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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION  
FLORIDA POWER & LIGHT COMPANY**

**Docket No. 900796-EI**

**Rebuttal Testimony Of Samuel S. Waters To:**

**The Direct Testimony Of  
Mr. Robert Scheffel Wright**

**November 28, 1990**

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**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF SAMUEL S. WATERS**

**DOCKET NO. 900796-EI**

**NOVEMBER 28, 1990**

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

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

4

5      **Q.    Have you previously testified in this docket?**

6      **A.    Yes, I have.**

7

8      **Q.    What is the purpose of your rebuttal testimony?**

9      **A.    My rebuttal testimony addresses issues raised by Mr. Robert Scheffel**  
10           **Wright in his direct testimony on behalf of the Citizens of the State of**  
11           **Florida.**

1 Q. What specific issues in Mr. Wright's testimony will you address?  
2 A. Mr. Wright, on page 10, lines 11-13 of his direct testimony, has stated,  
3 "Finally, it is not clear whether FPL has even subjected the Scherer 4  
4 purchase to the same evaluation process to which it subjected the RFP  
5 proposals." Specifically, he goes on to say "... one cannot discern from  
6 FPL's petition and testimony whether FPL's evaluation of the Scherer 4  
7 purchase included subjecting this option to the 'most severe  
8 penalties' ... FPL applied to RFP proposals for facilities located outside  
9 of Florida." Although Mr. Wright has raised here only speculative  
10 questions and not presented any substantive arguments to address these  
11 issues, I will discuss how FPL analyzed the Scherer 4 purchase and how  
12 the concept of penalties related to location is generally applied. In  
13 addition, I will discuss how the additional transmission facilities, which I  
14 presented in my direct testimony, relate to the purchase of Scherer  
15 Unit No. 4, as well as Mr. Wright's assertions regarding the adequacy of  
16 the cost data for Scherer Unit No. 4.  
17  
18 Q. What is the nature of the "severe penalties" quoted in Mr. Denis'  
19 testimony and referenced by Mr. Wright?  
20 A. The "penalty" concept which FPL has introduced recognizes the impact  
21 of the location of a generator on the transmission emergency assistance  
22 capability of the FPL system. This impact translates into a reduced  
23 contribution to system reliability. Simply put, a generator located so as

- 1 to reduce FPL's ability to access emergency power contributes less to  
2 system reliability than an equivalent generator at a location which does  
3 not reduce the import capability.  
4
- 5 Q. Please explain this concept in general terms using an example.
- 6 A. Yes. Consider two systems of 10,000 MW total capacity. System A has  
7 8,000 MW of installed capacity and 2,000 MW of firm purchases to meet  
8 load. System B has 10,000 MW of installed capacity and no firm  
9 purchases. Both systems have a total of 2,000 MW of import capability.  
10 If a contingency occurs, such as loss of a large generating unit, System B  
11 can import power, provided it is available, to make up the loss. System A  
12 has no more ability to import power because its transmission capability  
13 is already being used by its firm purchases, and therefore, System A  
14 would have to be considered a slightly less reliable system, all other  
15 factors being equal. To achieve equal reliability to System B, System A  
16 might add capacity, which could be viewed as a "penalty" to System A,  
17 assessing this additional capacity against the purchases of 2,000 MW.  
18
- 19 Q. How does FPL evaluate the effect of this penalty?
- 20 A. For a specific generating unit, a two step process is followed. First, the  
21 impact of the generator on FPL transfer limits is calculated based on load  
22 flow analyses. Any change in the transfer limits is reflected in the second  
23 step where the generator is added to an expansion plan and system loss-

1 of-load probability (LOLP) is calculated. The "penalty" refers to the  
2 comparison of this final LOLP to the LOLP produced by an alternate  
3 expansion plan which does not reduce system transfer capability. If  
4 additional capacity would be required to maintain equal reliability to the  
5 case where there is no impact on transfer capability, this additional  
6 capacity is a penalty or discount to the specific generating unit being  
7 examined.

