical that marginal costs would be  
3           at most zero when "must take" supplies exceed demand.  In  
4           such a situation there is no cost to serving the next  
5           increment of demand that falls below the "must take"  
6           level.

7           This is a common situation with respect to take or  
8           pay fuel contracts.  For example, if a utility had a take  
9           or pay requirement that obligated it to buy 10 tons of  
10          coal, but it only needed 9 tons, the incremental cost for  
11          the last ton would be zero because it could not purchase  
12          less than 10 tons.  In a fuel cost recovery proceeding,  
13          FPC witness Karl Wieland supported this conclusion by  
14          observing:  "The true economic cost of the take or pay  
15          [coal] contract is zero . . . .  I mean once you have an  
16          obligation to buy a certain tonnage, the incremental cost  
17          of burning . . . half of it or all of it is zero."  See  
18          Docket No. 870001-EI, Direct Testimony and Exhibits of  
19          FPC Witness Karl H. Wieland, transcript of cross  
20          examination, at 400 (1987), a copy of which is attached  
21          as Exhibit No. 7 (RJS-11).  The situation is exactly the  
22          same here when FPC has firm purchase obligations for more  
23          generation than load.

24          This is also not that unusual in the context of  
25          electric utility operations and generation.  Typically,



1 where generation exceeds load, the excess is regarded as  
2 "dump" energy, and often sold at a zero cost basis. This  
3 type of pricing of "dump" energy applies with respect to  
4 transactions between utilities in the New York Power Pool  
5 during periods of excess generation.

6 **Q. WITH RESPECT TO THE LAST TYPE OF MITIGATION YOU**  
7 **IDENTIFIED, HOW WOULD MODIFYING FPC'S RETAIL PRICING**  
8 **DURING PERIODS OF EXCESS GENERATION HELP MITIGATE THE**  
9 **NEED TO CURTAIL COGEN PURCHASES?**

10 **A.** The situation is very similar to that discussed above  
11 with respect to pricing additional economy sales on the  
12 Energy Broker. During periods of low load, the  
13 incremental cost for the block of power that would have  
14 been excess is zero or less. If FPC can encourage retail  
15 customers to take more of their requirements during this  
16 period, it should be prepared to sell it down to a price  
17 of zero. In turn, the increased load can reduce or even  
18 eliminate the level of excess generation. Thus, to  
19 properly mitigate, FPC should offer such energy to retail  
20 customers who can increase their loads at the reduced  
21 rate.

22 For example, any industrial companies which operate  
23 cogeneration facilities to meet their own loads could,  
24 during light load periods, be offered power at a price  
25 which encouraged them to turn off their plants and to

1 purchase from FPC. To further encourage such sales, FPC  
2 could offer the power in advance for a fixed block of  
3 time consistent with its forecast of the low load  
4 periods, in much the same way that FPC currently bids  
5 economy sales to the Carter facility in the South Eastern  
6 Power Authority. Of course, this would require FPC to  
7 file the appropriate retail tariff with the Commission.

8 SECTION C -- THE THIRD REQUIREMENT

9 Q. WHY IS THE CONCEPT OF "NEGATIVE AVOIDED COSTS" IMPORTANT  
10 IN THE CONTEXT OF THE POTENTIAL CURTAILMENT OF QF  
11 PURCHASES UNDER SECTION 292.304(f) OF THE FERCS  
12 REGULATIONS?

13 A. This concept is central to the determination of when the  
14 curtailment of QF purchases is permitted. Specifically,  
15 section 292.304(f)(1) excuses utilities from their  
16 obligation to purchase QF power during

17 any period during which, due to operational  
18 circumstances, purchases from qualifying  
19 facilities will result in costs greater than  
20 those which the utility would incur if it did  
21 not make such purchases, but instead generated  
22 an equivalent amount of energy itself.

23 18 C.F.R. § 292.304(f)(1) (1994) (emphasis added). The  
24 underscored text reflects the concept of "negative  
25 avoided costs."

1 Q. IS A FINDING OF "NEGATIVE AVOIDED COSTS" ENOUGH TO  
2 TRIGGER CURTAILMENT UNDER SECTION 292.304(f)?

3 A. No. Section 292.304(f) requires that a utility seeking  
4 to curtail QF purchases not only establish "negative  
5 avoided costs," but also establish that such "negative  
6 avoided costs" are "due to operational circumstances."  
7 Moreover, as discussed above, a utility cannot curtail QF  
8 purchases pursuant to section 292.304(f) unless it can  
9 first demonstrate that it has taken available measures to  
10 mitigate the very circumstances giving rise to the need  
11 for curtailment.

12 Q. WHAT ARE "NEGATIVE AVOIDED COSTS"?

13 A. In the context of section 292.304(f), "negative avoided  
14 costs" occur when the cost that the utility would incur  
15 to generate with the QFs (e.g., with QF energy priced at  
16 zero) exceeds the cost that it would incur to generate  
17 without the QFs (e.g., with the QFs curtailed). This  
18 differential comparison of what would occur with versus  
19 without the operation of the QFs reflects the basic  
20 concept of avoided costs. This concept is explained in  
21 the Preamble's discussion of the definition of avoided  
22 costs:

23 One way of determining the avoided cost is to  
24 calculate the total (capacity and energy)  
25 costs that would be incurred by a utility to

1 meet a specified demand in comparison to the  
2 cost that the utility would incur if it  
3 purchased energy or capacity or both from a  
4 qualifying facility to meet part of its  
5 demand, and supplied its remaining needs from  
6 its own facilities. The difference between  
7 these two figures would represent the  
8 utility's net avoided cost. In this case, the  
9 avoided costs are the excess of the total  
10 capacity and energy cost of the system  
11 developed in accordance with the utility's  
12 optimal capacity expansion plan, excluding the  
13 qualifying facility, over the total capacity  
14 and energy cost of the system (before payment  
15 to the qualifying facility) developed in  
16 accordance with the utility's optimal capacity  
17 expansion plan including the qualifying  
18 facility.

19 Preamble, at 12,216 (citations omitted) (emphasis in  
20 original) (Exhibit No. 9 (RJS-6)).

21 Thus, in order to determine the existence of  
22 "negative avoided costs," FPC must calculate its avoided  
23 costs, which represent the costs that it would have  
24 incurred but for the existence and operation of the QFs.  
25 In general, where those costs are negative (e.g., FPC's

1 costs increase due to the QFs), FPC will have incurred  
2 "negative avoided costs" with respect to the QF  
3 purchases.

4 **Q. IN ATTEMPTING TO DEMONSTRATE THE EXISTENCE OF "NEGATIVE**  
5 **AVOIDED COSTS," HAS FPC PROPERLY CALCULATED ITS AVOIDED**  
6 **COSTS CONSISTENT WITH PURPA?**

7 A. No. Although FPC does follow the basic with/without  
8 methodology used in PURPA to calculate avoided costs, its  
9 assumptions regarding the basis for its calculation of  
10 avoided costs are flawed. Basically, FPC incorrectly  
11 assumes the wrong system operations over the wrong period  
12 of time, and includes inappropriate costs in its  
13 calculations. These errors in FPC's methodology  
14 completely invalidate its results.

15 **Q. WHAT IS THE PROPER METHODOLOGY FOR DETERMINING THE**  
16 **EXISTENCE OF "NEGATIVE AVOIDED COSTS"?**

17 A. The determination of "negative avoided costs" in the  
18 context of section 292.304(f) should be viewed as a two-  
19 step process. The first step is essentially a  
20 pre-condition to the utility's calculation of avoided  
21 costs. It recognizes that prior to evaluating the  
22 existence of "negative avoided costs," the base line  
23 configuration of the utility's system operations must  
24 reflect the full effect of the efforts the utility has  
25 or, as discussed above, should have taken to mitigate the

1 need for curtailment.

2 As discussed earlier in my testimony, it is clear  
3 that the FERC intended section 292.304(f) to relieve  
4 utilities of their obligation to purchase QF power only  
5 under very limited circumstances. It follows that the  
6 method of determining the existence of "negative avoided  
7 costs" must be consistent with the limited nature of  
8 section 292.304(f). In order to achieve this  
9 consistency, the calculation of the utility's avoided  
10 costs must be made in the normative conditions of what  
11 the utility should have done to operate its system  
12 consistent with its obligations under PURPA and the  
13 regulations implemented thereunder. Under any other  
14 conditions, the determination of the existence of  
15 "negative avoided costs" in the context of section  
16 292.304(f) would be meaningless.

17 For example, it would be unreasonable to allow FPC  
18 to ignore its obligations to mitigate and then conclude  
19 the existence of "negative avoided costs" based on the  
20 resulting adverse operational conditions that it had  
21 brought upon itself. In fact, failing to measure avoided  
22 costs under normative conditions could encourage FPC to  
23 inappropriately operate and commit its system in order to  
24 effectively achieve contract rights in the Negotiated  
25 Contracts that it had failed to negotiate or pay for.

1 Clearly, neither PURPA, the FERC's regulations nor this  
2 Commission's rules contemplate such a result.

3 Q. WHAT WOULD BE AN EXAMPLE OF THE KIND OF ADJUSTMENTS THAT  
4 FPC WOULD BE REQUIRED TO MAKE IN ORDER TO REFLECT THE  
5 NORMATIVE CONDITIONS REQUIRED TO ACCURATELY MEASURE  
6 AVOIDED COSTS?

7 A. A simple example would be with respect to sales by FPC on  
8 the Energy Broker. Assume FPC had made no sales during  
9 a curtailment period because it failed to properly price  
10 their excess generation on the Energy Broker at a  
11 competitive rate. In this situation, the calculation of  
12 avoided costs should be adjusted to reflect the level of  
13 sales that could have been achieved had FPC taken the  
14 proper mitigation efforts as discussed above and priced  
15 the economy power at a market-clearing price. Similar  
16 adjustments would be required with respect to each of the  
17 other mitigation efforts that I discussed earlier.

18 Q. WHAT IS THE SECOND STEP IN THE PROCESS FOR DETERMINING  
19 THE EXISTENCE OF "NEGATIVE AVOIDED COSTS"?

20 A. The second step involves defining the period of time over  
21 which the avoided costs analysis will take place and the  
22 proper cost information which will be used consistent  
23 with such time frame.

24 Q. WHAT IS THE APPROPRIATE TIME FRAME FOR CONDUCTING SUCH AN  
25 AVOIDED COSTS ANALYSIS?

- 1 A. The time frame should be consistent with the context  
2 within which the utility is taking its actions. That is,  
3 the with and without avoided costs comparison should be  
4 over a period long enough to capture the full impacts of  
5 the potential perturbation of a curtailment, as well as  
6 the potential range of pertinent mitigation impacts.
- 7 Q. AS AN EMPIRICAL MATTER, WHAT WOULD BE THE APPROPRIATE  
8 TIME FRAME FOR CALCULATING FPC'S AVOIDED COSTS DURING A  
9 POTENTIAL CURTAILMENT PERIOD?
- 10 A. All the information furnished in this proceeding suggests  
11 that a time frame of not less than a week is appropriate  
12 for purposes of FPC's avoided cost calculations. This is  
13 supported by FPC's own comments regarding operational  
14 planning and unit commitment and explained further by Mr.  
15 Slater in his testimony.
- 16 Q. WHY DO YOU STATE THAT THE COSTS CONSIDERED MUST ALSO BE  
17 CONSISTENT WITH THE EVALUATION TIME FRAME?
- 18 A. This is a logical requirement of any costing analysis.  
19 That is, the costs considered should only be those  
20 incurred that are directly related to the events under  
21 analysis. For example, it makes no sense to consider  
22 long term life cycle costs in the context of an event  
23 that only lasts hours or weeks.
- 24 Q. HAS FPC USED THE APPROPRIATE TIME FRAME AND ASSOCIATED  
25 COSTS IN ITS AVOIDED COSTS CALCULATIONS?



1 A. No. The studies sponsored by Mr. Southwick all use much  
2 too short a time frame, and only consider the period  
3 associated with the cycle response time of a curtailed  
4 utility unit, rather than the longer one week period of  
5 time which the utility considers in making its own unit  
6 commitment and sales decisions.

7 In addition, FPC has included costs in its  
8 calculation of avoided costs which span much too long a  
9 period of time. The costs identified by Mr. Lefton  
10 represent long term life cycle expenses that may be  
11 associated with the continued cycling of a plant over the  
12 remainder of its useful life. They do not reflect  
13 marginal operational costs consistent with the shorter  
14 time frame used by either Mr. Southwick or Mr. Slater.  
15 If Mr. Lefton's costs were to be sustained as reliable,  
16 the only appropriate avoided cost analysis that would  
17 include such costs would be one that considered the  
18 avoided cost savings from the Cogens over the full  
19 lifetime of their contracts, a period consistent with the  
20 time frame of the measurement of Mr. Lefton's costs.  
21 Virtually by definition, such a time frame would never  
22 result in "negative avoided costs" because the same time  
23 frame would have been considered in the determination  
24 that the contracts are cost effective compared to the  
25 utility's expansion plan.

1 Q. HAS OCL REVISED THE AVOIDED COST CALCULATIONS CONDUCTED  
2 BY FPC TO PROPERLY REFLECT THIS TWO STEP PROCESS?

3 A. Yes. Mr. Slater has critiqued FPC's avoided cost  
4 calculations and discussed both the necessary mitigation  
5 efforts and the correct time frame and associated costs  
6 for such analysis. Mr. Slater concludes that no  
7 "negative avoided costs" exist during the low load  
8 periods where FPC has declared curtailments if the  
9 analysis period (even absent mitigation) is extended to  
10 include a period of less than two days.

11 Q. DOES THAT CONCLUDE YOUR TESTIMONY?

12 A. Yes.

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1 Q (By Mr. McGlothlin) Dr. Shanker, have you prepared  
2 a summary of your testimony?

3 A Yes, I have.

4 Q Please proceed, sir.

5 A Yes. I was asked by my clients in this proceeding  
6 to determine whether or not FPC's curtailment plan complies  
7 with 18 C.F.R. 292.304(F), what was referred to as the  
8 curtailment provision of the federal regulations and Rule  
9 25-17.086 of the Florida regulations.

10 As a result of my analysis, I concluded that the  
11 plan does not comply and is inconsistent with both the federal  
12 standards and the Florida Statutes.

13 Before summarizing the contents of my testimony, I  
14 think it would serve us to sort of focus on three key  
15 observations that I came to. I think, first, the starting  
16 point in looking at FPC's position on curtailment should be an  
17 understanding of FPC's underlying motives.

18 FPC is seeking to gain through the application of  
19 what they themselves admit is an extremely narrow exception,  
20 effective dispatch rights to facilities that they did not  
21 originally negotiate for nor compensate for these rights.

22 Second, the Commission should be very sensitive to  
23 the history of the curtailment provision in the federal  
24 regulations. And its context in the overall purpose scheme  
25 was intended to respond -- this provision, 292.304(f), was

1 intended to respond to the very restrictive concerns voiced by  
2 a single party and was not to impair the general incentives of  
3 the qualifying facilities or other contractual commitments.

4 Third, the Commission should recognize that all  
5 parties, including FPC, are in agreement with the need to  
6 mitigate. We even all agree with the types of mitigation  
7 efforts that should be undertaken. The only disagreement  
8 among the parties with respect to mitigation is the degree and  
9 the implementation of which mitigation should be pursued.

10 The starting point in my testimony was to come to an  
11 understanding of what the applicable standard should be with  
12 respect to the implementation of curtailment. Section  
13 292.304(f) of the federal statutes should be read -- should  
14 not be read and cannot be read in an vacuum. It must be read  
15 in the broader context of PURPA. It is just one piece of the  
16 regulatory puzzle that was put together under the federal  
17 statute and must be seen that way.

