BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

In The Matter of	DOCKET NO. 891345-EI
Application of GULF POWER COMPANY for an increase in rates and charges.	HEARING EIGHTH DAY AFTERNOON SESSION
	VOLUME - XXI
	Pages 3045 through 3192

FPSC Hearing Room 106
Fletcher Building
101 E. Gaines Street
Tallahassee, Florida 32399

Wednesday, June 20, 1990

Met pursuant to adjournment at 1:10 p.m.

BEFORE: COMMISSIONER MICHAEL McK. WILSON, CHAIRMAN
COMMISSIONER GERALD L. GUNTER
COMMISSIONER THOMAS M. BEARD
COMMISSIONER BETTY EASLEY

APPEARANCES:

(As heretofore noted.)

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I N D E X

WITNESSES

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EXHIBITS

Number:		Identified	Admitted
613	(Wright)	3056	3131
614	(Pollock)	3132	

AFTERNOON SESSION

(Hearing reconvened at 1:10 p.m.)

MR. VANDIVER: I seem to be short a witness.

CHAIRMAN WILSON: You all go ahead.

(Laughter)

MR. BURGESS: While we're waiting for the witness, I, with some trepidation, would request the opportunity to ask a couple of questions on a area that came up in response to questions by the Commission --

CHAIRMAN WILSON: Go ahead. (Laughter)

MR. BURGESS: -- of this witness.

CHAIRMAN WILSON: Go ahead. (Laughter)

MR. BURGESS: All right --

COMMISSIONER EASLEY: If you will just ask your questions, and then we'll let her answer them.

CHAIRMAN WILSON: You didn't say you wanted an answer.

COMMISSIONER BEARD: Her answers will be brief.

If they are like that one question of Schef Wright on rate design, I think I probably wouldn't be finished by the time she got here.

CHAIRMAN WILSON: Well, let's unconvene here and we'll reconvene when the witness returns.

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CHAIRMAN WILSON: Mr. Burgess has got a couple questions.

ROBERTA S. BASS

having been previously called and duly sworn as a witness on behalf of the Staff of the Florida Public Service Commission, resumed the stand and testified as follows:

FURTHER CROSS EXAMINATION

BY MR. BURGESS:

Q Ms. Bass, you were asked a few questions by Chairman Wilson with regard to responsibilities of Mr. McCrary and how much you would expect, or what actions you would have expected him to take, as I recall.

Who exactly is "Gulf management," for the question of good management or poor management; is it a single individual?

A I think ultimate responsibility would be with a single individual. However, I would classify various people in management, if they are in a position to make decisions about the Company and have been designated that authority or delegated that authority by the president of the Company.

CHAIRMAN WILSON: I didn't understand that answer.

WITNESS BASS: I think there is one person

who is ultimately responsible as the President for the overall management of the Company. But if the President delegates certain authority to other individuals within the Company that they can act without specifically him blessing every decision that's made, then I would consider them to be management of the Company, too.

Q Let me ask specifically, do you consider that Jake Horton was part of the Gulf management team?

A Yes, I do.

Q So that then activities or decisions by Mr. Horton himself reflect part or reflect the Gulf management decisions in some degree or another, is that correct?

A Yes.

Q And I guess if Mr. Horton had not encountered the difficulty he had but rather had embarked on a number of excellent initiatives that allowed Gulf to claim superior management and, therefore, some type of bonus, he would have been considered part of management at that point, also?

A I think any actions that he might be given credit for would be reflective of the management of the Company, yes.

MP BURGESS: Thank you very much, Ms. Bass.

That's all I have.

CHAIRMAN WILSON: Where do the Board of Directors fit into that hierarchy?

WITNESS BASS: The President the Company would rate of return to the Board of Directors.

CHAIRMAN WILSON: In terms of responsibility. In terms of responsibility.

WITNESS BASS: In what areas?

CHAIRMAN WILSON: In the area that you have been testfying about, management. Management or mismanagement.

WITNESS BASS: I think the Board of Directors give the total responsibility of the Company to the president, and if they feel like the president is not doing a good job, then it would be up to them to replace him.

CHAIRMAN WILSON: In terms of management that you have been testfying about, the buck would basically stop at the president and not --

WITNESS BASS: Yes.

CHAIRMAN WILSON: -- go up to the Board of Directors?

CROSS EXAMINATION

BY MR. VANDIVER:

Q Ms. Bass, is it true that today's your

birthday?

A Yes, that's true.

(Off the record briefly)

Q (By Mr. Vandiver) Would you agree that the Commission is the judge as to whether or not you are an expert witness?

A Yes, I would.

Q Would you agree that the Federal Department of Justice and this Commission has different roles?

COMMISSIONER BEARD: Please say yes.

(Laughter)

A Yes, I believe they do.

Q So do you think the Federal Government's definition and/or characterization of mismanagement and this Commission's definition and characterization of mismanagement may be two very different things?

A Yes, I believe they could be.

Q Do you know how statements get in plea agreements?

A No, I do not.

Q Do you believe that Gulf Power management did all it could to ferret out the corruption over the past six years?

A No, I don't.

MR. VANDIVER: No further questions.

CHAIRMAN WILSON: Do you know what it is that they could have done that they didn't do?

WITNESS BASS: I believe that the Company could have done more investigations into the upper management, specifically Mr. Horton and his activities, being that there was some indication that he was involved in something that may not be illegal but perhaps unethical, or that was in violation of the Company's Code of Ethics.

CHAIRMAN WILSON: Any questions, Commissioners? Anything further?

All right. Thank you very much. You may be excused. Call your next witness, and happy birthday.

WITNESS BASS: Thank you.

MR. BURGESS: That would be Mr. Wright.

(Witness Bass excused.)

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MR. BURGESS: I think I've got them in order now.

CHAIRMAN WILSON: Your witnesses?

MR. BURGESS: Yes, my rebuttal witnesses.

CHAIRMAN WILSON: Good, we're making definite progress here.

COMMISSIONER BEARD: We're down to only 20 to go, so I mean, you know.

COMMISSIONER GUNTER: Mr. Chairman, are you going to invoke any attorneys representing anybody has to be here when we start in the morning, has to be here when we finish at night, and not leave during that time period.?

CHAIRMAN WILSON: Right, is there somebody that you noticed that is missing?

MR. BURGESS: Yeah, I think there's some kind of forfeiture.

CHAIRMAN WILSON: I think so. There's also a penalty involved.

MR. STONE: I would hope you're not speaking of my partner. (Laughter)

CHAIRMAN WILSON: I don't see anybody else who is not here.

COMMISSIONER GUNTER: Looking around, let he who is not here speak for his self.

MR. BURGESS: We offered an exhibit when Mr. Wright was on the testimony in direct, and Commissioner Easley requested some information in addition to that which was shown on the exhibit. As I understand it, we left with the idea that Mr. Wright would present that information when he took the stand on rebuttal, which is now. I thought we'd start with that, unless there's a problem, unless you have some other inclination.

CHAIRMAN WILSON: I think that would be fine.

MR. BURGESS: Okay. Well, I'll hand out the exhibit first.

COMMISSIONER BEARD: We changed our minds, Mr. Burgess, we really don't want to see that information. (Laughter)

COMMISSIONER EASLEY: It sort of grew?

WITNESS WRIGHT: Yes, ma'am.

MR. BURGESS: That's something we're going to explain to you.

It did grow and I will state briefly what happened was, in tracking down the information that you sought, Commissioner Easley, Mr. Wright found information that he thought would further explain that information. That basically it would simply follow from that which is brought out in the exhibit.

What I would like to do is have Mr. Wright explain to you what he has here; and if you choose to -- and then I would offer the balance of the exhibit, whether you want it renumbered or a new number. But it is for the Commission's edification.

COMMISSIONER EASLEY: What was the number of the exhibit we were dealing with yesterday.

MR. BURGESS: I was afraid I'd be asked that.

WITNESS WRIGHT: 607.

COMMISSIONER EASLEY: 607. Right. Thank you.

MR. BURGESS: So that's why it's not numbered. I didn't know whether you would want a different number.

