UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

1-19

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
FLORIDA POWER & LIGHT COMPANY	)	DOCKET NO. 50-389
	)	
(St. Lucie Plant Unit No. 2)	)	

APPLICANT'S ANSWERS TO INTERVENOR'S INTERROGATORIES TO APPLICANT - SET NO. 5

50-389
Hear 4

APPLICANT'S
RESPONSE TO INTERVENORS
INTERROGATORIES TO APPLICANT
SET NO. 5

Question 1:

Are electricity and competitive fuel prices of significant relevance in determining electricity usage as a general matter?

Answer:

Yes. See testimony of Louis A. Guth, P. 6, follows TR 381 (hereafter Guth, page 9).

Question 2:

Is it possible to make an assessment of the impact of electricity and competitive fuel prices on the future growth of demand for electricity in the FPL system?

Answer:

Yes. See Guth, P. 9.

Question 3:

Have electric utilities such as FPL traditionally conducted studies designed to consider the potential scope of the impact of energy prices of future consumption? If affirmative, please identify any such studies conducted by FPL, by title, author, and author's educational and experiential qualifications.

Answer:

No. See Guth, P. 9.

Question 4:

If the response to No. 3 is negative is this a serious failure on the part of FPL? If not, why not?

Answer:

No, traditionally, prior to 1973, electric demand was increasing at such a rapid predictable rate that such studies were not necessary. See Guth, P. 10.

Question 5:

Has FPL performed or do they have available to them studies that indicate at what rate personal incomes may be expected to rise in relationship to costs of electricity?

Answer:

No.

Question 6:

If the response to interrogatory 5 above is affirmative, has FPL experience in the past three years 1973-1976 confirmed or negated the findings the FPL studies and projections on rate of increase of personal incomes, as they relate to electricity costs?

Answer:

Not applicable.

Question 7:

Is it true that available economic studies of electricity demand are generally seriously flawed?

Answer:

Unless the specific studies in question are identified, we cannot answer this interrogatory.

Question 8:

If affirmative to 7 above has FPL or its consultants prepared a review of such studies or innovated their own accurate studies so as to accurately project consumer demand for electricity?

Answer:

See answer to interrogatory 2(a), Answers to Intervenor's Interrogatories to Applicant, Set No. 3.

Question 9:

At what date was the review referred to in 8 above prepared. Does it accurately represent trends in demand occurring the FPL system' since 1973 till the present date?

Answer:

The most recent study was completed in October, 1976. See Answer to Interrogatory 2(a), Answers to Intervenors Interrogatories to Applicant, Set No. 3.

Question 10:

Does FPL have available to it or have any studies been performed by FPL or its consultants that show the effects of personal income on electrical consumption?

Answer:

The effects of personal income on electrical consumption are determined as an integral part of our forecasting effort. No study as such is performed external to the forecasting process. This method of assessing the impact of personal income on energy consumption is used nationwide by many utilities and consultants.

Question 11:

If affirmative to 10 above, what do these studies show and who authorized them?

Answer:

The official 1976 net energy forecast incorporated as an explanatory variable an economic index comprised of real per capita income (in constant 1967 dollars) and employment. The elasticity of this variable with respect to net energy was estimated at 0.7 for the 1975 through 1985 period. Richard P. Sergel, Supervisor of Load Forecasting was responsible for the net energy forecast.

Question 12:

Does FPL have available to it or have studies been performed by FPL that include a variable for price of competing fuel?

Answer:

No

Question 13:

Does FPL have available to it or do any studies performed by FPL on projecting rates of growth of electrical consumption including:

a) climate variables in their analysis
b) urban-rural differance in consumption
c) climatic changes presently occurring

Answer:

a) Yes
b) No
c) We are not aware of any climate changes presently occurring which we have not considered in (a)

Question 14:

What is the rate of sales per customer for the FPL system for each region in 1975, the regions being Northern, Western, Eastern, Southeastern and Miami? Please constrast these rates with those that have occurred for each respective year since 1970.

Answer:

	AVERAGE KWH PER CUSTOMER					
	1970	1971	1972	1973	1974	1975
Northern	17,236	18,543	19,315	21,166	20,028	20,937
North Central	23,961	23,898	23,628	23,595	21,011	21,318
Western	16,516	17,093	17,746	18,786	17,805	18,153
Eastern	17,670	18,385	18,769	19,091	17,720	17,896
Southeastern	15,881	16,672	17,673	18,598	17,522	17,349
Miami	20,134	21,229	22,348	22,987	22,117	22,164

Question 15:

In which of the above regions is the service area for St. Lucie 2?