18 PURPA was enacted to prefer and promote QFs through  
19 the establishments of a mandatory market for QF power and an  
20 explicit obligation to purchase from QFs. FERC was careful to  
21 carve out only two very limited exceptions to the obligation  
22 of utilities to purchase. The first is what we're discussing  
23 here today, is curtailment. The second which is system  
24 emergencies, which FPC's witnesses have mentioned, but for  
25 which they really made no serious efforts to claim exist.

1           The curtailment provision was created by just one  
2 voice, that of Commonwealth Edison, expressing a very limited  
3 concern, basically addressing the problem of what might happen  
4 during light-loading situations with its nuclear units.  
5 FERC's response was equally limited, and it's important to  
6 understand that limitation in coming to some understanding of  
7 the regulation.

8           FERC started by an explicit statement of looking for  
9 the existence of operational circumstances, a reference to the  
10 reduction of unit output from a baseload facility and the  
11 subsequent loss of that output and the need to replace that  
12 output with more expensive generation from alternative  
13 facilities.

14           FERC, also, was explicit in their recognizing the  
15 need to couple those operational circumstances with the  
16 existence of negative avoided costs. They have furthered that  
17 obligation and that protection and limitation by talking about  
18 the intent of protecting the qualifying facility selling  
19 as-available energy, to prevent a situation where the QFs  
20 selling into such a negative avoided cost market would wind up  
21 owing the utility money.

22           The limitations in the provisions were also explicit  
23 in terms of trying to establish notice provisions to further  
24 that protection of the qualifying facility. They further  
25 stated that the utility would pay for the energy delivered as

1 if there had been no curtailment if they had failed to net the  
2 burden of proof in the notice provisions.

3 Further, I think an aspect of the regulations that  
4 seem to have been overlooked in Mr. Fama's introduction is an  
5 explicit statement in the preamble that these regulations and  
6 this provision is not to undo any other contractual  
7 obligation.

8 The citation, I think, is in front of you on one of  
9 these boards where the preamble explicitly goes to that fact  
10 in recognition that compensation can change from time to time  
11 and the value of power can change from time to time and that  
12 this provision was not to be an excuse to undo or circumvent  
13 other contractual obligations.

14 And then, finally, the regulations are reasonably  
15 clear to me, and I think also in terms of excerpts from the  
16 preamble on one of these other placards, to establish a  
17 priority over other purchases from other utilities.

18 When 292.302(f) is read in this broader view, in the  
19 broader context of PURPA, it becomes clear that to be  
20 consistent with these goals, it must be interpreted narrowly,  
21 very narrowly, otherwise it could entirely -- be used to  
22 entirely frustrate the utility obligation to purchase QF  
23 power. And that's exactly why we have these narrow  
24 limitations.

25 As a result, my conclusion is that to be consistent

1 with this narrow interpretation, you need to look for the  
2 application, or the rule should only apply during  
3 extraordinary operational circumstances for which the utility  
4 couldn't plan or otherwise respond, which give rise to the  
5 negative avoided costs and for which the utility has already  
6 taken available mitigation measures to avoid.

7           This interpretation is entirely consistent with the  
8 language of Section 292.304(f) and the goals of PURPA. I  
9 think upon careful consideration you will see that FPC has not  
10 accomplished nor proceeded with any of these three elements.  
11 Alternatively, if we take FPC's interpretation, which is the  
12 self-evident, the need to cycle a unit results in a  
13 curtailment situation, this would allow the utility to  
14 effectively create its own operational circumstances, it bears  
15 no burden of proof and, thereby, avoid its qualifying facility  
16 purchase obligation. Such an interpretation is directly in  
17 conflict with the broader intent of PURPA, and its goals and  
18 should be rejected.

19           With respect to the specific elements, I think it's  
20 clear that there are no operational circumstances here. What  
21 FPC is attempting to accomplish is through an overly broad  
22 reading here, is to establish contractual rights, which it  
23 could have bargained and paid for but it didn't when it  
24 entered into these contracts originally.

25           I would urge the Commission to look at the

1 attachments 8 through 10 of my testimony that goes into  
2 discussion in terms of FPC's own documents what their intent  
3 is here in this proceeding. And I think it paints an entirely  
4 different picture from what you've been led to believe so far  
5 in these proceedings.

6 FPC was explicitly aware of the limited application  
7 of curtailment. It says so in its own words. FPC fully  
8 examined the need for dispatch in the original contracts and  
9 the benefits and the likely increased cost associated with  
10 getting the rates to regulate the output of facilities.

11 FPC rejected paying for such rates in its original  
12 negotiations. FPC subsequently changed its mind and is  
13 explicitly attempting to gain these rights through the  
14 overbroad application of curtailment.

15 In the area of mitigation, I think, again, as I've  
16 said, we all agree there should be efforts to mitigate. The  
17 disagreement comes with degree to which mitigation efforts  
18 should be applied.

19 I recommended the mitigation efforts take place in  
20 four areas. The first one is to interrupt utility purchases.  
21 I believe this is explicitly consistent with the regulations.  
22 I think it's important for the Commission to understand that  
23 in times when FPC, even though incorrectly, is suggesting the  
24 incremental costs are about 15 mils, they proceed with  
25 purchases from the Southern companies that are over 20 mils.



1           Second, it's important that FPC properly commit its  
2 system. In several instances FPC has considered and continued  
3 to hold the unit out on maintenance or not restart a unit.  
4 This needs not to be the exception, but the rule. The Company  
5 needs to understand its obligations and respond to them.

6           Third, and this is possibly the most important  
7 element, is the Company needs to properly understand what its  
8 incremental costs are and to use this correct pricing  
9 information to properly price and truly aggressively pursue  
10 off-system sales, both on and off the energy broker.

11           FPC persists in their view that regardless of the  
12 level of its load, regardless of whether it has excess power,  
13 the incremental cost remains unchanged. And this is just  
14 absurd and totally incorrect and inconsistent with its own  
15 analyses. When there is surplus must-run power on the system,  
16 the marginal cost is zero. That's the key to resolving this  
17 entire problem. And unless the Commission comes to a full  
18 understanding of why this is correct, I think we'll be at an  
19 impasse to finding one of the easiest solutions to this  
20 problem.

21           And then, finally, to the extent possible -- and I  
22 was only aware actually in rebuttal that FPC itself had looked  
23 at this -- I believe FPC should consider whether it can modify  
24 its retail pricing to encourage greater consumption. If and  
25 only if, after taking such available mitigation efforts

1 operational circumstances exist, negative avoided costs exist,  
2 then FPC should be able to proceed with curtailment.

3 As a final element in my testimony, I discussed  
4 errors I believe exist in the computation of negative avoided  
5 costs. I identified three general errors that I believe FPC  
6 was making in its calculations. The first is they're  
7 analyzing the wrong case.

8 It is not appropriate for a Company to refuse to  
9 mitigate or fail to mitigate; and then having backed itself  
10 into a corner where indeed they have a problem with  
11 curtailment and operational circumstances and incur negative  
12 avoided costs, to then claim that that problem exists and to  
13 shift the entire liability for that problem to another party.  
14 Therefore, it's proper that operational circumstances be  
15 established in the context of looking at the best case. That  
16 is what FPC should have done to mitigate.

17 Second, they use the wrong time frame. You've heard  
18 a lot of testimony about this, and I'll be happy to answer  
19 more questions. The appropriate time frame is one that has to  
20 be consistent with the type of event being examined. I think  
21 it's been fairly clear so far that the impacts of the  
22 curtailment extend well beyond the curtailment period, and it  
23 is appropriate to assess the cost and benefits of a  
24 curtailment over the properly impacted period.

25 And, finally, FPC grossly skews its calculation by

1 using the inappropriate unit impact costs that were sponsored  
2 by Mr. Lefton. I have no testimony as to whether or not these  
3 costs are appropriate or not that was dealt with by  
4 Mr. Slater. But I think what has been unambiguous so far and  
5 has been shown by the testimony you've heard, is that these  
6 costs are incurred over a longer period of time, possibly  
7 years. If you wish to include costs that are measured in  
8 years, you better include benefits that are measured in years.  
9 And that type of calculation has not taken place.

10 Q Does that finish your summary, sir?

11 A Yes, it does.

12 MR. MCGLOTHLIN: Dr. Shanker is available for cross  
13 examination.

14 CHAIRMAN CLARK: I think we go through the  
15 intervenors first and then come to the Company because of the  
16 potential of it being friendly cross and that we do the  
17 Company last.

18 MR. MCGLOTHLIN: Okay with me.

19 CHAIRMAN CLARK: Okay.

20 Mr. Presnell? (Laughter)

21 MR. PRESNELL: (Shaking head.)

22 CHAIRMAN CLARK: I guess that would be friendly  
23 cross then. Mr. Watson? Ms. Rule? Mr. Wright?

24 MR. WRIGHT: I just have a couple of brief lines,  
25 Madam Chairman. Thank you.

## CROSS EXAMINATION

1  
2 BY MR. WRIGHT:

3 Q Dr. Shanker, is there any -- a predicate question.  
4 If I were to use the term "economic curtailment" or  
5 "curtailment for economic purposes," would that phrase have  
6 meaning for you?

7 A In the context of a dispatcher turning off the unit  
8 because there were cheaper alternative supplies, yes.

9 Q So we could use the term "economic curtailment" to  
10 refer to turning off or refusing to take power from QFs  
11 because there were allegedly cheaper options?

12 A If we wish, sure.

13 Q Okay. Has any other jurisdiction in the United  
14 States permitted any utility to just -- to curtail QF  
15 purchases for economic reasons?

16 A The only instance where I'm aware that this has come  
17 up and, actually, is most recently with the FERC -- the answer  
18 to your question is no. And the only instance that I'm aware  
19 of is at FERC with the recent NYSEG proceeding.

20 New York State Electric & Gas requested the ability  
21 actually to break or adjust contracts based on the fact they  
22 were no longer economic. The New York Commission Staff  
23 entered some testimony or a position saying that they should  
24 be allowed to curtail under these provisions because it was  
25 uneconomic. And the FERC Commission very explicitly rejected

1 any notions like that that would tend to abrogate contracts or  
2 undo or override contractual obligations that were already  
3 entered into, I think, as you see on one of the boards in  
4 front here. It was dismissed out of hand.

5 Q Thank you. You were present this morning during my  
6 cross examination of Mr. Southwick, were you not?

7 A Yes, I was.

8 Q You may recall that I asked Mr. Southwick some  
9 questions about the possibility of Florida Power Corporation  
10 seeking regulatory authority to modify its pricing policies  
11 for off-system sales. Do you recall that discussion?

12 A Yes, I do.

13 Q Is there any regulatory impediment that you know of  
14 to a utility seeking to modify its tariffs to incorporate  
15 other incremental costs and benefits in setting its off-system  
16 sales prices?

17 A I don't believe so. But I also, quite frankly,  
18 believe FPC is totally wrong with its interpretation of its  
19 existing FERC tariffs for wholesale sales. They talk about  
20 incremental costs. No one's suggesting anything other than  
21 pricing consistent with incremental costs.

22 There certainly are other alternatives that would  
23 clear the market for this excess power, but we don't have that  
24 problem here. And I think this is just really a fundamental  
25 misunderstanding of FPC with respect to what it's agreed to

1 do.

2           You can read the broker tariffs, which are two-party  
3 FERC tariffs. You can read the general broker rules. You can  
4 read the as-available rule. They all talk about incremental  
5 costs.

6           What we need to determine here is come to an  
7 understanding about what are incremental costs when you are in  
8 a must-run situation and you have excess. I mean, FPC's own  
9 witnesses, which I cite in my testimony, agree the marginal  
10 costs are zero then. Now, is this a question of properly  
11 implementing that pricing.

12           CHAIRMAN CLARK: Mr. Shanker, let me ask you  
13 something. Has there been any other filing with FERC or any  
14 tariffs where your -- with the suggestion that the incremental  
15 cost is zero or close to zero has been accepted and that's  
16 been the basis on which the power has been bought and sold?

17           WITNESS SHANKER: Sure. This happens routinely,  
18 Chairman. The example I think I cited was the New York Power  
19 pool. The pooling agreement has a share-the-savings tariff  
20 similar to the broker. It talks about incremental power,  
21 incremental costs, decremental costs or value of power; and  
22 the clearing price will be halfway between the party's  
23 incremental and decremental.

24           And the pool says when you are in the state of  
25 excess, when you have dump energy, your incremental costs for

1 the purposes of calculating a sale will be deemed to be zero.  
2 This is a reasonably routine practice, and it makes perfect  
3 sense.

4 CHAIRMAN CLARK: You have cited New York. Anywhere  
5 else?

6 WITNESS SHANKER: That I'm aware of, dump power  
7 between utilities is routinely priced that way. It's because  
8 the increment is zero. I mean, we can go -- I suppose we can  
9 find other examples where the transactions take place at that  
10 price; but if you read the tariffs and you read FPC's tariffs,  
11 they all read incremental. They say incremental costs. And  
12 it's just an understanding that in these circumstances where  
13 there's a surplus, the incremental cost is zero.

14 CHAIRMAN CLARK: But it seems to me that we  
15 constantly have a debate as to what is incremental cost and  
16 that's where the rub is. And what I want to know is are there  
17 other broker systems, other than New York, where it has, in  
18 fact, been set at zero?

19 WITNESS SHANKER: The New York pool is zero. The  
20 PJM, it could be zero. What happens is that when the  
21 system --

22 CHAIRMAN CLARK: What is PJ --

23 WITNESS SHANKER: I'm sorry, Pennsylvania, New  
24 Jersey and Maryland.

25 CHAIRMAN CLARK: Okay.

1           WITNESS SHANKER: In that pool, there's a system --  
2 it's essentially dispatchable so it's fundamentally a little  
3 different here than a two-party transaction. In that pool, as  
4 the system lambda, the marginal running rate of the pool drops  
5 below the level where you would normally turn off one of the  
6 member's units, but that member's units cannot be turned off  
7 because they're must-run. The price that that company is  
8 deemed to offer its excess into the pool keeps going down  
9 until at a stage where the pool itself was surplus, the  
10 clearing price among the members would then be zero.

11           So in that sense, I guess the PJM pricing, if it got  
12 low enough, would all be zero. But for that company, its  
13 price regardless of what it was saying its marginal cost was,  
14 its price keeps falling with the rest of the pool even though  
15 its units stay at the same level.

16           CHAIRMAN CLARK: Okay.

17           Q     (By Mr. Wright) Dr. Shanker, just a couple more  
18 quick questions.

19           Would you agree that it would be prudent for a  
20 utility to explore either altering its internal calculations  
21 of incremental costs for off-system pricing purposes or to  
22 seek to change its tariffs if necessary?

23           A     Well, if there is a perceived problem, which I don't  
24 agree exists, but if there was one -- and this can all go away  
25 simply by adjusting the pricing -- FPC honors its agreement



1 with Southern and pays 20 when they themselves think the price  
2 is 15. FPC buys coal at above market from its affiliate under  
3 its long-term contracts when the market is lower. These are  
4 all examples of entering into long-term obligations and  
5 agreements where occasionally there's a mismatch between  
6 market and contract.

7           And that's all that's going on here. To the extent  
8 that what's going on, it's not unusual; there's excess, the  
9 marginal price is zero. And if you think there's a tariff  
10 need here to fix the problem, then that's what you ought to  
11 do. I mean, I believe it could just be implemented.

