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September 8, 1989

Mr. Steve Tribble
Division of Records and Reporting
Florida Public Service Commission
101 East Gaines Street
Tallahassee, FL 32301

RE: Docket No. 890148-EI

Dear Mr. Tribble:

Enclosed are the original and fifteen (15) copies of the revised pages to the prefiled testimony of Mr. S. S. Waters in Docket No. 890148-EI. At the hearing on August 23, 1989, Chairman Wilson asked that corrected pages to Mr. Waters' Direct and Rebuttal Testimony be submitted to the court reporter for insertion into the transcript. The corrected pages were to reflect corrections Mr. Waters made on the stand through an errata sheet.

Consistent with Chairman Wilson's directive, FPL is filing the following corrected pages to Mr. Waters' Testimony:

Direct Testimony Pages: 11, 12, 15, 17, 18, 19, 20, 22, 23, 24 and 25

Rebuttal Testimony Pages: 4, 9, 10, 37, and 43

Exhibit 208, Revised Document 4, Page 1 of 2

So that the Court Reporter is assured of a copy, we are providing a separate copy of this transmittal directly to Ms. Casseaux's office.

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If you have any questions regarding this transmittal, please contact me.

Very truly yours,

Charles A. Guyton

CAG:do
Enclosures

cc: Counsel for all parties of record
Ms. Carol Casseaux

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Florida Power & Light Company for approval of "Tax Savings" Refund for 1988	Docket No. 890319-EI Filed: Sept. 8, 1989

CERTIFICATE OF SERVICE

I CERTIFY that a true and correct copy of Florida Power & Light Company's Revised Pages 11, 12, 15, 17, 18, 19, 20, 22, 23, 24, 25 of the Direct Testimony of S. S. Waters, Revised Pages 4, 9, 10, 37, and 43 of the Rebuttal Testimony of S. S. Waters and Exhibit 208 - Revised Document 4 - Page 1 of 2 has been furnished by U. S. Mail or Hand Delivery to the following individuals on this 8th day of September, 1989:

Stephen C. Burgess, Esq.
Office of Public Counsel
111 West Madison Street
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Tallahassee, FL 32301

Charles A. Guyton

SSW
8-31-89

Errata Sheet
S.S. Waters

Rebuttal Testimony

• Page 4, Line 24	Add "Mr. Pollock calculates" after billion
• Page 9, Lines 24, 25	Strike "by a "preponderance of the evidence""
• Page 10, Line 1	Add "FPL had proven by a "preponderance of the evidence" that" after that
• Page 10, Lines 1-2	Add quotes around positive cumulative present value of expected net savings
• Page 37, Line 15	, → .
• Page 43, Line 1	"displacement" should be one word

Primary Purpose - Economic Displacement Of Oil

Q. Have Mr. Pollock's direct testimony and exhibits established that the Project has failed to economically displace oil fired generation?

A. No.

Q. Please explain.

A. Although Mr. Pollock asserts that the Project has not economically displaced oil fired generation, his direct testimony refutes his assertion. For example, in his attempt to dramatize the difference between the original projections and actual results adjusted for more current projections, Mr. Pollock points out on page 10 of his direct testimony that the "net fuel savings," while substantially below the original projection, are still a positive $1.3 billion on a nominal dollar basis. This calculation is also shown on Mr. Pollock's chart appearing on page 11 of his direct testimony.

Q. Would you agree that the reduction in net fuel savings from that originally forecasted has been substantial?

A. Yes. But, even if these savings were relevant to deciding whether oil backout cost recovery should continue, they still remain positive, and the $1.3 billion Mr. Pollock calculates still represents substantial savings.

No. 11217, but also the exhibit reflecting the test, Late Filed Exhibit 15(j) in Docket No. 820155-EU, was prepared by FPL at the request of the Commission. Mr. Pollock, in pages 15 through 18 in his direct testimony, acknowledges that the Project originally passed the test and continues to pass the test. In light of his own testimony, which demonstrates that the Project continues to economically displace oil, I fail to see the reasoning behind Mr. Pollock's assertion to the contrary.

Q. **Mr. Pollock asserts (page 12) that the Commission approved the Project for cost recovery even though FPL was projecting to accumulate substantial net losses. Please comment.**

A. This is a total misrepresentation of fact. The Commission did not, as Mr. Pollock alleges, base its Project qualification decision on the possibility of additional fuel savings provided by Alternate and Supplementary energy purchases from the Southern Companies, offsetting "forecasted" losses. None of the economic tests applied by the Commission, either during the qualification proceeding or since, has shown the accumulation of substantial net losses.