CHAIRMAN WILSON: I think we'll give it a different number. Give it No. 613.

(Exhibit No. 613 marked for identification)

MR. BURGESS: And I think Mr. Wright wanted to address the question of comparability that was raised about Exhibit 607.

WITNESS WRIGHT: Commissioners, Mr. McWhirter's objection and Commissioner Easley's questions were exactly on point. Due to an oversight on my part, the rates that I had pulled from Tampa Electric's proposed rates and the final rates approved by the Commission were not comparable, in that they were not based on the same revenue requirements. I can't tell you how sincerely sorry I am that I did that.

I went back to the cost study based on the equivalent peaker methodology from the Tampa Electric rate case. And from that study, I extracted unit costs, which if the Commission were to set rates based exactly on unit costs at the study, as the study

indicated, would be new rates.

The new numbers in the right-hand column of the first page of the new exhibit show what those numbers were. They indicate that the number for the energy charge was about one cent per kilowatt hour higher, and that the demand charge was about seven cents a kilowatt hour higher, and the customer charges were slightly different.

Because there's a different rate tilt embodied in these rates, as opposed to those proposed by Tampa Electric -- that is, the energy charges are greater than the rates proposed by Tampa Electric, while the demand charges are less than the rates proposed by Tampa Electric -- I added three pages to this exhibit, which are the Pages 2, 3 and 4 of 13, that show what the effect of the rates as proposed by Tampa Electric, and the effect of the rates as indicated by the unit cost from the peaker study would have been both on customers' bottom line bills and on customers' base-rate charges only, excluding fuel.

In these calculations, I assumed class average load factor for the respective classes for the test year. And I assumed customer maximum demand of 5000 kilowatts, believing that was a reasonable assumption for an industrial customer.

If you look at Page 2 of 13, it shows the comparison of Tampa Electric's highest one rates to those that would have been set at unit cost, per the equivalent peaker study. It indicates that on a comparable basis with both rates at the proposed revenue increase, that the total bill, based on the peaker study rates, would have been about 9% higher and the total base-rate charges would have been about 19% higher than those proposed at that time by the Company.

If you turn to Page 3 of 13, it shows the comparison for the new interruptible rate class that was implemented by the Commission pursuant to Tampa Electric's proposal in the rate case, the IS-3 class.

For a customer with the class average load factor, the equivalent peaker study rates would be approximately 5% lower or would yield a bottom-line bill approximately 5% lower than the rates proposed by Tampa Electric Company. And on a base-rate charge basis only, that is, excluding fuel, the rates indicated by a peaker study for a class average customer would be some 9.1% lower than those proposed by the Company.

Recognizing that Tampa Electric's general service large demand rate class might also include and probably would also include some industrial customers,

I did the computation for the GSLD class, that is shown on Page 4 of 13. You will notice that I again assumed a load, a maximum customer load of 5000 kilowatts and a class average customer load factor which was the calculated class average customer load factor for Tampa Electric for the test year in the case, of 69.7%.

Tampa Electric's proposed general service large demand rates yield bills that are virtually identical to the rates that would have been indicated at the full proposed revenue increase by the equivalent peaker cost study.

The peaker rates are approximately a quarter of a percent higher at the bottom-line bill, including fuel, and at approximately four-tenths of a percent higher than the Company's proposed rates on a base-rate charges basis.

The next several pages of the exhibit are simply supporting documentation for these calculations. They include an index to Mr. Campbell's supplemental testimony exhibits. They include the marked-up copies in legislative format of the rates proposed by the Company during the pendency of the rate case.

They include a page from Schedule E-9 of the Company's minimal filing requirements, showing the Company's proposed rates for the GSLD class at the full

proposed revenue increase.

And they include the unit cost summary sheet from the Equivalent Peaker Cost of Service Study that I sponsored into evidence in the rate case, at proposed rates, that is, at the full proposed revenue increase.

When I earlier discussed the effect of the peaker study on Tampa Electric's highest 1 rates, I did make the point that the rates that would have been implemented using the peaker study at that time were higher than those proposed by the Company. In the course of the case, Mr. Wood, Senior Vice-President for Regulatory Affairs of Tampa Electric Company, testified as to what the Company's intentions were relating to the spread between the general service large demand rates and the IS-1 rate over time. He testified that it was Tampa Electric's intention --

MR. McWHIRTER: Mr. Chairman, I'm going to object to the hearsay testimony of Mr. Wood since he's not here to be cross-examined; and secondly, the witness is attempting to extract certain facts from previous records, and you've always stated you take official notice of orders, but not of portions of fact in the transcript.

I move that, at this juncture rather than later, that Mr. Wood's portion of the testimony be

stricken from this exhibit and that he not be allowed to testify as to hearsay.

MR. BURGESS: Commissioner, I would suggest that it's really not hearsay in its technical sense; that is, it's not offered to prove the truth of the matter asserted herein. It's simply offered to prove that this was TECO's plan. The testimony of Mr. Wood is that this is a particular rate structure that the Commission should implement, and it would be proper to apply. And we are not offering it for the truth of that particular assertion that Mr. Wood has in his testimony; rather, we are simply offering it to prove that Mr. Wood did make that assertion, and therefore it's not hearsay at all.

CHAIRMAN WILSON: Just looking this over, my concern about this is the very last question on the excerpt of the page says, "Is cost of service the only factor the Commission should consider in rate design?"

Answer: "Definitely not."

And then it apparently goes on to something, and above that it talks about how Mr. Campbell discusses how revenues should be treated. And I'm concerned that if we take this, then we are going to need to get Mr. Campbell's testimony, that we are going to need to get the rest of Mr. Wood's testimony.

I think for the point that you are presenting, that the parts of the exhibit that proceed that probably are sufficient to present the point that it stands for.

MR. BURGESS: I would make one other point. Mr. Wright indicated yesterday, or whenever it was he was on the stand --

COMMISSIONER GUNTER: Last year.

MR. BURGESS: -- that in responses to Commissioner Easley, I believe, that because it involved a gradual increase, that what the Utility's rate design would come up with initially was not as drastic as it would have ultimately resulted in. And that of course was known by the industrial customers, basically indicating that regardless of whether the Commission chose equivalent peaker or the Company's method, the industrials were on notice of this fairly substantial increase and were already in the process of moving to cogeneration.

And this is simply, even to the extent it is hearsay, it's simply corrobative of that particular point.

I understand the need for context. I wouldn't have any problem, if Mr. McWhirter challenges, that this does not reflect what Mr. Wright suggests it

does. Then I have no problem at all with bringing in whatever Mr. McWhirter finds necessary to make the full context. We have most of the records available, and I'd be happy to make them available to Mr. McWhirter.

CHAIRMAN WILSON: Well, the other concern I have is going back into evidence in another case where we do officially recognize orders but not the evidence from that. I don't know.

Mr. McWhirter, do you intend to challenge the calculation of these various rates and calculations of bottom-line bills for different customer classes that have preceded that?

MR. McWHIRTER: I haven't had an opportunity to take him on voir dire, Mr. Chairman, so I don't know whether I will with respect to the other one. But the Pierce Wood testimony is patently improper, and I would raise that at this juncture.

CHAIRMAN WILSON: Let's just -- we'll strike that piece of the exhibit. (Pause)

Have you completed the explanation of the calculations in the exhibit?

WITNESS WRIGHT: Yes, sir.

COMMISSIONER EASLEY: Mr. Chairman, I just wanted to thank Mr. Wright for preparing this. It makes it a lot easier to understand, and I appreciate

it very much.

MR. BURGESS: Mr. Chairman, would you have us then go on to the rebuttal testimony or --

CHAIRMAN WILSON: I think so, principally to give Mr. McWhirter and his witnesses an opportunity to look this over so he can voir dire the witness on this exhibit at that point. So why don't we go ahead and go to the --

ROBERT SCHEFFEL WRIGHT

having been previously sworn as a witness on behalf of the Citizens of the State of Florida, was called as a rebuttal witness, and testified as follows:

DIRECT EXAMINATION

BY MR. BURGESS:

Q I believe you've been previously sworn?

