FLORIDA PUBLIC SERVICE COMMISSION

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VOTE SHEET

DATE: August 15, 1995

RE: 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. (Deferred from the 8/1/95 Commission Conference)

Issue 1: Recommendation that Florida Power Corporation has adequately demonstrated that the minimum load conditions for curtailment outlined in its plan comply with Commission Rule 25-17.086, F.A.C. Commission Order No. 12634, issued October 27, 1983, which amended rules relating to cogeneration, specifically identified QF purchases during low load conditions as an operational circumstance which could lead to negative avoided costs.

APPROVED

COMMISSIONERS ASSIGNED: Full Commission

COMMISSIONERS' SIGNATURES

MAJORITY	DISSENTING

REMARKS/DISSENTING COMMENTS:

PSC/RAR33(5/90)

Issue 2a: Recommendation that Florida Power Corporation has adequately demonstrated that its plan incorporates all appropriate measures to mitigate the need for curtailment during minimum load conditions. The plan requires FPC to reduce its generation to minimum reliable, economic levels; reduce inter-utility purchases; and make economic off-system sales to the extent possible. FPC's curtailment agreements with Group A QFs also contribute to the mitigation of involuntary QF curtailments.

APPROVED

Issue 2a: Recommendation that Florida Power Corporation has adequately demonstrated that it has attempted to mitigate any foreseeable imbalance between generation and load during minimum load conditions by committing the most appropriate combination of generation resources for the circumstances.

APPROVED

Issue 2b: Recommendation that the proposed curtailment plan properly requires Florida Power Corporation to take all appropriate measures to decrease other sources of generation to mitigate any imbalance between generation and load.

APPROVED

Issue 2c: Recommendation that the proposed curtailment plan properly requires Florida Power Corporation to take all appropriate measures to increase sales to mitigate any imbalance between generation and load.

APPROVED

Issue 3: Recommendation that Florida Power Corporation has adequately demonstrated that the procedures for curtailment outlined in its plan are reasonable and appropriate. The procedures provide a benchmark for FPC, QFs, and the Commission to judge FPC's actions during minimum load conditions.

APPROVED

Issue 4: Recommendation that Florida Power Corporation has adequately demonstrated that its proposed plan allocates justifiable curtailments among QFs in a fair and not unduly discriminatory manner. The plan is based on the objective differences between those QFs in Group A, and those in Groups B and C, respectively.

APPROVED

Issue 5: Recommendation that Florida Power Corporation properly implemented the procedures during the curtailments that occurred from October, 1994 through January, 1995, given the unique conditions on its system at the time of each curtailment event.

APPROVED

Issue 6: Recommendation that Florida Power Corporation has adequately demonstrated that the curtailments that occurred from October 1, 1994, through January 31, 1995, were necessary to avoid negative avoided costs.

APPROVED

Issue 6a: Recommendation that, in determining whether purchases of firm QFs' generation during an operational circumstance that satisfies Rule 25-17.086 would cause FPC to incur costs greater than the costs FPC would incur if FPC supplied the energy, all costs involved in the production of electricity are appropriate to consider.

APPROVED

Issue 6b: Recommendation that Commission and FERC regulations do not dictate a particular period to measure negative avoided costs. However, the time frames utilized by FPC in the analyses of the curtailment events in October 1994 and January 1995 were appropriate.

APPROVED

Issue 7: Recommendation that the permissible scope of Rule 25-17.086, F.A.C., in view of the federal standards implementing Section 210 of PURPA, clearly authorizes QF curtailments under the circumstances demonstrated by the facts of this case and contemplated by the federal standards implementing PURPA.

APPROVED

Issue 8: Recommendation that the Commission should approve Florida Power Corporation's curtailment plan as being in compliance with Rule 25-17.086. FPC's curtailment plan is a reasonable means to implement Rule 25-17.086. Approval of the plan does not relieve FPC of the duty to take prudent measures in order to avoid a minimum load condition. Any affected QF may still request a staff investigation of a specific event pursuant to Rule 25-17.086, even if FPC followed the procedures contained in its plan for its own generation resources.

APPROVED

Issue 9: Recommendation that this docket be closed.

APPROVED

PROPOSED FINDINGS OF FACT
ORLANDO COGEN LIMITED

COMPLIANCE OF FPC PROPOSED PLAN WITH COMMISSION RULE (Issue 1)

1. In 1991 FPC executed firm contracts to purchase more than 600 MW of capacity from QFs. (Tr. 85, l. 12-16).
Recommendation: Accept.

