BEFORE THE
FLORIDA PUBIC SERVICE COMMISSION

In the Matter of	DOCKET NO. 970512-EU
Petition to resolve territorial dispute with Clay Electric Cooperative, Inc. in Baker County by Florida Power & Light Company.	

VOLUME 2

AFTERNOON SESSION

Pages 168 through 339

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BEFORE:	COMMISSIONER SUSAN F. CLARK COMMISSIONER JOE GARCIA
TIME:	Commenced at 9:35 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JOY KELLY, CSR, RPR Chief, Bureau of Reporting (904) 413-6732

APPEARANCES:

(As heretofore noted.)

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PROCEEDINGS

(Hearing convened at 1:20 a.m.)

(Transcript follows in sequence from Volume 1.)

COMMISSIONER CLARK: Let's go back on the record. Commissioner Garcia is walking down as we speak, so maybe we can get the witness on the stand and get the formalities taken care of.

MR. HASWELL: Yes, ma'am. I'd like to call Herman Dyal.

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HERMAN DYAL

was called as a witness on behalf of Clay Electric Cooperative, Inc. and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. HASWELL:

Q Would you please state your name for the record?

A I'm Herman Dyal, Director of Engineering for Clay Electric Cooperative.

Q Are you the same Herman Dyal who has filed prepared direct testimony in this cause?

A Yes.

Q Okay. Do you have any additions, deletions

or corrections to that testimony?

A No.

Q Okay. If I ask you the same questions today would your answers be the same?

A Yes.

Q And have you also prepared and attached to your testimony two exhibits, HD-1 and HD-2?

A Yes.

COMMISSIONER CLARK: Mr. Haswell, can I interrupt you for just a minute? Do I not have the right testimony? It's July 28th, 1997, and I notice from Line 10 of Page 1 it has in parenthesis "(need answer.)" Look at your copy. What do you have on Page 1, Line 10? We need to know how long you have worked for Clay Electric Cooperative?

MR. HASWELL: I guess that snuck by us.

WITNESS DYAL: I have been with Clay about 11 years.

COMMISSIONER CLARK: Okay. You have been a director of engineering -- the division chief of distribution engineering for the same amount of time you have been with Clay?

WITNESS DYAL: Right. I've only been director of engineering about six, seven months now.

COMMISSIONER CLARK: Okay.

MR. HASWELL: I would respectfully request that the direct prefiled testimony of Mr. Dyal be entered into the record as though read with that correction to Page 1, Line 10.

COMMISSIONER CLARK: The prefiled direct testimony as corrected today of Mr. Herman Dyal will be inserted into the record as though read.

MR. HASWELL: And I request that his exhibits HD-1 and HD-2 be assigned a number for identification.

COMMISSIONER CLARK: We will mark exhibits HD-1 and HD-2 as Composite Exhibit 9.

(Exhibit 9 marked for identification.)

Q. Please state your name and business address.

A. Herman Dyal, Clay Electric Cooperative, Inc., Post Office Box 308, Keystone Heights, Florida 32656.

Q. What is your current occupation and position?

A. I am a licensed professional engineer and Director of Engineering for Clay Electric Cooperative, Inc.

Q. How long have you worked for Clay Electric Cooperative, Inc. ("Clay")?

A. (Need answer) about 11 years

Q. Before becoming Director of Engineering, what other positions have you held at Clay and for long?

A. I was Division Chief of Distribution Engineering for 11 years.

Q. What is your education?

A. I have a Bachelor of Science in Electrical Engineering from the University of Florida, which I received in 1973.

Q. What is your professional experience as an engineer?

A. I have worked some 24 years in the utility industry.

Q. What professional licenses do you hold in Florida and any other state?

A. I am a registered Professional Engineer in Florida and Georgia.

Q. What professional associations do you belong to?

A. I am a member of the Institute of Electrical and Electronic Engineers. (IEEE)

Q. Describe Clay's electric facilities in Baker County, Florida, including their type and capacity?

A. We serve some 1900 members in Baker County. We operate over 230 miles of distribution lines, one mile of 115 kV transmission line and one substation (Sanderson) in Baker County. As you can see by the shaded map of Baker County, Exhibit COMP 9 (HD -9) we serve a large portion of Baker County that is not taken up in timber land, the Lake Butler Wild Life Management Area or Osceola National Forest.

Q. Approximately when were Clay's first electric facilities constructed in Baker County?

A. We have been serving members in Baker County since the early 1940's, in fact the single phase line along the easterly part of Arnold Rhoden Road was built in 1947. The Sanderson Substation was built in 1973, along with one mile of 115 kV transmission line to serve the substation.

Q. Describe Clay's facilities in the area of the Baker County Industrial Park where the new River City Plastics facility is being constructed?

A. As you can see from Exhibit COMP 9 (HD-2) we have the River City Plastics manufacturing plant which is just north of the Baker County Industrial Park. To the east some 1800-1900 feet we have a single phase 14.4 kV distribution line. Another approximately 5,000 feet to the east we have a three phase feeder line going north from our Sanderson Substation some 2-¼ miles to the south.

Q. How close is the nearest Clay electric facility to the River City Plastics approximate point of service?

A. Along the road some 1800-1900 feet to the entrance road.

Q. How close is the nearest Florida Power & Light facility to the approximate location of the River City Plastics point of service?

A. I understand they will serve the site from their Wiremill Substation some 1800 feet from the entrance road.

Q. What is the expected load of the River City Plastics plant and how will Clay provide that service?

A. The expected load at the plant is about 2,000 kW. To serve this anticipated load we will need to make some system improvements, as follows and referring to Exhibit COMP 9 (HD-2):

1. The substation transformers at Sanderson Substation are rated 7500 kVA without additional cooling fans. The existing load is 6800 kVA. The additional load would exceed the base rating of the transformers but with the addition of cooling fans the transformer rating would increase to 10,500 kVA, well above the additional load.
2. The three phase line going north from the substation was converted to 25 kV operation in 1987. At that time a step-up transformer was installed at the substation to step the voltage up on the line from 12.47 kV to 24.94 kV. The transformer is rated 3750 kVA without additional cooling fans. The existing load is 2630 kVA. The additional load would exceed the base rating of the transformer but with the addition of cooling fans the rating would increase to

4688 kVA, sufficient to handle the additional load.

3. The plant would be served from feeder #3 of the Sanderson Substation. The feeder runs north approximately 2-¼ miles to the tap point at Arnold Rhoden Road. This line is operated at 24.94 kV with conductor size of #4 and #2 ACSR. The kVA rating of this line is approximately 5600 kVA. The existing load is 2630 kVA. The additional load would bring the total load to approximately 4800 kVA which is below the rating of the line.

4. We would rebuild approximately .6 mile of existing single phase line along Arnold Rhoden Road. This line was built in 1947. This line would be rephased and reconductored to 1/0 ACSR. This would have a kVA rating of over 8600 kVA, well in excess of plant load.

5. Continue the line upgraded in step 4 another .25 mile along Arnold Rhoden Road. This would be a new three phase 1/0 ACSR line with a kVA rating in excess of 8600 kVA.

6. Continue new three phase line along Arnold Rhoden Road and up plant access road approximately .65 mile. Part of this would be rebuilding a single phase line we built to the site for construction power. Again, this line would be 1/0 ACSR construction.

The total cost by phase would be:

Phase 1	$ 4,500.00
Phase 2	$ 1,500.00
Phase 3	$ -0-
Phase 4	$30,000.00
Phase 5	$12,000.00
Phase 6	$50,000.00

TOTAL $98,000.00

Q. Has River City Plastics requested the use of load management generators at its plant.

A. Yes. They felt the generators would provide them an on site power source which would be the most reliable in times of inclimate weather. It would provide them the ultimate reliability which they need in their manufacturing process.

Q. From an engineering standpoint is there any difference in the character and quality of service provided by the three phase line Clay will use from its Sanderson Substation together with the load management generators on site, and the service proposed by Florida Power & Light which would either be single or dual feed from its Wiremill Substation?

A. Yes there is. Our three phase line and the load management generators provide superior service of the quality and character required by the customer. We are not comparing two similar kinds of service, with one utility claiming its service would be incrementally better. We are evaluating two different kinds of service, one offered by Florida Power & Light and one offered by Clay. The service offered by Florida Power & Light is, for lack of a better way of saying it, standard three phase service, just like its other customer, Florida Wire & Cable is receiving. Clay is offering an innovative service that takes into account the unique operational needs of the customer through the use of load management generators for back-up as well as load management, which when coupled with Clay's three phase service is clearly a superior method of providing the required service.

If you compare just the three phase service from Florida Power & Light's

Wiremill Substation with Clay's three phase service from its Sanderson Substation, statistically there may be more exposure on Clay's 3.5 miles of three phase as opposed to Florida Power & Light's ½ mile of three phase. River City Plastics has reviewed outage records of both Florida Power & Light and Clay and it does not see a significant difference between the two. The customer recognizes there be some interruptions. His major concern is during times of intense storm weather. It is during these storms that he expects to experience outages as has occurred numerous times at his plant in Duval County. An outage to River City Plastics is any interruption of electricity of over 12-18 cycles. This is representative of almost any breaker operation of close and reclose. If he experiences an outage he loses his production lines. He has some 23 production lines which some 24 employees operate. This plant is scheduled to run 24 hours per day, seven days a week, all year. When the plant goes down due to an electrical outage it takes two people per production line to restart the line and approximately eight hours to get the line back to full production. This requires they call in another complete set of shift workers to help restart the plant. You can readily see the immediate costs they incur as a result of a blink in electrical power. Not only do they lose 8-10 hours of product production but they also must pay some 23 employees approximately eight hours of overtime. You can also see that it is critical that another "blink" not occur during the eight hours of restart or the process must start over.

It is during these intense storms that the service we offer is clearly difference from the service offered by Florida Power & Light. During a storm in the immediate area of the plant River City Plastics wants the ability to switch to our load management generators and separate from the existing distribution system. This will cut their exposure to the plant site only, not to the distribution line, substation,

or transmission line. Florida Power & Light is single or dual feed and would not reduce this exposure. The dual feed would only provide service in the case of a failure in the primary distribution or substation but would do nothing for a transmission failure.

Our load management generators offer the only solution for dramatically reducing exposure to power interruption as well as providing power in case of failure to transmission system.

Q. Did River City Plastics evaluate service proposals from both Florida Power & Light and Clay?

A. Yes. It did so through an engineering consultant who sought and received information from both Clay and Florida Power & Light.

Q. Did River City Plastics formally request service from Clay?

A. Yes it did after reviewing a recommendation from its consultant. A copy of that request is attached as Exhibit COMP 9 (HDB-6) to Mr. Barrow's testimony.

Q. Do you know why River City Plastics decided not to request service from Florida Power & Light?

A. Yes. Florida Power & Light would not offer the same service that Clay did.

Q. Florida Power & Light claims that service from its Wiremill Substation is reliable and adequate for River City Plastics' needs, and implies that Clay's service, using load management generators will either be less reliable or at least no more reliable than Florida Power & Light's. Do you agree with that claim?

A. No. As I stated previously, the load management generators offer the only true alternative to significantly lowering River City Plastics exposure to storm related outages. It removes the exposure of the distribution line, substation and transmission line. Even if River City Plastics were not running the generators when an outage occurred they could have the units started and immediately begin restarting the plant with confidence their eight hour restart time would not be interrupted and production could be started immediately. Florida Power & Light's service with single feed could be out hours before service is restored in the case of an outage. If they had dual feed the outage could be reduced if the outage occurred on the distribution line or substation but not on the transmission line.

Q. Does this conclude your direct testimony?

A. Yes it does at this time. I may have more comments after reviewing Florida Power & Light responses to our discovery requests, reviewing depositions, and Florida Power & Light's direct testimony.

Q (By Mr. Haswell) Mr. Dyal, would you give us a summary of your testimony, please?

A Yes. Basically in the summary of my direct testimony I want to talk about Clay's electric facilities in Baker County, and specifically about the facilities that we'll upgrade or add, and also the economic and technical aspects of the generators. I'd like to refer to the larger drawing, if I could.

(Witness moves to charts.)

Okay. All right. Referring to this, this is just a map of Baker County, and we're showing in red basically what has been the traditional service area of Clay Electric. As you can see, we come up through our Sanderson area, up across 90, and up in the northern part. Also, serve some down below 90, over around the Lake Butler Wildlife Management Area.

Traditionally we've served in Baker County probably most of the largest land area of any utility. A lot of Baker County is, as you know, Osceola National Forest and water management-type areas; it isn't, quote, "conversation" areas. And up into the northern part here, the Okefenoke Rural Cooperative is serving that. So it's kind of an overview there we serve in the red.

If we can go to this other large map, I'll

go over the general electrical facilities we have. Some of it is, I think, redundant; probably what Mr. Hood had.

Let's go over it again, we're showing here the property of River City Plastics. Basically you can see our Sanderson substation, we do have a line, a three-phase line, about two and a quarter miles up Bill Davis Road. We had a single phase line across Arnold Rhoden Road. We did serve back into this area so we'll be rephasing this single phase. And then we added some three-phase here (indicating). We went about another about four-tenths from where our last customer was, which we now have another one. We had another customer come in adjacent to this. And then we come to the entrance road and up into the property.

Just to quickly go over those in a nutshell, broken down into testimony by phases. Phase 1 woud be the additions we'd have to do to our substation to serve the existing or the proposed load. Our Sanderson substation is 7500 KVA capacity substation. The additional load, 2000 KVA approximately, would push that load to around 8800 KVA. That's about a 20% overload for the capacity of the station. For comfort level we proposed to add fans to that transformer to take it up to 10,500 KVA for a cost of 4500.

Phase 2, that feeder going north was converted back in '87 to 25 kV operation. The Sanderson sub as it stands right now is a 12 kV station. We converted a feeder. In doing that we put that feeder on a step-up transformer. The step-up only has a capacity of 3750 KVA. Again, due to the load we would add fans to that taking it to over 4600 KVA. Additional cost of the fans is about 1500.

Phase 3, or Part 3 of that is the feeder line, three-phase feeder line No. 2, No. 4 ACSR, going north out of the substation up to the tap point at Arnold Rhoden Road. That's a No. 2 and No. 4 conductor. Its capacity is approximately 5600 KVA. We would not propose any changes in that. It should be adequate to meet the load.

Phase 4 is where we come across and begin down Arnold Rhoden Road. We would have to rebuild about six-tenths the single-phase line. That single-phase line has been there since 1947, and we would rebuild it to 1/0 ACSR, giving it a capacity of 8600 KVA that would cost approximately 30,000.

Phase 5 would be where we kind of tie across from the end of that line back to where our last customer is. It's about a quarter of a mile, and it would be new 1/0 ACSR for 12,000.

And Phase 6 would be the new line from that point across to the entrance road into the site and up to the customer site, which would be a three-phase 1/0 for $50,000. The total cost for our system improvements would be about $98,000 to serve this customer.

Another part of our proposal to River City Plastics was the use of the load management generators. As I've noted, Clay Electric Cooperative has been in the load management program since 1983. It's been very active in the demand side management and these load managing generators are just a continuation of that program. We have been installing the units since 1994 and we've offered these as a result of the River City Plastics.

They felt this would provide them the reliability which they needed in their manufacturing process. Clay feels it's offering this as an innovative service. It takes into account the unique operational needs for backup as well as load management for Clay and its customers, and clearly is a superior method of providing the required service.

That's all I have.

MR. HASWELL: I tender the witness for cross.

COMMISSIONER CLARK: Mr. Logan.

MR. LOGAN: Thank you, Commissioner.

CROSS EXAMINATION

BY MR. LOGAN:

Q Good afternoon Mr. Dyal.

A Good afternoon.

Q Mr. Dyal. I believe you've characterized the service that FPL would offer River City as standard three-phase service; isn't that correct.

A I think I referred to that at the time as just their standard three-phase service. That was prior to any discussion of backup, throwover, and all that. This is the initial deposition.

Q I want to try and understand what constitutes standard three-phase service, both for Clay and for FPL.

Would it be an accurate statement to say that standard three-phase service is the -- as far as Clay, is that $98,000 figure that you've quoted which is to run the service from your substation to the customer's facility?

A Yes.

Q And the same would be true for FPL, would be the cost of running from FPL's substation to that facility?

A Yes.

Q And in both cases, for standard service, that would entail an overhead feeder into the facility, into the customer's facility?

A Yes.

Q Okay. So when you talk about the innovative nature of Clay's proposal, that's solely based upon the second element, which is the use of the generators; is that correct?

A Yes.

Q Let me ask you a couple of questions about the cost figure of $98,000 for the standard three-phase service. Does that cost figure include the cost of a three-phase recloser with transformer?

A No. It includes the cost of the setting of the pole and the framing for that.

Q But the recloser 's not included, or would there be a recloser?

A The recloser was scheduled to go up above Highway 90; we have a three-phase installation there and it was scheduled to be upgraded to that. With the advent of River City Plastics, because of their special needs and trying reduce on the outages, we opted to relocate that breaker station to just above Arnold Rhoden Road. So the cost of setting up pole

and line, cutting that out and everything is included there because that was an additional cost rather than just changing out where it was at.

Q And what were the cost figures associated with relocating that recloser?

A Setting the pole and cutting the dead end in; probably somewhere in the neighborhood of about $1,000.

Q I'm sorry, 1,000?

A Yes.

Q But it's your testimony that the recloser was already scheduled for installation somewhere else?