Answer:

On general power from St. Lucie 2 will be consumed in the Eastern Division. However, through its interconnected transmission system it is also available to FPL's entire system.

Question 16:

To what do you attribute the rate of change if any between 1972 and 1975?

Answer:

It is unclear as to what "rate of change" refers to.

Question 17:

How do FPL rates compare with those in other states?

Answer:

COMPARISON OF FPL'S RESIDENTIAL RATES FOR 1000 KWH WITH THOSE OF OUT-OF-STATE UTILTIES*

1.	Consolidated Edison, New York	$77.56
2.	Public Service Electric & Gas, New Jersey	54.31
3.	Philadelphia Electric Co., Pennsylvania	50.69
4.	The Cleveland Elec. Illum. Co., Ohio	49.11
5.	Long Island Lighting Co., New York	48.62
6.	Atlantic City Electric Co., New Jersey	48.28
7.	Pascoag Fire District-Electric, R. I.	47.00
8.	City of Dover (McKee Run), Delaware	46.28
9.	Delmarva Power & Light Co., Delaware	45.42
10.	Delmarva Power & Light Co., Maryland	45.02
11.	Boston Edison Co., Massachusetts	44.85
12.	Delmarva Power & Light Co., Virginia	44.60
13.	Arizona Public Service Co., Arizona	43.57
14.	Commonwealth Edison, Illinois	42.36
15.	San Diego Gas & Electric Co., California	42.34
16.	City Public Service, Texas	40.86

17.	Detroit Edison Company, Michigan	40.85
18.	The Connecticut Light & Power, Conn.	40.76
19.	Baltimore Gas & Electric Company, Maryland	40.31
20.	Water, Gas & Light Company, Georgia	40.08
21.	Dallas Power & Light Co., Texas	37.89
22.	Public Service Company of New Hampshire, N.H.	37.45
23.	Union Electric Co., Missouri	37.38
24.	Florida Power & Light Company, Florida	37.37
25.	Southern California Edison Company, Cal.	37.17
26.	The Hartford Electric Light Co., Conn.	36.66
27.	Monongahela Power Co., West Virginia	36.65
28.	Western Massachusetts Electric Co., Mass.	36.64
29.	High Point Electric Dept., North Carolina	34.52
30.	Department of Water & Power, California	33.21

*Figures are for October, 1976, and do not include taxes, or franchise fees. Fuel adjustment charge is included.

31.	Mississippi Power Company, Mississippi	$32.28
32.	Appalachian Power Co., Virginia	31.68
33.	Alabama Power Co., Alabama	30.40
34.	Bangor Hydro-Electric Co., Maine	30.16
35.	Georgia Power Co., Georgia	29.79
36.	Houston Lighting & Power Co., Texas	29.47
37.	Pacific Gas & Electric Co., California	28.31
38.	Electric Power Board of Chattanooga, Tenn.	26.80
39.	Memphis Light, Gas, & Water Div.; Tenn.	26.18

AVERAGE RESIDENTIAL RATE = $40.07

Source: Jacksonville Electric Authority, COMPARISON OF RESIDENTIAL ELECTRIC RATES, October, 1976

QUESTION #18: How do FPL electric rates compare with other Florida utilities?

ANSWER: COMPARISON OF RESIDENTIAL RATES FOR 1000 KWH FOR FLORIDA UTILITIES*

1.	Clay Electric Cooperative (Clay County)	$46.27
2.	Gainesville-Alachua Reg. Util.	44.33
3.	City of Leesburg	44.29
4.	Kissimmee Utilities	43.93
5.	City of Tallahassee	43.49
6.	City of Green Cove Springs	43.40
7.	Florida Power Corp.	43.16
8.	City Electric System (Key West)	42.74
9.	City of Vero Beach	42.53
10.	Sebring Utilities	42.49
11.	City of Jacksonville Beach	42.25
12.	City of Bartow Electric	41.46
13.	Tampa Electric Company	41.25
14.	City of Ft. Meade	41.07

*Figures are for October, 1976, and do not include taxes, or franchise fees. Fuel adjustment charge is included.

15.	City of Clewiston	$41.00
16.	City of Ocala	40.45
17.	Okefenokee REA, (N.E. Fla., & S.E. Georgia)	39.25
18.	City of Lakeland	38.87
19.	Jacksonville Electric Authority	37.38
20.	Florida Power & Light Company	37.37
21.	Orlando Utilities Commission	34.88

AVERAGE RESIDENTIAL RATE =$41.52

Source: Jacksonville Electric Authority, COMPARISON OF RESIDENTIAL ELECTRIC RATES, Coctober, 1976

QUESTION #19: How will FPL's $349 million dollar rate hike request before the Florida Public Service Commission (PSC) affect their standing in comparison with other Florida and National utility rates if it be granted by the Florida PSC?