APPROVED

2. Prior to issuing the RFP relating to the 1991 firm QF contracts, FPC considered internally whether to pursue provisions for dispatchability of the QF's units within the contracts. (Tr. 510, l. 9-13; Exh. 9, RJS-9).
Recommendation: Accept.

APPROVED

3. FPC decided not to negotiate for contractual dispatch rights prior to executing the 1991 QF contracts. (Tr. 90, l. 17-20).
Recommendation: Accept.

APPROVED

4. In 1993 FPC foresaw that it would experience minimum load periods beginning in 1994 when some of the QF capacity for which it had signed firm, non-dispatchable contracts in 1991 came on line. (Tr. 80, l. 2-7).
Recommendation: Accept.

APPROVED

5. In 1994 FPC devised a plan to use Commission Rule 25-17.086 to gain contractual rights to dispatch QF units during minimum load situations at no cost. (Exh. 9, RJS-8, at 3).
Recommendation: Reject. Conclusory and unsupported by the greater weight of the evidence.

APPROVED

6. FPC can experience an imbalance between generation and load of 30 MW without violating NERC standards. (Tr. 385, l. 9-18).
Recommendation: Accept and incorporate with the clarification that the particular NERC standard referenced by Witness Southwick at p. 385 refers to automatic generation control (AGC) imbalances.

APPROVED

7. Crystal River Units 1 and 2 are not assigned any role in Automatic Generation Control. (Tr. 393, l. 17 - Tr. 394, l. 2).
Recommendation: Reject. Unsupported by the greater weight of the evidence. In the above-referenced cite, Witness Southwick's response is to a question regarding the output of Crystal River Units 1 and 2 required to meet automatic generation control requirements, emissions restrictions, and other system conditions. This does not conclusively state that Crystal River Units 1 and 2 have NO role in automatic generation control.

APPROVED

8. On occasion, FPC has operated Crystal River Unit 5 below its normal minimum to help manage low load situations. (Tr. 776, l. 10-22).
Recommendation: Reject. Unsupported by the record citation. The above-referenced transcript cite is a discussion of Mr. Slater's after-the-fact manual adjustments to the output of FPC's units in the Unit Commit simulation model.

APPROVED

9. In some of FPC's "change case" scenarios, FPC identified shutting Crystal River 4 down as the alternative to curtailment. (Tr. 796, l. 11-14; Exh. 16, LDB-1).
Recommendation: Accept with the clarification that cycling off Crystal River Unit 4 was not the only alternative to curtailment but, rather, was part of a larger action taken by FPC in the "change case" scenarios of 1/2/95 and 1/7/95.

APPROVED

10. In its Unit Commit simulation model, FPC has incorporated parameters it regards as necessary to maintain reliability. (Tr. 797, l. 13-14).
Recommendation: Accept and incorporate with the clarification that the above-referenced transcript citation does not contain the above-mentioned statement. Rather, the transcript cite listed above refers to whether or not OCL/Pasco Witness Slater, in his change case calculations, respected "any criteria constraints regarding load control and voltage support." This proposed finding of fact is supported by the record at Tr. 918, l. 11-13.

APPROVED

MITIGATION (Issue 2)

APPROPRIATE UNIT COMMITMENT (Issue 2a)

11. Prior to four of the seven curtailments declared by FPC, FPC chose to commit all five of its Crystal River base load units to service. (Exh. 11, KJS-2).
Recommendation: Accept with the clarification that FPC did not commit the maximum generation output of all five Crystal River units at those times.

APPROVED

12. Prior to the other three curtailments declared by FPC, FPC chose to commit four of its five Crystal River base load units to service. (Exh. 11, KJS-2).
Recommendation: Accept with the clarification that FPC did not commit the maximum generation output of all four of the five Crystal River units at those times.

APPROVED

13. On one occasion FPC avoided a generation imbalance by deliberately delaying the return to service of its Crystal River 3 nuclear unit from a planned outage. (Tr. 943, l. 21-23).
Recommendation: Accept with the following clarification: At the above-referenced transcript cite, FPC Witness Southwick stated that one QF curtailment was averted by "slowing the rate at which the Crystal River nuclear unit was returned to service after an outage." Slowing the rate of a unit's return to service is not necessarily the same as deliberately delaying the unit's return to service.

APPROVED

14. FPC has also managed low load situations by keeping other base load units that were down for maintenance out of service longer than planned. (Tr. 943, l. 19-20).
Recommendation: Accept with the clarification that FPC's actions did not manage low load situations, but "help[ed] avert" them (Tr. 943, l. 18-20).