A Yes. Part of our normal course, we constantly look at our reliability and what's going on with our feeders. In a normal course situation like this it's not unusual when you run into the outages, some of the outages we saw here, frankly, were up above the hydraulics, which is an indication that their coordination wasn't going quite right through the step-up. Part of the solution to that is we changed the hydraulics out to electronic; improves the time and your coordination and prevents the outage from going back to the station when it should have stayed up at the first line reclosed.

Q So is it your testimony then that the

recloser is not necessary as part of delivering the three-phase service?

A Right. We would have done that irregardless of River City Plastics.

Q Could you do it without, could you provide that service without a reclosure?

A What --

Q Service to River City Plastics?

A Sure.

Q Would that have a impact on reliability for the customer?

A Well, it would be as reliable as the data we gave you. We're hoping to improve that data. That was one reason we're changing the reclose. We're not satisfied with reliability for existing customers.

Q What does that type of equipment, a recloser, what does that run in cost in ballpark figure?

A The recloser itself?

Q Yes, sir.

A Approximately 10,000.

Q Now, there was also some temporary construction, I think, included in Phase 6 of this project; is that correct?

A We have about two or three spans of single

phase over the construction trailers.

Q Okay. Were costs -- in the 98,000 figure, were costs included for all of the poles associated with that temporary construction?

A You're talking about not the last two or three poles.

Q Poles 12 through 14?

A They will be pulled back out and reused as salvage.

Q How about the labor associated with --

A The labor was included.

Q Mr. Dyal, can you turn to your prefiled direct testimony, on Page 6? You have that in front of you?

A Yes.

Q Thank you. And on Line 6 can you read for me the three sentences that begin with -- on that line?

A Starting with "His major concern"?

Q Yes, sir.

A "His major concern is during times of intense storm weather. It is during these storms that he expects to experience outages as has occurred numerous times at his plant in Duval County. An outage to River City Plastics is any interruption of

electricity of over 12-18 cycles."

Q So that was information given to you by River City Plastics?

A Yes.

Q And that was 12 to 18 cycles is what causes an interruption to their operations?

A Yeah. And I might note when he talks -- and I think Stafford answered that in his testimony, that that's -- basically at least half his plant shuts down. He can have problems with less than that, but what he considers to be, quote, "an outage" where he loses at least half or more of his production is in that 12 to 18 cycles.

Q But he defind an outage to you as interruption over 12 to 18 cycles; is that correct?

A Who?

Q He -- I assume Mr. McCartney or someone from River City Plastics?

A Yes.

Q Mr. Dyal, do you have your responses, Clay's responses to FPL's interrogatory, and specifically Interrogatory No. 12?

A Not on me. (Hands document to witness.)

Q Mr. Dyal, are you familiar with that document?

A Yes.

Q And is that Clay's indication of the number of outages at the Sanderson substation during the last three years?

A To the best of our records, yes.

Q And specifically it's for feeder No. 3?

A Yes. Feeder 3.

Q Now, using the definition that you provided in your direct testimony, that an outage is anything over 12 to 18 cycles.

A That was for River City Plastics.

Q That's correct.

A Okay.

Q Okay. But using that definition, and assuming that River City Plastics were Clay's customers, and that the generators were in place that you propose, I want you to tell me -- let's start at the top of that chart -- in each of these occurrence whether River City Plastics would experience an outage that would affect their production lines?

So for October 2nd, 1994, when there was a broken insulator, would River City experience that outage?

A Yes.

Q The next one, the failed transformer, would

they experience that outage?

A Yes.

Q The next one, the opened to remove failed line regulator?

A Yes.

Q The unknown for a hour of March 19 --

A Yes.

Q Tree on a line for June 16, 1996?

A Yes.

Q Storm damage, May 24th, 1997?

A Yes.

Q Now, there's also 23 momentary interruptions that are indicated of unknown cause. Would those have been experienced by River City Plastics in that situation?

A Yes.

Q So for each of those interruptions, River City Plastics would have experienced an outage at their facility?

A Yes.

Q And that would have impacted production; is that correct?

A That's my understanding.

Q Now, have you had a chance to review the specific indications that were contained in the

late-filed exhibit of Mr. Brill that deal with FPL's automatic throwover switch?

A Yes, to the extent that we submit it, yes.

Q And do you understand the parameters or specifications for that switch?

A To the extent that they are offered.

Q I'm sorry, to the extent that they are --

A It's only a technical specification sheet. I haven't seen test data that we requested, so I'm only speculating that the spec -- technical sheet he gave me is true.

Q Okay.

A I'm not committing to that.

Q Okay. So assuming that that specification sheet is accurate, you're famil'ar with the time and cycles that that switch would operate?

A Purported to operate, yes.

Q Okay. Again assuming those specs --

A Purported, yes.

Q Wouldn't that be in a time of nine cycles plus or minus one?

A I'm assuming here again; I haven't seen anything other that says what mode they are operating in. If you were operating in the other mode, I guess bypass mode -- or non-bypass it would not.

Q But if it was in the bypass mode.
A I don't know. You tell me.
Q But based upon that document --
A There's a lot of assumptions.
Q Do you have any reason not to --
A Yes.
Q And what is that?
A Present technology, I guess, does not preclude a switch will do that. I have not been able to analyze that switch. It's a proprietary switch of FPL's; have not been able to obtain data; not been able to obtain test data, so I really can't speak as to whether that switch will do that. I know most commercially available switches will not do that.
Q But you have no other means for suggesting that this switch would not perform as indicated on those specification sheets; is that correct?
A Well, yeah. I have serious doubts, yes, if that's what you're asking me. As a professional engineer I have serious doubts the switch will work, yes.
Q Assuming the switch will operate based upon the specifications provided by the manufacturer, which would provide a switchover from one feeder to another feeder in the event a -- anything that would be in the

range of nine cycles plus or minus one, that's the specification; is that correct?

A That's what the technical specifications say.

Q Okay. Using those specifications, we can go back to Interrogatory No. 12, can you tell me for each of these events would River City Plastics, if that switch were employed with a dual feed service, would River City Plastics experience an outage under those circumstances?

A There's a lot of assumptions there, you know.

Q Well, let's walk through them. How about October 2nd, 1994, a broken insulator?

A If the throwover switch is on FPL's line and this is on mine line, no, it wouldn't. What do you mean?

Q Here's the assumption; that FPL is providing service to River City Plastics --

A Okay.

Q -- as contemplated and discussed in the prefiled testimony. In other words, there are two feeds with this Whipp & Bourne automatic transfer switch installed and operational. Under those circumstances, if there had been a broken insulator on

FPL's equipment, would River City Plastics experience an outage under those circumstances?

A Here, again, if you're making the assumption that the switch works, what I'm not agreeing to at all.

Q Right. I understand.

A If you take just on face value that it's operating in a what, non-bypass -- bypass mode?

Q Correct.

A In a bypass mode and it switches to eight to ten cycles, then he would not have quote, "an outage."

Q Okay.

A He could very well have lost production but not an outage.

Q The last part I missed --

A He could very well have lost production but not necessarily what is considered to be an outage.

Q As they defind it to you?

A Right.

Q Now, for the next line, a failed transformer?

A Same answer, all of them; save you sometime here.

Q Okay.

A They would all be the same thing.

Q For each of these. And for the momentary interruptions as well?

A Well, it depends on what caused momentary, but since everything is so philosophical here anyway I'll say yes.

Q Given that philosophical and hypothetical situation then, in each of those circumstances River City Plastics would not have experienced an outage; is that correct?

A Philosophically, right.

COMMISSIONER CLARK: I'm sorry, Mr. Dyal, will you tell me again what River City Plastics defind as what kind of interruption would cause interruption in their production?

WITNESS DYAL: My understanding, and it may be much better to ask Mr. McCartney, it's his plant -- but my understanding, if he has an interruption of 12 to 18 cycles, he will lose service to at least half or more of his production lines.

COMMISSIONER CLARK: Okay. And I thought the switch was supposed to change in eight cycles.

WITNESS DYAL: I guess that's what I'm telling them. They say that, but since it's a proprietary switch and not commercially available, I'm not able to --

COMMISSIONER CLARK: Okay. What I want to know is if it makes the switch in the time it says it can, then there's no interruption of production, is there?

WITNESS DYAL: I can't say that, no.

COMMISSIONER CLARK: Well, given the parameters of what the customer said and what the switch says it will do, if both are correct parameters, then a glitch will not occur in his production; is that correct?

WITNESS DYAL: He will not lose over half his lines, half of his production lines.

COMMISSIONER CLARK: Okay.

Q (By Mr. Logan) Mr. Dyal, with respect to that last statement, is there anything concerning the statement of how many of River City Plastics lines would be affected in a circumstance -- I assume something less than 12 to 18 cycles in your direct testimony.

A No.

Q Is there anything in your rebuttal testimony about that?

A I don't know that we talked that much about it. It just came through Stafford's rebuttal.

Q Okay. Mr. Dyal, what causes momentary

outages?

A Wind, rain, lightning, squirrels, I mean all --

Q Isn't it true that it's your understanding that the configuration that River City Plastics will operate under will allow them to anticipate the occurrence of momentary interruptions that are weather related?

A My understanding what they plan to do or hope to do is anticipate the intense weather related-type momentaries.

Q So they would, if there is approaching -- an approaching thunderstorm or cell of thunderstorms, isn't it true that their plan would be to disengage their system from the Clay grid, fire up the generators and operate independently of Clay until such time that event has passed?

A Yes.

Q Now, would they be able to anticipate interruptions other than weather related in that fashion?

A No.

Q So as far as trees falling or squirrels or anything like that, they would not be able to operate in that mode?

A No.

Q And those are common occurrences for momentary interruptions?

A Common, yes.

Q Now -- and in each of those circumstances River City Plastics, under Clay's scenario of using generators in that fashion, they would still experience a interruption to their production process?

A Yes.

Q Now, again, back to our philosophical hypothetical, using FPL's proposed service with that throwover switch, in those circumstances, specifically a squirrel on a line or an outage from a tree or something else, would River City experience an outage?

A Philosophically, no.

Q Mr. Dyal, in what circumstances does Clay Electric Cooperative go into a load management scenario?

A At the request of our power supplier, Seminole Electric Cooperative.

Q So they initiate a call to you saying they are going to go -- they want you to go into a specific load management scenario, or --

A Typically they will call in and say, "Yeah, we're going to try to control load today" and they set

some load levels that they try to control.

Q Now, will Seminole Electric be aware when Clay determines that they are going to bring generators, such as those proposed to be used at River City and other facilities that exist, when those generators are going to come on line?

A Yes. They will view anything in our load management program we will put into place and operate.

Q They would specifically know that you're going to bring those generator on line?

A They know we bring the generators on line, yes.

Q And as far as the engineering, the configuration of those generators, does that involve a switch between the Clay's distribution system and the generation facilities themselves?

A Yes.

Q Will that switch operate in parallel at any time?

A Yes.

Q That would be during the time the generator are brought on line?

A It can be during the time they are brought on line or while we're actually in load management. We do not as a, matter of course, separate.

Q Now, Clay's distribution system is tied into FPL's transmission system; is that correct?

A At the Sanderson substation, yes.

Q And that's -- that is also employed by Seminole Electric to deliver power to Clay, is that --

A My understanding.

Q So that transmission grid is really kind of a Seminole-FPL transmission grid?

A My understanding.

Q At the point that Clay interconnects into that system?

A Right.

COMMISSIONER CLARK: Mr. Logan, did you want this Interrogatory No. 12 to be an exhibit?

MR. LOGAN: No, ma'am, I think Staff is going to move that.

Q (By Mr. Logan) Mr. Dyal, did I give you a copy of that?

A Yes.

Q Okay. I'm sorry. (Hands document to witness.)

Mr. Dyal, could you take a look at the document I've just handed you then tell me if you've ever seen that document before?

A Yes.

Q Oh, you have. Okay. Can you turn -- can you tell me what that document is?

A It's the Aggregate Billing Partial Requirements Service Agreement between Florida Power and Light and Seminole Electric Cooperative.

Q And you're familiar with that document?

A I've seen it. Read it. I mean -- I didn't design it. It's not -- you know.

MR. LOGAN: Commissioner Clark, I'd like to mark that for identification purposes.

COMMISSIONER CLARK: Exhibit FPL Cross Examination Exhibit of Herman Dyal, which is the Aggregate Billing Partial Requirements Service Agreement Between FPL and Seminole Electric will be marked as Exhibit 10.

(Exhibit 10 marked for identification.)

MR. LOGAN: Thank you.

Q (By Mr. Logan) Mr. Dyal, can you turn to Page 14 of that contract, and specifically Article 11. Have you found that part of the contract, Mr. Dyal?

A Yes.

Q Okay. And that's entitled "Parallel Operation"; is that correct?

A Yes.

Q Are you familiar with that article?

A Yes.

Q Does that article require Seminole and/or Clay to seek FPL's permission before bringing any generation point on line which will operate in parallel with its system?

A We did advise Seminole of our load management program with the load management generators. They are aware of this program and they approved it.

Q I'm sorry, and they approved it?

A They approved it. Yes.

Q You said with respect to the program itself. How about with respect to the proposal for River City Plastics?

A We have not at this point carried River City Plastics, but we have given all the previous units that we had, yes.

Q So Clay has not contacted FPL with respect to this provision?

A We have no obligation to contact FPL.

Q But you have an obligation to contact Seminole?

A And we did.

Q Have either Clay or Seminole performed any engineering studies with respect to the River City

Plastics proposal which would determine what is needed in the event of a backflow of electricity from this generate point?

A The units are set up to operate with zero backflow.

Q I take it you have not reviewed any of the engineering information with either Seminole Electric Cooperative or FPL?

A We have with Seminole.

Q You have reviewed the specifics of the River City Plastics?

A Oh, no, no, I'm sorry. I thought you meant the generators in general.

Q Okay. So that with respect to the particular type of generator, you've reviewed that with Seminole Electric?

A We have reviewed it with them in the past. It's there. If they want to come look at it we offer to make it available to them. They've not availed themselves to do that. It's their prerogative.

Q Is it possible that there could be engineering concerns with respect to the potential for backflow into FPL's transmission system?

A We don't feel there is.

Q But you haven't reviewed that with Florida

Power and Light, have you?

A I have no obligation to do it with Florida Power and Light.

Q And do you know if Seminole has reviewed it with Florida Power and Light?

A I have no idea.

Q Thank you. Mr. Dyal, tell me, where, with respect to the generation point, will the meter be for Clay -- I mean will the generation point be before or after the meter for this proposed facility?

A It will be before the meter.

Q Are you familiar with Spartan Electronics?

A Yes.

Q They are on a load management program as well?

A Right.

Q Are they a manufacturing facility?

A I don't know if they are a manufacturing or just rebuilding, but similar, I guess.

Q Do you know if they receive a generator credit from Clay Electric?

A They do not.

Q Mr. Dyal, I have a couple of questions in response, I guess, to supplemental responses to FPL Interrogatory No. 32. Are you familiar with those

supplemental responses?

A I'm sure I am. I'd like to see them.

Q Did you prepare those responses?

A Let me see it and I'll tell you. I probably did but I'll, you know --

Q Bear with us and we'll get you extra copy.

A All right.

Q While we're waiting for that, let me talk about the substation that will serve the River City Plastics facility.

It's your testimony that the only changes to that substation currently required are the addition of cooling fans; is that correct?

A Right, to the power transformer.

Q Now, in the event of additional customers at the industrial site, would there have to be any additional changes to the substation itself?

A Are you speaking in reference to No. 32, are you speaking in general, or what?

Q Yes. This is your supplemental reponse to Interrogatory 32?

A For that specific load, the 2,000.

Q Assuming that load there would be some changes?

A There would not be any required in the

substation itself, no.

Q Now, there's a step-up transformer that's located close to that substation?

A Right, the step-up transformer.

Q There would have to be some changes to that?

A Right.

Q Can you tell me, and I guess that's --

A Phase 2.

Q -- Phase 2, what is entailed in those changes to serve additional load?

A Basically I stated that particular feeder -- the station itself is a 12.5 feeder, it's a -- I'm sorry, 12 kV substation. So it's scheduled to be converted to 25 kV operation at which time we basically build another substation. Depending on exactly when that occurs, if that load comes in tomorrow afternoon, then obviously we'd have to parallel them, and that's what Phase 2 is. If it's down the road, like this, another 20 years, the station would probably be converted to 25 kV, and the step-ups would be removed and it would not be there.

But I did this on the basis that we had not convert and it is where it is right now. So what we would do is parallel -- right now there's one 3750 there that we upgraded to 4680, and we would parallel

3750 with it, a capacity around 8,000 or so.

Q And in your response you mention that if you were to bring in a new transformer it would come from your stock, which I assume that's existing stock?

A We, as part of our conversion program, you know, have 10 or 15 of these 3750s that are moved in and out of the system. Just like these units, the one that's there now, we fully intend to retire it and move it somewhere else. It's moved across the system. Any step-up we would put in in any station is basically a temporary in our conversion program. So I'm assuming what you're getting to, the cost to do that is not there and that's true. Because that unit would be salvaged back and moved back to another place as part of our ongoing conversion program.

Q So you wouldn't assign a cost to that?

A In other words, we're not going to buy a unit specifically for that and one that when we convert it we junk it. It's just units that we have that continually move around our system as part of our conversion program.