A Yes, sir.

Q Would you please tell us your name and address?

A My name is Robert Scheffel Wright. My business address is 501-D East Tennessee Street, Tallahassee, Florida 32308.

Q Are you same Robert Scheffel Wright who prefiled rebuttal testimony in this case or are you a different Robert Scheffel Wright?

COMMISSIONER EASLEY: What do your friends

call you?

A I'm the only one I know of, Mr. Burgess.

MR. BURGESS: I've always been amused by that opening.

CHAIRMAN WILSON: So have we.

Q (By Mr. Burgess) You have prefiled rebuttal testimony in this case, is that correct?

A Yes, sir.

Q Do you have any corrections that need to be made to that rebuttal testimony?

A Mr. Burgess, as I was looking over the testimony earlier today, I noticed one typographical error. It's not substantial so I regret that I didn't find it before so we can provide a clean copy to the reporter. If you want me to point it out, I'll point it out. If not, I'll let it go.

Q I don't think --

A It involves the change of the word "possible" to the word "possibly." Just a typo.

CHAIRMAN WILSON: We all caught that anyway.

COMMISSIONER GUNTER: If you got it correct, we'd probably think you talked funny.

COMMISSIONER BEARD: Is there a corrected errata sheet on that?

MR. BURGESS: Do we get an exhibit number?

Q (By Mr. Burgess) With that correction, Mr. Wright, if you were asked the questions posed in your prefiled rebuttal testimony today, would your answers be the same?

A Yes, sir.

MR. BURGESS: Mr. Chairman, we'd ask Mr. Wright's testimony be entered into the record as though read.

CHAIRMAN WILSON: Without objection it will be inserted into the record as though read.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 891345-EI

REBUTTAL TESTIMONY

OF

ROBERT SCHEFFEL WRIGHT

ON BEHALF OF

CITIZENS OF THE STATE OF FLORIDA

Q: Please state your name and business address.

A: My full name is Robert Scheffel Wright. I am employed as Vice President and Principal Consultant with the consulting firm, West Park Group, Inc. The firm's business address is 501 East Tennessee Street, Suite D, Tallahassee, Florida 32308. I am also employed as Resident Economist and Special Consultant on regulatory and economic matters with the law firm of Wiggins & Villacorta, Post Office Drawer 1657, Tallahassee, Florida 32302.

Q: Are you the same Robert Scheffel Wright who has previously filed direct testimony in this proceeding on behalf of the Citizens of the State of Florida?

A: Yes, I am.

Q: What is the purpose of your rebuttal testimony?

REBUTTAL TESTIMONY OF ROBERT SCHEFFEL WRIGHT

A: I shall rebut numerous assertions and arguments made by Mr. Jeffry Pollock against the Equivalent Peaker and Refined Equivalent Peaker cost of service methods. Specifically, I will rebut his proposal that all production plant costs should be classified as demand-related. My testimony will demonstrate that an example that he presents in his testimony to illustrate problems with peaker type methods is an inapt analogy and demonstrates either a mis-characterization or a basic misunderstanding of the way that such methods work. I will rebut his assertion that the Basic Equivalent Peaker and Refined Equivalent Peaker cost methods are subject to what he defines as a "fuel symmetry" problem. I will rebut his suggestion that the EP and REP methods need to be "corrected" to reflect differences in reliability between peaking type units and baseload coal-fired units. I will also rebut various other assertions and arguments that he makes in his direct testimony.

I shall also offer what I would characterize as "rebuttal commentary" on two issues discussed by Mr. Pollock and by Stone Container Corporation's Witness Tom Kisla: (1) the possibility of relieving self-generating customers (SGCs) from the production and bulk transmission reservation

charges in Gulf's Standby Service tariff for maintenance power service taken by SGCs in coordination with the utility, and (2) the possibility of permitting SGCs to take power as supplemental power, under Gulf's Supplemental Energy tariff, during operationally defined off-peak periods, even when the customer has other generation capacity available. I characterize my testimony on these subjects as "rebuttal commentary" because I believe that, under some conditions, these proposals may have some merit, and because my intention is to identify and clarify certain issues arising from them, rather than to attack and refute them.

Classification of Production Plant Costs

Q: At page 24 of his testimony and elsewhere therein, Mr. Pollock argues that all production capital costs are demand-related and should be allocated to classes using a peak demand allocator. What is your response?

A: My response is that this is an arbitrary classification of production plant costs that completely ignores the economic considerations that enter into utility generation expansion planning decisions. Utility generation planning generally consists of two phases. In the first, using

reliability criteria, the utility identifies needs for additional capacity and the timing of additional capacity requirements. In the second phase, an economic analysis is conducted to determine what type of capacity should be added, considering the energy loads to be served. Classifying and allocating all production plant costs on the basis of peak demands completely ignores the important economic considerations that drive decisions regarding what type of plant to build, and therefore how much will be spent on production plant.

Q: At page 9 of his testimony, Mr. Pollock states that "when the hours of use are considered, the capital cost per kilowatt-hour for the base load plant is usually less than the capital cost per kilowatt-hour for the peaking plant. Of course, since the fuel costs of base load plants are generally lower than the fuel costs of peaking plants, the overall cost per kilowatt-hour for base load plants is also less than the overall cost per kilowatt-hour for peaking plants." What are your thoughts on this statement?

A: Frankly, I believe that this statement supports equivalent peaker type cost methods. As Mr. Pollock puts it, <u>when hours of use are considered</u>, capital costs per kilowatt-

hour are lower for baseload plants. I readily recognize that utilities plan their system in order to minimize total costs and not blindly to achieve fuel cost savings. Obviously, a great enough capital cost would wipe out any potential benefits to be realized from fuel savings, and thus building baseload units would not be economically viable. Again, I am entirely comfortable with the proposition that in planning, utilities endeavor to minimize total average costs based on the hours a new generating unit is planned or expected to run. This affirms that hours of use or hours of run time are obviously important in the utility's consideration of what type of unit and therefore how costly a unit to build.

Near-Peak Demand Cost Allocation Method

Q: What is your opinion of Mr. Pollock's proposed Near-Peak Demand cost allocation method?

A: I cannot support or agree with the overall cost allocation method proposed by Mr. Pollock because of its failure to recognize the important role of energy requirements in generation expansion planning decisions.

His proposed method would classify all production plant costs as demand-related; this simply bears no relation to actual cost causation in generation expansion planning, in which both peak demands and energy requirements play an important role, the peak demands usually determining amounts and timing of plant additions and the energy requirements determining the type of plant to be built.

His classification principle reduces to: "If it's a production plant cost, it must be demand-related." This is clearly the most arbitrary standard for classifying production plant that has been advanced in this case. The only other standard that could possible rival its arbitrariness would be its polar opposite: "If it's a production plant cost, it must be energy-related."

I do believe that his proposed near-peak demand allocator may be a reasonable allocation factor to use for allocating those costs that are appropriately classified as being related to or driven by system coincident peak demands. However, before endorsing it or rejecting it, I would want to see additional information on reliability criteria values in his "near-peak" hours and in the peak and near-peak hours of the fall, spring, and winter months.

If the Commission is to use a near-peak demand factor for allocating demand-related production and transmission costs in this proceeding, it must be aware of several factors. First, in some cases, notably the Christmas holidays of 1989, Gulf does achieve significant system peaks in the winter. Because the implication of Mr. Pollock's near-peak allocation factor, which is based entirely on summer hours, is that there are no peak-demand-related costs in the winter, the Commission must, over time, continue to monitor Gulf's and the Southern Company's winter demand growth. The Commission must also consider the implications of adopting such a factor for rate design, especially relative to seasonal rate differentiation; allocating no demand-related production and transmission costs on the basis of winter peak demands seems to suggest that it would not be proper cost-based ratemaking to recover these costs in winter rates.

Second, the Commission should at least use the 12 CP allocation factor specifically for the purpose of allocating capacity revenues received by Gulf or capacity payments made by Gulf pursuant to the Southern Company's Intercompany Interexchange Contract, because IIC payments and revenues are determined on the basis of each monthly

peak regardless whether it occurs in the summer, winter, spring, or fall.