It is almost absurd for Mr. Pollock to assert that FPL projected substantial net losses for the Project, when the Commission actually found that FPL had proven that the Project would economically displace oil fired generation and that FPL had

proven by a "preponderance of the evidence" that the Project would produce a "positive cumulative present value of expected net savings" within the first ten years of operation.

Q. Is Mr. Pollock's testimony consistent with the FIPUG Petition in this docket?

A. No. FIPUG's Petition asks that the Commission: "determine that FPL's Transmission Project has failed to achieve the 'primary purpose' which led the Commission to qualify it under Rule 25-17.016, F.A.C." (FIPUG Petition, page 14). By Mr. Pollock's own admission, on pages 17 and 18 of his direct testimony, the Project passes the Primary Purpose Test, even when actual data is used. I can only surmise from this contradiction that in preparing the Petition, either FIPUG and Mr. Pollock failed to inform themselves as to how the "primary purpose" of the Project was determined by the Commission, or they were aware of how the Commission originally determined the primary purpose of the Project and intentionally chose to ignore or misstate it. Given that Mr. Pollock now concedes that the Project passes the Primary Purpose Test, the Commission should find that the Project has achieved its primary purpose of economic displacement of oil fired generation.

accelerated cost recovery of the Project costs resulting from actual net savings, which are premised in part on Martin unit deferral, is appropriate and should be allowed to continue.

Changed Circumstances

Q. **Mr. Pollock asserts that changed circumstances warrant a reexamination of the Project by the Commission. Do you agree?**

A. No. I have been informed by Counsel that "changed circumstances" cannot warrant the discontinuance of Project cost recovery as a matter of law, but from my perspective, there are no meaningful or significant changed circumstances that should affect cost recovery, even if it could be discontinued. Mr. Pollock has suggested that circumstances have changed such that (1) economic oil displacement (oil backout) is no longer the primary purpose of the Project and coal by wire purchases (page 21) and (2) deferred capacity savings no longer should be included in the calculation of actual net savings (page 38). I do not believe that there are any significant changed circumstances that justify reassessing whether the Project and associated purchased power costs should be recovered through the Oil Backout Cost Recovery Factor.

sible under the Rule provided the economic displacement of oil remained the primary purpose.

In addition, Mr. Pollock has acknowledged that FPL load growth has been essentially as projected in 1982. Power purchases have also been as projected in 1982. These facts lead to the inescapable conclusion that the capacity deferral benefits provided by the Project remain essentially unchanged. This certainly does not suggest that there are any changed circumstances since 1982 which have altered the primary purpose of the Project.

Q. Have any of the important factors changed regarding economic oil displacement as the primary purpose of the Project?

A. No. The Project still passes the Primary Purpose Test. Capacity needs are essentially as FPL projected. I see no reason to take FPL to task because load growth, capacity deferral and power purchases have materialized as forecast.

Q. What about Mr. Pollock's second issue, that changed circumstances warrant revisiting the use of capacity deferral benefits of the Martin units in the calculation of actual net savings?

A. I have already demonstrated that the Martin Coal Units were deferred by the Project and are therefore the appropriate basis for the calculation of net savings. The fact that these units

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Errata Sheet
S.S. Waters

Direct Testimony

• Page 11, Line 4	a → FPL's
• Page 11, Line 5	project → Project is → was
• Page 11, Line 12	or → nor
• Page 11, Lines 19,20	Change parentheses to brackets
• Page 12, Line 21	Add "net" to fuel savings
• Page 15, Line 1	"straightforward" should be one word
• Page 17, Line 6	costs → revenue requirements
• Page 18, Line 21	or → nor
• Page 19, Line 24	Add "i.e. 1987" after Project
• Page 20	Reprinted (correction to page 19 changed composition of page)
• Page 22, Line 13	will → may
• Page 23, Line 4	Add "needs" after capacity
• Page 24, Lines 17-18	Remove sentence "Then the total life cycle costs of a coal unit and a combined cycle unit were virtually identical."
• Page 25	Reprinted (correction on page 24 changed composition of page)
• Document 4 Page 1 of 2, Line P	Change (c) to [3/]

proposed project is the economic displacement of oil fired generation in the State of Florida."

Q. How was the determination made that the primary purpose of FPL's Project was the economic displacement of oil-fired generation?