Q So although there is a required piece of equipment that would have to be transferred into the facility, because you've already purchased it you're assigning a value of zero to that?

A Also because it's part of our ongoing conversion program and it will be reused as part of our other ongoing projects. It doesn't become a permanent part of that station; it doesn't become --

COMMISSIONER CLARK: I'm afraid I don't understand. It does or doesn't become a part of that station?

WITNESS DYAL: It becomes part of the station temporarily, I guess is what we're saying. In order -- as we convert the station from 12 to 25, and that's an ongoing program we have to convert our entire system to 25 kV operation. So we've got -- I don't know probably 10 to 15 of these units that are constantly resolving around the system. As we put it on a feeder, we'll use it, and as we convert the station, and convert the station 25, we'll retire that out, take it to another feeder and another substation and it will go through that process. We have been in that process for 20 years and expect to be in it for another 20 years.

COMMISSIONER CLARK: I'm afraid I still don't understand.

When -- you convert it from what to what?

WITNESS DYAL: The station operates at 12 kV.

COMMISSIONER CLARK: Uh-huh.

WITNESS DYAL: We reinsulated the circuit to operate at 25 kV.

COMMISSIONER CLARK: Okay.

WITNESS DYAL: To step up the station voltage to the line voltage it will operate at we put this step-up in there. It merely steps the voltage up from 12 to 25.

COMMISSIONER CLARK: All right.

WITNESS DYAL: And it will remain there until we convert the station to 25 kV operation.

COMMISSIONER CLARK: Oh, I see.

WITNESS DYAL: It will be the same voltage as the line and we'll pull that step-up out --

COMMISSIONER CLARK: Got you. All right. Thank you.

WITNESS DYAL: Sure.

MR. LOGAN: Commissioners, if you'll give me just a second.

No further questions.

COMMISSIONER CLARK: Staff.

CROSS EXAMINATION

BY MS. JAYE:

Q Good afternoon, Mr. Dyal.

A Hello.

MS. JAYE: Staff is going to be presenting some exhibits. We have them in a bundle. There will be nine of these. (Hands out documents.)

Q Mr. Dyal, if you would, take a look at the top exhibit. It consists of a map and Clay's response to Staff's First Request for Production of Documents, 1 through 6, some papers there are stapled together. Are you familiar with these documents?

A Yes.

Q Is this map true and accurate to the best of your knowledge and belief?

A Yes.

Q Could you tell me what this map illustrates?

A It shows the areas in Baker County where we have facilities.

Q Does this map indicate that Clay is serving customers to the north of FPL's Wiremill substation?

A Yes.

Q How many customers are there approximately?

A You know, I'd have to -- try it a little closer. You're talking about everything north? I don't really know quit how to answer that. Sitting here counting all of them.

MR. HASWELL: Excuse me, if I could ask the question, are you referring to the key map and the

maps that are shown on the key map?

MS. JAYE: It would be Map E.

Q (By Ms. Jaye) Mr. Dyal, if you wouldn't mind, I'd appreciate you pointing out approximately where these customers are located on the photographic map that is up there as sort of a demonstrative exhibit.

A Okay. Here again, I'm assuming you're looking at E talking about these are north.

Q Yes.

A Well --

COMMISSIONER CLARK: Mr. Dyal, why don't you take that microphone.

WITNESS DYAL: Oh, I'm sorry.

If you come across Arnold Rhoden Road to the plant site, there's a road that goes north from Arnold Rhoden, and we have a single-phase line that goes up that road and serves customers all in this area here. (Indicating) I'm guessing there's 15 -- that's a guess. I could count the houses, I guess.

Q That's fine. We just wanted to know as far as the immediacy of the area that was being served, whether it was actually to the north. Thank you.

Mr. Dyal, could you tell me what type of service, for example, a single or a dual phase, does

Clay provide to these customers that you just pointed out?

A I'm sorry, what?

Q What type of service is provided to those customers that you just pointed out that are to the north?

A Single phase, and I think most of them are residential.

Q In what year did Clay install the Sanderson substation?

A I believe '76. I think it's in a exhibit. I believe '76.

Q And what area was the Sanderson substation originally intended to serve?

A Well, the area I showed you in red is basically the area we've historically served. As I said, along Arnold Rhoden Road we had a line since '47, so --

Q Was the development of the industrial park in Baker County contemplated when Clay built the Sanderson substation?

A In '76? Probably not.

Q Could you tell me when was Clay aware that FPL was building the Wiremill substation in 1976?

A I wasn't there so I guess in '76 when it was

built, I don't know.

Q Do you know if Clay protested the existence of the Wiremill substation as uneconomic duplication of existing electrical facilities?

A I wasn't there. I don't know.

Q All right. If you could turn to the next exhibit in your packet, it will be FPL's interrogatories --

COMMISSIONER CLARK: Ms. Jaye, let's take a moment and -- should we go through and identify this as exhibits?

MS. JAYE: Yes, we can do that, or we can do them as a composite. Either way.

COMMISSIONER CLARK: Let's go ahead and do it as a composite but let's name what's in there.

MS. JAYE: Okay, very good.

COMMISSIONER CLARK: First thing I is Staff's First Request for Production of Documents to Clay Electric Cooperative, Nos. 1 through 6.

MS. JAYE: Yes, ma'am.

COMMISSIONER CLARK: What is the next one?

MS. JAYE: The next one would Clay's Answers to FPL's First Set of Interrogatories, 5, 6, 8, 12 and 15.

COMMISSIONER CLARK: All right. I have that

one.

MS. JAYE: Third one will be Actual Numbers to Arrive at Cost. Late-filed Exhibit 10.

COMMISSIONER CLARK: All right. I have that one.

MS. JAYE: Next one will be Clay's Answers to FPL's Third Set of Interrogatories, No. 32.

WITNESS DYAL: I don't --

COMMISSIONER CLARK: I have that. Do all of the parties have that?

WITNESS DYAL: I think I'm missing one before that. Did you say there was a late-filed Exhibit 10?

MS. JAYE: Yes. Actual Numbers to Arrive at Cost.

WITNESS DYAL: I have a 9. (Pause)

MS. JAYE: We're getting that for you, Mr. Dyal.

Q (By Ms. Jaye) The next exhibit then, after Clay's Answers to FPL's Third Set of Interrogatories No. 32, would be Late-filed Deposition Exhibit 9, Labor, Materials and Overhead for Service to River City Plastics.

Continuing on, Late-filed Exhibit 12, Statistics on Clay's Substations.

The next one, Clay's Response to FPL's Second Interrogatory, 16 and 20.

Late-filed Exhibit 5. This is from Mr. Dyal's deposition, Cost Estimate River City Plastics Generator Installation.

And the last one is Clay's --

WITNESS DYAL: Excuse me, I'm sorry. I don't have that one either. Wait a minute. Whoa, wait a minute. I do, I'm sorry. Excuse me.

MS. JAYE: Last one is Clay's Response to Staff's First Set of Interrogatories, 1 through 15.

COMMISSIONER CLARK: We will mark the series of discovery documents that Staff has just enumerated as Composite Exhibit 11.

MS. JAYE: Thank you, Commissioner.

(Exhibit 11 marked for identification.)

Q (By Ms. Jaye) If you'd turn to the second document in that stack, this would be Clay's Response to FPL's Interrogatories 5, 6, 8, 12 and 15. Do you recognize this document?

A Yes.

Q Is the information in this document true and correct to the best of your knowledge and belief?

A Yes.

Q Would you say that the type of load served

from of the Sanderson substation is mostly a rural/residential type of load?

A Yes.

Q If you look at Interrogatory 12, would you indicate which of these outages probably originated on the transmission line leading into the substation?

A This was only for the substations. It was not --

Q This would be the same Interrogatory No. 12 that Mr. Logan went over earlier?

A Yes.

Q And all of these you say originated with the substation itself; none of these on the transmission line leading into the substation?

A Right. Yes.

COMMISSIONER CLARK: I'm sorry. Ask that question again?

MS. JAYE: Yes. My question was if any of the outages listed in Interrogatory 12 and the table originated on the transmission line leading into the Sanderson substation, or if they were all originating at the substation itself.

COMMISSIONER CLARK: Wait a minute. The answer says "No outages of the Sanderson substation during the last three years." I understand it to be

the feeder out of it.

WITNESS DYAL: That's what I assume she's talking about. These affected the substation. It took the feeder breaker out in the Sanderson substation. The station itself, which would have been back to what she was talking about if I had a transmission outage, I would have lost the whole stagation. So basically the answer is no, I didn't. Okay.

Q (By Ms. Jaye) Now, Mr. Dyal if you would look at your Late-filed Deposition Exhibit 10. Tell me, did you prepare this document or have it prepared under your direction?

A I had it prepared under my direction.

Q To the best of your knowledge is this information true and accurate?

A Yes.

Q Does this information show the expected customer load and energy growth within what you consider the disputed area?

A Yes.

Q What are the expected load and energy growth estimates in the disputed area according to this exhibit?

A It's the load to the customer itself. The

1900 kW per month, and then its energy requirements of 1,154,190, Column 4 and 5.

Q Now, if you would take a look at your answer to Interrogatory 32, Clay's answer to Interrogatory 32, could you tell me if you recognize this document?

A Yes.

Q To the best of your knowledge and belief is this information true and correct?

A We have filed an additional 32, so I'm not sure which one you're talking about here.

Q Would the additional 32 supersede the original?

A Yes.

Q Okay. The addition then would be what we should speak about. And could you tell me if the supplementary answer to Interrogatory 32 attached to this exhibit would lead to a change in Clay's response to this answer -- to this question, rather?

COMMISSIONER CLARK: Can you read it?

A No, I'm sorry, it's not attached.

Q It's not attached. What is not attached?

A Well, I think she's referring to what is attached to this here and that's not the new 32, so I'm -- not sure where we're at here.

COMMISSIONER CLARK: I'm sorry. Some of the

last pages of my 32, I can't read them. They are not reproduced -- you can't read everything.

MS. JAYE: Just a moment, please.

WITNESS DYAL: This is it right here, that's 32. (Indicating) (Pause)

MS. JAYE: We'll move on while we're trying to locate the original of that fax. It was not a good quality fax to begin with, so as we try to locate that we'll move on.

WITNESS DYAL: In fairness, I'm not sure that that fax -- I do think it's part of 32 but it's not the entire 32.

Q (By Ms. Jaye) That's all we received as a supplemental to -- answer to question 32.

A Mark --

COMMISSIONER CLARK: Ms. Jaye, let me ask you a question. How much more do you have?

MS. JAYE: Quite a bit.

COMMISSIONER CLARK: We'll take ten-minute break, and if you would, straighten this out.

MS. JAYE: Yes, Commissioner. Thank you.

COMMISSIONER CLARK: We'll be back at 2:30.

(Brief recess taken.)

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COMMISSIONER CLARK: Go back to the record.

MS. JAYE: I'd like to substitute the new pages that have been passed out. I have Exhibit 2, at the bottom, Clay Electric Cooperative Incorporated, Job Estimate at the top. I'd like to substitute these for the poor copies we had attached to exhibit --

COMMISSIONER CLARK: It's part of 32, is that right?

MS. JAYE: Yes, ma'am.

COMMISSIONER CLARK: All right.

MS. JAYE: That goes in place of the poor copies that were attached to No. 32.

COMMISSIONER CLARK: Thank you.

Q (By Ms. Jaye) My question for you, Mr. Dyal, would be please explain what these responses mean on the fresh copy that has been handed out with the exhibit at the bottom of it and appended to the answer to Interrogatory No. 32.

A No. 32.

Q Yes, sir.

A What do you want explained? I'm sorry.

Q What are these numbers in response to? What do they mean?

A You want the $49,810.

Q All of the numbers. Material costs, labor

costs, overhead cost, and the total cost less salvage at the bottom of the right-hand column. How do they all compute?

A Okay. It's referred to -- I guess I don't know if you still don't have all of it, so there's called a Phase 3 is where we would reconductor -- basically what the 49,810 is the reconductor of the line, basically it's about 1.85 miles of line going up Bill Davis Road. It's the reconductor of that section of line. If you look back, there's a description. I guess you still don't have all of our answer to 32.

Q That's all right. We can keep going.

Is there sufficient real estate within the Sanderson substation to site the additional facilities if they are required?

A The paralleling of the step-up, yes.

Q Yes, sir. Does Clay have any potential customers along the nearly four mile long route from the Sanderson substation to the River City Plastics facility who would require service from Clay if Clay is awarded service to the territory in dispute?

A Do I have any active? I don't have any active.

Q Potential customers?

A I don't have any active potential customers

either, I guess. I mean there's open land and there's places for customers to move in, but I don't have any right offhand.

Q When did Clay Electric become aware of Baker County plant and industrial park in the vicinity of the currently disputed area?

A Mr. Barrow would know that better than I. I don't keep up with that stuff. I'm an engineer.

Q What actions did Clay take to upgrade its Sanderson substation when it learned of the creation of the industrial park?

A I'm sorry, say it again.

Q What actions did Clay take to upgrade its Sanderson substation when it learned of the creation of the industrial park in Baker County?

A Nothing.

Q Mr. Dyal, if you'd turn to your Late-filed Deposition Exhibit 9, Labor, Materials and Overhead for Service to River City Plastics. Could you tell me if you've seen this document before?

A Yes.

Q Is the information in this exhibit true and accurate to the best of your knowledge and belief?

A Yes.

Q I'd ask you then to look at your Late-filed

Deposition Exhibit 12, Statistics on Clay's Substations. Have you seen this document before?

A Yes.

Q Is the information this document contains true and accurate to the best of your knowledge and belief?

A Yes.

Q Would you explain the difference between load indicated in MVA and load indicated in kW as shown in this exhibit?

A The capacity MVA, the third column?

Q Yes.

A That's the capacity of the substation. The subload kW is the peak load on that substation that it's actually experienced.

Q And could you compare the 15 MVA capacity of the Farnsworth substation to the substation load of 14.160? How much reserve margin is that?

A 840 kW, unless you overload the unit, I mean --

Q Mr. Dyal, would you take a look at Clay's reponse to FPL's Interrogatory 16 and 20, please, tell me if you recognize that document?

A Yes, I do.

Q Are the answers contained in that document

true and correct to the best of your knowledge?

A Yes.

Q If you would look at answer 16B, would you agree that if Clay provided the data in response to this question, there would be little or no argument regarding the relative reliability of single feeds with on-site generation compared with a dual feed service without on-site generation from the perspective of the electric service provider?

A I thought that we did answer B, and here again another late-filed, 16-B, C, D.

Q Could you and the question in any case?

A I'll find it, I'll answer it. (Pause)

In 16-B, there's like five items that are noted in that. Do you want me to just read them?

Q Yes, if you could just answer the question. All it would take would be a yes or no.

A That's not what I have so I guess you need to ask the question again.

Q Okay. Let me ask it again, maybe I could go slow enough where you could pick up what it is that I'm getting at here.

Would you agree looking at 16-B, that if Clay provided the data in response to this question, there would be little or no argument regarding the

relative reliability of a single feed with on-site generation compared with a dual feed service without on-site generation from the perspective of the electric service provider?

A I don't know. I mean, no, I can't agree, I guess; if you're looking for a yes or no I can't agree. They are two totally different types of service, so I guess I have to say no, I don't agree.

Q So the difference in service wouldn't make a differences to the electric service provider?

A I guess so, yes.

COMMISSIONER GARCIA: Why don't you explain why it would make a difference.

WITNESS DYAL: Well, I guess I'm not real sure what she's hunting. But I guess in my mind, I, being the electric service provider, if all I'm providing is a single source feed with the backup load management generators, in my mind I'm reducing my costs and increasing my savings to the tune of about a 50,000. If I'm just giving throwover, then I'm not gaining that 50,000 in savings by using the unit as load management, so I'm not incurring those savings; I'm just providing service. So it's a different function, a different service.

Q (By Ms. Jaye) Okay. Mr. Dyal, turning to

Clay's response to question 20, would you agree that Clay's position regarding the higher reliability of an on-site generator is based upon the customer's views?

A I would say that 20 is based on what the customer has told us he needs, and that these generators fulfill that need. He made that judgment. We just told him what we had.

Q Mr. Dyal, now if you would look at your Late-filed Deposition Exhibit 5, Cost Estimate for River City Plastics Generator. Tell me, are you familiar with this document?

A Yes.

Q Is the response contained in this document true and correct to the best of your knowledge and belief?

A True. Yes.

Q Have you included a contingency factor or amount in any of the figures supporting the estimated $1.1 million amount?

A The 1.1 million is basically as a result -- as I said we've installed these at six other locations. I think we show in one exhibit where we did install them, and install costs. So it's based on actual installed costs of units, and would include normal contingencies, overheads, labor, everything.

Q Turning now to Staff's First Set of Interrogatories, Nos. 1 through 15, could you tell me if you're familiar with this document?

A Yes, I am.

Q Are these answers true and correct to the best of your knowledge and belief?

A Yes, they are.

Q Looking at this exhibit, would you please explain what Clay means by capital credit in its answer to Interrogatory 1-G? (Pause)

A Capital credits, you know, based as a cooperative, is, I guess, would be comparable to what we call profit. In other words, at the end of the year, after you're through with your revenues and your expense, the difference is basically margins which we return back to the members in terms of capital credits. So you could call it return of margins. We call it capital credits.

Q Does the capital credit represent present value or future value as it appears in this exhibit?

A As it appears right here it's present, or I guess, it's estimated present; estimated annual.