12           Q     Okay. So you would agree that it would be  
13 reasonable and prudent either to implement the changes you  
14 just discussed or to explore -- or to attempt to modify the  
15 tariffs to permit you to do so?

16           A     Absolutely.

17           Q     Okay. Last question. Are you aware of instances  
18 where utilities sell what you call dump energy, I think, or  
19 dump power at retail in addition to that wholesale?

20           A     Under some of the time-of-use rates, there are  
21 adjustments for retail. I don't know if I've seen anything go  
22 to a dump level for the retail. I think there's always been  
23 some sort of line loss and transmission charges, etcetera.  
24 But the energy component may go as low as zero. I'm not aware  
25 of any specifically.

1 MR. WRIGHT: Thank you.

2 CHAIRMAN CLARK: Any other intervenors?

3 Mr. Sasso?

4 CROSS EXAMINATION

5 BY MR. SASSO:

6 Q Let's start with some basics, Dr. Shanker. As I  
7 understand it, the premise of your opinions in this matter is  
8 that PURPA imposes an obligation on the part of the utilities  
9 to purchase QF power?

10 A The general obligation is that -- it's stated in the  
11 regulations -- that the utility shall purchase.

12 Q But you concede that that is the starting point for  
13 the analysis in the matter now pending before this Commission?

14 A That is the starting point. That's correct.

15 Q That is the starting point. But proceeding beyond  
16 that you would also concede that PURPA recognizes certain  
17 constraints on that obligation to purchase; is that correct?

18 A That's correct.

19 Q And one constraint is the principle that we've heard  
20 talked about in this proceeding called ratepayer neutrality or  
21 ratepayer indifference, I think you've called it; is that  
22 correct?

23 A That's correct. Over different circumstances and  
24 over differing periods of time, the intent of the contract is  
25 that in the context of facts as known at the time the

1 obligation was entered into, on a long-term basis, ratepayers  
2 should be expected at that time to be held indifferent.

3 Q The basic idea is that ratepayers aren't supposed to  
4 pay any more for power because QFs are in the picture than  
5 they would pay if QFs were not in the picture; is that right?

6 A Over the term of the contract.

7 Q Now, as grounds for your opinions, you rely in part  
8 on the conference report for PURPA; is that correct?

9 A That's part of it.

10 Q That was part of the legislative background  
11 materials; is that right?

12 A That is part of it. There's much more.

13 Q And, in fact, you have supplied us with that  
14 conference report as one of the exhibits to your prefiled  
15 testimony; is that right?

16 A That's correct.

17 Q And that's RJS-2?

18 A I believe so. I'll have to look.

19 Q Okay. And as I believe you put it in your prefiled  
20 testimony, this report -- and I'm quoting you now -- discusses  
21 PURPA and the objectives which Congress intended it to  
22 achieve; is that correct?

23 A As well as is implemented by the regulations,  
24 certainly. That's it.

25 Q And that conference report specifically discusses

1 Section 210 of PURPA which is the enabling authority for  
2 FERC's rules; is that right?

3 A That's correct.

4 Q Now, would you agree that in speaking of this  
5 section, the conferees in that report stated, and I'm quoting,  
6 "The provisions of this section are not intended to require  
7 the ratepayers of the utility to subsidize cogenerators or  
8 small power producers."

9 MR. MCGLOTHLIN: Can we have a page number?

10 Q (By Mr. Sasso) Is that correct?

11 A Yeah, if you'll give me a --

12 Q Page 4 or 5.

13 A Page 4 or 5. Can you sort of point me a little  
14 closer?

15 Q Well, I'm going to ask you to accept that I've  
16 accurately quoted the conference report.

17 A Well, I would like to see the passage specifically.

18 Q Sure. Page 4 or 5 of RJS-2. And I would call your  
19 attention to the second to the last paragraph, the last  
20 sentence.

21 A This is a section that talks about power sales, also  
22 to the qualifying facility.

23 Q Last sentence of the --

24 A Right.

25 Q -- of the second to the last paragraph states, does

1 it not, "The provisions of this section are not intended to  
2 require the ratepayers of the utility to subsidize  
3 cogenerators or small power producers." Did I read that  
4 accurately?

5 A I think that's correct, yes.

6 Q Thank you. Now, would you agree with me that this  
7 principle is the premise of FERC's curtailment rule? That's  
8 the reason for its being?

9 A No, I don't. I don't agree with that, no.

10 Q Well, the point of the curtailment rule, according  
11 to your own testimony, is to avoid a situation where a utility  
12 would incur negative avoided costs; is that right?

13 A I think the intent of the curtailment rule was to  
14 prevent a situation when a utility experiencing those costs  
15 might lead to the incongruous situation where a qualifying  
16 facility selling power would have to pay the utility.

17 Q And, of course, the whole reason the --

18 A I'm sorry.

19 Q Go ahead.

20 A And I think further, as one of these placards show,  
21 I think it also states that it's clear it's not the intent of  
22 this provision to override other contractual obligations. And  
23 they specifically talk about the situation and circumstances  
24 where compensation is set with respect to the variation and  
25 value of the power of a period of time.

1           If the utility could anticipate sometimes when the  
2 payment level might have been low and other times when it's  
3 high and curtail a qualifying facility so that when it was low  
4 or even negative and give it zero but then the rest of the  
5 time give it the average cost, you would wind up getting the  
6 average during the high periods and zero during the low  
7 periods.

8           Q     All right. Now, you mentioned --

9           MR. MCGLOTHLIN: -- let him answer.

10          A     And that's just what that provision is meant to go  
11 to. So it's much more than just that one single sentence in  
12 isolation. It's much, much more.

13          Q     (By Mr. Sasso) Now, you mentioned that FERC was  
14 concerned about a situation where the QFs may have to pay the  
15 utility for the utilities accepting the deliveries of power;  
16 is that right?

17          A     That's correct.

18          Q     There was a concern about that; is that correct?

19          A     That's correct, to protect the interest of the  
20 qualifying facility.

21          Q     Now, of course, you'd agree with me that the only  
22 basis for asking the QFs to pay a utility to accept deliveries  
23 of the power would be to keep ratepayers whole; is that right?

24          A     In circumstances other than where contracts might  
25 provide for other payments, that's correct.

1 Q All right. Now, you also rely in your prefiled  
2 testimony on the notice of proposed rulemaking for PERC's  
3 Rules; is that correct?

4 A That's correct.

5 Q Which you filed in this matter as RJS-4; is that  
6 right?

7 A I'll look, but I believe it was 4. (Pause) Yes.

8 Q And that notice discussed an example of when  
9 curtailment would be permitted; is that right?

10 A I believe so.

11 Q And that example concerned a low-load situation; is  
12 that right?

13 A Are we in the preamble to that or the actual  
14 regulation? I'm sorry.

15 Q In the preamble to that.

16 A Okay. Now, you have to give me the specific  
17 location for that. The numbers are different for this.

18 Q I believe it's at Page 8 of 16 in RJS-4, the middle  
19 column.

20 A Right.

21 Q Are you with me?

22 MR. MCGLOTHLIN: Are we at 8 of 16 of RJS-4?

23 MR. SASSO: Exactly.

24 A Do you want to point to the specific portion of the  
25 column?

1 Q (By Mr. Sasso) The part that begins Subparagraph 4.

2 A Correct. Okay. Yes, I am with you.

3 Q You got it?

4 And in that portion of this notice of proposed  
5 rulemaking, FERC talked about an example where curtailment  
6 would be appropriate; is that right?

7 I call your attention to the passage that begins --

8 A That's correct.

9 Q -- for example --

10 A Yes.

11 Q -- exactly, during low-load periods.

12 Are you with me?

13 A Correct.

14 Q And it goes on. So the example concerns low-load  
15 periods; is that right?

16 A "During which when the utility were operating a  
17 nuclear plant as its most expensive unit and were forced to  
18 cutback the output from such a unit in order to accommodate a  
19 purchase from a qualifying utility, the utility would  
20 experience increased costs and increase in the output from the  
21 nuclear facility when the system demand increases." I believe  
22 that's what I cited to in some context in my testimony.

23 Q In your summary, is that right?

24 A That's correct.

25 Q Okay. And we're in agreement if we're to take



1 FERC's words at face value that this was an example; is that  
2 right?

3 A Yeah. In fact, actually, if you go on to the next  
4 sentence, it says: "Thus because the avoided cost or marginal  
5 cost is zero" -- that's my parenthetical, marginal -- "or  
6 actually involves the expense to the utility requiring the  
7 purchased energy from a qualifying facility and during such a  
8 period would not be just and reasonable to consumers because  
9 it would result in increased costs" --

10 Q "Because it would result in increased costs to the  
11 system's ratepayers." That's what the rest of the sentence  
12 says.

13 A Right. And absent the protections we're talking  
14 about for as-available energy that aren't involved in a  
15 contract with long-term tradeoffs, this is a very reasonable  
16 position.

17 Q All right. Now, we can agree, can we not, that the  
18 curtailment rule is a constraint on the PURPA purchase  
19 obligation; is that right?

20 A That's right. I think I stated it was an explicit  
21 limitation.

22 Q Okay. And we also talked about another constraint,  
23 I believe you mentioned it in your summary, about system  
24 emergencies; is that right?

25 A That's correct.

1 Q That's 292.307; is that right?

2 A In the final regulations, that's correct.

3 Q And this Commission's Rule 25-17.086 implements the  
4 curtailment rule in 304 and the system emergency rule in 307?

5 A The way I read it, it might be interpreted that way,  
6 that's correct. I don't know that the Commission itself has  
7 ruled on that.

8 Q So, basically, what we are talking about in this  
9 proceeding is the scope and the meaning of certain exceptions  
10 or constraints on the purchase obligation under PURPA. Is  
11 that fair?

12 A I think we're explicitly talking about Section  
13 304(f) with respect to the curtailments, with respect to  
14 operational circumstances and negative avoided costs.

15 Q Okay. And you believe that the exceptions set forth  
16 in 304(f) -- can we use that as a shorthand, 304(f)?

17 A That will be fine.

18 Q FERC's curtailment rule.

19 As I understand it, you believe that that exception  
20 is a very narrow exception of the purchase obligation; is that  
21 right?

22 A Extremely narrow.

23 Q Okay. And how many years have you held yourself out  
24 as an expert on curtailments?

25 A Probably since I've been doing this work with

1 respect to PURPA. Maybe 1980.

2 Q 1980?

3 A That's when I first drafted some rules --

4 Q So for about 15 years?

5 A -- for another state.

6 MR. MCGLOTHLIN: Excuse me. He's in the middle of  
7 an answer.

8 A It's when I first drafted some rules for another  
9 state regulatory body, embodied some of the curtailment  
10 provisions.

11 Q (By Mr. Sasso) And you have never actually seen a  
12 curtailment of the firm purchase of power, purchase of firm QF  
13 power that you believe is legitimate under the PURPA; is that  
14 correct?

15 A In New York, where I'm aware curtailments have been  
16 made, I don't believe that's the case because they are fixed  
17 price facilities. Here, so far, it seems that the empirical  
18 evidence -- and I'd let Mr. Slater talk about it -- is that  
19 even within the limited time scope looked at by FPC, it  
20 appears to be no negative avoided costs, so I guess the answer  
21 is no.

22 Q The answer is: You have never seen a curtailment  
23 that you believe to be legitimate, a curtailment of firm  
24 power?

25 A What I'm saying is that I haven't seen a burden of

1 proof met by a utility, including FPC, and I think we'll get  
2 into that.

3 Q And, as a matter of fact, you remember in your  
4 deposition Mr. Tempest asked you, because you even identified  
5 any circumstances where it would be legitimate to curtail a  
6 firm purchase of power, and you couldn't think of anything in  
7 your deposition; is that right?

8 A I think I said that if you asked me to, I would be  
9 willing to go out and prepare an example, and he didn't.

10 Q Now, of course, the professional engagements in  
11 which you've given testimony on curtailment have all been for  
12 cogenerators or lenders to cogenerators; is that right?

13 A Where I given testimony, that's correct Where I  
14 worked on the regulations, it was for the Commission in one  
15 incidence.

16 Q And well over 90% of your engagements in this area  
17 have been for cogenerators or lenders to cogenerators?

18 A That's correct.

19 Q And, in fact, you've never actually seen a system  
20 emergency that you believe would justify a curtailment; is  
21 that right?

22 A I'm not so sure about that.

23 Q Okay. Can you name one?

24 A Yeah. There's been a number of instances where  
25 facilities I've been associated with have lost transmission

1 lines or the utility has been unable to take power without  
2 potentially overloading. It's a sudden and incidental kind of  
3 thing where the continued operations -- actually, just  
4 yesterday I was speaking with somebody about a plant in New  
5 Jersey that had that kind of an instance.

6 Q All right. Now, just so I can understand the  
7 limitations on your opinions and where you are coming from, as  
8 I understand it, you would distinguish between curtailments of  
9 as-available purchases and curtailments of firm purchases; is  
10 that right?

11 A I think the general conclusion with respect to the  
12 burden of proof would be the same, but I think there becomes  
13 further limitations when you enter into a long-term firm  
14 agreement that would not apply to an as-available purchase.

15 It's just what we are going through here with these  
16 contractual agreements.

17 Q We'll come back --

18 A If the utility enters into obligations to pay  
19 average or firm rates for something, then the facility has to  
20 get the benefit of the bargain by being able to operate during  
21 periods that was anticipated where the value of power was  
22 less. And FPC had the opportunity to look at this.

23 And in structuring these arrangements, it's clear to  
24 me that this type of firm long-term purchase agreement is  
25 different materially than as-available. But I think in the

1 abstract you've got to go through the same process even for  
2 as-available.

3 Q But it's your opinion that a utility could curtail  
4 an as-available QF much more readily than it could a firm QF;  
5 is that correct?

6 A I think the exceptions noted to the rules are such  
7 that that would be the result. That's correct.

8 Q And, in fact, as we've discussed, you have  
9 difficulty even conceiving of an appropriate curtailment of  
10 firm purchase power; is that right?

11 A I think the statement I made was with respect to  
12 agreements where there was a firm fixed price. If you'll look  
13 through the transcript, that might be where you're relating  
14 to, which is not the circumstances here, but there is a firm  
15 fixed price, a single price. And I think the example that was  
16 being discussed was 6-cent flat payments made in New York. It  
17 does become difficult. Parties there are offering 6-cent  
18 power possibly for 30 years at a flat rate, and there's front  
19 end loading. There's levelizing occurring over 20 or 30  
20 years.

21 And while the utility may not want that 6-cent power  
22 for economic reasons now, you can be sure they'll be clamoring  
23 for it 10 years from now when there's still an obligation to  
24 sell at the same price. And it's that economic tradeoff over  
25 time between periods when avoided costs are high and low,

1 between periods when the power is more valuable and less  
2 valuable, that has to be interpreted and understood in the  
3 contractual obligations before you can supersede that. That's  
4 what I'm trying to get at. You can't supersede that under the  
5 excuse of economic curtailment here. And that's what's going  
6 on.

7 All the circumstances we're discussing can be solved  
8 for money, and in some cases at a cost that's indifferent to  
9 ratepayers. These are not operational circumstances.

10 Q Now, let's talk a little bit about the difference  
11 between as-available and firm. Now, would you agree that the  
12 basic difference between the two is that when a utility is  
13 buying as-available power from a QF, it's not buying capacity;  
14 is that right?

15 A No. I think the basic difference with respect to  
16 curtailment here is the predictability in the knowledge of  
17 when that power will be delivered.

18 I think if you go back to Commonwealth Edison's  
19 complaint in concern with its nuclear units, what was going on  
20 was someone saying: "I'm running on minimums. I just have my  
21 nuclear units on. And someone just turns on a cogenerator in  
22 the middle of the night, and they force me to trip an  
23 800-megawatt baseload plant."