Baseload Unit Cost Overruns

Q: In his discussion at pages 11-12, Mr. Pollock makes the point that new baseload units may, by the time they come into service, cost much more than they were projected to cost when they were originally planned and contracted for. Does this affect your view as to the proper classification of the cost of such units above the cost of a peaker?

A: No, it does not. While it is undoubtedly true that baseload units have in recent years been brought into service at costs significantly higher than originally projected, it does not follow that the excess costs should be classified as demand-related and allocated on the basis of class contributions to peak demands. Cost analysts, and utility commissioners, must look back to the utilities' original decisions to build baseload units, because those decisions are what eventually resulted in greater than anticipated costs. The original decision would have been based primarily on economic considerations driven by all classes' energy loads, that is, on lower costs to be afforded the utility and its ratepayers by building a baseload plant that would serve

broad energy loads. Therefore, it is still appropriate to classify the plant costs above the costs of peaking capacity as energy-related.

You also have to address the question, "Upon whom would the burden of cost overruns otherwise be imposed?" There are two obvious choices at the outset. First, the cost might be imposed on the utility's shareholders, based on the argument that they should bear some risk and responsibility for cost overruns and for keeping costs in line with projections. Alternatively, the costs might be borne by the utility's general body of ratepayers.

Once the prudency issue has been settled, though, the question of the appropriate classification and allocation of the allowed plant costs must still be addressed. To the extent that energy loads contributed substantially and significantly to the utility's decision to build the baseload unit, energy should be the basis for allocating the costs of the plant above those that would have been incurred to build a peaking unit. It would simply be wrong -- inconsistent with cost-causation principles and thus inequitable -- to impose these energy-driven costs on classes and customers based on their peak demands.

Q: On page 12, Mr. Pollock makes the statement that "it is wrong to assume that observed differences in capital costs are always the result of conscious decisions to spend more per kW in order to achieve lower operating costs." How do you respond to this statement?

A: While the statement is probably true as far as it goes, it does not constitute a valid criticism of peaker type cost of service methods. In particular, the statement is misleading if it attempts to create the impression or idea that excess capital costs due to unanticipated cost overruns should be classified as demand-related. (This would be true for cost overruns associated with a peaking unit, because the decision to build the peaker would have been driven by peak demand growth, but it is not true for baseload plant cost overruns.)

In the first place, neither the Equivalent Peaker method nor the Refined Equivalent Peaker method assume anything about the higher capital costs of baseload units, whether intended or unanticipated. These methods recognize that, in order to be prudent and reasonable, higher capital costs must have been incurred consciously by the utility. Surely, with substantial capital expenditures on the line, any decision to build an intermediate or baseload plant,

at a higher capital cost than that required to build a peaker, had best be conscious, well-thought out, well-analyzed, and well-documented. Secondly, as I discussed above, although the actual difference between the cost of a baseload unit and a peaker may be greater than originally anticipated, the excess costs are still the result of the conscious decision by the utility to build the baseload unit, a decision driven by the energy loads that the unit was expected to serve.

Break-Even Point Analysis and Refined Equivalent Peaker Method

Q: In his discussion beginning on page 15, Mr. Pollock argues that if a new generating unit "is expected to run beyond a certain point, called the break-even point, it is more economical to install base load capacity rather than peaking capacity. In other words, once the break-even threshold is reached, additional energy use (and the fuel cost savings resulting therefrom) would not affect the investment decision." Is this a valid argument for preferring the Refined Equivalent Peaker method over the Basic Equivalent Peaker method?

A: No. While it may, under some circumstances, be true that a utility would decide to build a baseload unit if needed

additional generating capacity were expected to run more than a certain number of hours, it does not follow that the critical hours are those under the high-demand end of the load duration curve.

In the first place, any sufficient number of hours in which the unit would dispatch could drive the decision to build baseload plant, regardless when these hours occurred. Mr. Pollock's assertion that it is the hours under the high-demand end of the load curve that drive the decision is simply a "what if" hypothesis; other "what if" hypotheses involving off-peak load growth could produce the same result. By the rationale of the break-even analysis, any hours in which the unit would dispatch could drive the decision, regardless whether they were under the high-demand end or another segment of the load curve. In Florida, we have even observed a case where a utility built a new baseload coal unit, even though the unit's capacity was not needed for reliability purposes until several years later, in order to lower total costs. This investment decision must have been driven by off-peak as well as on-peak energy loads.

Secondly, as I understand the process, the economic analyses in generation expansion planning are based on all

energy loads that the utility expects to serve over a fairly long time horizon. Thus, because the Basic EP method allocates the additional capital costs of baseload units above the costs of peakers according to all energy consumption, it more accurately reflects actual generation planning and decisions.

Q: Do you have any thoughts about Mr. Pollock's car example on page 16 of his testimony?

A: Yes. This example, and most particularly the conclusion that Mr. Pollock asserts at lines 18-19, shows a clear misunderstanding or mis-characterization of how the EP and REP methods work. In his example, Mr. Pollock hypothesizes a scenario where a fuel-efficient car is bought and then driven 200 miles by one customer and 400 miles by another. He asserts that "[t]he EP and REP methods . . . would assign twice as much car [cost] to the second customer." This is simply false. Following this analogy, albeit an inapt one, the peaker methods would allocate only the <u>difference</u> between the cost of the fuel-efficient car and the gas-guzzling alternative on the basis of the two customers' mileage. The initial capital cost of the gas-guzzling alternative would be allocated on

the basis of a demand allocator, assuming that one could be developed for this example.

Reliability Differences Between Baseload and Peaking Units

Q: At pages 20-22 of his testimony, Mr. Pollock asserts that there are significant reliability differences between baseload and peaking units, necessitating adjustments in the peaker cost methods' calculation of equivalent peaker costs. What is your response?

A: My response is that his analysis is incomplete and that it is not at all clear that the appropriate adjustments would operate in the way that he suggests.

While it is true that the NERC (North American Electric Reliability Council) report cited by Mr. Pollock shows that peaking units have substantially higher forced outage rates than do baseload units, it is not clear that they are less reliable. First, it is significant to observe that the forced outage rate statistic is outage hours divided by run hours; because peakers run very little, around 200 hours per year according to the NERC data, any outage will result in sizeable forced outage rates. Additionally, infrequent usage may tend to result in more

frequent start-up problems that would not be encountered if the unit were run continuously for substantial periods of time.

Additionally, to evaluate and understand reliability, one should consider not only forced outage rates but also availability factors and equivalent availability factors in evaluating whether one generating technology is more reliable than another. Significantly, the equivalent availability factor (EAF) is the primary variable, along with unit heat rate, used by this Commission to determine Generating Performance Incentive Factors. From the same NERC Generating Availability Report, 1984-1988 used by Mr. Pollock, I have extracted data on availability factors (AFs) and equivalent availability factors (EAFs) for baseload coal units and the three types of peakers addressed by Mr. Pollock in his discussion on this issue. These data are reported in my Exhibit 316 (RSW-RT-1). This is comparable to, and in fact is really an expanded version of, Schedule 3 of Mr. Pollock's Exhibit JP-1. Ranked by both Availability Factor and Equivalent Availability Factor, coal-fired baseload units appear to be less reliable than any of the three categories of peakers. Coal units' AF for the 1984-1988 period was 82.77 percent, as compared to AFs above 90 percent for the

peakers; coal units' EAF for the period was 79.72 percent, as compared to EAFs of 85 percent to 95 percent for the peakers. While I am not proposing any reliability adjustments in computing the cost of equivalent peaking capacity in the EP and REP studies, these data appear to show that baseload coal units are less available than are peakers, such that any adjustment might well work in the opposite direction of that suggested by Mr. Pollock.