Q What does the average Clay customer normally receive a capital credit?

A I'm probably not -- I don't know. I mean I

just don't deal in that. We give them every year but I'm not versed in what the payback cycle is and who gets what.

Q Now, if you would return for a moment to Clay's response to FPL's Interrogatories 5, 6, 8, 12 and 15, I think this was the second in that stack. Give you a chance to flip over to question 15, if you will. Tell me if you are familiar with that. The information contained in that document.

A Yes. I see it.

Q Now, what I'm trying to do here is put the $2.4 million into perspective, the figure that is found here in the answer to 15. Does this figure represent the expected capital credits generated over the 15 year service contract with River City Plastics, including load management generators and site facility charges?

A No. Basically the 11 million 9 is just gross power revenues over 15 years for the site, okay? So that's just, you know, power -- the rate they are on times 12 months times 15 years; that's just gross revenues.

The 2 million 4 would be the cumulative cash flow at the end of 15 years; includes, you know, as it says, the line costs, the generator cost to have them

there, the wholesale power costs and revenues. So it's a -- it's what it says it is. I mean --

Q How many hours per year does Clay expect to operate its load management generator at River City Plastics for load management purposes?

A Around 135 to 140 hours a year.

Q Okay. If you would, please, return to Staff's request for Production of Documents 1 through 6?

COMMISSIONER CLARK: Before you do that, let me ask a question about 15 again.

It's not clear to me why the $2.4 million is. It sure sound seems like it's in effect a net, and it may, in fact, be equivalent to the your profit. It says "which include line costs, customer generation costs, wholesale power costs, and retail power revenues." I would assume you subtract costs from revenues and that would be a net. Is there somebody if you don't know, is there some witness who does know?

WITNESS DYAL: Yes. We have someone that could probably answer that.

COMMISSIONER CLARK: Because at the beginning you talk about gross power revenue. And then in the second part it talks about costs and

revenues and I would assume costs get subtracted from revenues. Maybe we can get somebody else to answer that question. Go ahead, Staff.

MS. JAYE: Thank you, Commissioner.

Q (By Ms. Jaye) Now, I had just asked you how many hours per year does Clay expect to operate its load management generator at River City Plastics for load management purposes, and you had answered it was about 135 hours; is that correct?

A Yes.

Q Now, if you would please return to Staff's Request for Production of Documents, numbered 1 through 6. This was the very first set of documents.

A Yes.

Q Now, if you would look at Clay's response to request 3-C.

A Yes.

Q There's a note at the very bottom of that page, and I was wondering if you could read aloud that note; the very bottom of Clay's response?

A "Given that the life of each unit is 15 years and that will run 11 months of each year, the dollar per kW equals 1.88."

Q How does that tie in with only running the generator 133 hours a year?

A Well, we plan on trying to control the peak 11 months out of the 12-month year. In any given month we may only run it 2 hours to control the peak that month.

Q So that the month doesn't mean running it every day during the month?

A Right, no. It only --

Q Thank you. Now, which other cost estimates are included in the 1.88 per kilowatt noted here? I believe we're back at question 15 where we were previously.

A Say the question, again, sorry?

Q Just a moment. Let me turn there.

MS. JAYE: Commissioners, I withdraw the question. Staff has requested that I do this.

Q (By Ms. Jaye) Mr. Dyal, if you would please refer to Staff's Interrogatory No. 10.

A The late-filed exhibit or --

Q It's the Interrogatory No. 10. (Pause)

A Is it in this group you handed me?

Q Just a moment.

A Here it is, I'm sorry. No. 10?

Q Yes.

A I've got it.

Q I believe there's a table in Clay's

response --

A Right.

Q Okay. We're on the same page now I think.

A Page 4.

Q Yes. Clay states that its first-year cost would be $36,023.

A Yeah. The taxes, fees and fuel expense.

Q Yes. And that it would increase as 3.5% annually; is this correct?

A Right, yes.

Q Now, in Clay's response to question 13 in that same set of Clay's responses to Staff's interrogatories, would you clarify if Clay dispatches all of the load management generators at the same time when they are running them in load management?

A Yes. When we go into load management we'll have them all on.

Q Now, speaking of load management, during your deposition, when Staff asked how the load management credit is determined on a customer-by-customer basis, you responded "It depends on their load and what they are willing to do." This was to Page 53, Lines 18 and 19 in your deposition.

Could you explain what "it depends on their load and the what they are willing to do" means?

A I guess what I'm really referring to, it really depends on whether they are willing to participate as to whether or not we put them on it. Basically, what we just look at, and that is, is their load and now coincidental probability they are on our peak. In other words, are we going to be able to use the units and that type of thing.

Q So this would be negotiated between Clay and the customer?

A Well, I don't know that it's necessarily called negotiation per se. We look at each load and how it contributes to the peak. And it has to be a win-win for both of us. If it can't work as a load management device, then we're not going to get involved in it at all. So it has to work in that vernacular.

And then we look at each customer, depending on how well it may work as to how much credit he may get, and that's why you have the range. And even in the range, if they are willing to give up their capital credits, then you know the range may even get broader. If they are not willing to give up capital credits, then that's part of the -- looking at the cost.

Q Now, staying with the idea of cost for a

of documents that are interrogatories 1 through 15, I only have I guess Mr. McCartney's signature and Mr. Malphurs. I to haven't have any others. Do you, Joe?

COMMISSIONER GARCIA: No.

MR. LOGAN: Commissioner, I think it's the second to the last page; the witness signature.

WITNESS DYAL: That was the one I asked her she was at and she said no. I'm assuming she was talking about the contract. Appendix B I have not signed.

COMMISSIONER CLARK: All right. Okay. I'm sorry. I was looking at the appendix. And it's actually -- about four pages before the last that I do have. There's on Susan Reeves, a Herman Dyal -- is that it?

COMMISSIONER GARCIA: This is what she's talking about. (Indicating document.)

MS. JAYE: Yes, sir.

COMMISSIONER CLARK: Okay. Thank you.

MS. JAYE: Staff has no further questions.

COMMISSIONER CLARK: All right. Commissioner Garcia. Redirect?

MR. HASWELL: Thank you. I do have a resolution to the question about Late-filed

Exhibit 10, the answer to No. 15, if the parties have no objection. The person who furnished that information to Mr. Dyal is with us. However you want to handle that. I'm certainly not prepared to testify for him. I believe, Commissioner Clark, you wanted to know what the relationship of the 2,431,756 was.

COMMISSIONER CLARK: Just a minute. Mr. Dyal comes back on as a rebuttal. He can answer it then. He can confer with whoever knows and then answer it then, if that's all right with you, Mr. Logan?

MR. LOGAN: That's fine.

COMMISSIONER CLARK: Okay.

MR. HASWELL: Thank you.

COMMISSIONER CLARK: Go ahead, Mr. Haswell.

MR. HASWELL: Thank you.

REDIRECT EXAMINATION

BY MR. HASWELL:

Q I just have a few questions concerning some of the questions that Mr. Logan asked you.

Mr. Dyal, what was the reason for moving the reclosers that you referred to that Mr. Logan had asked you? Perhaps you could also show where they were moved on the map.

A Basically, right now looking at this out of

our Sanderson sub, the feeder goes due north, comes up 90, goes across and then goes up.

We have a set of hydraulic breakers up in this area. (Indicating) And what's that intended to is for problems or outages up into this area, it would open up here and not affect any of the customers back down here. But because of the step-up we have in the station and the coordination between the electronic breaker in the station and the hydraulic here, we were getting faults up in this area that were, in essence, going through this breaker and locking out the station. So we were losing all of customers in here for actually a problem up here.

To resolve that what we do, we changed that hydraulic to an electronic so it coordinates with that, with the breaker in the station, to prevent that from happening. But due to River City Plastics coming in, and the work we were doing, we decided rather than just change them right here, we would move the breaker location to right here. What that does is take this exposure off of River City Plastics, changes the feeder to where the feeder basically looks from here to River City, and this up here becomes a tap off that electronic breaker.

Q Thank you, sir. Mr. Logan also asked you

questions about 12 to 18 cycles is what River City Plastics has told you is a -- constitutes an interruption. Has Mr. McCartney of River City Plastics indicated any other time frame that causes his lines to go down?

A You know, he refers to even less than that that he'll have certain losses of his lines, I think that came through his rebuttal in talking about his services and the quality of it.

The 12 to 18 was basically here again when he lost over 50% of his lines, his plant had a major outage. If it's less than that, he tends to deal with it but he does have loss of production and that could be anywhere from six cycles to the 12.

Q Okay. Thank you. I believe you were also asked when the Sanderson substation was built. Could you refer to Page 2, Line 16, of your direct testimony for you minute?

A Yes. I guess I should have before. It's 1973.

Q Okay. Thank you. Does Clay Electric -- you were also asked questions by Staff if you objected to the construction of the Wiremill substation. Does Clay Electric regard the location of a substation, or the construction of one by another utility adjacent

to, let's say, your own area as a claim to your territory?

A No.

Q You were also asked by Mr. Logan questions about the bypass switch. Do you still have a copy of that Powell-ESCO specification?

A No. I didn't have one then.

Q You also indicated that the switch caused you some concerns. As a professional engineer, could you tell us what are your concerns? What happens when that switch is operated and bypassed and what happens when it's not bypassed in terms of good engineering practices, prudent utility practices?

A Well, the concerns I have, a traditional bypass switch, in the venacular of the industry we've used it, typically is operated in a mode that is -- it has a primary feed and then it has a backup feed. The normal traditional mode is it senses source voltage on a primary. When it loses that voltage, it opens up primary feed, and then after a certain time delay, find reclosers or whatever to clear, it would then transfer over to the backup.

Transfer times typically in that mode are not intended to stop momentaries. They are in the seconds range. That's your traditional technology.

The switch that they are proposing here is an major breakthrough, especially at a $40,000 cost level. I don't have any way to verify it, so I'm having to take it here at face value, which does cause me some concern.

As an engineer, when you start operating in nine cycles and less, you're having to make some real decisions. One, I purport what they are saying in a bypass mode that what's going to happen here is they are not going to open up the preferred source first, but they are going to close in the backup before they open the primary; which means if you've got a fault on your primary feed, you are now putting both of your transformers in parallel into a fault. And then it will open those with the, quote, "switch" itself, which is a nontraditional role.

Now, the spec sheet shows it has capability, but -- you know, I mean I've never seen that. And so I -- you know, I'm leary of that mode.

So that's a nontraditional application. I think when they talk about the non-bypass position, and here again I'm going by assumption of what historically how a switch operates, that's the typical time where they open up the preferred and then close in the backup. And that's the 12-plus cycles, 12 plus

or minus 1. That's the more traditional mode.

So here again, not only is it a new switch and a different switch, it's somewhat a nontraditional because you're possibly exposing your backup feeder to the same fault that you're trying to get off of. And then you're depending on this transfer switch to interrupt fault current to try to isolate back your backup feeder from the primary, unless you've got timing in your station breakers to separate those. So that's -- when we're dealing in cycles, there's not a lot of room for error. So that's a tough move. I'd have to see a lot of tests. I'd have to see a lot of experience that this test worked.

Also, I guess I have a concern. We constantly, in our industry, look at ideas; things we feel will work, things that will improve. And I buy -- if this works, it's a great switch. I'm not trying to dispute that per se. But one of the things that's got to make this switch work is one, you've got to be able to sense the loss of voltage. And a loss of voltage is not always synopsis with an interruption of current. Just like in this situation, you can go into a lab and you can put a source voltage on a control panel and you can lower that voltage and it will transfer over. I don't doubt that. But in the

real world, this thing has a dynamic electrical system in it and it doesn't necessarily always have zero voltage. I doesn't always have 70% voltage. This switch is going to sit on top of about 3,000 foot of cable that is capacity by nature, which basically means you could open up the breaker station, and the charging in that cable, it may hold a voltage.

Now, it's only maybe hold the cycles, but here again if it holds it for three or four cycles, you've got no current flowing; there's no power to its motors. So then you begin to open up and it clears in nine cycles, you're talking 12 or 13 cycles that his motors have not seen torque; they have not seen current.

So there's things that concern me about the switch. It may work great but, frankly, all I have is one page. I have no test data. If it works great, we'd buy a bunch of them. Love to see it. But as an engineer, I'm pretty skeptical right now. There's just not one available out there. And I did try to talk to Powell-ESCO, and you can't. It's proprietary switch for Florida Power and Light. So right now I don't know what this switch will do.

MR. HASWELL: Thank you, sir. I have no other questions.

MR. LOGAN: Commissioner Clark, I have just a couple of questions related to the territory in one of their exhibits that Staff touched on. I promise I'll be very, very brief.

COMMISSIONER CLARK: Go ahead, Mr. Logan.

MR. LOGAN: Thank you.

RECROSS EXAMINATION

BY MR. LOGAN:

Q Mr. Dyal, I want to turn your attention to the E-2, which is the territory that you all serve. I think it's behind that photo.

A Do you want me to go up there?

Q I don't think you'll need to.

A All right.

Q Mr. Dyal, each of these grids represents how much territory or space on that map, do you know?

A The grids on that map right there?

Q Yes.

A I'm sure there's a scale on it. I can look and see if there's scale.

Q Okay.

A (Witness moves to charts) Looks like somewhat a couple of miles, -- (Pause) Looks like somewhere around a mile.

Q About a square mile?

A Yeah. That's a guess, I mean --

Q Now, so if there is one customer within that block then that was gridded off as a -- part of your service territory or where you are serving customers, is that how that works?

A If we're serving a customer in it, then we probably gridded it off.

Q Would there be any of those grids where there might be FPL customers as well?

A I wouldn't know specific on each and every grid. Some of those grids are half grids. It's not a square block on every grid, so I'm sure --

COMMISSIONER CLARK: The answer is you don't know.

WITNESS DYAL: What?

COMMISSIONER CLARK: You don't know if there are any FPL customers in the areas you've shaded off as being your territory?

WITNESS DYAL: I'm not aware of any, but there may be some perimeter area where there is a customer. Like we serve along the county road there just south of Macclenny, and I know they come down that road. With whether they cross, I really don't know, each one. As a whole it would be very, very minor.

Q Subject to check, would the total number of customers served by Clay and Baker County be approximately 1900?

A That's what I said in my deposition. I did list it.

Q And again, subject to check, for FPL approximately 6300?

A Yes.

Q And, again, with respect to these blocks, there could be as few as one customer in a block. This is a rural area?

A Sure.

Q I think that's your testimony. Thank you.

MR. LOGAN: Thank you, Commissioners.

MR. HASWELL: We'd move Mr. Dyal's exhibit, Exhibit 9, I believe.

COMMISSIONER CLARK: Without objection Exhibit 9 is admitted in the record.

MS. JAYE: And Staff would move Exhibit 11.

COMMISSIONER CLARK: Without objection Exhibit 11 is entered in the record.

MR. LOGAN: FPL would move Exhibit 10.

COMMISSIONER CLARK: Without objection Exhibit 10 is moved into the record.

Thank you, Mr. Dyal. We're back to

Mr. Hood.

(Exhibits 9, 10 and 11 received in evidence.)

MR. LOGAN: FPL would call Mr. Hood.

- - - - -

ROBERT A. HOOD

was called as a rebuttal witness on behalf of Florida Power & Light Company and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. LOGAN:

Q Mr. Hood, can you state your name for the record, please?

A Robert A. Hood.

Q Are you the same Mr. Hood that caused to be prepared prefiled rebuttal testimony dated September 22, 1997?

A Yes, I am.

Q If I were to ask you the questions contained in this testimony today, would your answers be the same?

A Yes, sir, they would.

Q Did you have exhibits attached to that rebuttal testimony? I don't believe you did.

A I don't believe so, no, sir.

MR. LOGAN: Commissioner Clark, I move that rebuttal testimony of Mr. Robert Hood, dated September 22, 1997, be admitted into the record as though read.

COMMISSIONER CLARK: The rebuttal testimony of Robert A. Hood will be inserted into the record as though read.

MR. LOGAN: Mr. Hood does not have a summary. We'll tender him for cross.

BEFORE THE PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

REBUTTAL TESTIMONY OF ROBERT A. HOOD

DOCKET NO. 970512-EU

SEPTEMBER 22, 1997

Q) CAN YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A) My name is Robert A. Hood.

Q) MR. HOOD, WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A) To rebut certain aspects of Mr. Dyal's and Mr. Barrow's testimony with respect to FPL's proposed provision of service to River City Plastics as well as that proposed by Clay.

Q) In Mr. Dyal's testimony, page 5, lines 18-20, Mr. Dyal states that "The service offered by Florida Power & Light is, for lack of a better way of saying it, standard three phase service just like its other customer, Florida Wire & Cable is receiving". Do you agree, that standard three

phase service is what FPL will provide to RCP?

A) No. In fact, due to RCP's unique reliability requirements, FPL would provide a much different type of service. FPL would provide two three-phase services, fed from two separate power transformers. One service would be the primary service and the other would be the backup (dual) service. These two services would be connected by a throwover switch device, which would automatically sense an interruption and transfer RCP's load to the backup service. The switch will accomplish this transfer in 8.5 cycles or .14 seconds. By Mr. Dyal's testimony, page 6, lines 8 & 9, "An outage to RCP is any interruption of electricity of over 12 - 18 cycles". Therefore, RCP would not experience an outage during this transfer. In addition, the transfer back from the backup service to the primary service would be in parallel and no interruption would occur.