24 "I had no knowledge it was coming. It was totally  
25 unanticipated and unpredicted, and I'm stuck knocking

1 something off the system because this guy in a totally  
2 unpredictable fashion turned on his unit."

3 That's different from five years ago entering into  
4 long-term contracts for firm must-take energy, significant  
5 difference.

6 Q Let's explore that. Now, as I understand it, when a  
7 utility buys firm power, it's buying capacity. It's being  
8 offered on a reliable basis with assurances that the energy is  
9 going to be there when the utility needs it; is that right?

10 A That is one of the characteristics of firm power,  
11 that's correct.

12 Q And, fundamentally, as I understand what you're  
13 saying, an as-available QF does not provide that type of  
14 assurance, that type of capacity; is that right?

15 A That's a difference, but it's not the difference I'm  
16 referring to in the context of curtailment. It's the  
17 predictability of the output.

18 Q I understand. But predictability is really an issue  
19 of whether the QF is going to be there when the utility needs  
20 it, right?

21 A And that the utility can rely on its being there.

22 Q And how constant the production and provision of  
23 energy is; is that right?

24 A That's an aspect of it, yes.

25 Q Another term for that might be capacity; is that



1 right?

2 A If you wish to say that, yeah. The reason I'm  
3 hesitating here is because the attribute of capacity; any  
4 power output has capacity. I think if you want to say  
5 dependable capacity or capacity the utility can rely on, maybe  
6 that's the semantic difference we're having, then I would  
7 agree with you.

8 Q Okay.

9 A Capacity, per se, is not the difference.

10 Q Now, firm energy is typically provided under a  
11 contract; is that right?

12 A That's correct.

13 Q I mean, that is the essence of providing reasonable  
14 assurances that the energy will be there when the utility  
15 needs it; is that right?

16 A That's correct.

17 Q In fact, you are aware that this Commission's rules  
18 define firm capacity and energy as capacity and energy  
19 produced and sold by a qualifying facility and purchased by a  
20 utility pursuant to a negotiated contract or standard offer  
21 contract?

22 A It sounds reasonable. I don't have the "reg" in  
23 front of me.

24 Q Okay. Now, the FERC curtailment rule in 304(f) is  
25 entitled, "Periods During Which Purchases Not Required"; is

1 that right?

2 A I have to look at the header; but, yes.

3 Q Okay. And, of course, the PURPA obligation to  
4 purchase power extend both to as-available power and firm  
5 power; is that right?

6 A I believe that's correct, yes.

7 Q Okay. And the FERC curtailment rule is not exempt,  
8 by its terms, purchases made under firm contracts, does it, by  
9 its terms?

10 A Other than the explicit statement that's sitting in  
11 front of the Commissioners here that says, "Nothing in this  
12 provision shall override any other contractual obligations."  
13 If you choose to ignore that, I guess that's correct.

14 Q Now, you're not suggesting to this Commission that  
15 that's contained in the regulations, are you?

16 A It's part of the preamble to the regulation.

17 Q But it is not in Rule 304(f)(1); is that right?

18 A Well, we can go read the regulation; and I think  
19 you're correct.

20 Q In fact, the regulation speaks generally about  
21 purchases from qualifying facilities, the curtailment of  
22 purchases from qualifying facilities; is that right?

23 A Let's look at the header so I don't have to rely on  
24 my memory all the time. "Periods During Which Purchases Are  
25 Not Required" and that's the header under (f).

1 Q Right. And it goes on to say that "Any electric  
2 utility which gives notice pursuant to Paragraph (f)(2) of  
3 this section will not be required to purchase electric energy  
4 capacity during any period during which, due to operational  
5 circumstances, purchases from qualifying facilities," is that  
6 correct?

7 A That's correct.

8 Q And it goes on.

9 So it talks about purchases from qualifying  
10 facilities, not merely purchases from qualifying facilities  
11 that provide as-available power; is that right?

12 A That's correct.

13 Q And, in fact, as we've just indicated, the rule says  
14 that a utility will not be obligated to purchase energy or  
15 capacity, doesn't it?

16 A Right. And that's the distinction I was trying to  
17 hold clear when we had our previous discussion, is that it's  
18 sort of like mass and weight? I mean, you can't get energy  
19 without capacity, and so it's sort of a tautology there.

20 Q Well, are you aware that this Commission's rules  
21 forbid utilities to make capacity payments to as-available  
22 QFs?

23 A This doesn't say anything about capacity payments.  
24 This is referring or this might be referring, that's the way  
25 I've always read it, as talking about the physical properties

1 of what's being purchased, which is energy that comes with  
2 capacity associated.

3           But I think the starting point, where I did agree  
4 with you, is the regulation on its face. But for the  
5 explicit -- and maybe I should read this aloud. I'm also on  
6 the preamble on Page 1227. It's Page 14 of 24 of my Exhibit  
7 6. It's "Many of the comments received reflected a suspicion  
8 that electric utilities would abuse this paragraph to  
9 circumvent their obligation to purchase from qualifying  
10 facilities. In order to minimize that possibility, the  
11 Commission has revised this paragraph to provide that any  
12 electric utility which seeks to cease purchasing from  
13 qualifying facilities must notify," and it goes through that.  
14 It says "Any claim that such a light-loading period will occur  
15 is subject to verification. Any utility which fails to  
16 provide notice, has incorrectly identified such a period, will  
17 be required to reimburse"; a situation that may exist here.

18           Also, have been modified to clarify the exception  
19 that it has to be due to operational circumstances. And then,  
20 finally, and most importantly in the context of firm  
21 contracts, "The Commission does not intend that this paragraph  
22 override contractual or other legally enforceable obligations  
23 incurred by the electric utility to purchase from a qualifying  
24 facility."

25           Q     Now, let's talk about that.

1           A     Now, that's fairly explicit, and it goes into the  
2 economic matters that I was just discussing.

3           Q     Yeah, let's talk about the preamble now that you've  
4 called our attention to it.

5                     The preamble talks about an example, again, about  
6 when curtailment would be appropriate; is that right?

7           A     Yes.

8           Q     At the beginning?

9           A     Yes, it does.

10          Q     And that example doesn't indicate that the QF  
11 involved is an as-available QF, does it?

12          A     No, it doesn't.

13          Q     For all we know, it could be a firm QF; is that  
14 right?

15          A     Could be.

16          Q     Yeah. All right. Now, you believe the curtailment  
17 rule is narrowly limited in part because it requires proof of  
18 operational circumstances; is that right?

19          A     That's correct.

20          Q     And that is a term --

21          A     Among other things, that's correct.

22          Q     And that is a term that is used in 304(f); is that  
23 right?

24          A     That's correct.

25          Q     Okay. Now, you also believe that the rule is

1 limited because it imposes an obligation to mitigate; is that  
2 right?

3 A Yes.

4 Q And that is not a term that is used in the rules; is  
5 that right?

6 A That's correct. I believe that's a reasonable  
7 interpretation, and I assume so does FPC.

8 Q Okay. Now, with respect to operational  
9 circumstances, as I understand it from your testimony in this  
10 matter, is your opinion that this term must be intended to  
11 limit curtailment to, quote -- and I'm taking this from your  
12 prefiled testimony -- "short term and unexpected," closed  
13 quote, events; is that correct?

14 A That's correct.

15 Q And you don't believe that a utility should be  
16 permitted to curtail if it finds that it has too much  
17 generation capacity as a result of long-term planning; is that  
18 right?

19 A I believe if it planned, just like any of its other  
20 fixed obligations, like the Southern purchase, you honor that  
21 when other energy is cheaper. Your long-term coal obligations  
22 you honor when other power, other coal, may be cheaper. I  
23 don't see you running to take units out of rate base when  
24 there might be excess capacity. This is the exact same kind  
25 of arrangement.

1 Q It's your opinion, is it not, that Florida Power has  
2 just consciously committed to too much capacity.

3 A I didn't say consciously.

4 Q Inadvertently?

5 A What I said is they consciously made a commitment to  
6 this obligation, and subsequent circumstances have proven that  
7 they have an excess. And that's not operational circumstances  
8 if you can sit back over a period of -- at least I think it  
9 was agreed as early as 1993 to now, and say: "I'm going to  
10 plan for this. I see it happening. I know that I have this  
11 problem. I should do something about it."

12 You have a whole bunch of ways to respond, and the  
13 easiest way for you to respond was to turn these guys off  
14 instead of the see-what-you-can-do-to-mitigate, a full range  
15 of things to mitigate.

16 Q So you are not attacking Florida Power's long-range  
17 planning?

18 A I think I was asked the question by Mr. Tempest  
19 concerning prudence, and I think my response was that I've  
20 taken no position either way with respect to the prudence of  
21 these contracts. It wasn't something that I examined.

22 Q And you are not suggesting that this Commission made  
23 a mistake in approving those QF contracts?

24 A No. It's like anything else. If we all had perfect  
25 foresight, we probably wouldn't be wasting our time in these

1 rooms.

2           The issue occurs is that a fixed obligation was  
3 entered into, and it has some consequences. And the point  
4 that, I guess, I'm somewhat energized about is that most of  
5 us -- and, typically, it's the other side of the table, the  
6 utility, that's in front of this Commission reminding them to  
7 make sure that they are allowed to honor the commitments they  
8 made in good faith, typically with rate-base types of items,  
9 based on the best information they had when they entered into  
10 those obligations.

11           And I'm sitting here on the other side of the table  
12 trying to say the exact same thing. You entered into a fixed  
13 obligation in good faith; so did these parties. And one of  
14 the consequences is now we have to do our best to plan around  
15 those obligations. Just like that firm power from Southern.  
16 And I believe there are ways to do this that will not be very  
17 difficult at all.

18           Q     Well, let's talk about the preamble again. As we've  
19 discussed, this sets forth an example when FERC believed  
20 curtailment would be appropriate; is that right?

21           A     Yes.

22           Q     And it refers to a situation involving light loading  
23 periods, is that right, and other matters. But light loading  
24 periods?

25           A     I mean, the statement is this section was intended



1 to deal with a certain condition that can occur during light  
2 loading periods.

3 Q Okay. So light loading periods were involved in  
4 this situation; is that right?

5 A That's part of the attribute. That's correct.

6 Q Okay. And whether or not a light loading period  
7 will present a problem to a utility in terms of matching  
8 generation and load is always going to be, in part, a function  
9 of the generation capacity of that utility; isn't that right?

10 A That's correct. I mean, certainly, if you didn't  
11 have any generation, we'd be in a different situation than we  
12 are now. That's correct.

13 Q And generation capacity is always going to be a  
14 function or a product of long-range planning; isn't that  
15 right?

16 A Certainly the gross amounts, as opposed to what is  
17 committed at any point in time, would be a function of  
18 long-range planning. We are talking about the commitments at  
19 a specific time. At least, certainly, that's what I was  
20 discussing before. That distinction is not clear in terms of  
21 the operational circumstances. It's only what's on line at  
22 the time, and that's part of the issues that, I think,  
23 Mr. Slater is going to talk about.

24 Q Okay. Let's try to come to grips with what you mean  
25 by an unexpected event. I understand that you place some

1 emphasis on the notice provision in the FERC rule; is that  
2 right?

3 A That's correct.

4 Q Okay. The FERC rule requires that utilities give  
5 reasonable notice of a curtailment event to QFs to enable them  
6 to stop a delivery; is that correct?

7 A That's part of the statements in the provisions.  
8 That's correct.

9 Q And Florida Power's curtailment plan includes notice  
10 provisions; is that right?

11 A Certainly, it provides for some notice. That's  
12 correct.

13 Q So can we agree that FERC contemplated there'd be  
14 some advance notice of curtailment events?

15 A Yes.

16 Q Okay. But you would insist that the event still has  
17 to be unexpected; is that right?

18 A Well, I guess what we are getting to here -- maybe  
19 this is sort of trivial, and I'm missing something -- but you  
20 see these circumstances coming in several ways.

21 One, you see them coming years in advance or not,  
22 when you sign obligations, the minimum take provisions from  
23 Southern, these contracts. They represent gross resources on  
24 the system.

25 You then have those resources, and you're trying to

1 shuffle them to honor the commitments you made with them, like  
2 you don't turn off the Southern, as your example. You don't  
3 want to do that because you think your contract doesn't let  
4 you. You do other things, like change your commitments,  
5 shuffle the use of units and find a short-term basis.

6 I think what we're both saying here is you see the  
7 circumstance coming and the question is, can you do something  
8 reasonable? I think Mr. Southwick talked about making offers  
9 a couple days in advance of the sale, can you do something  
10 reasonable to avoid it? And you come along and all we're, I  
11 think, differing on is what's the checklist over that couple  
12 days to try and avoid the circumstance?

13 If you've followed the checklist and you come to  
14 that circumstance and there's going to be negative avoided  
15 costs due to operational circumstances, I don't think I've  
16 disagreed that you can curtail. What I'm worried about here  
17 is we seem to have major disagreements about what's on the  
18 checklist and what you ought to do.

19 Q Okay. So we're in agreement then, basically. And  
20 you were in the hearing room when Mr. Harper was testifying;  
21 is that right?

22 A Yes, I was.

23 Q And when Mr. Southwick was testifying, right?

24 A Yes.

25 Q And you heard them both say that these events kind

1 of creep up on you, and you really don't know until the very  
2 end of the week, as it were, or day or two before that you're  
3 actually going to have a problem; is that right?

4 A Well, I think the context we heard was that on a  
5 reasonable basis you had some warning. That on a weekly basis  
6 looking ahead you had some general feeling. And as with  
7 anything else that's going to be related, the weather and  
8 other things, it gets more certain as you approach.

9 Q And you're really talking about the day or two  
10 before the event when you would actually have to curtail when  
11 you're making those final efforts to avoid it; is that right?

12 A Well, I think, certainly, a lot of what we're  
13 talking about here in terms of mitigation is the ability to  
14 enter into either extended economy, certainly as in a couple  
15 day, maybe a week kind of basis, I think, like the Carter's  
16 Dam and, certainly, economy that we are talking about under  
17 Schedule C, which is the next-hour type of economy.

18 Those, certainly, are short of horizon. The  
19 commitment of units, I think, we were talking about were  
20 factors within the week.

21 Q Okay. So let's talk about this week planning  
22 horizon that you and Mr. Slater talk about.

23 As I understand it, it's your opinion that Florida  
24 Power should sit down on Monday and kind of anticipate what's  
25 going to happen over the next week; is that right?

1 A Or Sunday, whatever, yeah.

2 Q And Mr. Slater says Friday?

3 A Whatever. Yeah, usually you go from -- you're  
4 capturing the weekend effect is what the intent is.

5 Q Okay.

6 A So if you were on the weekend, you'd probably plan  
7 for the resources of the coming week.

8 Q Okay. And, of course, the FERC rules don't talk  
9 about Friday or Monday or a week or anything like that, right?

10 A Absolutely not.

11 Q Okay. Now, you're suggesting that you sit down on a  
12 Monday -- let's say Monday -- and you make certain  
13 calculations about what's going to happen in the next week; is  
14 that right?

15 A Right. Try and take a look at your minimum loads,  
16 take a look at the tradeoffs that you can make in terms of  
17 committing units.

18 Q And you calculate some costs; you do some runs, both  
19 with QFs and without QFs; is that right?

20 A Actually, that was in Mr. Slater's discussion. I  
21 don't think I went to the a priori evaluation, but I wouldn't  
22 differ from what he was saying. That's correct. I didn't  
23 testify about that.