8  
9 **Q. Was this process followed in analyzing the purchase of Scherer Unit  
10 No. 4?**

11 **A. Yes. The purchase of Scherer Unit No. 4 reduced FPL import capability  
12 by the amount of the purchase. For example, in a year where FPL  
13 purchases 300 MW, emergency import capability was reduced by  
14 300 MW. The additional capability represented by an assumed new  
15 500 KV transmission facility were then added to that amount. As  
16 discussed in my direct testimony, the costs of this new transmission  
17 facility were then added into the analysis of the Scherer purchase.**

18  
19 **Q. How does this compare to the process employed in the analysis of  
20 the RFP responses?**

21 **A. The analysis performed on the purchase of Scherer Unit No. 4 was more  
22 rigorous than the analyses of the RFP responses. In analyzing the RFP  
23 bids, a set of generic location specific penalty factors was determined**

1           which could be used as representative of a broad range of locations.  
2           Due to the large number of RFP bids, specific analyses of each and  
3           every bid using the two step process I have described would have taken  
4           a great deal of time. The use of generic location factors aided FPL in  
5           meeting self imposed time commitments to the bidders.

6

7           **Q. Mr. Wright asserts that the purchase of Scherer Unit No. 4 would**  
8           **necessitate expansion of the Florida Southern Interface, at an**  
9           **unknown cost to FPL. Do you agree?**

10          **A. No, for two reasons. First, the purchase does not necessitate the**  
11          **expansion of the transmission interface. This fact should be obvious. In**  
12          **the analysis of the purchase presented in my direct testimony, no**  
13          **expansion of the interface was assumed prior to 1997, and purchases**  
14          **began in November, 1990. The full 646 MW of purchase were reflected**  
15          **in 1995, without expansion of the interface. Existing UPS purchases by**  
16          **FPL decline from 2,000 MW in 1991 to approximately 900 MW in 1995,**  
17          **making transmission space even more available for the purchase. This**  
18          **purchase can be accommodated without the violation of system transfer**  
19          **limits. The addition of new transmission will serve to enhance system**  
20          **reliability and provide other economic benefits, but it is not required to**  
21          **make the purchase possible.**

- 1           **Second, I disagree with Mr. Wright's suggestion that the costs of new**  
2           **transmission are unknown to FPL. While I will agree that the final cost**  
3           **of the transmission project is not yet determined, the figure of**  
4           **\$180 million is not a wild guess. Mr. Wright apparently feels comfortable**  
5           **enough with the estimate to add it to the cost of the Scherer unit.**  
6
- 7           **Q. Is it wrong to add the cost of the transmission line to the cost of the**  
8           **Scherer unit?**
- 9           **A. No, provided this total cost is not simply compared to other generating**  
10           **units as a capacity cost. The additional benefits of the transmission**  
11           **facilities must be accounted for. The transmission facilities allow**  
12           **increased economy purchases. This recognition of both costs and**  
13           **benefits is precisely how FPL evaluated the Scherer purchase with**  
14           **additional transmission capability. It is wrong for Mr. Wright to simply add**  
15           **the cost of transmission to the Scherer purchase and say it is**  
16           **necessitated by the purchase, particularly without acknowledging the**  
17           **other benefits it will provide.**  
18
- 19           **Q. Could you please identify other assertions regarding cost data with**  
20           **which you disagree?**
- 21           **A. Yes. Beginning on page 5, line 20, Mr. Wright asserts that the**  
22           **Commission does not have the information necessary to make an**  
23           **informed decision on FPL's purchase of Scherer Unit No. 4. More**

1 specifically, he asserts on page 6, lines 13-16 that, "... the Commission  
2 needs to know what the actual costs of buying, owning, and operating the  
3 unit will be. These data will only be known when all applicable contracts  
4 are available for review." Mr. Wright also argues that insufficient data has  
5 been provided on alternatives to the Scherer purchase (e.g. page 8, lines  
6 10-11).

7  
8 **Q.** Could you please comment on these assertions about the adequacy  
9 of the data?