Q) Mr. Barrow provided data to the consultant, Post, Buckley, Schuh & Jernigan, reviewing RCP'S service requirements. In HDB-3, Exhibit "A", Mr. Barrow states, "One service to RCP would be from an existing substation approximately 2 miles away". Do you agree with this distance and that RCP is approximately 2 miles from Clay Electric's Sanderson

Substation?

A) No. RCP is approximately twice that distance from Sanderson Substation. Mr. Dyal, in his testimony, page 6, line 2, states "3.5 miles" and his Exhibit #2 shows a total distance of 3.75 miles. The distance from Clay's Sanderson Substation is 3.75 miles.

Q) On page 3 of Mr. Dyal's Direct Testimony, from line 20 to page 4 line 2, Mr. Dyal states the system improvements required to provide service to River City Plastics (RCP). Do you agree that these system improvements will provide for RCP's needs?

A) According to data provided by Mr. Dyal, the step-up transformer in Phase two will be overloaded with RCP's initial load.

	Proposed RCP KVA Existing KVA	Proposed RCP KVA startup load	load with 20% growth
Transformer rating	3750	4688	4688
Transformer loading	2630	4983*	5980
Over/Under Capacity	1120	(295)	(1192)

*(2630 KVA + 2353 KVA (2000 KW/85% power factor)= 4983 KVA)

The step-up transformer would be operating at 106% of capacity with RCP's current load requirements. With RCP's load growth, Clay Electric will be required to increase the capacity of this step-up transformer. In addition, this does not address any increase in load from other customers in the area. Ginger Barber with the Baker County Chamber of Commerce has told FPL that as soon as the road is in and RCP is up and operating, they will begin to actively market the other two parcels in this industrial park. This could also result in loading problems for Clay's Sanderson Substation's power transformer (Phase one of the system improvements). FPL knows its existing Wiremill Substation capacity is ample to meet all of RCP's needs and the needs of the surrounding area. Also FPL believes Clay Electric's substation is insufficient to meet RCP's initial load requirements, RCP's growth load requirements and the surrounding area's growth load requirements without costly additional system improvements.

Q) After reviewing Clay's testimony and documents in this dispute, do you have any concluding remarks?

A) Yes. The decision for who should be awarded this customer

should be based on the Commission's usual criteria in resolving territorial disputes, and that is Rule 25-06.0441. This rule addresses the capability of each utility, the nature of the area and foreseeable future requirements as well as the cost of each utility to provide the service. I is clear that FPL should be awarded this customer for the following reasons:

1) FPL has the substation capacity to provide reliable electric service with its existing facilities to not only service River City Plastics but to serve the two additional industrial customers planned for the industrial park.
2) The only new facilities required would be the distribution facilities extended to serve this customer and the addition of regulators in the substation.
3) FPL's Wiremill Substation is situated adjacent to this industrial park and also serves the community of Sanderson within 1/2 mile of the disputed area.
4) The cost for FPL to serve this customer is substantially lower, $205,431 (including the substation improvements) compared to Clay Electric's stated costs of $1,198,000.
5) The customer's preference should not be considered as factors are not substantially equal.
6) The effect on FPL's ratepayers would be higher costs

and reduced utilization of its existing Wiremill Substation.

7) Duplication of facilities would be avoided, including duplicating substation capacity.

8) FPL would provide this customer with extremely reliable electric service. A utility can spend any amount of money to ensure the customer the very highest level of reliability; however, the impact of these costs on the other utility members/customers should be considered as well.

Q) Does this conclude your rebuttal testimony?

A) Yes.

COMMISSIONER CLARK: All right.
Mr. Haswell.
MR. HASWELL: Thank you.

CROSS EXAMINATION

BY MR. HASWELL:

Q Mr. Hood, in your rebuttal, basically on Pages 1 and I think continuing on to Page 2, the service that you're referring to there, that was your Option 3 that you referred to in your direct; is that not correct?

A That's correct.

Q Okay. And that was also the service that you referred to in the change to your direct where you said you would not charge a CIAC for an Option 3?

A That's correct.

Q Okay. I just wanted to make it clear that FPL did not first tell River City Plastics it would provide that service at no cost to River City Plastics?

A That's correct. Originally there was a cost to provide that, and later on, I believe the date that came out was May the 12th, in a meeting with Mr. McCartney, that they would provide it at no cost.

Q So your initial service or offer to River City Plastics was primary single feed overhead?

A Right. And any backup would be at the customer's cost.

Q Now -- and you just said you changed that offer on May 12th of 1997?

A It was changed, yes.

Q Okay. Now do you know that River City Plastics signed a contract with Clay Electric on March 20th, 1997?

A I do now. I'm not sure if the people at that meeting -- well, I would think they wouldn't have known at that time because I believe there was testimony, or in one of the exhibits maybe, or my discussions with Mr. Cobb -- I believe he did know via conversation with Mr. McCartney in March, I believe it was March the 17th, that he was aware that they were considering Clay as the primary provider.

Q Okay. Thank you.

On Page 4 of your rebuttal you refer to a step-up transformer would be operating at 106% of capacity.

A That's correct.

Q But didn't you earlier say that one of your operating policies at Florida Power and Light said you could run a transformer up to 130%?

A Power transformer, yes, sir.

Q Okay. Does that apply to any transformer, that you can overload them for a certain percentage?

A It would, yes.

Q Okay.

A I think my point here was that it's overloaded with the existing River City Plastics load, and any future load would just make that problem much worse.

Q Do you think Mr. McCartney is misinformed about his desire or making a big mistake in his desire to have Clay Electric provide the kind of service he's requesting?

A I think there may be some misunderstanding on what our service entails. I think there also may be some misunderstanding -- and this is my assumptions from what I read based on the testimony or the information provided by the consultant. It did not appear to me in the documents provided that they really took a good look at the service. In fact, they made, as we identified earlier -- or was identified earlier, they made some misassumptions in the calculations of the bill, which today it came out that River City knew that. But, also, there were some standpoints by Mr. Borrow about the primary service and the indication to the consultant that there was no

fusing between the substation breaker and River City Plastics, the customer, as if that is a benefit to the customer. And I believe the consultant, in looking at the documents, took it that way. And that actually is nowhere near an advantage to the customer when it comes to a permanent type outage.

So I would say that some of the information that Mr. McCartney received from the consultant was not good information.

Q So you think you should take your dual feed backup, your underground primary and overhead backup, whether he likes it or not?

A I think Mr. McCartney could request what he would like. But any customer could request that but you have to look at, also, your other customers and what the impact of spending those kind of dollars for a service that if you look at what we have provided just to the adjacent industrial customer over the past five years, or even the past eight years, has been superior service, we believe, to what he will experience from generator backup.

Q If Florida Power and Light did a cost/benefit analysis, which you said you have not done, and it showed that there was a net benefit of installing generators at FPL's cost in a similar

fashion as Clay's, the net benefit to your customers, your utility, of $50,000 a year, would you do it?

A I would seriously consider it.

Q Okay.

A I would have to do a lot of calculations to come up with a $50,000 benefit.

Q Now, in terms of -- and this will be my last question -- in terms of the interruptions, momentaries and all the fussing we're doing about how fast this throwover switch works, if it was determined that it either did not work in its actual test, once it's actually tested out and works, or some test results were available, that it won't stop an interruption of Mr. McCartney's lines, or at least 50% of them -- because let's say it takes 14 cycles to operate instead of 12, or that Mr. McCartney's system really needs it to work faster than that 8.5, then it wouldn't really make any difference whether he went to turn a generator on to restore power or whether you had some other device available in our system to restore his power, would it?

A Go back to the switch. First of all, that switch will work.

Q Could you answer my question first, and then -- yes or no, and then you could explain?

A Okay. I guess I got kind of focused on the assumption that it wouldn't work. Would you repeat the question?

COMMISSIONER CLARK: It was kind of long, Mr. Haswell. I can't remember it myself.

Q I'll shorten the assumption.

Assume that the switch, which, again, you have not produced any test results, does not really transfer or stop his interruptions fast enough to keep his equipment from shutting down, okay?

A Okay.

Q I threw out an example. Let's say it took it 12 cycles and his equipment can only stand 8.

A Okay.

Q So the switch didn't stop his outage. Would it make any difference in terms of restoring power to this customer whether he restored his power on a generator that took 30 seconds to a minute to come on line, or your backup feed?

A No, under that assumption I would say that he would have a down time with his production.

Q All right.

MR. HASWELL: I have no other questions.

COMMISSIONER CLARK: Staff.

MS. JAYE: Staff has no questions.

COMMISSIONER CLARK: Commissioners? Thank you, Mr. Hood.

COMMISSIONER GARCIA: I had a quick question.

Tell me why it would work, because I wanted to hear your explanation and we didn't get it all.

WITNESS HOOD: I can tell you that Florida Power and Light would not put in its engineering standards that this will be the only switch that we will purchase, that has come out from our engineering department, unless we absolutely knew that that switch would perform at the level that it's supposed to.

We helped develop that switch based on a need for a faster throwover. And we would not have been a part of that and ended up going into purchasing those and saying that is the only switch we will buy if we did not -- be assured that it would work. We have not had a history of doing that, and we would not do that here.

COMMISSIONER GARCIA: Thank you.

COMMISSIONER CLARK: Let me ask a question. You went directly to the manufacturer to develop this switch?

WITNESS HOOD: Our engineering department worked with them to develop it. I was talking to

Mr. Brill at the break. We have been working on a project for the faster switch for up to five years.

COMMISSIONER CLARK: With this manufacturer?

WITNESS HOOD: I would assume with this manufacturer. It's the one we ended up dealing with in manufacturing the switch to our specifications. And the information, as Mr. Dyal pointed out, is proprietary because we did help with the specifications and the design, and we would not like for them to give that information out to any other utility.

COMMISSIONER CLARK: Thank you. Exhibits?

MR. LOGAN: No redirect.

COMMISSIONER CLARK: I'm sorry, Mr. Logan.

WITNESS HOOD: I thought I was excused.

MR. LOGAN: He is, I think. No exhibits either.

COMMISSIONER CLARK: All right. I'm sorry. Thank you, Mr. Hood. Now you're excused.

(Witness Hood excused.)

COMMISSIONER CLARK: Mr. Noble.

REX E. NOBLE, JR.

was called as a rebuttal witness on behalf of Florida Power & Light Company and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. LOGAN:

Q Mr. Noble, can you state your name and business address for the record please?

A Rex E. Noble, Jr. 1982 North State Road 7, Margate, Florida.

Q And are you the same Mr. Noble that caused to be prepared prefiled rebuttal testimony dated September 22, 1997, in this docket?

A Yes, sir.

Q If I were to ask you the questions contained in that testimony today, would your answers be the same?

A Yes, sir.

MR. LOGAN: Commissioner Clark, I'd move that Mr. Noble's rebuttal testimony, dated September 22, 1997, be inserted into the record as though read.

COMMISSIONER CLARK: Mr. Noble's rebuttal testimony will be inserted into the record as though read.

BEFORE THE PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

REBUTTAL TESTIMONY OF REX E NOBLE JR

DOCKET NO. 970512-EU

SEPTEMBER 22, 1997

Q) Please state your name and business address.

A) Rex E. Noble, Jr. and my business address is 1982 North State Road 7, Margate, Florida 33063.

Q) What is your occupation?

A) I am Manager of Technical Services, FPL Services. I am also a registered Professional Engineer in the states of Florida and Alabama.

Q) Please describe your educational background.

A) I have a Bachelor of Science Degree in Mechanical Engineering from Auburn University.

Q) Please describe your professional background.

A) I am currently responsible for managing project development for FPL Services. I have directed the development of over $15,000,000 of construction for FPL Services. I oversee the development of engineering, construction, measurement and verification and pricing for all performance contracts. I have developed projects for lighting retrofits, Heating, Ventilation and Air Conditioning retrofits, and installation of backup generators. I have over 15 years of experience in the Demand Side Management field and mechanical system design. I have designed mechanical systems for large hospitals and managed the installation of air conditioning equipment, lighting and generators. I am the Past President of the Southeast Florida Chapter of the Association of Energy Engineers. I am currently the Assistant Regional Chairman, Region XII and a member of the ASHRAE Continuing Education Committee for the American Society of Heating, Refrigeration and Air Conditioning Engineers. I am also a Certified Energy Manager and a Certified Indoor Air Quality Professional through the Association of Energy Engineers.

Q) What is the purpose of your testimony?

A) To identify the costs of providing a generator, including siting the generator, construction, operation and maintenance of the generator system.

Q) In Mr. Dyal's response to Interrogatory No. 3 of FPL's 1st Set of Interrogatories, Mr. Dyal estimates the cost of Phase 7, providing two (2) 1360 kw load management generators and associated equipment as $1,100,000.00. What is FPL's position on this cost estimate?

A) It is difficult to evaluate Clay's cost estimate of $1.1 million as Clay has not provided the specific breakdown of the generator costs. In Clay's response to Interrogatory No. 9, they state the cost of each generator is $450,000. This would leave $200,000 for the associated equipment costs. Based on our discussions with the generator supplier, Ring Power, we feel there are more costs involved.

Q) What are the various costs involved with supplying two 1360 kv generators?

A) The generator and associated costs to FPL are:

a.	2 - Power Modules (generators with switchgear and weatherproof enclosures)	
	Total price for both modules (450,000/ea.)	$ 900,000
b.	Fuel storage tanks, 5000 gallons (above ground)	$ 4,200
c.	Labor	$ 100,000
d.	Liability Insurance	$ 9,200
e.	Permitting construction and environmental	$ 18,000
f.	Payment and performance bonds	$ 9,200
g.	Engineering	$ 50,000
i.	Contingency (for unknown site conditions)	$ 50,000
j.	On-site construction management	$ 54,000
k.	Overhead	$ 179,190
l.	Profit	$ 137,379
	Total costs for 2 generators and associated equipment	$1,511,169

Q) In Mr. Dyal's testimony, page 6, lines 13-15, he states "When the plant goes down due to an electrical outage it takes two people per production line to restart the line and approximately eight hours to get the line back to

full production". And on line 19 he further states, "You can also see that it is critical that another "blink" not occur during the eight hours of restart or the process must start over." What is your estimate of the cost to run the two generators during such an eight-hour operation?

A) The cost of operation for two generators during an 8-hour period will be approximately $1,120, or $140 per hour.

Q) Mr. Dyal asserts in his testimony on page 5, lines 20-24 that, "Clay is offering an innovative service that takes into account the unique operational needs of the customer through the use of load management generators for back-up as well as load management, which when coupled with Clay's three phase service is clearly a superior method of providing the required service." Do you agree that Clay's service proposal is superior to FPL's dual throwover service?

A) No. The service Clay is offering the customer is somewhat innovative. However, the proposal from FPL will provide the customer with reliable service at a significantly lower installation cost. Based on Clay's

proposal, someone will need to subsidize not only the installation of the generators, but also the costs to maintain and operate the system, since Clay will be providing the generators to the customer at no cost. When all costs are examined, the costs of 1.1 million would increase by approximately 25% for additional factors. This increase is due to the insurance, permitting, payment and performance bond, engineering services, overhead and profit. FPL's proposed system will provide superior service for the customer because of the very fast transfer time for distribution interruptions and will be a much more cost effective system, both in initial capital cost and in operating and maintenance costs.

Q) Does this conclude your testimony?

A) Yes.

Q (By Mr. Logan) Mr. Noble, do you have a summary of your testimony?

A Yes, sir.

Q Would you provide that for the Commissioners, please?

A Commissioners, the purpose of my rebuttal testimony is simple and straightforward: I work for FPL Services, which is is wholly-owned subsidiary of Florida Power and Light. In my capacity as Manager of Technical Services, I currently -- I'm currently involved in the preparation, in the review of proposals, for the sale and installation of a variety of energy-related equipment and services, including generators.

As you might expect in the areas we compete with other energy service companies for the sale and installation of such equipment, it's been FPL Services' experience that in most instances there is not a large variation in the hard costs associated with the proposals, such as those for backup generation.

FPL has asked me to review the limited information submitted by Clay with respect to the costs associated with the purchase and installation of two 1360 kW load management generators at the River

City Plastics facility.

My review of that information indicates that Clay's estimate of $1,100,000 may have understated the actual costs of purchasing and installing such equipment. I believe a more accurate figure of those costs, is $1,511,169. Given the cost of this equipment versus the cost of FPL's proposed throwover switch, as discussed by Ed Brill from FPL, it would not seem that such a proposal is cost-effective.

Thank you.

MR. LOGAN: Tender the witness for cross examination.

COMMISSIONER CLARK: Mr. Haswell.

MR. HASWELL: Thank you.

CROSS EXAMINATION

BY MR. HASWELL:

Q Now, isn't it true, Mr. Noble, that you discussed the cost of the generators with Ring Power by a telephone conference you had with them?

A Yes, sir.

Q And that FPL Services has only ordered about three of these units?

A Yes, sir.

Q Okay. And when you ordered them, you actually ordered them for a customer who had to pay

for them?

A Yes, sir.

Q But you did, at least in one or two of them, help arrange for the financing?

A Yes, sir.

Q And the generators that were installed for these customers, they are not included in any tariff filed with the Commission, are they?

A No, sir.

Q Now, in looking at your cost figures and your testimony on Page 4, I assume that starting on Line 1, that two power modules, that is the telephone quote you got for two units?