24 Q You would do it the same way. You would try to make  
25 your best guess on Monday about what the cost situation is

1 going to be for the next week; is that right?

2 A Right. I think mechanically I would state what  
3 Mr. Slater said differently; but, mechanically, I think we're  
4 both talking about the same thing. That's correct.

5 Q But we all seem to be in agreement that you're not  
6 going to know what -- you're not going to know reliability  
7 what your load and generation situation is until you really  
8 get much closer to the event that might call for curtailment;  
9 is that right?

10 A Right. That's why there's a variety of mitigation  
11 efforts here that sort of have the flexibility of getting you  
12 into the right posture maybe in the week in terms of  
13 commitment of units, looking ahead and seeing what's going on;  
14 maybe two or three days in advance when you look at extended  
15 economy; maybe be an hour in advance when you look at  
16 Economy C, and maybe an hour in advance when you interrupt  
17 Southern, or that could possibly be longer. It depends on how  
18 you would interpret the regulation. And possibly in that same  
19 week or longer time frame, actually, on some of the retail  
20 issues I talked about.

21 Q Okay.

22 A And I guess maybe there's one other time step that I  
23 sort of left out here, and that's things that the Company  
24 itself has suggested, maintenance scheduling, planning like  
25 that, that actually might be more on a seasonal basis, and

1 that would be done, possibly on an annual plan.

2 Q Okay. Now, let's talk a little bit about this  
3 dispatch issue that you mentioned in your summary. As I  
4 understand your position on this, it's basically your  
5 contention that Florida Power's efforts to curtail now  
6 represent an improper effort to get the benefit of dispatch  
7 rights that the Company chose not to get in its contracts; is  
8 that right?

9 A That's right. I think if you look through  
10 Appendices 8, 9, and 10, you see in 9, in the middle there, a  
11 series of memos where individuals in the Company debate  
12 actively the value of dispatch, being able to control the  
13 output of the Company units.

14 Q That's what I wanted to talk about, just to be clear  
15 about what you are here for.

16 You have identified and assembled a number of  
17 documents that have been provided to the intervenors in  
18 discovery, is that right, and you've put them in your  
19 appendix?

20 A That's correct.

21 Q But you don't hold yourself out as an expert in  
22 Florida Power's motivations, do you?

23 A I guess I hold myself out as a reasoned person who  
24 can take a look at these memos and see exactly what they  
25 state. And I'd be happy to read them to the Commission and

1 let them use their judgment. I think my judgment here is very  
2 good.

3 Q Okay. But you would agree with me that if there's  
4 any fact finding to be made about Florida Power Corporation's  
5 motivations when it negotiated these contracts, that's for the  
6 Commission to do, is that right, not you?

7 A I'm here to help the Commission make decisions, just  
8 like the rest of us. And I think these statements -- let me  
9 just begin by --

10 Q I'm not asking you to read.

11 A No. You've asked me about whether I'm reasonable in  
12 making judgments about it, and I think we need to take a look  
13 at what the statements are to see whether or not I am being  
14 reasonable.

15 Q Now, that is not my question.

16 A I offered opinion about them.

17 Q That is not my question. I haven't asked you to  
18 review them, and I don't want to take up the Commission's time  
19 going through the items in your appendix.

20 A Well, that's fine.

21 There's some implication that there's some hidden  
22 subtle interpretation. And, boy, these are pretty  
23 straightforward, right on their face, as to what the Company  
24 was up to, what the Company's intent was, and how it changed  
25 over time, and how it explicitly stated it was going to use



1 this regulation to wind up negotiating for things that it  
2 hadn't previously gotten at zero cost.

3 Q Okay. Now, you would agree that dispatch rights --  
4 well, let's talk about dispatch rights for a moment.

5 Would you agree that there is no constant conception  
6 or definition of dispatch rights, that it can vary depending  
7 upon the contract or the arrangement between parties?

8 A I think dispatch rights, in general, reflect the  
9 ability of the utility to exert control over the level of  
10 operation of the facility.

11 Q Okay.

12 A The extent of that control can be subject to  
13 contractual agreement. It can go from looking like a  
14 utility's unit itself, to the extreme of, say, a schedule  
15 agreed to in advance that says you'll operate at 100% for  
16 these three months and 80% for these two months. Can be as  
17 fine or as blocky as the parties mutually agree.

18 Q It generally involves a fairly extensive right on  
19 the part of the utility to regulate the level of output of the  
20 QF; is that right?

21 A It varies all over the park.

22 Q Can they easily extend to every day of every week of  
23 every month of the year; is that right?

24 A It can, and it can be seasonal. I've seen them both  
25 ways.

1 Q It can be seasonal, in which event the dispatch  
2 rights would extend through an entire season; is that right?

3 A No. I mean, you agree to run it 90% for six months  
4 or 50% for six months and 100% the rest of the year.

5 Q Okay. And it may well involve the right to control  
6 production at all levels whether or not there's a minimum-load  
7 situation?

8 A I think I said they can be in that continuum between  
9 huge blocks and fine-tuned responses.

10 Q Okay. And whatever your perceptions about Florida  
11 Power's motivations, we can agree, can we not, that Florida  
12 Power Corporation in this matter chose not to negotiate or to  
13 obtain dispatch rights in these contracts?

14 A Originally.

15 Q Yes.

16 A That's correct.

17 Q Okay. And you would also agree with me that in  
18 these contracts between Florida Power Corporation and your  
19 clients, that the parties recognize that Florida Power was  
20 reserving its rights to curtail under this Commission's rule  
21 and under FERC's rule?

22 A I think they acknowledged the applicability of the  
23 rule when appropriate, and the legal decision of interpreting  
24 that I'll leave to you folks.

25 Q And your clients agreed to those provisions; is that

1 right?

2 A They agreed to the contract.

3 Q Okay. Now, let's turn to your opinions about  
4 mitigation. You talked quite a bit this morning about  
5 mitigation. And, as I understand it, you contend that there  
6 are at least four types of mitigation that Florida Power is  
7 required to pursue as a precondition to invoking curtailment  
8 rights under FERC's rule; is that right?

9 A That's correct.

10 Q Okay. And the first type is interrupting purchases  
11 from the Southern Company; is that correct?

12 A From other utilities. And then, and specifically  
13 here, and the only one that's applicable is the minimum-take  
14 provisions of the Southern contract at this time.

15 Q Okay. And you're aware that Florida Power has taken  
16 some steps to obtain the right to resell energy to Southern in  
17 certain circumstances?

18 A That's correct.

19 Q And you would applaud that effort, I take it?

20 A That's certainly correct.

21 Q Okay. Now, as I understand it, you would require  
22 that Florida Power interrupt its purchases from the Southern  
23 Company even if Florida Power would still be contractually  
24 obligated to pay Southern for energy; is that right?

25 A If that's the consequence of the agreement. I think

1 I also stated that I wasn't sure whether such an interruption  
2 subject to federal regulation would result in that type of  
3 implementation of the contract.

4 Part of what I was referring to was the part of the  
5 preamble that makes it fairly explicit, like in requirements  
6 contracts that, basically, FERC was saying -- I'm looking at  
7 the quote, that's why I'm hesitating here. This is what's in  
8 front of me here.

9 "The Commission observes that in general if it  
10 permitted such contractual provisions to override the  
11 obligation to purchase from qualifying facilities, these  
12 contractual devices might be used to hinder the development of  
13 cogeneration and small power production."

14 I mean, these were conscious decisions. Now, as to  
15 whether they pay or not is a legal determination that I will  
16 punt on in terms of what happens when federal regulations  
17 interact with contracts.

18 Q That's outside of scope of your testimony and your  
19 expertise; is that right?

20 A Right. It may be a consequence that that happens,  
21 but -- and I'm not suggesting that it either does or doesn't.

22 Q Okay. And assuming that Florida Power has to pay a  
23 Southern Company, even if it interrupts purchases, you would  
24 insist that Florida Power accept this consequence even if  
25 Florida Power's ratepayers have to absorb the cost; is that

1 right?

2 A If that's the consequence. It's no different  
3 than -- I believe Mr. Slater has a chart of when this Southern  
4 purchase is going on. And if you take a look here, it's  
5 running along at zero most of the time. During the light-load  
6 periods, it comes up on its minimum; and you're buying 20 mil  
7 power to the detriment of ratepayers when the marginal cost in  
8 my world is zero and in your own world is 15.

9 Now, you're going ahead and doing that because you  
10 feel that that's a contractual obligation.

11 What I'm mystified here is why suddenly we're  
12 second-class citizens and we don't have the same kind of  
13 contractual obligations on your part and protections that were  
14 good faith to implement. We're in exactly the same boats  
15 here.

16 Q Well, let's talk about that. As I understand it,  
17 you're not aware of any provision in the Southern contract  
18 that would permit purchases to be interrupted; is that right?

19 A With respect to this, no.

20 Q Okay. But there is, in our contracts, as we've just  
21 discussed with the QFs, an acknowledgement at least you would  
22 concede of curtailment rights; is that right?

23 A If certain circumstances are met, including a  
24 recognition of the primacy of the purchase obligation with  
25 respect to other purchase obligations from utilities. I don't

1 know if we noticed also the Commission with respect to the New  
2 York Commission ruling on this, or the Commission throughout  
3 the curtailment rules, because the utilities refuse to  
4 recognize the need to undo purchase obligations from other  
5 utilities. And that's what this quote is getting to, too.

6 Q Now, let's just suppose that we were given legal  
7 direction that Florida Power couldn't refuse deliveries of  
8 power from Southern companies because of an enforceable  
9 contractual obligation; and in order to avoid breaching that  
10 contract, Florida Power had to cycle off one of its own  
11 baseload units in lieu of curtailment. You would insist that  
12 we should accept that result, too, wouldn't you?

13 A If it didn't lead to operational circumstances and  
14 it didn't lead to negative avoided costs, that's what I would  
15 expect to happen. If you got that judgment and you tried  
16 everything else to mitigate and you had the operational  
17 circumstances exist where you couldn't bring a unit back and  
18 you had to substitute more expensive power and you could show  
19 the existence of negative avoided cost, then I think you're  
20 into the situation where we talked about where curtailments  
21 may be possible.

22 Q So we could curtail in lieu of cycling off our  
23 base-load unit?

24 A No. I said if those other conditions were met.  
25 Cycling off -- despite Mr. Southwick's assumption

1 cycling off a unit does not in of itself and is not at all  
2 self-evident to me, or I'm sure Mr. Slater will confirm that,  
3 is not self-evident that it causes negative avoided cost.  
4 It's an empirical decision between the cost of restarting a  
5 unit and the cost of the -- or the value of the energy that is  
6 being supplied during that period by the QFs. It's an  
7 empirical result.

8 Q Now, let's talk about one other issue concerning the  
9 Southern contract. You are aware, are you not, that Florida  
10 Power entered into the Southern contract years before it  
11 entered into the purchased power agreement with your clients?

12 A That's correct.

13 Q Okay. And you're aware that the Commission was  
14 aware of that, too, when it approved the contracts with your  
15 clients?

16 A I assume they were. I have no knowledge of the  
17 Commission's awareness. I assume it came in front of them so  
18 they would know about it.

19 Q Now, the second type of mitigation that you would  
20 require Florida Power to pursue is that Florida Power should  
21 reduce its own generation or change the commitment of its own  
22 units to avoid excess generation before it should curtail; is  
23 that right?

24 A That's correct.

25 Q Okay. And it's your opinion that if Florida Power

1 can identify a course of action in its unit commitment, that  
2 would result in greater cost to the ratepayers. But to avoid  
3 the need for curtailments, Florida Power should pursue that  
4 course; is that right?

5 A If there is an alternative commitment that doesn't  
6 result in negative avoided cost and honors its obligation,  
7 that's what the Company is supposed to do and meet those  
8 constraints.

9 COMMISSIONER GARCIA: Above the concerns of the  
10 ratepayers?

11 WITNESS SHANKER: Your Honor, what I'm trying to say  
12 is that the concerns of the ratepayers are weighed continually  
13 against all the contractual obligations of the Company. I  
14 don't hear the Company here, nor do I hear the Commission,  
15 insisting that they stop purchasing from Southern at 20 mils  
16 when they could supply the power at 15 mils, even though that  
17 would certainly help the ratepayers.

18 I don't hear them offering to remove their  
19 facilities from rate base if they may not be needed, if they  
20 were prudently entered into. I don't hear them breaking their  
21 contracts for coal at contract values that is above market.

22 Yes, in this specific instance there may be a higher  
23 cost. What we're talking is, we pointed out earlier as Staff  
24 counsel pointed out, about less than 1% of the hours. How  
25 about the value from these facilities the rest of the year



1 when their costs are significantly lower than the avoided cost  
2 or the incremental cost of the utility. No one is offering to  
3 pay him a premium for those periods.

4 I mean, all these things go hand-in-hand. If you  
5 focus on a small segment of time, you're going to find the  
6 time when a contractual obligation is a handicap. And if we  
7 choose to ignore all the benefits that occur the rest of the  
8 time, then we have a problem.

9 No one wants to sit here and offer the QFs -- they  
10 get paid more money when the incremental costs are higher.  
11 Certainly, these people are willing to honor their contracts  
12 then.

13 Q (By Mr. Sasso) I'm not sure I got a direct answer to  
14 my question. In your deposition you were asked the question  
15 at Page 54: "If FPC could identify a course of action that  
16 would result in greater cost to the ratepayers but would avoid  
17 the need for curtailments, is it your view that FPC is  
18 required to take that action?"

19 Answer, "Yes."

20 A Yes.

21 Q You stand by that answer?

22 A Yes. For that period of time, absolutely. And if  
23 we're talking about this seven-tenths of a percent of the time  
24 that FPC has to incur cost to honor its obligations, yes, I'm  
25 firmly behind that.

1 Q All right. Now, again, with respect to unit  
2 commitment, you would acknowledge that even using your  
3 one-week planning horizon, that Florida Power can't get around  
4 forecasting what its needs will be that coming week; is that  
5 right?

6 A Certainly.

7 Q And I think we've discussed that this is not an  
8 exact science.

9 A That's correct.

10 Q And you would concede that there must be room for  
11 the exercise of judgment and discretion by Florida Power's  
12 operators and dispatchers?

13 A I think if it's neutral with an intent to its  
14 obligations, absolutely.

15 Q Okay. And, in fact, when we're evaluating even  
16 retrospectively whether a curtailment was appropriate, we need  
17 to use information that the utility had available to it at the  
18 time; is that right?

19 A Absolutely.

20 Q Okay. Now, the third area of mitigation is that you  
21 contend that Florida Power must pursue off-system sales to  
22 avoid curtailment even if it means giving the QFs' power away  
23 or paying someone to take it; is that right?

24 A On the as-available calculation under those  
25 circumstances, the negative avoided cost, what your own

1 calculations are telling you is to keep from shutting down a  
2 unit, you'd be better off paying someone to take the power.  
3 And that's exactly what's going on here. It's not  
4 understanding what your marginal costs are.

5 Q So there would be situations where you would contend  
6 we should give away the QPs' power in order to avoid  
7 curtailment; is that right?

8 A I said, logically. That's the extreme point. What  
9 I said as a practical matter is -- and your own witnesses here  
10 testified today -- there are lots of opportunities to sell  
11 between your incorrectly calculated marginal cost that you put  
12 at 15 mils and the true marginal cost that is, at most, zero.

13 Q Okay.

14 A I mean, this is fundamental to this. You -- and I  
15 mean you as FPC -- don't understand what your marginal costs  
16 are. Mr. Harper reads off a list. And go to this situation  
17 here.