Additionally, I would expect Mr. Pollock to be familiar with the use of combustion turbine and other peaking technologies in cogeneration applications where very high availability and capacity factors are achieved. Indeed, while I was still on the Commission staff, one of Mr. Pollock's clients in this case made presentations to us regarding its great success in attaining capacity factors above 90 percent using CT technology in cogeneration applications. This performance also shows the high reliability of peaking technologies when they are used in long-run-time applications.

Alleged Fuel Symmetry Problem

Q: On page 12 of his testimony, Mr. Pollock begins his discussion of the Equivalent Peaker and Refined Equivalent

Peaker methods' alleged fuel symmetry problem. Later, at page 19, he goes on to state that by a peaker type cost study, a high load factor customer class would typically be allocated above average capital costs. What is your response?

A: It is true that by peaker studies, high load factor customer classes are allocated above-average plant costs when those costs are defined and expressed in terms of dollars per kW of capacity. It is not true, however, that they are allocated greater than average costs per kilowatt-hour for these units. Nor is it necessarily true that this is a problem, flaw, or failing with equivalent peaker methods. This line of criticism essentially refuses to consider that cost per kilowatt of capacity for a base load unit is greater than the cost per kilowatt of capacity for a peaker, and that it is the energy loads of all classes that contribute to the utility's decision to build (baseload or intermediate) plants that cost more per kW.

I believe that it is this fundamental, definitional assertion regarding plant costs per kilowatt that is at the root of Mr. Pollock's fuel symmetry argument. In effect, he defines an appropriate share of capital costs

to be expressed only in terms of dollars per kW while ignoring the contribution of energy loads to higher plant costs. I reject this because it ignores the contributions of energy loads, not only those of high load factor customer classes, but also those of low and medium load factor customer classes as well, to the utility's decision to build more expensive production plants than they would otherwise build in order to meet only peak demands.

Q: Do you believe that the "fuel symmetry adjustment" suggested by Mr. Pollock at pages 40-43 of his testimony is appropriate?

A: No, for two reasons. First, Mr. Pollock and I disagree as to the proper measure of fuel symmetry. I believe that he considers or defines a fuel symmetry problem to exist when a cost study is employed other than one that classifies all production plant costs as demand-related and in which no adjustment is made to pricing fuel on an average cost basis. In other words, he defines fuel symmetry relative to his preferred cost of service methodology. By contrast, I believe that the appropriate measure of "fuel symmetry" or fuel equity is the relationship between the percentage of baseload plant cost responsibility borne by each rate class and the percentage of inexpensive

baseload-generated electricity each class receives (or is effectively permitted to buy) at the baseload fuel cost. As my direct testimony demonstrates, with one exception--the GSD class in the Refined Equivalent Peaker study--the Basic Equivalent Peaker study provides a closer match between class baseload plant cost responsibility and baseload energy received than the other cost studies available at that time. In my opinion, this demonstrably better match between baseload plant cost responsibility and baseload fuel received is the "proof in the pudding" that defeats the argument as to an alleged fuel symmetry problem with peaker methods.

Second, the analysis underlying his proposed fuel symmetry adjustment is based on hypothetical peak period energy costs that include hypothetical peaker energy that is more than 100 times Gulf's projected 1990 peaker generation. Mr. Pollock's analysis in Schedule 12 of Exhibit JP-1 is based on hypothetical generation from peaking capacity of 330,246 MWh (Schedule 12, page 3 of 4). Gulf's projected peaker generation for 1990 is 211 MWh.

Q: At page 19, Mr. Pollock asserts that peaker type methods somehow inappropriately "de-average" production plant costs. What is your response to this?

A: Peaker methods do not "de-average" plant costs. They express the energy-related portion of production plant costs on an average cents-per-kWh basis rather than on the dollars-per-kW basis that Mr. Pollock, and industrial intervenors generally, advocate. I believe that expressing these energy-related costs on an average cents-per-kWh basis is entirely appropriate because of the energy and hours of run time considerations that led the utility to build baseload units rather than peaking units.

Q: Mr. Pollock also seems to assert that the alleged "de-averaging" of production plant costs, as he styles it, is inconsistent with collecting fuel and variable operation and maintenance costs on an average per kWh basis. What is your response to this?

A: Well, because I believe that energy-related production plant costs are appropriately averaged, as it were, over all kilowatt-hours, I see no problem with expressing fuel and operations and maintenance costs in the same way. Both are expressed on an average per-kWh basis because both are driven by energy and hours of use considerations.

Applicability of Reservation Charges to Scheduled Maintenance Power Service

Q: Both Mr. Pollock and Stone Container Corporation's Witness Tom Kisla address a proposal to excuse demands registered by self-generating customers (SGCs) during certain maintenance power outages from paying the ratcheted Reservation Charges applicable under Gulf's Standby Service (SS) rate schedule. What commentary do you have to offer on this proposal?

A: First, in principle, I believe that a fair case can be made for excusing demands registered during scheduled, usefully coordinated maintenance outages from the Reservation Charge provisions of Gulf's SS rate. This is because if the outages are indeed usefully coordinated, they will presumably occur at times when they have no cost impact on the demand-related production and transmission costs that are the components of Gulf's Reservation Charge.

However, I do want to make two points regarding this proposal. First, scheduling outages will not enable Gulf to avoid local facilities costs, so if the SGC's power requirements during a scheduled maintenance outage cause

its total standby demand imposed on Gulf to increase, then it cannot properly be excused from paying the additional Local Facilities Charges required by the tariff. (If the Commission implements proper local facilities charges for all demand-metered rate classes in this case, based on maximum customer demand, then any increase in total demand, whether for standby or supplemental service, would properly result in an increase in the customer's demand subject to local facilities charges.)

Second, the sought-after relief from the Reservation Charge should only be granted (1) if the desired maintenance power is used in hours that do not include a Gulf peak that determines Gulf's IIC payments or revenues, or (2) if the Southern Company operating committee agrees to let Gulf deduct any such maintenance power demands from its registered peaks so as to negate any effect on Gulf's IIC payments or revenues. Assuming useful coordination and timely advance scheduling, I believe that this would be a reasonable request.

"As-Available" Supplemental Energy Purchases, or "Economic Backup Power" Under Gulf's SE Rate

Q: Mr. Pollock and Mr. Kisla also suggest that SGCs be permitted to purchase power from Gulf under the same general terms and conditions as presently apply under Gulf's Supplemental Energy (SE) Rider. What commentary do you have to offer on this proposal?

A: I do not see anything conceptually wrong with allowing an SGC to take power from a utility during operationally defined off-peak periods, even though the SGC has generating capacity available to serve its load, so long as the rates under which such power service is taken are appropriately designed and administered. First, the rate should properly include (1) a local facilities charge, applicable to the customer's maximum demand, regardless when it occurred, designed to recover distribution costs, and (2) a non-fuel energy charge equal to the class energy unit cost. Second, by Order No. 17568, the Commission approved the SE Rider on the condition that it become a separate rate class in the Company's next rate case. Although I believe they are surmountable, I can foresee some administrative difficulties in dealing with customers taking backup and maintenance power under Rate SS, ordinary supplementary power under Rate LP/LPT or PXT, and "economic backup" power or "as-available" supplemental power under Rate SE. Finally, along these lines, I would

also comment that permitting such service to be taken would require particular diligence by the utility in measuring and monitoring the customer's usage to assure that the customer did not actually take power service under one rate schedule that should properly be billed under a different rate schedule.

Q: Does this conclude your rebuttal testimony?

A: Yes, it does.

Q (By Mr. Burgess) Have you prepared a summary of your rebuttal testimony that you could present to the Commission?

A Yes, sir.

Q Would you please proceed with that?

A Certainly. In the interest of time, I'll be as brief as I can.

In summary, my rebuttal testimony stands for the following: All production plant costs are not peak demand-related. Assertions that they are ignore the important determinative role that energy loads play in determining how expensive the generating plants are that utilities will build via the economic analysis component of generation expansion planning; that observed cost overruns in the construction of baseload units do not affect my opinions as to the proper classification of baseload production plant costs.