APPROVED

15. During all of the seven curtailments declared by FPC, alternatives to base load units in the form of intermediate capacity, peaking capacity, and/or purchased power were available to FPC in sufficient quantity to enable FPC to serve its peak load following the low load event. (Tr. 654, l. 11-15; Exh. 11, KJS-3).
Recommendation: Accept.

APPROVED

DECREASE GENERATION FROM OTHER SOURCES (Issue 2b)

16. FPC subordinates its firm QF contracts to the minimum take provision of its UPS contract with Southern Company. (Tr. 650, l. 10-12).
Recommendation: Reject. Misleading and argumentative. FPC "is living by the terms of all its contracts. It is important to recognize, however, that the contracts are not all the same." (Tr. 939, ll. 6-8). The Southern Company UPS contracts are must-take contracts, while the QF contracts allow for curtailment under certain conditions.

APPROVED

17. During two of the seven curtailment events declared by FPC, the amount of power that FPC purchased from Southern Company exceeded the amount of firm QF purchases that it curtailed. (Tr. 651, l. 17-20).
Recommendation: Accept with the clarification that the actual hourly minimum takes for the Southern Company purchases exceeded the hourly levels of curtailment.

APPROVED

SALES EFFORTS (Issue 2c)

18. When the total of firm QF purchases and must-run base load units exceed system load, a sale by the utility of its excess generation eliminates the imbalance between generation and load. (Exh. 11, KJS-4).
Recommendation: Accept with the clarification that other methods may also be used to mitigate or eliminate the imbalance between generation and load. Curtailment of QF purchases is an example of one of those methods.

APPROVED

19. A sale by a utility of its excess energy results in no change in the operational status or production costs of its own generators. (Tr. 656, l. 10-14; Exh. 11, KJS-4).
Recommendation: Accept.

APPROVED

20. A sale by a utility of its excess energy at any price above zero results in a removal of the imbalance between generation and load without any "negative avoided costs." (Tr. 657, l. 15-21).
Recommendation: Reject. Not supported by the greater weight of the evidence. The testimony of FPC Witness Southwick substantially illustrates the "negative avoided costs" associated with the sale of excess energy at any cost less than system incremental cost.

APPROVED

21. The price of a transaction on the Florida Energy Broker is derived by "splitting the savings," quantified as the difference between the cost of the purchasing utility to generate and the price quoted by the selling utility. (Tr. 952, l. 21 - Tr. 953, l.5).
Recommendation: Reject. Immaterial and irrelevant to a determination of the issues in this case.

APPROVED

22. During some hours in which FPC curtailed purchases from firm QFs, other utilities that quoted prices lower than FPC's sold energy on the Florida Energy Broker. (Tr. 223, l. 3-19).
Recommendation: Reject. Immaterial and irrelevant to a determination of the issues in this case.

APPROVED

23. During minimum load periods, FPC bases the price that it quotes for off-system sales on the same price sheet that it uses to quote bids during normal circumstances. (Tr. 214, l. 17-24).
Recommendation: Reject. Not supported by the record citation.

APPROVED

24. When the combination of firm QF purchases and must-run base load generation exceeds FPC's minimum load, FPC incurs no incremental cost associated with the amount of the excess. (Tr. 220, l. 6-12; Tr. 526, l. 12-24).
Recommendation: Reject. Not supported by the record citation. Unsupported by the greater weight of the evidence. FPC Witness Southwick provided substantial testimony regarding the negative avoided cost associated with excess capacity.

APPROVED

25. Other utilities subject to regulation by FERC -- such as those in the New York Power Pool -- routinely reflect the zero marginal cost of excess energy in the prices they incorporate in inter-utility transactions. (Tr. 658, l. 2-15).
Recommendation: Reject. Irrelevant and immaterial to the resolution of the issues in this case.

APPROVED

APPROPRIATE COSTS TO CONSIDER (Issue 6a)

26. Whether to increase output from a unit to make a sale is an operational decision. (Tr. 389, l. 5-7). In evaluating such a decision, FPC assesses only short-term, out-of-pocket production costs. (Tr. 388, l. 23 - Tr. 389, l. 4).
Recommendation: Accept.

APPROVED

27. The selection of which units to commit is an operational decision. (Tr. 387, l. 1-16). In making this decision, FPC assesses only short-term, out-of-pocket production costs. (Tr. 388, l. 23 - Tr. 389, l. 4).
Recommendation: Reject. Not supported by the record citation.

APPROVED

28. The choice of removing a base load unit or curtailing firm QFs is an operational decision. (Tr. 389, l. 8-11).
Recommendation: Accept with the clarification that the above-mentioned action is a short-term, rather than long-term, action.