A. The Commission has established a means of testing that issue. In the final order in the Project's qualification proceeding, Order No. 11217, the Commission devoted an entire section to the discussion of "The Primary Purpose Test." FPL proposed, and the Commission Staff supported, a Primary Purpose Test which was met if gross fuel savings expected from the Project outweighed all other gross savings on a net present value basis. Neither FIPUG nor Public Counsel proposed a test, but Public Counsel, based on an examination of system expansion plans and projected oil usage, argued that FPL's Project and the related unit power purchases were primarily intended to meet load growth rather than displace oil. The Commission rejected these alternatives and stated:

> In our mind, the issue [determination of primary purpose] is best resolved by allocating the fuel costs of the project against the fuel savings and the capacity costs of the project against the capacity savings. We think it proper to allocate costs and benefits in this case because the Company could have purchased the coal by wire power on a non-firm basis, thereby avoiding the

capacity costs due Southern but also foregoing the deferred capacity benefits.

Having stated that UPS capacity costs should not be allocated against fuel savings in determining the Project's primary purpose, the Commission specifically embraced a methodology for determining whether the Primary Purpose Test was satisfied:

> If the net fuel savings exceed the cost of the Project, the Company has met its burden of proof on this issue and demonstrated that the primary purpose of the Project is oil displacement. The Company has done this in Exhibit 15(j).

Q. Have you examined Exhibit 15(j) from the Qualification Proceeding?

A. Yes. I have attached a copy of the original Exhibit 15(j) and a supporting schedule in Docket No. 820155-EU as my Document No. 3. As stated in Commission Order No. 11217, this exhibit reflects the methodology used by the Commission in determining whether or not a project meets the Primary Purpose Test. That is, for the first ten years of the Project, net fuel savings are compared to Project revenue requirements.

FPL was straightforward in acknowledging the difficulty in accurately projecting oil prices. It is clear from a review of the transcript that the Commission was fully apprised of the probability that actual experience would deviate from the projections and that the deviation might be substantial.

Oil prices have, in fact, been lower than any of the forecasts used in the original qualification. However, the original intent of presenting a banded forecast was to present a range of possible outcomes, and it was FPL that produced the low band forecast. More importantly, even with actual oil prices lower than those originally projected, the Project has economically displaced oil fired generation.

Q. Does the Project still pass the Primary Purpose Test, using actual data and current forecasts?

A. Yes, however, I would like to add that I do not think it is proper to "requalify" a project. Decisions on whether to qualify a project for Oil Backout Cost Recovery should be made based on the best available information at the time qualification is sought. That is the time when project decisions must be made, information justifying the project is readily available and the Commission is fully apprised of current circumstances affecting a project. Requalification or reevaluation of qualification through hindsight, as FIPUG appears to want to do, is difficult and unfair.

Actual Net Savings - Deferral Of Martin Unit Nos. 3 And 4

Q. Has FPL collected any revenues for the project which have resulted from actual net savings?

A. Yes. As authorized by the Rule, and as determined appropriate by the Commission in Order Nos. 18136, 19042, 20133 and 20966, FPL has and is collecting revenues above Project revenue requirements because the project has produced net savings.

Section (4)(a) of the Rule authorizes collection of revenues equal to:

- Straight line depreciation, plus
- Project cost of capital, plus
- Actual tax expense, plus
- Oil/non-oil O&M differential, plus
- Two-thirds of the actual net savings (if positive)

The amount identified as two-thirds of the actual net savings is recovered through the Oil Backout Cost Recovery Factor and applied as additional depreciation. This recovery is to continue until the Project investment is fully recovered.

Q. How were actual net savings derived in each of the instances?

A. The specific methodology for determining the actual net savings for inclusion in FPL's Oil Backout Cost Recovery Factor was presented in D. L. Babka's testimony in Docket Nos. 870001-EI and 880001-EI. The methodology was the same in all cases and part of the calculation included deferred capacity benefits associated with the Martin coal units. The Martin coal units were deferred as a result of the Project and the related UPS agreement with the Southern Companies.

Q. When did capacity deferral benefits first appear in FPL's calculation of net savings in an FPL Oil Backout filing?

A. The first time capacity deferral benefits were projected in an FPL Oil Backout filing was in FPL's January, 1987 testimony for the April, 1987 - September, 1987 recovery period in Docket No. 870001-EI. The capacity deferral benefits were the result of the deferral of Martin Coal Unit No. 3, which would have been placed in service in June 1987, without the purchases from the Southern Companies. Although the recognition of capacity deferral benefits did not produce net savings in the projection of the April, 1987 - September, 1987 period, neither FIPUG nor Public Counsel, who were parties to the Docket, objected to FPL's recognition of capacity deferral benefits in its calculation of net savings.