18 Assume for a moment that the must-run is 2,200 and  
19 the load is 2,200. Mr. Harper would look at that last 200  
20 megawatts and give you that 14 or 15 mil number, so that's the  
21 last 200 megawatts meeting my own requirements. That's the  
22 as-available rate, and that's what it's worth.

23 If load dropped 200 megawatts, generation stayed the  
24 same. You have 200 megawatts of surplus, no use for it at  
25 all. Mr. Harper looks on his table and comes up with the same

1 value.

2 Is it conceivable that you go from having a  
3 perfectly balanced system with 2,200 of demand and generation  
4 to a system where you have 2,200 megawatts of generation and  
5 2,000 megawatts of load and 200 megawatts of surplus power,  
6 and you conclude that the last 200 megawatts are worth exactly  
7 the same thing. It's just silly.

8 Q Now, I think you said the extreme case was giving  
9 away the power, but isn't the extreme case your contention  
10 that we ought to pay somebody to take that power?

11 A I think as a matter of theory, yes.

12 Q Okay.

13 A I think, as a practical matter, we can all mitigate  
14 by getting this power sold, like the Carter Dam example.  
15 We're talking about the lowest, I think, Mr. Harper ever  
16 thought he saw it was a little less than 10. No one is asking  
17 as a practical matter for you to do anything other than to get  
18 this power out and offer it at a lower price. See what  
19 happens.

20 CHAIRMAN CLARK: Mr. Shanker, sometimes you talk too  
21 fast for me.

22 WITNESS SHANKER: I'm sorry.

23 CHAIRMAN CLARK: If you would slow down, that would  
24 be helpful.

25 WITNESS SHANKER: I'm sorry.

1           CHAIRMAN CLARK: Since I've interrupted, I  
2 understand in your deposition that you were asked whether you  
3 could come up with a situation where you would meet the  
4 requirements of curtailments that you could, in fact, curtail.  
5 And I understand you were not asked to pursue that.

6           WITNESS SHANKER: That's correct.

7           CHAIRMAN CLARK: I'm asking you to pursue it now.  
8 I'm trying to figure out under what circumstances, given all  
9 these alternatives, that there would ever be a necessity of  
10 curtailment under your reading of PURPA.

11           WITNESS SHANKER: Let's take a real simpleminded  
12 one. Let's assume the only things operating were Crystal  
13 River 3 and there was 100 megawatts of qualifying facilities  
14 and was being paid at that point in time applicable  
15 as-available rates, and so there's 900 megawatts of load; and  
16 the load drops. Obviously everything's been done that's  
17 possible at that stage if they couldn't make a sale, and they  
18 shut off the QF. That makes it fairly clear that there are  
19 extreme points when it has to work.

20           This is an empirical standard. And as we go further  
21 up the scale of having more utility facilities on line and  
22 having more options to sell, it gets more difficult. And,  
23 certainly, I guess in that same situation, Madam Chairman,  
24 think about the Southern purchase in that same situation.

25           You're down there with, I guess it's 132 megawatts

1 minimum. And Crystal River 3 and 132 megawatts of the  
2 Southern purchase, forget QFs at the moment, and the load goes  
3 below it. Is the Company going to break its contract there?  
4 Well, yeah. There's a point logically at which it does.

5           The difficulty I'm having is I view these contracts  
6 as having firm must-take obligations, that the Company should  
7 start by planning how to honor and then working around them,  
8 just like it does the Southern purchase. And that may lead to  
9 some difficulties sometimes, but they get a lot of 30-year  
10 benefits out of these deals as well.

11           And the Company appears to start from the view that  
12 it's no big deal. I get into a box; I'll turn them off. And  
13 it's that hierarchy of the obligation that's what's at stake  
14 and what's at play here.

15           CHAIRMAN CLARK: Then let me see if I understand it.  
16 What you're suggesting is the only time that you could come  
17 into a legitimate curtailment situation is when you would have  
18 to curtail baseload units?

19           WITNESS SHANKER: That's correct. I mean, I think  
20 that's a starting point as clearly --

21           CHAIRMAN CLARK: To the extent you have firm  
22 purchases from other utilities, you have to interrupt those  
23 and provide for the QFs.

24           WITNESS SHANKER: I think that one of these charts  
25 here sort of suggests that's pretty clearly what FERC's intent

1 was.

2 CHAIRMAN CLARK: Well, I guess that sort of gets to  
3 my question. If that were what FERC was intending, why didn't  
4 they say that?

5 WITNESS SHANKER: There's two things that I think  
6 fairly clearly suggest that they did. The first -- I'm sorry,  
7 I don't know which one of these says that.

8 CHAIRMAN CLARK: Well, I read it. This one. I'm  
9 not sure -- if that one says it, I've missed it.

10 WITNESS SHANKER: Okay. The Commission observes  
11 that in general -- well, I guess one comment I had noted that  
12 with respect to all requirements co-ops, any impairments of  
13 the obligation to obtain all the cooperatives' requirements  
14 from generation and transmission cooperative, might affect  
15 whatever. The Commission observes -- so they're saying a  
16 co-op has a full requirements obligation.

17 I don't know if you have full requirements, the  
18 customers here; but someone has a contract with Florida Power  
19 Corp that says "I will buy all of my power from Florida Power  
20 Corp." That's fairly explicit. Take all my requirements.

21 What the Commission does, the Commission observes in  
22 general that if permitted such contractual provisions, that if  
23 it permitted such contractual provisions to override the  
24 obligation to purchase from qualifying facilities, these  
25 contractual devices might be used to hinder the development of

1 cogeneration and small power production. The Commission  
2 believes that the mandate of PURPA, to encourage cogeneration  
3 in small power production, requires that obligations to  
4 purchase under this provision supersede contractual  
5 restrictions on a utility's ability to obtain energy or  
6 capacity from a qualifying facility.

7 CHAIRMAN CLARK: Well, that's what my problem was.  
8 I didn't see some of the missing --

9 Is what they are saying is you have to be a full  
10 requirements customer in order --

11 WITNESS SHANKER: This provision talked about it.  
12 So they're saying you have a contract. They say, "Hey,  
13 PURPA's obligation to purchase supersedes this other  
14 contract." That's one instance.

15 If you go into the legislative history in the drafts  
16 of the regulation, you see very clearly another example. In  
17 the original rules, the language -- and I'm paraphrasing  
18 now -- stated that you could curtail when purchases -- you  
19 could curtail when but for the qualifying facilities'  
20 generation, the cost of generation and purchases from other  
21 utilities would be higher.

22 In the final language they explicitly drop the end  
23 purchases, and they only refer to operational circumstances  
24 and the cost impacts with respect to generation, period.

25 CHAIRMAN CLARK: Okay. So you're saying operational



1 circumstances limit it to their units.

2 WITNESS SHANKER: Their units. And I think that's  
3 what you've got, I believe, from either -- Mr. Southwick, when  
4 he said if your purchases change, then the prices change for  
5 the purchases, but your unit's output stayed the same; there  
6 couldn't be operational circumstances. And that's what I'm  
7 talking about here, is that you ought to fully explore a way  
8 of getting rid of the surplus under proper pricing, and then  
9 you don't have to change the operations of your units. If you  
10 don't have to change the operation of your units, you can't  
11 have operational circumstances.

12 CHAIRMAN CLARK: Okay.

13 This is probably a good time to take a break. We  
14 have been going for a little bit more than an hour and-a-half,  
15 so we'll break until quarter after.

16 (Brief recess.)

17 - - - - -

18 Q (By Mr. Sasso) Let's just spend a moment on the  
19 passage from the preamble that you mentioned, and then I'd  
20 like to get back to talking about the mitigation efforts you  
21 would require.

22 A I'm sorry, which passage now?

23 Q The passage that involved the statement of FERC's  
24 concern about contracts that might interfere with  
25 cogeneration.

1 A Yes.

2 Q The passage involves a situation where utilities may  
3 be contractually obligated to purchase all of their  
4 requirements from a wholesale supplier; is that correct?

5 A Yes.

6 Q And that would totally obliterate the purchase  
7 obligation under PURPA; is that right?

8 A That's why -- and it's also the most restrictive  
9 contract provision that I could imagine that they were willing  
10 to overturn which was one that said very simply, "You will buy  
11 all from X."

12 And the Commission said, "No, that doesn't apply  
13 here."

14 Q Now, let's talk about off-system sales. We were on  
15 the subject of off-system sales as your third mitigation  
16 requirement. And I believe we covered the fact that you would  
17 agree that Florida Power Corporation -- you would contend that  
18 Florida Power Corporation should either give away QF power or  
19 even pay somebody to take it in order to avoid a curtailment;  
20 is that right?

21 A I think that's a mischaracterization. I said,  
22 logically, as a matter of theory, that's what the company's  
23 own calculation of negative avoided cost means. It says that  
24 the Company would be better off giving that power away rather  
25 than curtailing a unit.

1 I said "as a practical matter." And in testimony  
2 completely supported by the Company's own witnesses, there is  
3 an active market there and one that is viable at rates well  
4 above that, and that the Company ought to be participating in.  
5 I think we want through the example.

6 Q All right. I think you've answered my question.

7 A Yes.

8 Q And I would ask of you the same courtesy that Mr.  
9 McGlothlin asked of his witness, which is that you limit your  
10 answer to my question, and counsel for your clients will have  
11 the opportunity to ask you to explain on redirect.

12 A All right.

13 Q Thank you.

14 Now, do I understand it, that with respect to your  
15 contention, that Florida Power should sell excess energy at  
16 some price equal to zero or above in order to avoid  
17 curtailments. Now, with respect to that contention, you are  
18 assuming that QFs will be paid some positive number for the  
19 energy they supply to Florida Power; isn't that right?

20 A Actually, as a technical point, the calculation  
21 would be freestanding of what the QFs would be paid. I mean,  
22 like you wouldn't pay Southern the same amount as you sold  
23 other power for. You wouldn't pay any specific unit the same  
24 amount you sold the power for. All of the resources on the  
25 system at that point in time are essentially system-firm

1 resources.

2 As a mechanical issue, it is, I think, the most  
3 appropriate that that sale price become the as-available rate  
4 and that may have some implications for things that get priced  
5 as if they were marginal, not because they are marginal.

6 Q Okay. So you're suggesting, to take an example, we  
7 had 200 megawatts of excess energy and that that was equal to  
8 the amount of energy being supplied to us by the QFs and we  
9 were able to sell that \$2 a megawatt, that we ought to pay the  
10 QFs \$2 a megawatt; is that right?

11 A No. What I said -- and let's be explicit about  
12 it -- is the system has 200 megawatts of excess generation.  
13 That's the first step. And then you sell it.

14 And let's assume you do get \$2 for it. Then, as a  
15 completely separate process, it's a matter of contract to see  
16 who gets what payments and if any specific payments are  
17 related to that rate.

18 Q Okay. Are you familiar with this Commission's rules  
19 on calculating as-available cost?

20 A Yes, I am.

21 Q You're familiar with Rule 25-17.0825(2)(a)?

22 A (2)(a)? I'm hesitating because I think I have the  
23 second page that says (2)(a), but I don't have the front part.

24 25-17.0825 Section (2)(a), correct.

25 Q Paren (2), Paren (a)?

1 A Paren (2), Paren (a), yes.

2 Q And that rule requires that as-available cost be  
3 calculated, quote, "before the sale of interchange energy."

4 Do you see that?

5 A I know it's there. I'm sorry, I just can't find  
6 the -- I just can't find the line. Can you count up from the  
7 bottom or something? I'm just not finding the text.

8 Q It's in the very first sentence of Section (2)(a)

9 A I'm sorry, in the very first sentence. I was  
10 looking farther down. Yes.

11 Q Okay. See that?

12 A Yes.

13 Q So under this Commission's rules, we would calculate  
14 the price that we're paying QFs and the cost of that energy  
15 before any interchange sales are made; is that right?

16 A That's how the rule would be read here. It's the  
17 avoided cost, marginal cost, at that point in time. That's  
18 correct.

19 Q And that's what it would cost Florida Power  
20 Corporation if this rule was applied to acquire that excess  
21 energy block from the QFs; is that right?

22 A If Florida Power was making payments at as-available  
23 rates, that would be correct.

24 Q Okay. So we would -- let's say, we'd be paying the  
25 QFs \$18 as an as-available rate for that block of energy, and

1 we sell it for \$2. And you would contend that Florida Power  
2 ought to absorb that difference?

3 A No. What I would contend is -- you still don't get  
4 it -- the as-available rate is being calculated incorrectly  
5 there. We go back to this example.

6 Your situation was the 200 megawatts. Your  
7 situation was saying when the load is 2,200 and there's 2,000  
8 megawatts of Company resources and 200 megawatts of qualifying  
9 facilities, you calculate the as-available rate just like  
10 this. It's the incremental cost of the Company producing from  
11 2,000 to 2,200. That's how you calculate as-available.

12 The loads drops to 2,000. We now have 200 excess.  
13 You say it's exactly the same thing. You say the amount of  
14 producing 200 megawatts of excess when you're at your must-run  
15 with 200 is exactly the same price in value as if it was  
16 matched by generation and load; and it's just not true.

17 And this is the heart of the problem. You're  
18 calculating the as-available rate line when you have a  
19 surplus.

20 Q All right. Let's talk about that. Can we both work  
21 off the this mike you think?

22 All right. Just to be clear what this illustrated,  
23 I believe Mr. Presnell created this exhibit and asked  
24 Mr. Harper about it. And he asked Mr. Harper to assume that  
25 Florida Power had 2,200 megawatts of generating capacity; is

1 that right?

2 A Including qualifying facilities.

3 Q Well, I don't remember that he said anything about  
4 qualifying facilities.

5 A Well, I do.

6 Q Okay. Well, 2,200, let's do it in a way then that  
7 makes this explicit. Let's take an example where our load is  
8 2,000 megawatts, and Florida Power Corporation is producing  
9 2,000 megawatts on its own system?

10 A Including QFs?

11 Q No. And QFs are producing another 200 megawatts.

12 A Those are firm QFs?

13 Q Firm QFs.

14 A Well, then Florida --

15 Q Let me finish my question.

16 A Okay.

17 Q Now, in this hypothetical Florida Power Corporation  
18 is capable of meeting load with its own units. And let's  
19 suppose this is its minimum generating level. It's got its  
20 baseload units meeting 2,000 in load. Okay? And the excess  
21 generation can be accounted for by QFs at 200 megawatts.

22 MR. MCGLOTHLIN: I'm going to pose an objection to  
23 the question because it's an improper hypothetical that  
24 assumes the firm QFs are incremental to the system load.

25 A Exactly what my point was going to be.

1           Why don't we assume that 200 megawatts of the  
2 Crystal River 4 unit are excess and the QFs are at the bottom  
3 of the stack there. This is the heart of the whole  
4 discussion.

5           I start from, these are firm obligations that you  
6 ought to honor just like your must-runs. You think you can  
7 shut them off, so you might as well put them at the last  
8 marginal unit.

9           Q     (By Mr. Sasso) Isn't that what this proceeding is  
10 all about, whether --

11           CHAIRMAN CLARK: Let me just interrupt you for a  
12 minute.

13           MR. SASSO: I'm sorry.

14           CHAIRMAN CLARK: Mr. McGlothlin posed an objection,  
15 but his witness went ahead and answered. I have to say, I  
16 thought it was you speaking.

17           He's answered the question. Do you want to do  
18 anything further? It seems to me that you can correct it on  
19 redirect if you choose to.

20           MR. MCGLOTHLIN: Well, as a matter of fact, I think  
21 the answer was in terms of a more correct question, so I'm  
22 satisfied with the status of the record.