APPROVED

29. The "unit impact costs" quantified by FPC witness Lefton include changes due to creep and fatigue that may impact a unit over the course of its useful life. (Tr. 536, l. 9-12).
Recommendation: Accept with the clarification that FPC Witness Lefton's testimony illustrated that a unit's useful life is shortened due to frequent cycling, which causes creep and fatigue.

APPROVED

30. The analysis underlying a decision to cycle a base load unit or curtail firm QFs values QF deliveries over only the short-term, measured by FPC to be the curtailment period of several hours. (Tr. 670, l. 1-3).
Recommendation: Accept with the clarification that the "value" of QF energy deliveries (in lieu of coal-generated energy) over the short term includes both benefits and costs.

APPROVED

31. FPC engaged Aptech to perform three of the eleven analyses proposed by Aptech. (Tr. 667, l. 1-4; Exh. 11, KJS-6).
Recommendation: Accept.

APPROVED

32. The values for cycling costs supplied by Mr. Lefton contain significant uncertainty. The uncertainty has many sources. (Exh. 11, KJS-5 at 3).
Recommendation: Accept.

APPROVED

APPROPRIATE TIME FRAME (Issue 6b)

33. When FPC evaluates which units it will next commit to service, it examines all values associated with the unit under review for a period of at least one day and usually several days. (Tr. 685, l. 9-12).
Recommendation: Accept with the clarification that FPC's commitment decisions are based on benefits and costs associated with that unit for a period ranging from one day to one week.

APPROVED

34. When FPC evaluates whether to accept or curtail deliveries of firm QF power in a minimum load situation, it values the QFs over a period limited to the curtailment hours. (Tr. 670, l. 1-3).
Recommendation: Accept with the clarification that one part of the analysis underlying a decision to cycle a base load unit or curtail firm QFs is to determine avoided energy costs. FPC looks at avoided energy costs for only those hours during which the QF curtailments occur.

APPROVED

NEGATIVE AVOIDED COSTS (Issue 6)

35. FPC has not attempted to measure production costs with and without firm QFs at any time prior to its decisions to curtail firm deliveries. (Tr. 912, l. 9-14).
Recommendation: Accept.

APPROVED

36. When the status of the units on the system is known, it takes only a few minutes to compare the costs of an alternative to curtailment with the Unit Commit system simulation program. (Tr. 754, l. 12-14).
Recommendation: Reject. Conclusory and unsupported by the greater weight of the evidence. The above-mentioned transcript cite contains an exchange between Commissioner Deason and OCL/Pasco Witness Slater. Questioned on his ability to perform "after-the-fact" trial and error runs to compare QF curtailment costs to coal unit cycling costs, Mr. Slater said that he "arrived at the strategy" on some of the runs in 30 minutes.

APPROVED

37. With respect to each of FPC's seven original base cases curtailment scenarios, there was available to FPC a feasible shut down alternative involving no negative avoided costs. (Tr. 676, l. 16-21).
Recommendation: Reject. Conclusory and unsupported by the greater weight of the evidence. FPC Witness Southwick provided substantial testimony on the reality of negative avoided costs associated with purchasing QF capacity in lieu of curtailment during minimum load periods.

APPROVED

38. With respect to the seven modified base cases presented by FPC in rebuttal testimony, there were available to FPC in at least six of the cases feasible shutdown alternatives that involved no negative avoided costs. (Tr. 692, l. 12-14; Exh. 13, KJS-10).
Recommendation: Reject. Conclusory and unsupported by the greater weight of the evidence. FPC Witness Southwick provided substantial testimony on the reality of negative avoided costs associated with purchasing QF capacity in lieu of curtailment during minimum load periods.

APPROVED

39. In all simulations of the FPC system during the seven curtailment events, using FPC's simulation model and data, the base load unit removed to eliminate the generation imbalance returned to service in time to meet rising load following the minimum load event. (Tr. 763, l. 7-15).
Recommendation: Reject. Not supported by the greater weight of the evidence. In the above-referenced cite, OCL/Pasco Witness Slater's response is to a question regarding application of the unit commit model and assumptions on the ramp-up rate of a hypothetical unit. This does not in any way conclusively state what is contemplated in the above proposed finding of fact.

APPROVED

40. FPC uses the same Unit Commit model and data that were employed to prepare the curtailment and change case scenarios to derive the price it pays for as-available energy. (Tr. 886, l. 21-23).
Recommendation: Accept with the clarification that the Unit Commit models were "developed during the normal course of business for as-available energy payment purposes." The models were not developed to determine the cost impacts of curtailment, although this "readily available" data could be used after the fact by FPC to illustrate the prudence of management decisions made before the fact.

APPROVED