10 **A.** Yes. The information provided in FPL's testimony is sufficient and reliable  
11 to make informed decisions regarding FPL's request. More specifically,  
12 the FPL-Southern Letter of Intent specifies the purchase price for the  
13 facility. Moreover, since Scherer Unit No. 4 is an existing unit, there is  
14 a reliable basis to estimate the performance characteristics of the Unit  
15 and to project fuel and O&M costs. Indeed, the accuracy and reliability  
16 of the data currently available to evaluate the cost effectiveness of  
17 Scherer Unit No. 4, or alternatives to the purchase, is comparable or  
18 superior to the information normally available to make power purchase  
19 decisions.

20  
21 This Commission has a history of evaluating generation alternatives in  
22 connection with the Annual Planning Hearing proceeding and more  
23 recently evaluated alternatives in FPL's need determination hearing for

1           Martin Units No. 3 and 4 and the Ft. Lauderdale repowering. Additionally,  
2           I have provided in my direct testimony FPL's generation expansion plan,  
3           significant information on underlying assumptions ( e.g. '89 Load forecast,  
4           fuel forecast, demand side management measures, financial assumptions  
5           and FPL's avoided unit assumptions) and a comparison of the economics  
6           of the Scherer purchase to other alternatives available to FPL. Additional  
7           information has been provided in response to interrogatories.

8  
9           With respect to approval of the inclusion of the total purchase price of  
10          Scherer 4 in the rate base, FPL has already provided sufficient  
11          information for the Commission to approve the Company's petition. The  
12          basic price to be paid for the Scherer 4 Unit has been established  
13          (\$615.5 million) and will not change except potentially for minor  
14          adjustments; for example, to reflect actual inventories at time of closing.  
15          FPL has provided a reasonable estimate of the operation and  
16          maintenance costs for the Unit (see my Document No. 6). Estimated  
17          costs for transmission (wheeling) and fuel costs have also been provided  
18          (see G.R. Cepero's Document No. 2, p. 15 of 18, and my Document  
19          No. 2, p. 1 of 4). In this regard, it should be noted that actual fuel,  
20          operation and maintenance costs are also not known for utility  
21          constructed units until actually incurred. Rather, these costs are  
22          estimated based on the best available information and are subject to  
23          Commission review for prudence in fuel adjustment or other proceedings.

1           The proposed transaction, therefore, does not represent a departure from  
2           Commission practice. In fact, it provides greater certainty in that the unit  
3           is already built and its costs are known, unlike "yet to be constructed"  
4           alternatives. The Commission therefore has sufficient data to reach a  
5           conclusion regarding the appropriateness and prudence of FPL's  
6           purchase of Scherer Unit No. 4.

7

8       **Q.**    Are changes in the cost estimates for Scherer Unit No. 4 (e.g. fuel,  
9           O&M, transmission) likely to change the fundamental decision to  
10          acquire Scherer Unit No. 4, rather than pursue a different  
11          alternative?

12       **A.**    No. Scherer Unit No. 4 compares favorably to FPL constructed units  
13          (Martin Unit Nos. 5 and 6) or to purchases from QFs under a standard  
14          offer contract by over \$400 million in net present value savings (\$225  
15          million relative to the standard offer with a 20% risk factor).

16

17           To erode the cost advantage of Scherer Unit No. 4 over these other  
18           alternatives, the O&M and fuel estimates for Scherer Unit No. 4 would  
19           have to be off several orders of magnitude. Some simple sensitivity  
20           analysis illustrates the point. For example, if we arbitrarily double the  
21           O&M estimate for Scherer Unit No. 4, the cumulative present value  
22           savings would be reduced by approximately \$70 million, which would still

1 leave a very substantial margin of savings over Martin Nos. 5 and 6, or  
2 QF alternatives.

3

4 Q. Would you please summarize your assessment of Mr. Wright's  
5 discussion of FPL's evaluation of the Scherer purchase?

6 A. I believe Mr. Wright's questions and assertions result from an incomplete  
7 understanding of the analytical process required to analyze the Scherer  
8 purchase. FPL has properly accounted for location in its evaluation of  
9 the Scherer purchase versus other alternatives, properly represented the  
10 costs and benefits of additional transmission in its analyses, and properly  
11 concluded that the Scherer purchase is the most cost effective alternative  
12 to meet the future needs of its customers.

13

14 Q. Does this conclude your rebuttal testimony?

15 A. Yes, it does.