My testimony stands for the proposition that the break-even point analysis, based on the highest energy hours under a low duration curve in the refined equivalent peaker method, is incorrect because any sufficient number of hours in which the unit would dispatch would presumably cause the electric utility to build a baseload unit, not strictly those hours under the high use end of the load curve. In fact, decisions

to build baseload units may well be driven by off-peak energy loads.

Additionally, the refined equivalent peaker method does not track the economic analysis component of system planning as closely, nor as accurately, as does the basic equivalent peaker method.

The equivalent peaker method recognizes that the economic analysis and generation expansion planning is based upon the Utility's cost to serve all the load in all the years of the study on a system basis. The refined equivalent peaker method extracts from those loads the hours only under the high use end of the load curve.

Mr. Pollock has suggested that because of certain differences in reliability statistics for peaking units and baseload units, that some adjustment needs to be made in, or correction as he styles it, in the cost of service method.

My testimony states that forced outage rates, Mr. Pollock's statistic of choice, are not necessarily the appropriate measure for reliability. I believe that it's appropriate also to look at availability factors. When we do, we see that peakers are significantly more available than are baseload units, based on exactly the same source data as that used by

Mr. Pollock.

Additionally, forced outage rates for peakers, which run very few hours a year, can be misleading because any outage divided by the relatively few hours when the unit ran or would have run, will show up as a high forced outage rate.

Additionally, we know of instances where combustion turbine technology is applied with very high availability and capacity factors. This would indicate that if combustion turbines were run frequently and maintained regularly, that they might well exhibit the availability indicated by the generation availability data report cited by Mr. Pollock.

My testimony on the Fuel Symmetry Issue is follows: That it is entirely appropriate to classify costs that are driven by energy loads in all the hours of the study, in generation expansion planning, as energy related, and thus to express them on a cents per kilowatt-hour basis; indeed, I argue that it is more appropriate to express them on a kilowatt-hour basis, because it is all the kilowatt hour loads that drive them, than it is to express them on a dollars per kilowatt basis.

I submit that the appropriate measure of fuel symmetry is not whether certain customer classes who

pay "above average" costs expressed in dollars per kilowatt of capacity get below average operating costs, but rather that the appropriate result is obtained, if the classes get an appropriate share of the lower cost realized because the Utility built the baseload unit. Basically, if they get the same share of the benefits realized as the share that they pay for of the excess energy-driven costs allocated to them.

I offered some rebuttal commentary on two proposals made by the Industrial Intervenors. I hope, and certainly intended, that that testimony would be construed as constructive criticism, because I believe that the proposals have some merit. I wanted to call attention to some implementation problems that should be considered if we're going to go forward with them.

As to the suggestion that standby customers, on self-generating customers, be excused from paying the reservation charges, otherwise applicable to standby power for maintenance power, specifically, when that maintenance power is taken in a usefully scheduled and coordinated fashion from the utility, are fine in principle. I wanted to make clear that I believe that such power should be subject to the local facilities charge because the Utility will have to have the local facilities there to deliver the power, whether it's

coordinated with the Utility's generation outage schedule or not.

And, additionally, that such power should not be taken during the monthly peaks of Gulf that determine Gulf's payments or revenues under the Southern Company's Interchange Contract (Pause)

I think I'm finished. As to the suggestion that self-generating customers be permitted to take what has been called, in the past, economic backup power, under the supplemental energy rate or under a similar rate, I think that that's conceptually okay, assuming that appropriate safeguards and monitoring are implemented by the Utility to assure that the customer is not really taking standby power under the SE rate or under an SE rider, if that's the way you go.

That a proper local facilities charge should be applied if the total demand taken for such power requirements exceeds the standby contract capacity, and that for the power thus taken, the customer should pay as he or she presently pays under the standby -- sorry, under the supplemental energy rider, a nonfuel energy cost, that I believe should be based on class energy unit cost.

This could have some implementation problems, in that it might require the Utility to monitor, fairly

diligently, usage taken where a customer was taking power under the standby rate, taking supplementary power under a full requirements rate and then taking some economic backup power, which is in some other realm under an SE rider or under a SE rate, solely to determine or -- excuse me, solely to assure that the customer was taking the power service and being billed for the power service under the rate schedule, applicable to the character of that service.

You probably noticed I lost a thought in my discussion on the maintenance power issue under scheduled and coordinated circumstances. The point I wanted to make is that if the Southern Company were willing to forgive the demands registered by customers taking maintenance power on a coordinated scheduled basis, during Gulf's monthly peak for IIC billing or revenue purposes, then I think that would eliminate my concern with them being on during the peak, and that concludes my summary.

MR. BURGESS: Thank you, Mr. Wright. We tender the witness for cross examination.

CHAIRMAN WILSON: Mr. McWhirter.

CROSS EXAMINATION

BY MR. McWHIRTER:

Q Mr. Wright, I think it would be helpful,

because some people think you and I don't necessarily agree on a lot of things, that we touch base on the things we do agree on and start out with that, and start with a happy note.

Essentially, you agree with Mr. Pollock and Mr. Kisla, that if common sense says that when you have cogeneration, and that cogenerator has to maintain that generator for some point in time, that logic says he should be allowed to maintain it without incurring a new demand, so long as he does it when Gulf has available power; doesn't have to build new capacity to meet that demand, isn't that fair?

A If I may be clear, yes, that's generally fair, as long as we're talking about the demand upon which the customer will pay; specifically, the production in bulk transmission reservation charge and not the local facilities charge.

Q So that if they've got dedicated facilities, they ought to pay their fair share of those facilities?

A Exactly, yes.

Q There's nothing wrong with that.

And then the -- you agreed, I believe, with Mr. Pollock and Mr. Kisla with respect to this supplemental energy. And that's when, at those points in time when Gulf has energy it can sell out of its

existing capacity, if it can create a market for that energy, it helps everybody, doesn't it? Because Gulf gets more revenue; and to the degree that that revenue exceeds fuel costs, Gulf makes more money. And if a customer who might not do something with energy unless he had it at a proper rate would go ahead and do something with it. Isn't that true? Maybe that part you don't want to speculate on.

But in any event, seems to me that where you have a person that's an industry and takes supplemental energy that's available, you don't have any objection to that being priced at a lower price as long as it's recognized that that price is not discriminatory, nor does it take power away from other people, is that correct?

A Yes, sir, that's correct. We can talk specifically what cost components they shouldn't pay for under those circumstances, if you like.

Q Now, the problem might come about if that customer is a cogenerator as well as takes power for other uses, and that's the problem that you have focused on, is that correct?

A You said "the problem might come about." I'm not quite sure which problem you're relating to. I alluded to some problems in implementation and

administration of the tariffs, but you may be addressing a different problem; and, if you are, I would ask that you clarify what that is.

Q Well, there's no reason that a customer should be denied the opportunity to take supplemental power just because he also has cogeneration?

A I would agree with that.

Q And if supplemental power is available and it's cheaper for that customer to take supplemental power than to cogenerate himself under certain circumstances, would it be wise to allow that customer to cut down his cogeneration and continue to take supplemental energy?

A Yes, sir. Under certain conditions I think that would both be wise and I think it would be sound rate policy.

Q All right, thank you.

A Yes, sir.

Q With respect to Exhibit 607, which you've modified?

A Yes, sir.

Q I appreciate the fact that you agreed with me that the appropriate rates to use were the rates that were originally proposed. I note that in Exhibit 616 under --

A Excuse me, 616 or 613, Mr. McWhirter?

CHAIRMAN WILSON: 613.

MR. McWHIRTER: I'm sorry, I misapprehended.

Q (By Mr. McWhirter) 613, the price per kilowatt hour under the equivalent-peaker methodology would be 36% higher than the price per kilowatt hour under the TECO proposed rate? Subject to check?

A I didn't calculate it. But eyeballing it, that looks right to me, Mr. McWhirter.

COMMISSIONER EASLEY: You notice that not even 24 hours went by, not even six hours went by.

MR. McWHIRTER: I figured out what the difference is on that "subject to check" deal. If it's a mathematical computation, that's appropriate because it saves time. And if it's a mathematical computation and it finds out that the guy that was asking the question was wrong, he's going for wind up with egg on his face when the other side points out that he was doing that. Whereas, if it's a factual consideration that you really can't prove except by bringing other witnesses and so forth, that kind of question would be appropriate.