Q. Has FPL claimed any additional capacity deferral benefits since that time?

A. Yes. The benefits of deferral of Martin Coal Unit No. 3 have continued to appear in all subsequent FPL Oil Backout Cost Recovery Factor filings. Without construction of the Project and the UPS Agreement, Martin Coal Unit No. 4 would have come into service in December of 1988. Consequently, FPL began to accrue capacity deferral benefits for Martin Unit No. 4 in its October, 1988 through March, 1989 filing in Docket No. 880001-EI. This was also supported in FPL's prefiled testimony. The resultant Levelized Oil Backout Cost Recovery Factor of 0.886 cents/KWH for the period October, 1988 - March, 1989 was approved without objection by FIPUG or Public Counsel.

Q. Is FIPUG questioning in this proceeding issues previously raised by FPL and decided by the Commission?

A. Yes. During 1987 and 1988, FPL presented the methodology and underlying assumptions for its calculation of capacity deferral benefits used in qualifying actual net benefits to be recovered through the Oil Backout Cost Recovery Factor. This was consistent with the Commission's directive in the original certification proceeding that the proper measure of savings to be recovered was to be determined "at such time as the deferred units would have come on-line, absent the Oil Backout Project, i.e., 1987." Even though FIPUG had notice as far back as 1982 and even

though FIPUG has been an active party in the Oil Backout proceedings throughout 1987 and 1988, FIPUG waited until significant dollars of actual net savings had been recovered before raising a challenge in January, 1989.

Q. Was it appropriate for FPL and the Commission to include the deferral of Martin Coal Unit Nos. 3 and 4 in the calculation of net savings in these previous proceedings?

A. Yes. The Martin Coal Units were identified in the qualification proceeding as the capacity additions which would have been required if the Project had not been constructed and the power purchases from the Southern Companies had not been made. The construction of the Project and the purchases from Southern Companies allowed the units to be deferred to the 1990's. This deferral was recognized by the Commission in qualifying the Project by including the units' capacity deferral benefit in the Cumulative Present Value Test. In addition, the deferral of Martin Coal Unit Nos. 3 and 4 was the basis for FIPUG's and Public Counsel's argument in the certification proceeding that the primary purpose of the Project was to meet future load growth. Thus, it appears that at least in 1982, all the parties agreed that the Martin Coal Units would be deferred by the Project and the UPS purchases.

would be coal conversion and gasification which would then be used in a combined cycle type plant, which should have a much lower capital cost than the conventional units that we see today.

It appears to me that Mr. Scalf recognized that the decision to pursue the Project and the UPS purchases would result in the deferral of the Martin Coal Units from 1987 and 1988 until 1992 and 1993. It also appears that Mr. Scalf recognized that another potential benefit of deferring construction of the Martin Coal Units out of the 1987-1988 time frame might be providing time for technological advancements. Because of lower projected fuel prices, FPL and its customers may able to enjoy the fruits of such advances by using less costly combined cycle technology in FPL's next generating unit addition. However, the current prospect that FPL will build a generating unit other than the Martin Coal Units when it eventually undertakes capacity additions does not change the fact that absent the Project and the UPS purchases, the Martin Coal Units would have been built. Consequently, the Martin Coal Units were the units deferred by the Project, and taking advantage of this additional benefit of intervening technological advances does not make the original units "mythical" or make the capacity deferral benefits "illusory."

Q. Please clarify your assertion that FIPUG's allegations show a misunderstanding of the generation planning process?

A. FIPUG has confused what FPL intends to do in the 1990's with what FPL would have done to meet capacity needs in 1987, absent the Oil Backout Project. The two cannot be compared.

In developing generation expansion plans, the need for new capacity must be identified far enough in advance so that all required activities, e.g., siting, licensing, design, engineering and construction, can be performed to meet the required in-service date. The amount of time required to perform these activities establishes the lead time required between a decision to install a new unit and its completion. For Martin Unit No. 3, the required lead time was approximately eight years. This means that to meet the in-service date of June, 1987, FPL would have had to begin expenditures on the unit in 1980. Similarly, for Martin Unit No. 4, the required lead time was seven years. To meet a Martin Unit No. 4 in-service date of December, 1988, expenditures by FPL would have had to begin in 1982. If FPL had not committed to the Project and the UPS purchases from Southern Companies, FPL would have had to construct Martin Unit Nos. 3 and 4 and these units would now be completed and in operation.

