

ORIGINAL

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September 22, 1997

Mrs. Blanca S. Bayo
Director, Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

RE: Docket No. 970512

Dear Mrs. Bayo:

Enclosed are an original and fifteen copies each of the Rebuttal Testimony of Messrs. Hood, Noble and Brill on behalf of Florida Power & Light Company. Please file these documents in the captioned docket.

ACK A copy of this letter is enclosed. Please mark it to indicate that the originals were filed and return the copy to me. Copies have been served on the parties shown on the attached Certificate of Service.

AFA

APP

CAF

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EAG

LEG

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OPC

RCH

SEC

WAS

OTH

Sincerely,

Mark K. Logan

Hood - 09647-97
Noble - 09648-97
Brill - 09649-97

Enclosures

cc: All parties of record

RECEIVED & FILED

FPSC-BUREAU OF RECORDS

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition of Florida Power &)
Light Company to Resolve a Territorial)
Dispute with Clay Electric)
Cooperative in Baker County)

Docket No. 970512-EU

Filed: September 22, 1997

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the Rebuttal Testimony of Robert A. Hood; Rex E. Noble, Jr.; and Edward R. Brill have been furnished by U.S. Mail to John H. Haswell, Esquire, Chandler, Lang & Haswell, P.A., Post Office Box 23879, Gainesville, Florida 32602; Robert Elias, Legal Division, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399; William C. Phillips, General Manager, Clay County Electric Cooperative, Inc., P.O. Box 308, Keystone Heights, Florida 32656-0308; Mr. W.G. Walker, III, Florida Power & Light Company, Regulatory Affairs, P.O. Box 029100, Miami, Florida 33102-9100; and Patrick M. Bryan, Esquire, Law Department, Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408, on this 22 day of September, 1997.



Mark K. Logan
Bryant, Miller & Olive, P.A.
201 South Monroe Street
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FLORIDA POWER & LIGHT COMPANY

ORIGINAL

1 BEFORE THE PUBLIC SERVICE COMMISSION
2 FLORIDA POWER & LIGHT COMPANY
3 REBUTTAL TESTIMONY OF EDWARD R. BRILL
4 DOCKET NO. 970512-EU
5 SEPTEMBER 22, 1997

6
7 Q Please state your name and business address.

8
9 A Edward R. Brill and my business address is 272 E.
10 Virginia Avenue, Punta Gorda, Florida 33950.

11
12 Q What is your occupation?

13
14 A I am a Power Quality Specialist in the Customer Service
15 Commercial/Industrial Department of Florida Power & Light
16 Company. I am also a registered Professional Engineer.

17
18 Q Please describe your educational background.

19
20 A I have a Bachelor of Science Degree in Electrical
21 Engineering from Florida Atlantic University, 1987. I
22 also have a Bachelor of Science Degree in Business
23 Administration from Bryan College, Dayton, Tennessee, in
24 1983.

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Q Please describe your professional background.

A I began my career at FPL in 1983 in the customer service department and worked in various capacities in marketing and distribution engineering. Since 1989 I have worked as a Power Quality Specialist, performing analyses at over 600 commercial and industrial customers' facilities to recommend solutions to power quality problems affecting customer's equipment and operations. I am presently responsible for FPL's southwest Florida area.

Q What is the purpose of your testimony?

A The purpose of my testimony is to describe the character of the dual service proposed by FPL and the advantages of FPL's service over the load management generator service proposed by Clay Electric.

Q Clay Electric testifies there is a difference in the character and quality of service provided by their three-phase line and load management generators when compared to FPL's proposal for dual service to River City Plastics. In Mr. Herman Dyal's testimony, beginning on

1 page 5, line 14 and concluding on page 7, line 7, Mr.
2 Dyal asserts the "load management generators offer the
3 only solution for dramatically reducing exposure to power
4 interruption as well as providing power in case of
5 failure to transmission system". Do you agree with Mr.
6 Dyal's statements?

7
8 A No. No one can anticipate all momentary interruptions or
9 faults which might occur on the utility lines and the
10 backup generators being proposed by Clay Electric.
11 Clay's system will do nothing to protect the customer's
12 load from unanticipated faults on the line, including
13 unanticipated weather related faults. The generators
14 will be expensive to install, operate and maintain and
15 will not resolve the customer's problems with
16 interruptions. The advantage of FPL's proposed dual
17 throwover system is that if a fault occurs on the primary
18 service, FPL will be able to transfer to the backup
19 service in less than the 12-18 cycles, which Mr. Dyal
20 states is the customer's threshold. FPL's proposed
21 throwover system is better in eliminating unanticipated
22 interruptions than what Clay is proposing since Clay's
23 system will eliminate none of them shorter in duration
24 than one minute. According to Mr. Dyal, Clay's system

1 with load management generators will take up to a minute
2 to transfer the customer's load after experiencing a
3 fault on their distribution system. In fact, according to
4 Clay's Load Management Generator Contract, the customer
5 may have to call to advise Clay to dispatch the generator
6 in the event of an unanticipated interruption. In
7 contrast, when unanticipated interruptions occur on FPL's
8 distribution line, FPL's switch will automatically
9 transfer in 8.5 cycles or .14 seconds. Clay's assertion
10 that RCP will be able to anticipate interruptions before
11 they occur is possible, in some cases, but will be
12 uneconomical. No one can anticipate when unexpected
13 faults such as lightning, vehicle accidents, animals,
14 trees, equipment failure and human error will occur.
15 Also, the proposed equipment that Clay is providing for
16 inclement weather is susceptible to equipment failures
17 and problems just as is any electrical equipment, i.e.
18 lightning damage.