COMMISSIONER EASLEY: You know, I'm sorry I commented, subject to check.

MR. McWHIRTER: I'm glad you did because I

thought maybe you would wonder why I would do such a silly thing so soon as I said I would never do it again.

COMMISSIONER GUNTER: I got a spray can full of repellant down in the office I'm fixing to go get.

Q (By Mr. McWhirter) But in any event, the price per kilowatt hour under the equivalent peaker methodology is substantially higher but the demand charge under the TECO proposal was higher than under the equivalent peaker methodology?

A Yes, sir, that's correct.

Q If you have a big customer, the kilowatt hour charge really totally overwhelms the demand charge when you have demand charges this small, don't they? For instance, look at your Page 2?

A You said "a big customer." I think the correct characterization is a high load factor customer, not necessarily a big customer.

Q Yes, it's big relative to the demand, a lot of kilowatt hours relative to the demand.

A Yes, sir.

Q For instance, on your Page 2, you show that the kilowatt hour charge is $33,000 compared to a $10,000 demand charge.

A Yes, sir.

Q Under the TECO proposal. And under your proposal, the demand charge would be slightly less but it would only reduce $4,000, whereas the kilowatt hour charge would go up $12,000?

A Yes, sir. Under those rates, that's exactly right.

Q So from the customer's viewpoint, if he is a high load factor customer, the kilowatt hour charge would be very significant to him?

A That's true.

Q More so than the demand charge. Whereas, if I were a poor load factor customer, then it would be -- the demand charge would not be that consequential to me?

A Mr. McWhirter, I think you meant to say that the energy charge wouldn't be that consequential to you if you were a low load customer. Is that accurate?

Q Well, in this instance, because you have described a low demand charge, then it's not too consequential to me to put a big load on the system, because the big price is going to be on the energy charge and I'm not being -- I'm not using much energy.

A I'm sorry, Mr. McWhirter, I think we've gotten into a little bit of confusion.

You premised your last question, I thought,

by hypothesizing the case of a low load factor customer. You used the phrase, "poor load factor customer," which I don't agree. I say, "high and low" rather than "good and poor."

Q Okay. Fair enought.

A But because you premised it that way, I think that your statement that followed wasn't correct or wasn't the question you were going to ask.

If you want to ask it again, I'll answer the question, yeah, that's fine.

Q I used to represent a company called the David Joseph Company, and David Joseph would crushed automobiles.

CHAIRMAN WILSON: By himself?

Q (By Mr. McWhirter) And they'd crush them into little blocks like that like they did in the James Bond movie. And they'd do that for about an hour a day. But when they did it, they imposed about 30 -- yeah, 30 -- megawatts. I don't think it's 30, maybe 10 megawatts --

CHAIRMAN WILSON: Subject to check.

MR. McWHIRTER: Subject to check. (Laughter)

Q (By Mr. McWhirter) But a customer like that wouldn't be concerned about the magnitude of the demand he's placing on the system if most of the price for

electricity is in the kilowatt hour charge, isn't that correct?

A Yes. Yeah.

Q Now, another thing we agreed upon the other day was, you are an expert in the field of cost of service and rate design, but you're not an expert in any other field, such as system planning, is that correct?

A That's a fair statement, yes, sir.

Q And Mr. McGlothlin took your deposition in this case on June the 7th, and you told him, as of that date, you had not conferred with the system planners of either Gulf Power or Southern Company as you prepared your testimony, is that correct?

A Yes, sir, that's correct.

Q All right. So, I'm not going to ask you any questions about planning, as it would be inappropriate to do so. But I'll ask you about your testimony.

On Page 6, you criticize Mr. Pollock's concept of forced outage rate, and you quoted the North American Electric Reliability Council's definition of forced outage. It's Page 14 of your testimony at Page 20. And you said that the definition -- or Line 20, not page 20.

You said the definition of forced outage is

"the outage hours divided by the run hours." Under the North American Reliability Council's definition, they have something else in the denominator, too, don't they? Do you have a copy of those available?

A I think that I have. I'm not sure what you're speaking of.

Q Well, my understanding was that the numerator in that fraction is the outage hours; and the denominator is not only the hours that run, but also the hours when they try to get the thing to run but it doesn't run.

A I think that's correct.

Q Okay. Now, you said a more appropriate test is not the forced outage rate, but rather, the availability rate. And the availability rate, as determined by the North American Reliability Council, is the hours that it runs divided by all the rest of the hours in the year. Is that essentially it?

A I think that's a correct definition of the raw availability factor, yes, sir.

Q In the enumerator for service hours, the time its run, and in the denominator, you would take down, you would add the reserve shutdown hours -- I can't understand all this. Pumping hours and synchronous condensing hours.

Isn't it essentially all the other hours in the year?

A I thought that was the answer I gave you to your previous question. I think that's correct.

Q I think that's easier for us to work with.

A Me, too. (Laughter)

Q So I guess what we're getting at, Mr. Pollock says that the important thing to look at is when you try to run it, does it run? And you say the important thing to look at is the number of hours it runs compared to all the other hours in the year, except when it's down when it isn't running.

A I suggest that an appropriate measure for looking at reliability of units is the availability factor, yes.

Q But the fact that it's there --

A I didn't say --

Q -- and it's not called upon, you would still count in your denominator?

A It's available, yes --

Q But you don't know.

MR. BURGESS: Excuse me, Mr. Wright had a further response to his question.

MR. McWHIRTER: I'm sorry.

WITNESS WRIGHT: (No response.

COMMISSIONER BEARD: Could you tell him what the further response is so he'll know? (Laughter)

CHAIRMAN WILSON: What should he have said?

MR. BURGESS: I thought he was responding while you were questioning further.

Q (By Mr. McWhirter) Do you own a vacation home?

A No, sir.

Q Are you familiar with the debate that went on in the 1986 income tax law? I thought that was quite interesting.

There was a tax shelter where people would rent their vacation home for a week; and then they'd live in it for a week; and then it was unoccupied for 50 weeks, but they said it was available for rental or rented for 51 weeks. And so when they wanted to take the business deduction, they would take the deduction for depreciation and other costs for 51 weeks of the year.

And the IRS said, "No, we think you ought to look at the amount, the number of weeks you rented it and the number of weeks that you used it, and then forget about all the other hours in the year."

You're sort of like the people that owned the vacation home that wanted to use the 51-week concept as

opposed to the IRS that said, "We'd just look at two weeks." And Mr. Pollock is kind of like the IRS? Is that a good analogy or not?

COMMISSIONER EASLEY: Mr. Wright, let me help you on that.

WITNESS WHITE: Thank you.

COMMISSIONER EASLEY: I think the analogy would have been better had you had him owning that rental home and having a management entity to take care of it for him in the other 50 weeks. Because otherwise, if he managed it himself, IRS would have allowed it.

MR. McWHIRTER: That's after-the-act was performed.

WITNESS WRIGHT: Mr. McWhirter --

Q (By Mr. Wright) Did I confuse you?

A No, you didn't confuse me. There's some conceptual similarities there in the calculation, but I don't think you wanted to compare your consultant to the IRS.

Q All right. (Laughter)

Here's an interesting line of questions and this is all I'll ask --

A All of your questions are interesting and enlightening, Mr. McWhirter.

Q I'm glad of that.

Is it an underlying assumption of the equivalent peaker method that utilities are willing to incur higher capital costs of baseload units to save fuel costs?

(Pause)

A I'm sticking a little bit on the use of the word "assumption." The equivalent peaker method, I submit, tracks the considerations that are most important in utility generation expansion planning. Peak demands that determine the timing of needed additional capacity and total energy requirements in all the years of the expansion study that go --

Q I don't want you to get into cogeneration planning --

A -- that go into the economic analysis that determines what type of plant to build. Now, to the extent that those analyses evaluate the cost of different generating technologies, including their total costs, capital costs, plus operating costs, those considerations, total capital and operating costs for one technology versus total and capital operating costs for all other technologies, as they are evaluated by the utility in the generation expansion planning economic analysis -- what I think in Southern System is

called "the generation mix package" -- then those considerations are factored into the equivalent peaker method.