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Q. Why do you believe these units would now be in operation, absent the Project and UPS purchases from Southern?

A. FPL evaluates a number of generating unit alternatives when considering capacity additions. In doing so, we look at total expected life cycle costs on a present value basis. When Martin Unit Nos. 3 and 4 were identified as the next unit additions in FPL's generation expansion plans, these coal-fired units had been evaluated against other options on a life cycle basis and found to be less costly. The decision to construct the Project and enter the UPS Agreement was made in 1981, thereby effectively deferring the Martin Units at that point in time. The total life cycle cost relationship between coal-fired units and other alternatives did not change until 1985 planning studies were performed. These studies were then focusing on capacity needs in the mid-1990's. It was not until 1985 when FPL first reflected in its generation expansion plan a combined cycle unit as the next planned generating addition.

I have no reason to believe anything but that the Martin Coal Units would have or could have been built to meet FPL capacity needs in 1987 and 1988. It was not up until 1985, when fuel forecasts for oil and gas showed a significant decline, that combined cycle technology became attractive. Prior to this time, it would have been more economical for FPL to have built its coal-fired units than it would have been to switch to combined cycle technology. Other

factors demonstrate this to be the case. Several coal units were certified by the Commission and/or constructed during the period of 1980-1985. Moreover, as late as May, 1984, the Commission determined that a coal-fired generating unit would be more economical than a combined cycle unit and should be used as the avoided unit for cogeneration pricing. Putting aside Fuel Use Act uncertainty over the use of oil and gas as a primary fuel as well as more limited natural gas supplies during this time period, simple economics suggest that absent the UPS purchases, coal-fired generation was the preferred generating alternative until, at least, late 1985.

One other consideration must be mentioned. The project lead time for a combined cycle unit during the 1980-1985 period was five to seven years. Thus, to meet the 1987 and 1988 capacity needs which would have existed without the UPS purchases, FPL would have to have begun construction on a combined cycle unit (and cancelled construction of the Martin Coal Units) in 1981 and 1982. Of course, the Commission had already approved a 1982 generation expansion plan in qualifying the Project in 1982. Even if combined cycle technology had been more cost effective after 1982, project lead time alone would have dictated the completion of the Martin Coal Units to meet capacity needs in 1987 and 1988.

FLORIDA POWER AND LIGHT COMPANY

500 KV Transmission Project
Comparative Analysis Of Base Case Versus Coal-By-Wire Case
Expected Savings Within First Ten Years Of Commercial Operation

	Totals ($000)	Present[2] Value ($000)	Source[1]
A Fuel Savings			
B Direct Fuel Savings	1,840,852	1,010,158	Line D-I
C Foregone Deferred Capacity Fuel Savings	796,424	316,125	Line T-S
D Fuel Related Savings	(393,121)	(277,265)	Line E-F-G-H
E Total Fuel Savings (B-C+D)	**651,307**	**416,768**	
F Capacity Savings			
G Deferred Capacity Carrying Costs	3,469,030	1,411,829	Line R
H Capacity Cost "UPS"	2,571,002	1,280,748	Line K
I Wheeling Cost "UPS" (INCLUDED IN LINE H)	----	----	
J Total Capacity Savings (G-H-I)	**897,228**	**131,081**	
K Transmission Project Costs			
L Transmission Project Revenue Requirements	290,095	165,081	Line L
M Transmission Project O&M	5,659	2,820	Line M
N Total Transmission Project Costs (L+M)	**295,754**	**167,901**	
O Total Net Benefits (E+J-N)	1,252,781	379,948	
P Primary Purpose Test (B-C+D-N)[3]	355,553	248,867	

Notes:

[1] Source is the attached page 2 of 2 of Exhibit SSW-4, with actual data through May, 1989.

[2] Discount rate = 11.4% each year.

[3] Primary Purpose Test is defined as fuel savings less fuel costs exceeding transmission revenue requirements over the ten year analysis period.

Florida Power & Light Company
Petition To Discontinue FPL's
Oil Backout Cost Recovery
Factor
Docket No. 890148-EI
Revised Document No. 4
Page 1 of 2