ANSWER: FPL's proposed residential rate for 1000 KWH would be $40.89. This figure does not include franchise fees and taxes, but does include a fuel adjustment credit of $2.01 for nuclear-generated power.

FPL's rate would still be below the average for Florida of $41.52 and on a par with that for other states of $40.07. (See answers to interrogatories 17 and 18 above.) By the time FPL's increase is granted, these averages may well have risen since some of these other utilities have pending rate increases, and others will be asking for them.

Question 20:

In 1974 Mr. Gerber testified for FPL that "average annual growth in residential customers through 1980 of 7 percent is not an unrealistic expectation." In light of the recent rates of growth experienced by FPL from 1973 to 1976, what rate of growth of residential customers is projected from 1977 to 1987 by FPL?

Answer:

The average annual growth rate of residential customers is projected by FPL to be 4.4 percent for the years 1977-1987.

Question 21:

Please constrast the relationship of the forecasted range of growth of electrical sales to the growth of peak load as stated in Response #2 of Applicants Answers to Intervenors Interrogatories Set No. 3.

Answer:

The following shows the net energy for load and peak load forecast.

	Net Energy/For Load (Million KWH)		Peak Load (Megawatts)	
Year	Low	High	Low	High
1976	37,900	37,900	7,598	7,598
1977	39,330	41,110	7,950	8,230
1978	41,100	44,450	8,350	8,880
1979	43,070	47,870	8,780	9,540
1980	45,270	51,360	9,210	10,200
1981	47,440	54,910	9,640	10,860
1982	49,580	58,470	10,060	11,500
1983	51,660	61,580	10,470	12,120
1984	53,670	64,580	10,870	12,710
1985	55,600	67,420	11,250	13,270

Question 22:

In Response #21 of Applicants Answers to Intervenors Interrogatories to Applicant Set No. 3, FPL states the earliest possible in-service date St. Lucie No.2 at Hutchinson Island is now late 1982. What is the earliest possible in-service dates for the following sites of a comparably sized nuclear plant?

a. DeSoto site.

b. South Dade site.

c. Martin County site, a. fossil units, b. nuclear units.

d. any other FPL sites?

Answer:

The earliest possible in-service dates for a comparably sized nuclear unit at different locations, assuming that the sites are suitable for nuclear units and there delays, are as follows:

a. DeSoto site - Late 1988 to early 1989

b. South Dade Site - Late 1985 to early 1986

c. Martin County site - Fossil Unit - Early 1984
Nuclear Unit - Late 1988 to early 1989

d. Any other FPL sites - FPL owns no other sites at the present time which can accommodate a nuclear unit.

Question 23:

FPL refers to a rescheduling of oil burning generation which is now under construction which might have occurred had not there been a delay in securing permits and licenses to start construction of St. Lucie No. 2 in the Response #21 of Applicants Answers to Intervenors Interrogatories to Applicant Set No. 3. Please explain both the current construction schedule commitments of rescheduled fossil units such as Palatka and Martin and how any delays of St. Lucie No.2 have affected the fossil plants construction schedules?

Answer:

The Martin Plant has been affected by the delay of St. Lucie #2 from late 1979 to late 1982. If St. Lucie #2 had not been delayed, unit #1 at our Martin Plant would not be needed until the peak of 1982.

Question 24:

Please state and identify all fossil generating plants presently under deferral in the FPL system. Please indicate projected in-service dates and identify the plant by name, location and generating capacity.

Answer:

See Interrogatory #5 of Applicant Answers to Intervenors Interrogatories Set No. 3.

FLORIDA POWER & LIGHT COMPANY

By _____
Ernest L. Bivans, Vice-President
System Planning Department

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

ERNEST L. BIVANS, being first duly sworn, deposes and says:

That he is Vice President of System Planning of Florida Power & Light Company, the Applicant herein;

That he has executed the foregoing document, that the statements made in this said document are true and to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Applicant.

Subscribed and sworn to before me this

19th day of November, 1976.

_____
NOTARY PUBLIC, in and for the County of Dade,
State of Florida

NOTARY PUBLIC STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES NOV. 30 1979
BONDED THRU GENERAL INS. UNDERWRITERS

My commission expires: _____

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Interrogatories to Intervenors, etc., has been served by mail, this 19TH day of November, 1976, to the following:

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