23           WITNESS SHANKER: I'm sorry, Your Honor.

24           Q     (By Mr. Sasso) I mean, isn't that what this  
25 proceeding is all about to determine whether we should prefer



1 baseload operation or QF operation?

2 A No. I think the proceeding is about whether you  
3 honor your contractual commitments and operate your system  
4 consistent with those contractual commitments and that you  
5 don't prejudge the situation by assuming a priori, as you just  
6 did, that you can turn off those facilities.

7 There's a burden of proof here. Show the  
8 operational circumstances, show the negative avoided cost,  
9 show that you mitigate. I mean, this hypothetical says where  
10 the Company is coming from. Let's start by assuming that the  
11 last 200 megawatts are the QFs.

12 (Simultaneous conversation.)

13 MR. SASSO: I think you have answered the question.

14 MR. MCGLOTHLIN: Just a minute. Excuse me, counsel,  
15 I ask for some courtesy. I would like for courtesy with  
16 respect to the witness' ability to finish his question. This  
17 has happened several times, and I'd like a direction to that  
18 effect.

19 MR. SASSO: May I address that, Chairman Clark?

20 CHAIRMAN CLARK: Just a minute. Just a minute. You  
21 both have been guilty of interrupting each other.

22 As of you, Mr. McGlothlin, when they were trying to  
23 sort things out. Both of you owe a courtesy to each other,  
24 but more importantly to the court reporter.

25 Go ahead.

1           A       And I guess what I was trying to say is this is the  
2 hypothetical here or the description is exactly what the  
3 problem is. It starts from the presumption that the last  
4 units on the system, even though they are equally firm, are  
5 the QFs.

6                   They may in certain circumstances be priced as if  
7 they were marginal, but they are not marginal. They are firm  
8 system resources just like everything else here. And if you  
9 start from that assumption, you work around to find out how to  
10 avoid curtailing them, not assume that you can and then not  
11 honor the situation, and to start from the fact that you can  
12 turn them off.

13           Q       (By Mr. Sasso) All right. Let's talk about the  
14 preamble in this regard. The FERC preamble talks about a  
15 situation where a utility is faced with the choice between  
16 curtailing QFs or cycling off a baseload unit with certain  
17 consequences; isn't that right?

18           A       That's correct.

19           Q       So the FERC preamble directs us to compare the cost  
20 associated with curtailing those QFs and the cost of operating  
21 with them; isn't that right?

22           A       That's different from assuming they're the marginal  
23 resources in terms of the pricing, which is where we started  
24 the example.

25           Q       And you would resolve that impasse, as it were, as

1 to which generation source gets preference on the basis of  
2 your conclusion that these contracts are must-take; is that  
3 right?

4 A They're must-take contracts with the limitation that  
5 if you mitigate, if you show operational circumstances, if you  
6 prove negative avoided cost, then you can curtail and undo  
7 that obligation. You start from the obligations existing.

8 And I think I want to point out that while we wound  
9 up here, I think the question began with a discussion of how  
10 do you price. And I'm happy to go back to that if you want  
11 it. I don't know if we answered that question to begin with.

12 Q I think we have a disagreement in how you price,  
13 which may be resolved by a reading and implementation of the  
14 Commission's rules.

15 A Well --

16 Q There isn't a question pending.

17 A Okay.

18 Q Now, as I understand it, you would justify a  
19 situation where Florida Power gives away excess energy or  
20 sells it at a very, very low cost or price even if that has an  
21 adverse impact on the ratepayers, based on the position that  
22 we must take the long view of the benefits of this 20-year  
23 contract; is that right?

24 A I don't think I stated it that way. I think the  
25 comment is: In a very short period of time the price may

1 be -- paid to the QFs might be higher than the clearing price  
2 for surplus energy. It may or may not be. It depends on how  
3 we implement the rule.

4 Similarly the price paid to Southern might be higher  
5 than the marginal cost. Similarly the prices paid for other  
6 firm contractual obligations, such as contract coal, might be  
7 higher.

8 The point is that at that instant in time, as we  
9 pointed out before, we're talking about .7% of the time this  
10 situation may exist where the cost for this power could be  
11 higher; not must be higher, could be higher. And the other  
12 99.25% of the time you're paying them exactly what the  
13 marginal cost is or less than what the marginal cost is and  
14 you're getting significant benefits. That's the tradeoffs  
15 that are going on here.

16 Q So just to be clear that we are on the same page  
17 here, you would agree that there are certain circumstances at  
18 least where we are paying the QFs, even under your pricing  
19 mechanism, where we are paying them more than we're getting  
20 for the energy we're selling?

21 A I think I said that that's a possibility. And in  
22 this example, the most frequent that it would occur would be  
23 .7, whatever Staff counsel pointed out was the percentage  
24 where it might happen, not where it will happen, but where it  
25 might happen. And the rest of the time, by definition, it's

1 either clearing at the right price or you're getting in excess  
2 of the benefits of the price that's being paid.

3 Q Okay. And that .7% of the times involved situations  
4 where we've curtailed to avoid that; is that right?

5 A Improperly, I think, and that we'll get into that.  
6 That's correct.

7 Q Okay. And it's your view that Florida Power ought  
8 to accept an adverse consequence that .7% of the time, and the  
9 ratepayers ought to accept it because over the long haul in a  
10 20-year contract they're going to get benefits?

11 A My testimony is you ought to honor your contracts  
12 and that that's what the value is. And we go through this  
13 over and over again. You are not offering when the value is  
14 higher than the contractual amounts to pay anybody a premium.  
15 I don't find it earthshaking that some small portion of the  
16 time you might say, "Geez, I might be better off if this one  
17 small instant I didn't honor the contract." But the world  
18 doesn't work that way.

19 I guess we're over here, with this example the FERC  
20 was talking about. Let's assume that half the time the  
21 avoided cost of energy was 10 cents, and the other half of the  
22 time it was zero, or let's say even negative, a teeny-weeny  
23 bit negative. And on average it came out to five cents, and  
24 your contract says you've got five cents.

25 Well, going into this contract half the time, not

1 three quarters of a percent, but half the time, the utility  
2 could stand up and say, "Your Honors, we're paying them five  
3 cents and the avoided cost is zero; isn't this an outrage?"  
4 And the other half of the time when it's 10 cents and you're  
5 only paying them five were met with silence. That's what's  
6 going on here.

7 Q You accept the principle that a utility under PURPA  
8 is obligated to pay QFs no more than their avoided costs; is  
9 that right?

10 A As estimated over the term of the agreement. And I  
11 think that again I would refer the Commission to Commissioner  
12 Mohler, Chairman Mohler's comments at FERC in the recent NYSEG  
13 decision. She was rather outspoken about the false  
14 interpretation of the utility attempting to say that avoided  
15 cost in any instance being exceeded was a violation of a  
16 QF-related contract.

17 Q All right. Now, I believe in your deposition you  
18 refer to these occasions where the Company may have to accept  
19 adverse consequences and the ratepayers may have to accept  
20 adverse consequences as occasional blips in the life of this  
21 20-year contract, is that right? Something like that?

22 A I think I said I started from the notion you honor  
23 the obligation of the contract. And that like many contracts,  
24 there's an ebb and flow of the relationship. And there's  
25 benefits for both parties. And sometimes they are greater on

1 one side, and sometimes they are greater on the other.

2 The whole point was that you estimated the values,  
3 you came before the Commission, you said they were prudent,  
4 and we are here with them.

5 Q Okay. But you would concede -- I believe you  
6 conceded in response to Chairman Clark's question that where  
7 Florida Power Corporation is able to demonstrate that it's met  
8 all of your conditions for curtailment, that it could curtail;  
9 is that right?

10 A If you go through the process I described, I accept  
11 that. That's correct.

12 Q And Florida Power, if it met all your conditions,  
13 could curtail for a period of, say, 10 hours; is that right?

14 A I think if we go through all these conditions under  
15 the types of contracts we're talking about here in payments,  
16 yes, that's possible.

17 Q But 10 hours is just a blip in the life of a 20-year  
18 contract, is it not?

19 A If all the other conditions are met, that's correct.  
20 The point is it's when those conditions are not met and that  
21 there's a firm purchase obligation and that there is no  
22 negative avoided cost and there is no mitigation, you can't  
23 undo it. That's correct.

24 Q So you would agree that when the Commission  
25 determines what conditions have to be met in order for us to

1 invoke the curtailment rule, that we could curtail for a  
2 period of several hours, even though we have a 20-year  
3 contract with these QFs; is that right?

4 A If you go through and show that you cannot make  
5 additional sales, you could not have made additional sales,  
6 you could not have committed the system differently, that you  
7 had no other alternatives with respect to your purchase  
8 agreements, and you didn't undo or for those periods suspend  
9 your purchases, and you had no other way of behaving, then,  
10 yes, you could curtail.

11 Q Now, with respect to these off-system sales again,  
12 let's talk about the opportunities that Florida Power may have  
13 to make off-system sales.

14 You would agree that low-load periods occur  
15 typically during times of the year where the weather is mild;  
16 is that right?

17 A That's my understanding here. That's correct.

18 Q And during those times neighboring utilities may  
19 also be experiencing these weather conditions and low loads;  
20 is that right?

21 A That is correct.

22 Q Okay. And they may not want to buy Florida Power's  
23 excess energy; is that right?

24 A Now, that's where we may differ. That they may not?  
25 I guess is it feasible, yes.



1           But, empirically, the only example that's been in  
2 the records so far, I think, was with Mr. Presnell's  
3 discussion where he showed that through the curtailment  
4 period, one of the utilities, I guess it was TECO, was selling  
5 200 megawatts. So somebody was buying. Florida Power &  
6 Light, I guess, was in that example.

7           Q     Now, you also talked a bit about the New York Power  
8 pool arrangement and the practice of selling energy within  
9 that pool. It is true, is it not, that in a situation where a  
10 utility is selling at dump-energy prices, that is considered  
11 to be a penalty situation in this New York Power pool  
12 arrangement?

13          A     I don't consider it to be a penalty.

14          Q     You haven't heard that term?

15          A     They may consider it to be a penalty. It's the  
16 economic arrangement they're in by being in a surplus  
17 situation that they were not able to cope with otherwise; the  
18 price is zero.

19          Q     You haven't heard the proposition that these  
20 utilities are being penalized to discourage overgeneration in  
21 some way?

22          A     Well, certainly, the economic impact on them is not  
23 desirable, so there's no incentive. I assume no one purposely  
24 plans to be in surplus, so if you want to call that a penalty,  
25 sure.

1 Q And the economic impact on the ratepayers is  
2 undesirable also?

3 A In the way they're pricing in that situation, it may  
4 or may not be. Because of the split saving sale, you really  
5 wouldn't know.

6 Q Okay. Now, the last type of mitigation that you  
7 contend that Florida Power should pursue involves retail  
8 pricing; is that right?

9 A That's correct.

10 Q Okay. And you contend that Florida Power must  
11 modify its retail pricing to encourage users to take more  
12 power during low-load periods; is that right?

13 A I said they should look at that. And as I'm aware  
14 now, in the rebuttal testimony it was proffered by the Company  
15 that they did look at that and it wouldn't work. Those  
16 materials weren't provided in discovery that the Company was  
17 looking at that to avoid low loads, so I don't know if they  
18 did a good job. And I agree with their conclusion or maybe  
19 they should keep looking.

20 Q Okay. That's something that Florida Power has  
21 indicated that it has taken the initiative to look at; is that  
22 right?

23 A It said it took the initiative. But we never, in  
24 the discovery process, were provided with any information  
25 about that.

1 Q Okay. But you would submit that Florida Power is  
2 obligated to attempt to structure retail pricing, if at all  
3 possible, in order to avoid curtailment; is that right?

4 A That's right. I think they should look at trying to  
5 create a situation where there is a short-term incentive on  
6 the order of the week or whatever we're talking about for  
7 someone to increase their load during the light-loading  
8 periods.

9 Q And you believe that Florida Power is obligated to  
10 pursue that mitigation effort as a precondition to curtailing  
11 under the FERC rule; is that right?

12 A I would think that they would have to explore it.  
13 If they concluded that they couldn't do it, then they can't do  
14 it. If they concluded they could do it, then I'd say that  
15 they really should and that that would be a precondition.

16 Q But you would recognize, of course, that FERC has no  
17 jurisdiction over retail sales?

18 A Interesting question. I think generically it  
19 doesn't. As this Commission may be aware, there are issues  
20 with respect to PURPA where there are directives as to how  
21 retail rates should be designed for sales to qualifying  
22 facilities and properties of those rates.

23 And I guess it's the industrial cogenerator's case  
24 here where the Commission, at least initially, was overturned  
25 by FERC with respect to retail rate design under PURPA. And

1 then later, I guess it died somehow, but --

2 So, in general, they don't. But under limited  
3 circumstances, it appears they do have something to say about  
4 retail rates in this general area.

5 Q Okay. You can't point to any specific language in  
6 Rule 304(f) that indicates an effort by FERC to exercise  
7 jurisdiction over retail rates, can you?

8 A That isn't what you asked me. I think you asked if  
9 FERC had jurisdiction over retail rates, and I was answering  
10 that under PURPA, I believe, they clearly set forth guidelines  
11 for certain retail rates.

12 Now, with your second question, I believe you're  
13 saying, "Can I point to that in 304(f)." And the answer is,  
14 "No, I cannot."

15 Q Now, lastly, you criticize the manner in which  
16 Florida Power has calculated avoided cost; is that right?

17 A I'm sorry, we are out of mitigation now?

18 Q We're out of mitigation. I think we've covered all  
19 four of your mitigation steps.

20 A That's correct. I'm sorry.

21 Q And, lastly, you criticize the manner in which  
22 Florida Power calculates avoided cost?

23 A Yes, in the negative avoided-cost calculation. I'm  
24 sorry, that's what threw me for a second.

25 Q Okay. You would go so far as to suggest that we

1 ought to calculate avoided cost over the 20-year contract  
2 term; is that right?

3 A My comment, I believe that when you have long-term  
4 fixed price payments, such as the example I gave the five  
5 cents averaged over 20 years, there may be an argument that  
6 the right with-and-without calculation effectively is the  
7 length of the contract. That isn't what I was recommending  
8 here.

9 Q Okay. Again, I think it's pretty evident that your  
10 whole testimony is based on your view that these QF contracts  
11 are must-take obligations; is that right?

12 A It starts from the presumption that the Company  
13 entered into an agreement to buy firm must-take power from the  
14 qualifying facilities. And the Company's behavior, as much as  
15 it has already been manifest in terms of its own efforts to  
16 mitigate, should be that you honor that obligation and work  
17 backwards from there, not assume you can turn it off and stop  
18 whenever it's convenient.

19 Q Now, you would agree --

20 COMMISSIONER GARCIA: I want to go back to that, and  
21 I don't want you to get off and veer off, because you were  
22 there. That is at all costs? In other words, we should honor  
23 that contract at all costs --

24 WITNESS SHANKER: No.

25 COMMISSIONER GARCIA: -- even if it hurts --

1 I know you've got your 16 qualifiers on when and why  
2 and how to curtail which hardly ever would take effect if we  
3 look at them strictly the way you're explaining them.

4 But my question is: Is that contractual obligation  
5 more important than the ratepayer of Florida and the financial  
6 health of the infrastructure that the ratepayers have paid?

7 WITNESS SHANKER: I think as a logical exercise, the  
8 negative avoided cost set the limit on that. And what we've  
9 been talking about here, I think, as the examples you show are  
10 \$2,000 and \$3,000 kind of incidents so, logically, that's the  
11 numbers we're dealing with. So up to that limit, yes. But  
12 the answer is, "Yes, you ought to attempt to mitigate."