19
20 Q Mr. Dyal states in his testimony on page 7, lines 2-4,
21 "The dual feed would only provide service in the case of
22 a failure in the primary distribution or substation but
23 would do nothing for a transmission failure". Do you
24 agree with this statement?

1
2 A Yes and no. When FPL has a transmission interruption,
3 both FPL and Clay will see the outage since Clay's
4 substation is fed from FPL's transmission. If the
5 transmission interruption is less than one minute, both
6 proposed systems would see the same event. The only
7 advantage of Clay's system is that when the transmission
8 system is out longer than the one minute Clay says it
9 takes to start the generator, the customer will have
10 power on Clay's system, but not on FPL's system.
11 However, based on the historical data of FPL's Baldwin-
12 Columbia 115 kv transmission line, there have been only
13 three (3) transmission outages since 1992. The longest
14 outage duration was 14 minutes, which occurred during the
15 March 13, 1993 "Storm of the Century". The other two
16 interruptions in the five-year period were a two-minute
17 and a three-minute interruption. For the last five years
18 there have been an average of three (3) momentary
19 interruptions per year on the system. Based on this
20 information, FPL's proposed service will actually be an
21 advantage over Clay's proposed service with generators
22 because the possibility of a momentary interruption of
23 less than one minute is far greater than an interruption
24 lasting longer than one minute and FPL's system will
25 eliminate virtually all distribution momentary

1 interruptions that might affect RCP according to Mr.
2 Dyal's 12-18 cycle criteria.
3

4 Q In Mr. Dyal's testimony on page 5, line 5-7, he states
5 "they felt the generators would provide them an on-site
6 power source which would be the most reliable in times of
7 inclement weather" and the "ultimate reliability which
8 they need". Also on page 8, line 1, Mr. Dyal states,
9 "generators offer the only true alternative to
10 significantly lowering River City Plastics exposure to
11 storm related outages". Do you agree with these
12 statements?
13

14 A No. FPL's proposed throwover system will be able to
15 transfer to the backup feed in 8.5 cycles when a fault
16 occurs, while Clay's system would only help the customer
17 if they were on the generator during the time an
18 interruption occurs. The generators are reliable when
19 they are already on line prior to a fault. This gets
20 into a guessing game as to whether an anticipated storm
21 will cause an interruption. With the amount of lightning
22 activity in the State of Florida, there will be 70-80
23 days per year when Clay and the customer would have to
24 make a decision of whether the storm will or will not

1 affect the distribution line. Mr. Dyal's testimony tells
2 us that the generator cannot come on line quickly enough
3 in the event of loss of power to prevent the customer
4 from seeing a momentary interruption. The customer has
5 indicated that he is relying on his ability to predict
6 when momentary interruptions will occur based on weather
7 conditions. Even if weather is the cause of a momentary
8 interruption, these weather conditions may be outside the
9 immediate vicinity of the customer. Our experience
10 tells us that momentary interruptions are not always
11 associated with inclement weather conditions. Therefore,
12 it would be a very difficult and costly decision to be
13 guessing how far away a storm is before switching to
14 generator power and how long to run the generators to
15 avoid an interruption that may or may not occur at that
16 time. The only way River City Plastics can significantly
17 lower its exposure to all storm related outages is to be
18 on the generators continuously during the 70-80 storm
19 days in north Florida and also days when weather can
20 affect the transmission line. The cost for this
21 generator operation protection would be prohibitive.

22
23 Q Mr. Dyal asserts in his testimony on page 5, lines 20-24
24 that, "Clay is offering an innovative service that takes

1 into account the unique operational needs of the customer
2 through the use of load management generators for back-up
3 as well as load management, which when coupled with
4 Clay's three phase service is clearly a superior method
5 of providing the required service." Do you agree that
6 Clay's service proposal is superior to FPL's dual
7 throwover service?

8
9 A No. Based on Mr. Dyal's statement that a loss of power
10 for 12-18 cycles is considered an outage to River City
11 Plastics, the proposed dual feed service from FPL will be
12 superior, because of the fast transfer time between
13 feeders of less than 12 cycles. The advantage of Clay's
14 proposed system exists if Clay and the customer can
15 predict ahead of time when an interruption will occur on
16 Clay's distribution system and FPL's transmission system,
17 which would be difficult to do at best. The other
18 advantage would occur when FPL's Baldwin-Columbia 115 kv
19 transmission line is out for longer than one minute, the
20 customer would have power on Clay's generator system but
21 not on FPL's system. The historical data shows that this
22 has been a highly unlikely occurrence. Based on Clay's
23 proposed system, someone must invest a large amount of
24 money, not only to purchase and install the system, but

1 also to maintain and operate it, as discussed in Mr.
2 Noble's Testimony. With the amount of lightning activity
3 in Florida, the generators will have to run for many
4 hours during the 70-80 days per year we experience
5 lightning. This will require many thousands of gallons
6 of fuel as well as an aggressive maintenance plan to have
7 the generators operating in this mode. With all this,
8 there is still no guarantee that they will guess right to
9 avoid anticipated outages and no benefit at all for
10 unexpected faults. And with all this expense, River City
11 Plastics will only gain three minutes of additional
12 reliability per year, based on FPL's last five year's
13 history of transmission reliability. FPL's proposed
14 system will provide superior service for the customer
15 because of the very fast (less than 12 cycle) transfer
16 time for distribution interruptions and will be a much
17 more cost effective system, both in initial capital cost
18 and in operating and maintenance costs.

19
20 Q Does this conclude your testimony?

21
22 A Yes