A Yes, sir. That's the quote I received from Ring Power.

Q And the fuel storage tanks, how -- what was your basis for that?

A I called the local -- one of the contractors that we use on projects that we're doing currently, got a quote from them on that. Then I went back also to the R. S. Means catalog to just get a gut check on that.

Q Okay. Now, on your labor costs -- let me just summarize probably my questions, starting with C through L.

Is it fair to say that you basically took the cost of the units, and perhaps the cost of the fuel storage tanks, and just ran a percentage against them to come up with all of these other figures?

A No, sir. The labor, the labor costs, and I believe you're referring to my deposition.

Q Yes. I am.

A Which is I was basing everything off of a percentage to give a concept of where we are. As far the labor, that's based on a similar job that we're doing presently with around a 13 -- they are actually 1400 kW generators so that's an actual cost.

Now, as far as the liability insurance, that does work out to a percent of the construction cost and also your permitting and environmental impacts. Not knowing the specifics of the job, that's the best we can do with the limited scope. Because a lot of these projects, in order to develop these costs, you really need to have a good firm scope to go off of so you can actually go out and get quotes.

So based on the information I had that's how I had developed those costs. As far as payments and performance bonds, FPL Services right now is getting bonding depending again on the specifics of the project, anywhere I think I said between a quarter to

2% of the construction costs.

Q In your deposition, your deposition you said labor was about 10%?

A I was using that figure because it works out to about 10, but the 100,000 --

Q I understand but that was because it's 10% with another project you're doing?

A Correct. Correct.

Q And that liability insurance, you just figured 1%?

A Yes, sir.

Q And that the performance bonds, you said they could be anywhere from a quarter of a percent to 2%?

A Right.

Q And that the engineering services, you just used a factor of 6%?

A Yes, and that's pretty standard in the industry the way engineers figure their fees.

Q And construction management you have a set fee you charge of 12%?

A That is a set fee we charge, is 12% of construction.

Q You said your overhead is running around 15% for this type of project?

A Yes, sir.

Q And then 10% profit is pretty standard?

A Yes.

Q Now, these percentages, are those kind of like what we might call system average costs that somebody has put together a lot of data and come up with said these are kind of the average way to price these out?

A It is based on projects that we have done. So it would be on an average. Again, without knowing the specific scope, it's difficult to go out and get real accurate pricing.

These prices, as far as what is being developed, what I have seen in the industry, these construction costs are not -- you could probably go plus or minus 10%.

Q So the cost that you're showing you there, the 1.5 million, is based on what Florida Power and Light would charge someone to install these generators; not necessarily what the actual cost that a customer might incur, let's say on a -- referring to maybe an incremental basis.

A These are prices that FPL Services would charge a customer, and these would be very similar to the costs that they would see dealing with another

energy service company.

Q Okay. But what I'm suggesting to you, sir, is that are you telling me that you're positive Clay is going to incur engineering costs if it does this at $50,000?

A I would say that from my experience in putting together the numbers for projects, whether it's Clay or if it's FPL Services, or even if it's Florida Power and Light, there is a cost in order to do that service. And when you look at all of the costs -- I mean during the project, you're going to find that that actual would probably be about 50,000.

Q I agree with you that some of these elements will certainly be involved, but what evidence do you have of any to dispute the fact that Clay who has installed six of these already will spend about 1.1 million doing this next one?

A As I mentioned, without a scope of services that is being provided, the only information that I had to go off of was the generator sizes of 13 -- I believe it's 1360, and the million one that they had.

COMMISSIONER CLARK: Let me ask you a question. Would you expect Clay to include the profit?

WITNESS NOBLE: No, ma'am.

COMMISSIONER CLARK: We could deduct that.

WITNESS NOBLE: You could deduct that, yes, ma'am.

MR. HASWELL: I have no other questions.

MS. JAYE: Staff is going to hand out Late-filed Deposition Exhibit 1 for Mr. Noble: This exhibit is called Information on Leasing River City Plastics Two Generators. I'd like to get this marked for identification at this time.

COMMISSIONER CLARK: It will be marked as Exhibit 12, and that's the Late-filed Deposition Exhibit 1, Information on Leasing River City Plastics Two Generators.

(Exhibit 12 marked for identification.)

BY MS. JAYE:

Q Mr. Noble, could you tell me if you've seen this document before?

A Yes, ma'am.

Q Did you or someone under your direction and control prepare this document?

A I prepared the document.

Q Is the information contained in it true and accurate to the best of your knowledge and belief?

A Yes, ma'am.

MS. JAYE: No further questions.

COMMISSIONER CLARK: Commissioner Garcia. Mr. Logan, redirect.

REDIRECT EXAMINATION

BY MR. LOGAN:

Q Mr. Noble, in your capacity with FPL Services, you essentially are in the business with competing with other energy services -- other energy services businesses -- it's that Marlin's game again -- for customers purchasing equipment such as generators or other energy related --

A Yes, sir.

Q And is it your experience in your operation that the margins on those costs vary. In other words, when you go out to compete against other energy service entities, do you find great variation in the hard costs associated with the equipment?

A No, sir. The costs that we develop, and that other energy service companies, as was listed out you will find they are very, very similar. If there is any differential in the pricing, that has to do again with the scope of services that are being performed. When we get a RFP, a request for proposal, or go out to get a -- get a request for proposal, the numbers that we'll submit back in are very similar to those other companies.

Q Did you ever get a request for proposal from River City for the provision of generators?

A No, sir.

MR. LOGAN: No further questions.

COMMISSIONER CLARK: Exhibits.

MR. LOGAN: There are none.

MS. JAYE: Staff would like to move Exhibit 12.

COMMISSIONER CLARK: Without objection Exhibit 12 is admitted in the record.

(Exhibit 12 received in evidence.)

Thank, Mr. Noble. You're excused.

(Witness Brill excused.)

COMMISSIONER CLARK: Mr. Brill.

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EDWARD R. BRILL

was called as a rebuttal witness on behalf of Florida Power & Light Company and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. LOGAN:

Q Good afternoon, Mr. Brill. Can you state your name and business address for the record, please?

A Yes. My name is Edward R. Brill. My address is 272 East Virginia Avenue, Punta Gorda,

Florida.

Q Mr. Brill, are you the same Ed Brill that caused to be prepared prefiled rebuttal testimony dated September 22, 1997, in this docket?

A Yes, I am.

Q And Mr. Brill, if I asked you the questions contained in that testimony today, would your answers be the same?

A Yes.

MR. LOGAN: Commissioner, I'd move that the prefiled rebuttal testimony of Mr. Brill be inserted into the record as though read.

COMMISSIONER CLARK: The prefiled rebuttal testimony of Mr. Edward R. Brill will be inserted into the record as though read.

BEFORE THE PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

REBUTTAL TESTIMONY OF EDWARD R. BRILL

DOCKET NO. 970512-EU

SEPTEMBER 22, 1997

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

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

Q **What is your occupation?**

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

Q **Please describe your educational background.**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Q Does this conclude your testimony?

A Yes

BY MR. LOGAN:

Q Mr. Brill, do you have a summary of your testimony?

A Yes, I do.

Q Could you provide that to the Commissioners at this time.

A Good afternoon. As stated earlier in my earlier deposition, I'm a power quality specialist for Florida Power and Light. And what I do is I deal with our large commercial industrial customers, such as River City Plastics, as well as multiple others, on power quality related problems that can affect their operations and their business.

And based on the testimony that was provided by Clay, previous testimony, where the customers expressed interest to avoid interruptions that occur in the 12 to 18 cycle range, I have two points to make.

The first one is I believe that our proposal is a much more cost-effective solution for avoiding momentary interruption in the 12 to 18 cycle range by employing a transfer switch that can automatically transfer from a preferred feed to an alternate feed in less than that amount of time.

The switch that we're referring to that

FPL's engineering group in the distribution area has decided is a switch we're going to go with, is spec'd out to transfer in less than that amount of time. And the test data from the manufacturer is that in the area of nine cycles plus or minus one cycle, which is below the 12 to 18 cycle threshold that Clay has said they are -- customer is susceptible to.

Because of the neighborhood cost of the switch of the $40,000 range, compared to the cost of the generators, for the purpose of avoiding interruptions or gaining the customer the avoidance of any type of interruption that can occur on a system, I believe our solution is a much more cost-effective solution and will give the customer a higher reliability.

That brings me up to the second point that I was going to make as far as the use of these backup generators as a way of avoiding momentary interruptions.

The proposal that we sought as far as the way to avoid these interruptions is for the customer to deploy the generators when they feel that weather related activity might generate an interruption on the system. Just based on historical data that we monitored that thunderstorms that are located 70 to 80

miles away from the customer's facility, have in the past generated an interruption to the customer. If you were to look at the number of the lightning days in the state of Florida, which in this area where the customer is going to be located, is in the vicinity of 70 to 80 days per year, the number of hours that you would have to be running on the generator to avoid an interruption that may or may not occurr, is going to require a lot of fuel, a lot of time on the generators to try to avoid an interruption.

Based on the customers that I've worked with, which is in the vicinity of 600 to 700 industrial customers in Florida Power and Light's service territory, I've never had a customer use backup generators to avoid momentary interruptions because of the cost to operate and the unlikelihood that you're going to guess right, or if you do, that the time frame is going to be significant.

Based on the historical data that Bob Hood has presented on this line that the customer is going to be served from, the number of interruptions have been minimal, and the number of momentary interruptions that the customer would be able to avoid are very few in the past several years. So the cost of the generators is really very hard to justify to

avoid this number of interruptions that has occurred on that system.

MR. LOGAN: Tender the witness for cross examination.

COMMISSIONER CLARK: Mr. Haswell.

MR. HASWELL: Thank you.

CROSS EXAMINATION

BY MR. HASWELL:

Q Good afternoon, Mr. Brill.

A Good afternoon.

Q You first became aware of this docket just about a month before your deposition was taken, am I correct?

A Yes, sir.

Q And your deposition was taken on October 2nd?

A Yes, sir.

Q And you were asked by somebody in your company to give an opinion about whether the proposed service from Clay Electric was superior based on specifications that were given to you; is that correct?

A Yes, sir.

Q Okay. And those specifications that you were furnished were those being the testimony of

Mr. Dyal and information from you were distribution group?

A Correct.

Q Okay. You're located in Southwest Florida; is that correct?

A Yes.

Q Punta Gorda?

A That's where my office is, yes, sir.

Q So your division goes to the cover Baker County?

A No, it does not.

Q And the power quality specialist for Florida Power and Light covering the region of Baker County is located in Fort Lauderdale; is that correct?

A At the present time.

Q And you, personally, haven't done any power quality work in North Florida?

A No, sir.

Q And it's also true that you've recommended the use of generators for backup and other uses, haven't you?

A Yes, sir.

Q And the other uses that you've recommended for would include the ability of a customer to have power during a long-term power outage?

A Correct.

Q All right. And the kinds of customers that would request those according to you were hospitals and industrial customers like radio and TV stations?

A Yes.

Q And you've worked with three other plastic pipe manufacturing companies regarding power quality; isn't that true?

A Yes, sir.

Q And one of those is World of Plastics in Ft. Pierce?

A Correct.

Q And you have been aware they had some power quality issues related to power interruptions there?

A When I was in that area five years ago, yes.

Q And those issues involved a number of momentaries that the customer experienced each year; is that true?

A Correct.

Q And some of those years there were more than 20 momentaries and some there were less than that?

A From the historical data, yes, sir.

Q Right. Now, you also agreed, don't you, that you cannot anticipate actual faults, but you can predict based on weather and past experience when

there will be an increase in the probability of a momentary; isn't that true?

A Correct.

Q Now, wouldn't an anticipated fault be one that could be based on large weather system approached where there would be an increased chance of a momentary?

A Yes. And the issue there is how far away before you deploy your generators. And like I said, from past experience 70 to 80 miles away has been a far enough occurrence to affect our customers. Just taking last night for an example in Tallahassee, you would have to probably be on your generators from 3 or 4 in the afternoon to about 8 o'clock last night. And in many of the cases where I was last night there were no interruptions during that time, so there would have been seven, eight hours, or five, six hours you'd have had to run the generator. And the likelihood is maybe there would have been and maybe there wouldn't have been during that time.

Q But if you were on them, the customer could have avoided anticipated fault that would have occurred on your system?

A If he was on the generator during the time that an interruptions occurred.

Q Well, what would you care if the customer wanted to do that?

A We wouldn't care. We have customers that have the right to do that right now.

Q Okay. Now, you say a storm day -- you were talking about the storm days in your testimony and about how many storm days there were. And that's a day that you can hear lightning from where you are at?

A Correct.

Q Wouldn't that variable would be just how good your hearing is?

A That's just the isochronic map that defines the number of lightning days for every area of the country. And for the state of Florida, depending on where you're at, there is 70 to 100 lightning days per year. And they are defined that it's lightning that you can hear the thunder from where you are at.

COMMISSIONER CLARK: It's so scientific.

Q (By Mr. Haswell) You agree that if River City Plastics was running on a generator isolated from Clay Electric's system or from Florida Power and Light system, it's exposure to weather related outages would be reduced?

A Again, yes. We said that is correct based on the ability to do that. It's just the fact that

the number of hours per year you'd have to be trying to do that is very uneconomical from a customer's standpoint.

Q Okay. Now, you've also said that FPL's switch and I'm not sure --

MR. HASWELL: Mark, did you distribute the specifications for this when you were talking to Mr. Dyal? I don't want to do two sets of them.

MR. LOGAN: No. I have some extra.

Q Now, Mr. Brill does this -- do you recognize this as your Late-filed Exhibit 1 to your deposition?

A Yes.

Q And this was prepared at or in accordance with your instructions and directions?

A Yes.

Q It's the same one you submitted back to the Staff at their request?

A It came back from the manufacturer.

Q Okay. In your testimony you've indicated that this switch will automatically transfer in -- I may be referring to your deposition I'm not sure here -- 8.5, or .14 seconds?

A That's correct. That's based on FPL test data.

Q Okay. Where is that test data? I believe

Staff asked for that. That wasn't submitted with the exhibit. Do you have that test data with you?

A No, I don't.

Q Have you seen any?

A I have not seen the FPL test data, no.

Q But you know some exists?

A I know that FPL ran a test on the switch and they showed the test of 8.5 cycles of transfer time. When the request came until we went to the manufacturer and asked him for test results, and this is what the manufacturer gave us in response to that request.

Q When was that test done?

A The FPL test?

Q Yes.

A I think we've done several tests over the past year or so, but I'm not sure. I'd have to refer to Bob Hood.

Q You heard Mr. Hood refer to a field test earlier today?

A Correct.

Q Was that done in the last month or two?

A I'm not sure of the date that that occurred.

Q In your experience -- you're a professional engineer?

A Yes.

Q What does the difference between a field test and certified test mean?

A A field test is one that someone runs without test equipment that's been calibrated and brought up to a certain national standard. Whereas a certified test is one that the manufacturer or the testing facility would certified as correct.

Q And that's not part of your late-filed exhibit, that certified testing.

A The only thing is what you've got in front of you that we got from the manufacturer.

Q Okay. Now, even if the switch was there and operated, isn't it true that River City Plastics would still experience an interruption of electricity?

A Correct.

Q How does the switch that FPL -- how does this power -- excuse me, Powell-ESCO switch sense a fault, do you know?

A It has circuitry that's built into the switch that senses when voltage goes below a certain magnitude, that it will begin the transfer procedure to transfer from the preferred source, which is the preferred feeder, to the alternate or backup feeder that's also coming into the switch from the other

feed.

Q Okay. Now, when I asked you that same question as your deposition -- do you remember you were deposition?

A No, but I have a copy of it in front of me.

Q If you look at Page 18,

A This is the phone deposition?

Q Yeah. Maybe I can avoid doing that. Since I asked you that question at your deposition, have you referred to manufacturer's specification or details?

A From this manufacturer?

Q Right.

A Yeah, the same copy that was given to the -- I guess it's listed as Exhibit 1 Late-filed from E. R. Brill, docket number --

Q When I asked you that question the last time you didn't answer it. You said you'd have to refer to the manufacturer of the switch.

A Correct. This was done after that phone deposition.

Q Okay. Then help me with this one. Where on this diagram does it say how it senses a fault?

A It doesn't in the document. I didn't know that's what you were looking for.

Q Do you have any idea who Whipp & Bourne are?

A No, I don't.

Q Okay.

A That's the name given by the manufacturer to the switch.

Q All right. They are not two guys that work for Florida Power and Light?

A Not as far as I know.

Q You heard Mr. Dyal talking about how this switch appears to him to work. Do you agree with it, when it's in the bypass mode, that it actually closes in the alternate feed without actually opening the first faulted feed?

A No, I disagree with that.

Q Tell us how you think it works.

A The manufacturer has stated to us that when the switch senses a fault and goes through its time delay of how long it's going to sense that fault, it begins to open the switch at the preferred feed before it closes the switch of the alternate feedback into the customer. So there is an interruption, there is a break before it makes contact to the alternate feed. We would not accept a switch that didn't do that.

Q So basically you're saying that at no time would this switch --

A There would be no paralleling on the faulted

line.

Q Okay. Then what does -- which mode is that you just referred to?

A That's when a fault occurs that brings the voltage down on the preferred feed.

Q Is that called bypass or non-bypass?