13 I think I discussed in my deposition that you're  
14 getting -- you're asking me what's the standards for their  
15 behavior with respect to contracts, and that I don't want to  
16 testify about. I think that's a legal matter, you know, these  
17 best efforts or reasonable efforts or cost-effective efforts.  
18 But that they have to do something and that the standard  
19 appears to be if you don't get at negative-avoided cost,  
20 they've got to keep going, the answer is, yes, they do.

21 Q (By Mr. Sasso) Now, if we were to look at the  
22 provisions of these negotiated contracts, you would agree with  
23 me that we can't find any express terms in the provisions of  
24 these negotiated contracts that purport to limit our  
25 curtailment rights under the FERC rule or the PSC rule,

1 correct?

2 A Other than to limit them to that rule.

3 Q Pardon me?

4 A I mean, the limitation is that you get whatever that  
5 rule would provide. I think we started from the presumption  
6 here that the rule applies. But we all want to agree what the  
7 rule means and what is the standard by which you can determine  
8 that the rule is applicable.

9 Q But you would agree that there is nothing in the  
10 express terms of the contract that purport to limit the  
11 operation of that rule; is that correct?

12 A I mean, what we're here discussing is the limits of  
13 the operation of that rule. Maybe I'm missing something.

14 Q Well, I just want to be clear that you can't point  
15 to any express provision of the negotiated contracts that in  
16 turn purports to take away curtailment rights?

17 A Maybe I don't understand.

18 I mean, my testimony is that that contract reference  
19 says you have curtailment rights with respect to those rules.

20 Q Right.

21 A And my testimony is with respect to the scope of  
22 those rights under that rule.

23 Q Okay. Now, let's just put that provision aside  
24 because you and I will disagree fundamentally over what that  
25 means. Putting that provision aside, you would agree there

1 are no other provisions in this contract that you would point  
2 to, to claim that they purport to limit Florida Power's  
3 curtailment rights under the FERC's rule or the Public Service  
4 Commission's rule; is that correct.

5 A So, we pretend that that contract provision doesn't  
6 exist.

7 Q No. We're just going to put it to one side. And  
8 I'm asking you: Are there any other provisions in this  
9 contract?

10 A Well, if the rest of the contract doesn't speak to  
11 it, I guess I might say the rule doesn't apply.

12 Q Now, you're basing your opinion about the sanctity  
13 of these firm contracts in very important part on this excerpt  
14 that you've taken from the preamble to the FERC's rule; is  
15 that right?

16 A That's right. Certainly that's part of the  
17 testimony; that you have to honor the obligation of these  
18 nondispatchable contracts.

19 Q Now, let's consider the comments that FERC received  
20 prior to finalizing the rule. You've attached a summary of  
21 those comments to your testimony; is that right?

22 A That's correct.

23 Q Okay. Now, it's RJS-5; is that correct?

24 A I've got to look.

25 Yes. And it's a portion of the total summary of



1 comments.

2 Q The portion that you believe to be pertinent; is  
3 that right?

4 A Yes.

5 Q Okay. Now, you would agree at Page 7 of that  
6 exhibit there's reference to comments received from two Public  
7 Service Commissions about this contract issue; is that right?

8 MR. MCGLOTHLIN: Excuse me, could I have a page  
9 reference for that?

10 MR. SASSO: Page 7 of 7 of RJS-5.

11 MR. MCGLOTHLIN: Thank you.

12 A Yes.

13 Q (By Mr. Sasso) And the summary states that one  
14 comment here, quote, suggests that this section be amended to  
15 make it clear that it does not override existing contracts; is  
16 that right?

17 A Yes.

18 Q And you would agree that your client's contracts  
19 were not in existence at the time FERC enacted its rule; is  
20 that correct?

21 A Yes.

22 Q Okay. And the second comments suggested adding very  
23 specific language to the FERC rule; is that right? And, in  
24 fact, I'll quote it, they wanted to add the phrase "Capacity  
25 and energy purchases which result from a legally enforceable

1 obligation for firm power deliveries are not subject to option  
2 by the utility of not purchasing such electricity during such  
3 periods identified by the state regulatory authority". Did I  
4 read that accurately?

5 A That's correct.

6 Q Okay. That's the language of the second comment it  
7 wanted FERC to adopt; is that right?

8 A That's correct.

9 Q And, of course, FERC didn't adopt that language,  
10 didn't include that in 304(f).

11 A Right. They stated other things that, I believe,  
12 we've gone through quite a bit with respect to not overriding  
13 other contractual obligations.

14 Q Correct, in the preamble.

15 A In the preamble.

16 Q And, in fact, the final Rule 304(f) provides for  
17 curtailment of, quote, "energy or capacity"; is that right?

18 A I think we had this discussion previously as well.

19 Q Right.

20 A And my answer stands as it was before.

21 MR. SASSO: Just take a moment, please.

22 That's all I have Chairman Clark.

23 CHAIRMAN CLARK: Redirect?

24 REDIRECT EXAMINATION

25 BY MR. MCGLOTHLIN:

1 Q Dr. Shanker, counsel referred you to the portion of  
2 the conference report in which the statement about ratepayers  
3 not subsidizing QFs here. Do you recall that exchange?

4 A Yes.

5 Q What time frame do you believe the conferees had in  
6 mind when they made that statement?

7 A I think it's very clear from the regulations that  
8 the interpretation FERC gave to that was that a contract, that  
9 is for the entirety of the contract, that the expectant  
10 payments at avoided cost not exceed the estimated avoided  
11 costs over the term of the contract.

12 So I think it was clear that they visualized  
13 levelizing front-end loading, periods when the payments would  
14 be higher or lower than avoided cost, but that over the term  
15 of the contract, the expected payments would be at avoided  
16 cost.

17 Q He also referred you to the notice of proposed  
18 rulemaking, Page 8 of 16, at which there was an illustration  
19 of a low load situation and observation about the possible  
20 subsidy by the ratepayers. Do you recall that reference?

21 A Yes.

22 Q And in your response you mentioned that the  
23 reference did not take into contract the long-term protection  
24 of a long-term contract. Would you explain what you meant by  
25 your answer?

1           A     Well, it's again the same phenomena that, I think,  
2     FERC added the clarification of this chart in full recognition  
3     that there would be periods of time when the value of power  
4     would be worth less and sometimes when it would be worth more.  
5     And that a reasonable contract might give you an average  
6     payment over those periods, and that you weren't to ignore  
7     that in determining the impacts of the curtailment.

8           Q     In one question counsel referred to the fact that  
9     the Southern UPS contract was in place before certain QF  
10    contracts. With respect to the comments in the preamble  
11    regarding requirements contracts, do you know whether the  
12    requirements contracts that were the source of worry in that  
13    situation were in place prior to the regulation in the QF  
14    contract that followed?

15          A     Not only were they there prior, but they were  
16    anticipated as a problem that someone might enter into them  
17    after the fact and use the ploy of such arrangements to  
18    circumvent the obligation. So it was anticipated that  
19    somebody might gain the system by saying I've got this  
20    existing obligation to purchase all my requirements.

21                   Well, FERC said, "No, that's wrong; we supersede  
22    that." And they also said we're concerned someone might enter  
23    into new obligations to circumvent or undo the obligation of  
24    purchase. And they said, "No. We're going to take care of  
25    that as well."

1           CHAIRMAN CLARK: Mr. McGlothlin, may I interrupt you  
2 for a minute?

3           I recall in your direct testimony you were concerned  
4 about a preference being given to contracts for purchasing  
5 power from other utilities as opposed from cogenerators. And  
6 it seems to me your suggestion that they should be  
7 curtailed -- I took it to mean 100% before you curtailed  
8 QFs -- gives QF power priority. Shouldn't they just be  
9 treated the same?

10           WITNESS SHANKER: I think this kind of statement and  
11 the full text there suggests that there is a clear preference  
12 for the QFs.

13           CHAIRMAN CLARK: For the QF?

14           WITNESS SHANKER: For the QF. You've got to go back  
15 and remember -- and I think this comes from some of the other  
16 material that's also attached to the testimony -- PURPA was  
17 instituted as a remedial act.

18           CHAIRMAN CLARK: I understand all that. But let's  
19 put that aside. Why is that clear?

20           WITNESS SHANKER: It is a legislated preference from  
21 the Congress of the United States, and the Congress is the  
22 arbiter of many preferences for a number of things, from tax  
23 incentives to purchases of power, and this is one of those  
24 preferences.

25           CHAIRMAN CLARK: Okay. Let's assume PURPA gave no

1 preference. What would be the fair thing to do? Treat all  
2 firm purchases the same?

3 WITNESS SHANKER: I think that the fair thing to do,  
4 and I think the New York Commission did it explicitly, is to  
5 recognize that you have to preempt those other purchases  
6 first.

7 CHAIRMAN CLARK: What other purchases?

8 WITNESS SHANKER: The purchase from the Southern  
9 Company in this instant first. That those get bumped first.  
10 That there is a hierarchy, and that's a result of this  
11 congressionally mandated preference.

12 CHAIRMAN CLARK: All right. I asked you to put that  
13 aside.

14 WITNESS SHANKER: Oh, I'm sorry. I misunderstood.

15 CHAIRMAN CLARK: If we didn't have PURPA and  
16 everybody were just treated nondiscriminatorily, how would you  
17 go about dealing with curtailment?

18 WITNESS SHANKER: I'm sorry, I understand the  
19 question better now. So we have four or five utility  
20 purchases all floating out there -- and not to be too  
21 argumentative, let's assume they all have the same contract  
22 language. Because, I mean, the first thing I did, I looked to  
23 the contracts.

24 CHAIRMAN CLARK: I would agree with you. You'd look  
25 to the individual --

1 WITNESS SHANKER: Okay.

2 CHAIRMAN CLARK: But assume they're all for firm  
3 purchases.

4 WITNESS SHANKER: They're all for firm purchases.

5 CHAIRMAN CLARK: And all for must-take, because you  
6 described these contracts as must-take.

7 WITNESS SHANKER: That becomes a real quandry. I  
8 think that if the contracts themselves weren't helpful you  
9 certainly might think about taking the most expensive one out  
10 first. But I'm not so sure you can do that. I think now you  
11 are getting into things that are really contract and  
12 commercial law, where you can go to the Florida precedence  
13 about such situations. I don't know how you resolve it. If  
14 there were no contractual limitations, certainly rationally  
15 would be to do it by price.

16 But I guess, you know, one example that I have  
17 thought of here is let's assume that instead of these 2,000  
18 megawatts you have 2,100 megawatt must-run contracts from  
19 other utilities. The first question is which one is at the  
20 margin? Okay. And I think it's clear we don't know, it's a  
21 system requirement.

22 The next question is, well, which do I bump? And  
23 now you're getting into contract law.

24 CHAIRMAN CLARK: It wouldn't be fair to do it pro  
25 rata?

1           WITNESS SHANKER: It might be. I mean, if I was the  
2 purchaser, I would sure want to look at if I had the right to  
3 do it by price. If I didn't have the right to do it by price  
4 and it was fairly clear that I have to try to do my best to  
5 honor all of them and do what I have to to mitigate, pro rata  
6 would be reasonable, sure.

7           CHAIRMAN CLARK: Okay. Thank you, Mr. McGlothlin.

8           Q     (By Mr. McGlothlin) In response to one question,  
9 you stated that it is not self-evident that cycling all the  
10 baseload units would results in negative avoided costs, and  
11 then your answer referred to the value of QF power during the  
12 period. Would you explain what period you're referring to?

13          A     Well, it would be, I think as a first cut, even in  
14 the Company's eyes, the period is the curtailment period. I  
15 think in terms of both Mr. Slater and myself, it's the value  
16 of the QF power over a longer period, more appropriately, a  
17 week. But it's still, I guess, the heart of what I'm saying  
18 is the Company is suggesting that it's self-evident that it's  
19 negative, and that's just not true. It's an empirical  
20 calculation. Even for periods as short as the Company's  
21 curtailment calculation, I think Mr. Slater is going to  
22 testify about what those results are and whether or not even  
23 by their standards they are negative, and I think the answer  
24 is no.

25          Q     With response to the New York power pool



1 transactions in which certain sales of utilities in surplus  
2 are based on the selling price of zero, you said that those  
3 sales may or may not result in adverse financial impacts  
4 because of the split-the-savings arrangements. Would you  
5 explain what you meant by that.

6 A First, you have the question of what's the cost of  
7 those sales? And I think even the utilities themselves in New  
8 York disagreed. Is it the average of all the units running?  
9 Is it the most expensive unit running?

10 In my experience, they didn't even know what it  
11 cost, they argued among themselves. You know, theory, as  
12 we've gone through here, suggests to us the marginal cost is  
13 zero so anything they get for it is positive. But even with  
14 their own accounting, if they were selling at zero and someone  
15 is buying at 20 mills, they would receive 10 mills. So even  
16 by their own accounting 20 mills might be greater or less than  
17 they think it costs. It's just an empirical question.

18 Q Would that observation be relevant to transactions  
19 that take place on the Florida energy broker at sales prices  
20 that you recommend?

21 A Certainly, if things were done on the broker, the  
22 offer price, which might, I think in the worst example that  
23 Mr. Harper, I think, came up with -- maybe it was Mr.  
24 Southwick -- no, it was Mr. Harper, I'm sorry -- about 9  
25 mills, that would go out at 9 mills.

1           If they were selling to another utility, we saw  
2 examples where the shared savings rates that were clearing on  
3 the market at the time that curtailments were going on were in  
4 excess of FPC's own estimates, incorrect estimates, of avoided  
5 costs, marginal cost. So the split savings again in that  
6 situation could inure to benefit.

7           Q       There was several questions from counsel and  
8 Commissioner Garcia regarding the role of the ratepayers in  
9 these situations. Based upon your experience in the industry  
10 and for various clients, Dr. Shanker, do you believe the  
11 ratepayers have benefited from the growth and development of  
12 the cogeneration industry?

13          A       I think it's unquestionable that a huge shift in the  
14 industry of everyone's costs, not just the QFs' costs, have  
15 been associated with the competition brought about by  
16 qualifying facilities. Be it a specific contractor or new  
17 costs of competition, you take a look at what the utilities  
18 said was the cost of new capital 10 or 15 years ago and you  
19 look at it today, you will see that on a real basis those  
20 prices have declined. And I think it is unquestionably the  
21 fact that the utilities had to face competition, and there's a  
22 huge benefit to the ratepayers that have come from that.

23          Q       In your opinion, is there a relationship between  
24 what we might call the sanctity of the firm QF contracts on  
25 the one hand and the benefits that the ratepayers receive from

1 cogeneration on the other?

2           A       I think at one stage they're independent; I mean,  
3 you want to honor the contracts. I think that stands no  
4 matter what. I think in general, if you want to talk about  
5 aggregate benefits, there's been huge aggregate benefits. So  
6 in the aggregate sense they go hand-in-hand. But in detail, I  
7 mean, once we're in the implementation, you honor your  
8 contractual agreements; and that has got to be the starting  
9 and ending point.

10           MR. MCGLOTHLIN: Those are all my questions.

11           CHAIRMAN CLARK: Thank you Dr. Shanker. If I have  
12 called you Mr. Shanker, I apologize.

13           WITNESS SHANKER: That's quite all right.

14           MR. MCGLOTHLIN: I move the admission of Composite  
15 Exhibit 9.

16           CHAIRMAN CLARK: Without objection, Exhibit 9 is  
17 admitted in the record.

18                   (Exhibit No. 9 received in evidence.)

19                   (Witness Shanker excused.)

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21                   (Transcript continues in sequence in Volume 5.)

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