A That's neither one. The bypass and non-bypass is just a timer that's built into the switch that can bring that time delay down from 12 cycles to 8.5 to nine cycles. So by having the bypass switch in the bypass mode, you bypass that one timer that would allow the switch to transfer quicker than when you're in the non-bypass mode. They are stating in here that the non-bypass mode is 12 cycles plus or minus one cycle, and the bypass mode is nine cycles plus or minus one cycle. So that's the difference between the bypass mode and at non-bypass mode.

Q Okay.

MR. HASWELL: Commissioner, could we mark this or identification?

COMMISSIONER CLARK: Yes. We'll mark it as Exhibit 13 and it's the Late-filed Exhibit for Deposition of Mr. Brill, and its Specification for Automatic Throwover Switch.

(Exhibit 13 marked for identification.)

MR. HASWELL: I have just a few more questions.

Q (By Mr. Haswell) You have already told us, haven't you, at your deposition that you don't know if this switch exists anywhere in FPL's system.

A That's correct.

Q And can you tell us whether or not that was the question, is whether you know it is. Do you know that there's not one in your system?

A I know that there's not one right now that's set for the 8.5 cycles.

Q Do you know the susceptibility of this unit to failures?

A No. From our engineers, again, that's a requirement before they would spec a switch, they would go through and run those kind of tests and requirements before they would accept a switch. So it has at least as good of a requirement as our older switch.

Q Okay. How would you crank this thing down to operate at 6.5 cycles as Mr. Hood says it could be done?

A The manufacturer tells us there's another timer in the switch that can be bypassed.

Q But it's not shown on the specification?

A No, because we wouldn't accept the switch with that --

Q Okay.

A -- that bypass and it would be too fast for what our system would require.

Q Now, with the switch operating, let's say, according to its specifications, what would prevent the alternate feed from being available?

A A transmission level interruption. In other words, both feeders come out of the same substation off a different transformers, as was stated earlier, if the feed coming into both of those transformers is out, then both feeds are out and it wouldn't transfer because there would be no alternate available.

Q Okay. Now, does this switch in your opinion operate the same as a standard throwover switch?

A Yes, as far as the operation, correct.

Q Do they usually run it at this level of 10 cycles or less?

A No, we haven't in the past. Because of our breaker settings in the substation, the customer was going to see an interruption anyway. With the older switch that we didn't feel it was necessary to bring that time faster because it wasn't fast enough to help our customers.

Q Okay. And to your knowledge Florida Power and Light has never done a cost/benefit analysis of installing generators at FPL's cost for a customer?

A Not in my experience, no.

MR. HASWELL: Thank you. I have no further questions.

COMMISSIONER CLARK: Staff.

CROSS EXAMINATION

BY MS. JAYE:

Q Mr. Brill, I have a question for you. Still looking at your late-filed exhibit, if you would explain how long this new standard has been in place. You call this FPL's new standard switch, how long has that been in place?

A I don't have that information. That would probably be Bob Hood's area of expertise.

MS. JAYE: No further questions.

COMMISSIONER CLARK: Commissioner Garcia. All right. Redirect.

MR. LOGAN: Just a couple questions.

REDIRECT EXAMINATION

BY MR. LOGAN:

Q Mr. Brill, I believe there's been some testimony today about the occurrence of what I'll called repeated momentaries. There would be the

initial momentary and then subsequent momentaries that would occurrence. Can you tell me how this particular switch would respond to those circumstances?

A Yes. The customer stated the big concern of once they've seen a momentary interruption they want to be able to use the generators to bring that system back up, because in their previous experience they have seen multiple interruptions over the course of a storm-related event. In other words, a storm comes through, lightning hits the line, it causes a momentary; as that storm continues to pass through the area a few minutes later it's possible that the lightning can hit the line again and cause a second momentary. So the customer's concern was once they experienced one, they'd like to avoid experiencing multiple interruptions while they get their assembly line back up.

And based on the statistical data that Bob Hood present that's only occurred twice in a two-year period: Once in January of '95 and once in February of '96 where we had more than one momentary interruption back to back within a few minute period or within even a few hour period.

Q And tell me how the throwover switch would work in that situation.

A Once it sensed a fault on the preferred feed, it would transfer to the alternate feed in the 8.5 to 10 cycles. Once it's transferred over to the alternate feed, it would stay there until the voltage stabilized on the main feed. And once the voltage stabilized, it would transfer back to the preferred feed without interruption to the customer.

Q And what would the time be necessary to ensure stabilization of the primary feed?

A It really wouldn't matter because if the line was stabilized for a minute and we transferred back to the preferred feed, and another interruption were to occur, the switch would transfer back to the alternate feed in the less than the eight to ten cycles, and customer would experience an interruption of less time than the previous deposition information they gave us as far as the 12 to 18 being the threshold. So the customer wouldn't experience an outage with the multiple hits on the same feed.

MR. LOGAN: No further questions.

COMMISSIONER CLARK: Exhibits.

MR. HASWELL: I move 13.

COMMISSIONER CLARK: Without objection Exhibit 13 is admitted in the record.

Thank you, Mr. Brill. You're excused.

We'll take a ten-minute break and we'll begin with Mr. Dyal.

(Exhibit 13 received in evidence.)

(Brief recess taken.)

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COMMISSIONER CLARK: Staff, we might be able to stipulate the next two witnesses. And if that's the case, Commissioner Garcia will be here in just a minute, but I think we can go through the formalities without him here. And we will have to check and make sure he has no questions to ask those witnesses, and I don't think he will.

MR. HASWELL: On Mr. Dyal, we were going to do the explanation of this, so we'd want to call him up just for that purpose.

COMMISSIONER CLARK: That sounds good.

MR. HASWELL: We can do that now.

COMMISSIONER CLARK: Why don't we do that. All right.

HERMAN DYAL

was called as a rebuttal witness on behalf of Clay Electric Cooperative, Inc. and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. HASWELL:

Q Mr. Dyal, you previously testified on direct and were asked questions about interrogatory answer No. 15 of Clay Electric's answers to FPL's interrogatories 5, 6, 8, 12 and 15. And the question would concern whether or not the figure of 2.4 million, whatever that was at the end, was a net figure or not. Have you been able to determine the answer to that question?

A Yes. The answer to No. 15 is that 2,431,756 is net margins.

COMMISSIONER CLARK: Okay. I appreciate that. Now, while he's doing this, let's -- we'll go ahead and insert his prefiled rebuttal testimony.

MR. HASWELL: Yes, ma'am. I'd respectfully request that his prefiled rebuttal testimony be inserted into the record as though read.

COMMISSIONER CLARK: It will be inserted into the record as though read.

MR. HASWELL: There were no exhibits.

COMMISSIONER CLARK: There are no exhibits. Okay. And his testimony has been stipulated into the record, and I understand, therefore, there is no cross examination.

MR. LOGAN: Yes.

MR. HASWELL: That's correct.

COMMISSIONER CLARK: All right.

Q Please state your name and business address.

A Herman Dyal, Clay Electric Cooperative, Inc., Post Office Box 308, Keystone Heights, Florida 32656.

Q Are you the same Herman Dyal that filed prepared direct testimony in this case?

A Yes I am.

Q Have you had the occasion to review the direct testimony and exhibits of Robert A. Hood who filed testimony on behalf of Florida Power and Light Company ("FPL")?

A Yes I have.

Q What is the purpose of your testimony?

A To rebut Mr. Hood's direct testimony as it relates to claims by FPL directly or by implication that its proposed service to River City Plastics will provide the same character and quality of service as that offered by Clay Electric, to question the costs that Mr. Hood claims would be expended by FPL as well as his statements regarding future growth in the area, and his claims about uneconomic duplication.

Q Do you have any experience and expertise in pricing and costing of distribution, substation, and transmission facilities?

A Yes I do. I have been working in the electric utility business for over 24 years, as a licensed professional engineer. I have extensive experience and knowledge in the planning and determining of what facilities and equipment are necessary and prudent for providing electric service to customers and those facilities of the electric utility that are needed for the utility's system to provide the character of service requested

by a customer. Part of that process involves determining what the cost of the equipment will be, as well as doing an economic analysis of the revenues that are required to justify the costs and cost recovery.

Q Would you please go ahead and discuss your areas of disagreement and rebuttal?

A Mr. Hood does not accurately answer the question of who has historically served the area or its vicinity. The specific site of the River City Plastics plant has not been served by either utility. We do agree that both of us serve in the vicinity of the site, but as I indicated in my direct testimony, Clay Electric has and continues to serve the areas immediately east of the site as well as areas south, north and northeast. FPL basically has elected to serve to the west of the site and into the community of Sanderson.

Q Does Mr. Hood appear to claim the right to serve areas already served by Clay Electric?

A Yes he does. He claims, on page 8 of his testimony, that the Wiremill substation was built by FPL to serve additional customers in the undeveloped area of the substation and the surrounding areas both east and west. If he goes east past his substation he will be in our service area where we have existing customers and have served them for many years. For FPL to do so would require it to uneconomically duplicate our facilities.

Q Do you have any comments on Mr. Hood's reliability claims that there have been no outages at the Wiremill substation in the past five years?

A Well first he limits his answer to outages caused by substation equipment. He did

not say there were no outages. He did not disclose that on July 12 of this year the Wiremill substation experienced a major outage that affected the Florida Wire and Cable facility. Hopefully FPL will disclose that in their discovery response to us, as well as the actual number of outages regardless of the cause. We really cannot fully evaluate FPL's reliability other than to note at this time that there have been more outages than Mr. Hood admits.

Q What about the reliability of the Baldwin-Columbia transmission line of FPL?

A The Wiremill substation is not served directly from the Baldwin-Columbia transmission line. It is served off a radial tap two miles long. When that tap is out, Wiremill substation is out. The tap runs along Rhoden Road which is shown on my Exhibit COMP 9 (HD-2) and on Hood's Exhibit COMP 1 (RAH-4). Rhoden Road is a graded county road and FPL's poles are extremely close to the road. It appears that FPL is occupying an easement that is not more than fifteen (15) feet in width. The proximity of the pole line to the road and the prospect of increasing traffic make it a reliability issue for FPL. If FPL plans to add additional service along Rhoden Road to serve River City Plastics, as it proposes, I do not see where they could put the additional facilities unless they underbuild on the existing transmission line, and it does not appear to me that the transmission line tap was designed to handle underbuilt distribution. This gets into his costs if FPL has to modify the transmission line or move the existing poles.

Q Has there been any discussion about moving FPL's poles on Rhoden Road?

A Yes. Baker County wants to improve the road and FPL has told the County the cost to move a single pole is between $75,000.00 and $90,000.00. I do not believe they

included that cost in their cost estimates. Also, if a vehicle hits one of FPL's poles adjacent to the road, assuming they do not move those poles, it would take at least four (4) to six (6) hours for FPL to repair the damage and restore service, and perhaps even longer depending on where FPL's crews come from to fix the damage. Keep in mind that Clay Electric's Sanderson substation is also served by Seminole Electric Cooperative, Inc. off the Baldwin-Columbia transmission line. If that line is out, both FPL's Wiremill substation and our Sanderson substation will be out. However, if FPL suffers an interruption on its two (2) mile tap, FPL's Wiremill substation will be out, but Clay Electric's Sanderson substation would not be affected.

Q Mr. Hood also states that FPL will spend about $104,600.00 for its proposed service to River City Plastics of which about $40,000.00 is for overhead service and $64,600.00 is for substation improvements. He says that the improvements that FPL will construct will serve River City Plastics and will take into consideration "the future needs of this customer and future growth in the area". What comments do you have about those statements?

A Certainly it is prudent for a utility to construct facilities capable of serving the foreseeable load in an area. Mr. Hood has stated that the projected growth in the area is 1.2 percent. The size of the conductor that FPL proposes to use, as shown on Hood's Exhibit 6, has a minimum capacity of 16 megawatts. Considering the testimony that FPL's Wiremill substation is loaded to 8.5 megawatts, it seems unrealistic to expect this line to reach its capacity within the next thirty (30) years, the useful life of the line. So it appears that the "future needs of this customer and future growth in the area" that Mr. Hood is talking about would require the continued

expansion of FPL's facilities into areas already served by Clay Electric and that can be adequately served by Clay Electric.

Q What about FPL's cost to build the underground feeder and overhead feeder line as shown on Exhibit 6 and as estimated on Exhibit 19?

A Those costs appear to be in error on the underground pulloff. This cost appears to be for 1/0, not 1,000mcm as stated. The underground cost should be about $12,000.00 instead of the $5,000.00 estimated. Again, FPL appears to have estimated costs using the transmission poles. I am not sure they can build a 568 ACSR line on the transmission poles. Consequently they have made no provisions for the additional costs they will have for adjustments to the transmission line.

Q FPL also indicates that it would add a new substation feeder position in its Wiremill substation consisting of three (3) single phase voltage regulators and associated bus work for $64,600.00. Do you think that cost is reasonable based on your experience?

A I believe Mr. Hood has omitted the additional cost for a breaker for this feeder position. It is my opinion that a realistic cost estimate would be as follows:

Breaker	$20,000.00
Regulators	$75,000.00
Buswork and labor	$40,000.00
Total	$135,000.00

If FPL plans on using the existing breaker which appears it is now using as a transfer breaker, it will no longer have a dedicated breaker for this use.

Q Is FPL capable of providing adequate and reliable service to River City Plastics as Mr. Hood states?

A Well FPL obviously has the substation capacity available. However, as I have said before, regarding the substation improvements and primary service facilities that need to be constructed, there appears to be some serious questions as to how FPL can build what it needs to build on the available easement area without putting those facilities in danger of traffic related outages. After reviewing the load projections it seems that FPL's existing capacity has been the result of poor planning and excessive investment costs. Obviously FPL's ratepayers have been paying for this excess capacity. The system planned by FPL will not provide the type of service the customer is requesting. River City Plastics is requesting the capability to be isolated from the electric supplier in cases of inclement weather as well has having a continuous source of power in the event of a catastrophic failure on the electric system whether it is distribution, substation or transmission related. River City Plastics' production schedule runs 24 hours a day, 7 days a week. Based on the customer's need, it is my judgment that FPL will not provide the adequate and reliable electric service that the customer requests.

Q What about Mr. Hood's claim that the number of interruptions seen by a customer is inversely proportional to the length of the line serving the customer?

A I strongly disagree with that statement. Interruptions on a line are a factor of the terrain that the line traverses, its exposure to outside damage such as weather, trees, vehicles, etc., and the maintenance a utility performs on the line. Certainly the longer the line is exposed to weather conditions, traffic and trees if they are present may increase the chances and opportunities for interruptions. However, they

are not inversely proportional. A line that runs 2,950 feet through the woods, or immediately adjacent to a road, and that is subject to contact with trees or vehicles may be less reliable than a line that runs two (2) or three (3) miles through open fields, away from trees or traffic. Also a longer line that is closer to a utility's repair crew facilities may be more reliable than a shorter line that is farther away from the utility's repair crews.

Q FPL has claimed that it can offer River City Plastics several different scenarios for backup service or dual feed. What are your comments regarding Mr. Hood's statements?

A The only service acceptable to River City Plastics is the backup generators. In fact, the other two scenarios are not viable options at all. Those scenarios offer varying choices of preferred and backup distribution lines to an automatic throw over switch. They provide no means for River City Plastics to operate in case of a failure in the substation or transmission line. Outages in either of these areas could be extensive, at least four (4) to six (6) hours or more depending on the damage and where FPL's repair crews are located.

Under scenario two stated by Mr. Hood, the overhead feeder with the overhead feeder backup, FPL proposes to provide the backup feeder on a separate pole line as shown on Exhibit 8. It is my opinion that FPL would have problems building the backup line to the north of the existing transmission line as shown. Baker County owns the undeveloped property and has been unwilling to grant any easements on this property. It appears that the only viable route for FPL would be south on Rhoden Road where they would have to cross back and forth under the existing transmission line. Again, FPL has included no costs for this. They would also have

to clear additional right-of-way.

Q Do you agree with Mr. Hood's costs for option number two as stated on page 15 of his testimony beginning at line 7?

A No I do not. It is my opinion that the costs for option number two to FPL should be:

Preferred overhead feeder	$55,000.00
Backup overhead feeder	$39,600.00
Substation costs	$135,000.00
Throw over switch	$40,000.00
Total	$269,600.00

Q What about the cost for option number three?

A I disagree with his projected costs and it is my opinion those costs should be:

Underground feeder	$80,281.00
Backup overhead feeder	$39,600.00
Substation costs	$135,000.00
Throw over switch	$40,000.00
Total	$294,881.00

Q Mr. Hood claims that FPL has the capability of providing adequate and reliable backup or dual feed service to River City Plastics. Do you agree with that statement?

A No. Again, FPL is not offering the customer the service it is requesting. Mr. Hood also claims that either of those two options for backup service will be "extremely reliable". I do not know exactly what kind of throw over switch they are proposing

to provide, but to avoid a momentary outage on transfer, they must be willing to parallel the feeders, this is not a normal mode of operation.

Q What about Mr. Hood's comments that there is no reliability provided by a generator as backup or dual service?

A Again, FPL totally misunderstands or refuses to consider the customer's request. The customer has repeatedly stated that it understands and accepts reasonable amounts of isolated momentary interruptions. The service that River City Plastics wants is the ability to keep its production facility running at all times regardless of problems on the electric system whether it is Clay Electric's or FPL's. River City Plastics optimum operating condition is a production line running 24 hours a day, 7 days a week. Its goal with the generators is to run them isolated from the primary system whenever there is severe weather in the area and in the case of the catastrophic failure of the electric system whether it is weather induced or otherwise, or whether he wants to get his plant back into production as soon as possible to avoid duplicating restart costs when outages and glitches continue to occur during the restart process.

Q Mr. Hood claims that if FPL is not permitted to serve River City Plastics and this disputed area to the east of its Wiremill substation it would incur a loss of revenues from new customers and refers to the area to the east of the substation as undeveloped. He claims these areas are areas that the Wiremill station was originally planned to serve. What comments do you have about those statements?

A FPL indicates that their Wiremill substation was located at its present location to serve growth to the west and to the east. FPL specifically notes the area eastward

along Rhoden Road toward Macclenny. I do not understand their claim to this area since Clay Electric has served these areas since 1943, long before the Wiremill substation was built. If they were planning on growth and revenues from this area to support the building of the Wiremill substation I would again question their planning process and prudency for spending the amount of money they obviously spent to build the Wiremill substation at such a high capacity. Also if they are concerned with the costs associated with obtaining private easements versus public rights-of-way, it seems to me that they are ignoring the wasteful duplication of facilities. I do not think there is any doubt that Mr. Hood is stating that FPL claims the right to serve all areas surrounding the Wiremill substation up to its rated capacity. The area surrounding the Wiremill substation will not, in its useful lifetime, support the excessive capacity built into the substation. Consequently what has been the effect on the ratepayers of FPL for the underutilization of the substation for the past twenty (20) years? It appears that FPL's grab for territory east of its substation is an attempt to reverse its overbuilding and underutilization of its facilities at the expense of Clay Electric.

Q If we look only at the primary or preferred overhead service to River City Plastics and ignore River City Plastics' needs for the generators, who can provide the service at the least cost?

A Based even on FPL's understated costs, Clay Electric can serve the customer for a cost of $98,000.00 as opposed to FPL's costs of $104,600.00. If we look at realistic costs to FPL and still ignore the cost it will incur in relocating its transmission line or rebuilding it, or acquiring new easements, the cost difference is even greater for FPL at $135,000.00 and Clay Electric at $98,000.00. Even if the Commission

were to say that the cost difference was "de minimis" then the customer's choice is to be considered. The customer chose Clay Electric.

Q Will Clay Electric uneconomically duplicate service by FPL if it provides the service requested by River City Plastics?

A No it will not. First, FPL has a higher cost to serve at the primary service level. Secondly, FPL has refused to provide the load management generator/backup service that River City Plastics has requested. In that instance alone, we are not talking about the same kind of service. FPL simply has not offered to provide the service that the customer wants. Third, Clay Electric's construction of its facilities is in an area already served by Clay Electric. As the area grows, new load can be served from Clay Electric's existing facilities and those added to serve River City Plastics, as the logical and natural extension and growth of Clay Electric's system. Clay Electric's objective in its planning is not to build more capacity in its substations and distribution facilities that are reasonably necessary for the foreseeable future. To do otherwise would require Clay Electric's members to pay for unnecessary and unused capacity. If anyone has constructed uneconomic facilities it is FPL by installing a 44 megawatt substation in 1976 to serve what twenty (20) years later is an 8.5 megawatt load. Even with River City Plastics on its system, its total load on Wiremill would still be one-fourth (¼) of its capacity, and that situation could continue for another twenty (20) years.

We are serving the areas shown on my Exhibit Comp 9 (HD-1) to my direct testimony. We plan to continue to serve that area and have built facilities to serve as they are needed. We could have built our Sanderson substation at 44 megawatts or even at 25 megawatts twenty (20) years ago, but that would not have been a

prudent investment.

Q What about the cost of the load management generators?

A In the first place, FPL has not offered this service, and to compare it in terms of total costs, we would have to consider that Clay Electric's costs to provide the backup generators would be substantially the same as FPL's costs. So at the very least, the cost to the two (2) utilities to provide the service requested by the customer would be substantially the same if we ignore FPL's underestimated costs for primary service. Clay Electric will incur a cost in purchasing the backup generators, however, we have carefully analyzed the economic benefit to Clay Electric and its members for using those generators, and there is a net cost savings to Clay Electric's members for the use of those generators under the existing agreement with River City Plastics. It is a win win situation. Clay Electric's members benefit and the customer benefits.

Q Does this conclude your rebuttal testimony?

A At this time, yes; however, I may have supplemental comments after we have received and reviewed FPL's discovery responses.

COMMISSIONER CLARK: Now, Mr. McCartney. He's filed prefiled rebuttal testimony and we will insert it into the record as though read and cross examination is waived.

MS. JAYE: Staff would like to have admitted also his Late-filed Deposition Exhibit 1.

COMMISSIONER CLARK: And we will mark -- that's a little bit ahead of it. He does have a exhibit --

MR. HASWELL: SM-1, which we would also move, and I believe --

COMMISSIONER CLARK: You're ahead of me. SM-1 will be identified as Exhibit 14 and admitted in the record without objection.

(Exhibit 14 marked for identification and received in evidence.)

COMMISSIONER CLARK: And Staff, you would like to have his Late-filed Deposition Exhibit No. 1.

MS. JAYE: Yes, ma'am. That would be Outage Information Before 12-1-96 for the Duval Plant.

COMMISSIONER CLARK: That will be identified as Exhibit 15 and admitted in the record without objection.

(Exhibit 15 marked for identification and received in evidence.)

COMMISSIONER CLARK: Were there any other exhibits for Mr. McCartney?

MR. HASWELL: No, ma'am.

Q Please state your name and business address.

A Stafford McCartney, 7167 Old Kings Road North, Jacksonville, Florida.

Q What is your current occupation?

A I am the Executive Vice President and General Manager of River City Plastics, Inc., a plastic pipe manufacturing plant located in Duval County, Florida.

Q How long have you held that position?

A Seven years.

Q What other positions have you held at River City Plastics?

A I have also held the position of Vice President of Sales.

Q Please tell us a little about your educational background.

A I graduated in 1970 from Polytech of the South Bank (now the University of London) as a diplomate of Plastics Institute.

Q Do you belong to any professional associations?

A I am an executive member and a committee chairman of the Plastic Pipe and Fitting Association. In addition I am a member of the Society of Plastic Engineers, and the Florida Plastics Industry Council, where I serve as a director.

Q On whose behalf are you testifying in this proceeding?

A I am testifying on behalf of Clay Electric Cooperative, Inc., the electric power supplier that we have chosen to serve our new plastic pipe manufacturing plant in Baker

County.

Q What is the purpose of your testimony?

A To rebut the direct testimony of Robert A. Hood of Florida Power & Light ("FPL"), particularly his assertions that FPL should be allowed to serve our new plant in Baker County.

Q You have stated that River City Plastics manufactures plastic pipe. Can you provide us with more detail on what types of pipe, the kinds of customers you sell to, and how the manufacturing process works?

A River City Plastics uses a continuous extrusion process to manufacture PVC pipe that is sold to plumbing, irrigation, electrical and utility distributors.

Q Is your manufacturing process sensitive to interruptions, even momentary interruptions, of electric service?

A Yes. The extruders use a very sensitive d.c. drive, and even a very brief power drop will cause the drive to quit.

Q What happens to your manufacturing process when you have an outage or glitch?

A The production lines will each have to be restarted. We have eighteen (18) lines and twenty-three (23) extruders. Each line will produce scrap until it is restrung and the product brought back into specifications. Five (5) of the eighteen (18) lines are particularly sensitive to stoppage because of the nature of the PVC compound used. Power interruption on these lines necessitates disassembly of the extrusion tooling to minimize the corrosive effects of decomposing PVC on the chrome surfaces of

the machinery.

Q In the past two years, what has been your plant's experience with outages and momentary glitches at your Duval County plant?

A I have attached an exhibit to my testimony, Exhibit 13 (SM-1), which describes the number of outages and the costs to River City Plastics. Between December 1, 1996, and June 30, 1997, our Duval plant experienced 34 outages and a total of 122 glitches. The 34 outages are included in the 122 glitches.

Q So when a glitch, or momentary interruptions causes your production line to shut down, what do you have to do to get it back up and running?

A Each production line requires a minimum of two people to restart the process. Depending on available people, and the product type being extruded, the process of restarting and getting the product back into specification will take upwards of eight (8) hours. For the lines to reach equilibrium and optimal operational conditions it will take 24 to 48 hours. The scrap generated by the outage will typically take seven (7) to ten (10) days to grind and assimilate back into the process.

Q How much did the glitches and outages or other momentary interruptions cost River City Plastics at its Duval plant in the last two years in terms of down time, restarts, labor costs, lost production, etc.?

A As shown on my Exhibit 14 (SM-1), the total cost to River City Plastics between December 1996 and June 1997 was $412,636.00.

Q What does the average outage cost River City Plastics?

A The cost per outage between December 1996 and June 1997 was $12,136.00 as shown on Exhibit 14 (SM-1).

Q Do these service interruptions impact River City Plastics sales of plastic pipe?

A Yes, River City Plastics supplies most of its customers on a "just in time" system, so unscheduled down time plays havoc with our very tight production and delivery schedule. We have a large power utility customer that has a heavy penalty for unscheduled delays in shipping. Lost sales due to power outages are inevitable.

Q Is it fair to say that your manufacturing process is very dependent on an uninterrupted supply of electric energy?

A Yes

Q Are the interruptions you have experienced in any way related to weather conditions?

A Yes, it has been our experience that the weather is responsible for the majority of our power glitches and outages, probably in the high ninety (90) percentile. We monitor the weather very closely, and in the majority of cases when large storms are imminent, we will have additional people standing by to assist in the anticipated outage and restart of the plant.

Q If you have a service interruption (glitch or outage) that causes your production line to shut down, what happens to your "restart" procedures if another glitch or outage occurs during that process?

A We have to start the whole "restart" process all over again.

Q Has River City Plastics acquired property in Baker County on which to construct a facility?

A Yes. As stated in the testimony already filed in this case by both Clay Electric and FPL, we have acquired a parcel of property east of the Baker County Industrial Park. Our plans are to relocate our Duval facility to Baker County on that particular site.

Q Were you aware that there were two power suppliers in the area?

A Yes, we determined that FPL and Clay Electric were in the general area.

Q Did you request information from both Clay Electric and FPL prior to making your decision on who to select as a power supplier?

A Yes we did. We requested information from both Clay Electric and FPL and referred that information to our consulting engineers for their review and evaluation.

Q As a result of that evaluation who did you select as your power supplier?

A Clay Electric Cooperative, Inc.

Q Why did you make that selection?

A Clay Electric offered us a rate schedule, which when coupled with the use of load management generators, provided us with a very competitive cost compared to FPL's proposal. Keep in mind that we had two basic issues for our operation. The first is the cost to us for the electric service and the second one is a high level of reliability of service and ways in which we can protect our manufacturing process from all of the outages and glitches that we have experienced at our plant in Duval County. The idea of using the load management generators became very intriguing

to us because of our sensitivity to glitches and outages. As I previously stated, our concern is that there be as few glitches or outages as possible and we recognize that no electric utility can guarantee that there will be none. In a comparison of the service that would be provided by FPL and the service that would be provided by Clay Electric from their primary substation and distribution facilities without considering load management generators, we cannot say there would be any significant difference in reliability at this point in time. However that type of service, relying entirely on primary service from either utility would result in the same kinds of outages and glitches that we experienced on the JEA system. We believe that we can avoid some of the weather related glitches and outages by monitoring the large, violent weather activities and having Clay Electric isolate us from the grid with the load management generators before the storm hits. In the event of an outage we can isolate our plant from the cause of those outages and glitches during the restart process and we are more likely to be able to get up and running again until the conditions causing the glitches and outages is past. Those conditions are weather related. For example if a major thunderstorm or other weather condition causes glitches or outages on the primary service from Clay Electric, we would have the option of isolating our plant (disconnecting from Clay's system), and use the generators on site to restore our manufacturing operations. This will minimize, if not eliminate continued outages and glitches while adverse weather conditions continue to cause momentary interruptions or outages on the primary service facilities. This is very critical to us and it was a service offered only by Clay Electric, and not by FPL.

Q Did you ask FPL if they would offer the same character and quality of service as that

offered by Clay Electric, particularly whether or not they would provide the load management generators?

A Yes we did, and they refused.

Q What was the basis of their refusal?

A FPL advised us that primary service from its Wiremill Substation had all the reliability that we needed.

Q Have you reviewed data from both FPL and Clay Electric regarding reliability of service?

A Yes. Mr. Hood refers to it in his direct testimony, and I discussed it with both Clay Electric and FPL prior to making any decision on who should be our power supplier. Incidentally, Florida Wire and Cable, served by FPL, has experienced more outages and interruptions than Mr. Hood says have occurred. The reliability of primary service from either utility is probably not significantly different. If we were not concerned about the sensitivity of our plant to glitches and outages, we could have selected service from either utility. In fact, we called the Florida Public Service Commission to ask who was the power supplier for our Baker County site, and were advised that since Clay Electric and FPL were in the same area and did not have a territorial agreement, that we could chose the utility we wanted. Clay's use of load management generators provided us with a significant cost savings over FPL's cost to us, but that was not the only consideration. As we looked at the opportunity to use the generators for our restart process, or to even use them to isolate our plant from the primary electric system when a storm threatens, prior to a glitch, it became clear that the character and quality of service offered by Clay Electric was superior to that

offered by FPL.

Q So Mr. Hood's statement that FPL has existing substation capacity and capability to extend distribution facilities to provide adequate and reliable service to River City Plastics is what you take issue with?

A Yes, and his further statements about FPL's "usual and customary service". We are not interested in FPL's usual and customary service because our plant is not usual and customary. Our manufacturing process is unique, and notwithstanding that uniqueness and our service needs, FPL has insisted to us that we do not need the service offered by Clay Electric, and that the service offered by Clay Electric will not help us. For the reasons that I previously stated, we respectfully disagree with Mr. Hood's assertion.

Q Mr. Hood also states that FPL can offer River City Plastics several different scenarios for backup or dual feed, and in his statement he mentioned backup generators. Did FPL offer you that option prior to your selection of Clay Electric as your power supplier?

A No it did not. They basically told us that if we wanted backup generators we would have to get them ourselves. They also told us that if we wanted dual feed out of their substation we would have to pay for that too. All they have offered us is "their usual and customary service" from their Wiremill Substation. Also please note that Mr. Hood did not say they offered those three options mentioned in his testimony to us, he simply stated that "FPL <u>can</u> offer River City Plastics several different scenarios" and as Mr. Hood goes on to testify, all of the options would be charged to River City Plastics. I have been advised by Clay Electric's attorneys that Mr. Hood has now

changed his direct testimony or at least wants to change it indicating that FPL will not charge River City Plastics a contribution in aid of construction for two of the three backup options, a dual feed overhead service and a dual feed underground service. Neither of those options address the kind of service we need and really will not help us.

Q Have you signed any agreements with Clay Electric for service?

A Yes. We sent Clay Electric a request for service and then we executed contracts with Clay to have that service provided. We signed a separate equipment lease agreement so that the generators will be on our site and will be leased by River City Plastics from Clay Electric and operated by us. Pursuant to the equipment lease agreement, we have appointed Clay Electric as our agent to operate the generator for load management purposes, and we are currently discussing with Clay the details of how we would isolate ourselves from the system when we request it. We could either manually disconnect ourselves from their system, or Clay Electric could respond to a telephone call from us to do it.

Q Do you have any further comments on Mr. Hood's testimony?

A Yes. Mr. Hood's testimony, when you look at it in total, basically says that FPL can provide River City Plastics the same kind of service and the same reliability that other customers of FPL receive in the same area. River City Plastics requires another kind of service. It is really apples and oranges. We asked for an orange because we need it, and FPL says "here is an apple, this is all you need". So we are not just talking about a difference in the degree of service between FPL and Clay Electric, we are really talking about two different kinds of service. Since FPL will not

provide the service we need, we had no real option except to go to Clay Electric for our service needs. It is that simple.

Q Does this conclude your rebuttal testimony?

A Yes it does at this time.

COMMISSIONER CLARK: Okay. That would conclude our hearing.

Are there any items we need to take up at this time? Ms. Jaye, I think you've already given us the schedule.

MS. JAYE: Yes, ma'am.

COMMISSIONER CLARK: Are there any questions or anything further we need to take up?

MR. HASWELL: The only thing is whether or not the transcript will be ready so -- we have a real tight time line.

MS. JAYE: Yes, sir, you do. The transcripts will be due on the 15th of November and the briefs will be due to the 24th of November.

COMMISSIONER CLARK: We have an indication from our court reporter there's no problem for her meeting that date.

With that, this hearing is adjourned. Thank you all very much.

(Thereupon, the hearing concluded at 4:10 p.m.)

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STATE OF FLORIDA)
: CERTIFICATE OF REPORTERS
COUNTY OF LEON)

We, JOY KELLY, CSR, RPR, Chief, Bureau of Reporting and ROWENA NASH, Official Commission Reporters,

DO HEREBY CERTIFY that the Hearingin Docket No. 970512-EU was heard by the Florida Public Service Commission at the time and place herein stated; it is further

CERTIFIED that we stenographically reported the said proceedings; that the same has been transcribed by us; and that this transcript, consisting of 339 pages, Volumes 1 and 2, constitutes a true transcription of our notes of said proceedings and the insertion of the prescribed prefiled testimony of the witnesses.

DATED this 30th day of October, 1997.

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