Q Well, you were talking about what a utility does on generation planning, and you're not an expert in that field. What I wanted to ask you, just kind of as a layman, like I am, is the theory that it's a good idea to pay more money, to build a plant, if in the long run the fuel costs savings result in a lower total cost than if you built the peaker?

A That's -- I agree that that's a good idea and it's that idea that underlies planning.

Q That motivates really your methodology?

A Well, again, my methodology recognizes that there are two primary determinative factors: peak demands and energy requirements that determine the utility's capital expenditure decisions. Peak demands and energy, and that's it.

Q All right. Now, Plant Scherer is a recent baseload unit which is really the essence of this rate case, is it not?

A That's my understanding of the revenue requirements portion of the case, yes, sir.

Q Would that be treated under your methodology as a baseload plant or an equivalent peaker?

A The revenue requirements for the plant would be classified into separate components, one demand related equal to the amount that it would have cost Gulf to build a peaking unit of equivalent capacity to its share of Plant Scherer, and another component equal to the difference between that equivalent peaking capacity cost component and what they actually paid for the unit.

Q Do you know what kind of fuel is used at Plant Scherer?

A I'm not 100% sure. I'm going to use our favorite of the day, "subject to check," I believe that the plant uses low sulphur coal, which costs more than high sulphur coal.

Q I will stipulate to you -- with you that that's correct. So you don't have to check on it.

Is low sulphur compliance coal more expensive or less expensive than the coal that Gulf Power uses in its other baseload units?

A I'm reasonably sure that the low sulphur "compliance" coal is more expensive than the coal that Gulf uses at its older units.

Q Would scrubbers, if they put them in Plant Scherer, paidthe cost to put scrubbers in there, would that enable them to use lower price, low-sulphur -- or

high-sulphur coal?

A I believe so.

Q If The equivalent peaker method classifies higher capital cost of baseload units like Scherer as energy-related, as you've suggested part of them should be, because of these higher capital costs were incurred to save fuel, would it be just as legitimate to classify the higher Plant Scherer fuel costs as demand related since -- since low sulphur compliance fuel costs more than the cheaper fuel, then that fuel difference price should be treated as demand-related, isn't it, because we've saved some capital costs of putting scrubbers in those chimneys?

A I don't agree that fuel costs are appropriately classified as demand-related, and I think -- that was a very long and involved question, but I don't think that you -- I think part of the premise of your question was that the scrubber cost was a capital cost and therefore demand-related. I am not sure that I agree with that.

Q I didn't think you would.

MR. McWHIRTER: I have no further questions of this witness.

MR. STONE: I don't have a line of questions that would be as interesting as McWhirter's so I have

no questions.

COMMISSIONER GUNTER: Staff?

CROSS EXAMINATION

BY MR. PALECKI:

Q Mr. Wright, what is the definition of "standby service"?

A Standby service is power provided by the utility to a self-generating customer to replace power that is taken by the customer when -- during a forced outage or a maintenance outage, when that power would otherwise have been normally or ordinarily generated by the customer's own equipment.

CHAIRMAN EASLEY: Mike, could I interrupt you right here, please?

You used the term "self-generating." In the last line of questioning, and throughout, the cogeneration and self-generation has been used almost interchangeably. Would you define them for me and make a distinction as to whether or not you are talking about cogeneration or self-generation exclusively?

WITNESS WRIGHT: Certainly, Commissioner Easley.

For most of our purposes, as regards standby service, they are the same. Cogeneration specifically involves the use of thermal energy or waste heat energy

for the purpose of generating electricty. If it's a -- like a phosphate processing plant, they use the waste heat energy from burning sulphur to make steam to make electricity. If it's a different kind of cogeneration facility, they'll use the thermal energy to drive some thermal or mechanically driven process and use the thermal energy to generate electricity.

In the Commission's standby rates docket, it was determined -- or the Commission determined that self-generating customers would be treated under the tariffs the same as cogenerating customers or QFs. The deal was that PURPA required the provision of standby service to qualifying facilities as defined under the Act and under the rules implementing the Act. The Commission, I think appropriately and properly, determined that there is no good reason not to make the same character service, standby backup maintenance service, available to self-generating customers who are not QFs. For that reason, I generally try to use the phrase, "self-generating customer," because it relates back to the character of the serivce taken rather than to their status under PURPA. But I will use whichever term is convenient.

COMMISSIONER EASLEY: I just wanted to make sure, because in a lot of the costs and revenue

discussions, there's been no mention of the costs and revenue discussions, there's been no mention of the revenue to the cogenerator for power sold to the utility company. I just wasn't sure whether there was any relationship or I was missing something.

WITNESS WRIGHT: Maybe I can --

COMMISSIONER BEARD: A congenerator self-generates, but a self-generator doesn't necessarily cogenerate?

WITNESS WRIGHT: Took the wo· is out of my mouth, Commissioner.

COMMISSIONER EASLEY: It could. There's no prohibition against the self-generater become a cogenerator becoming a cogenerator?

COMMISSIONER BEARD: That's right.

COMMISSIONER EASLEY: In which the case the utility is required to buy the power, the self-generator now cogenerates?

WITNESS WRIGHT: That's right. Under the federal rules, the utility is not required to prvide standby service to non QFs self-generating customer. Under the Florida Commissions' decisions, they are.

COMMISSIONER EASLEY: But nowhere in any of the cost of service or any of the financial analyses has there been any offset or consideration of potential

revenue to the customer for any cogeneration sales, and perhaps not appropriate, I'm just saying it's not there, is that correct?

WITNESS WRIGHT: I think that in this case that's correct. I'm sure in the future we'll see on the utility's revenue requirements side power purchase payments made to congenerators.

COMMISSIONER EASLEY: Thank you.

Q (By Mr. Palecki) I would like to ask you about your response to Mr. McWhirter's questions about cogenerators buying kWh on the SE rider rather than generating the kWh with their own generators. Do you think it's appropriate for a congenerator to be able to buy kWh on the SE rider to replace kWh normally generated with his generators when he is experiencing a forced outage of one of his generators?

A No, sir.

Q How about in the case of a scheduled outage for maintenance of one of his generators? (Pause)

A Your question is a little bit involved because of the other issue that's been discussed here as relates to the coordinated scheduled maintenance outages being excused from reservation charges and so on. But, if you would ask the question again, just read it again the way it's written and I'll try to

answer it just the way it's written.

Q Do you think it's appropriate for a cogenerator to be able to buy kWh on the SE rider to replace to kWh normally generated with his generator when he has scheduled an outage for mainmtenace of one of his generators?

A No.

Q Does the fact that when experiencing a forced outage of a generator the cogenerator has a choice of whether to buy standby power or generate the kWh with another one of his generators, does this justify allowing the taking of standby power on the SE rider?

A Not in my opinion. The difference is that in that case the customer has the option of whether to take the standby power from the utility. It potentially really is standby power, power to replace that normally generating -- sorry, normally generated by the customer during a defined standby outage; that is a forced outage or a maintenance outage.

That's the difference in my mind between that scenario and what I have earlier described as economic backup power; that is the scenario in which a self-generating customer can, and in my opinion should, be allowed to take supplemental energy if he finds it more economic to do so by backing off his generation

capacity when it's not in an outage status.

Q It would appear that the Industrial Intervenors are seeking to have a situation approved where a cogenerator would be able to buy kWh on the SE rider to replace kWh normally generated with his generators when he is experiencing either a forced or a scheduled outage; And that this decision could be made solely for economic reasons.

At the time you formulated your testimony on Issue 158, which apppears on Pages 23 and 24 of your rebuttal testimony, were you aware that this is the situation that was being sought by the Industrial Intervenors?

A No, sir. I thought they were asking for simple -- simply for what we have called economic backup power, power taken when the customer finds it economic to back off his generation when his generation facilities are not in outage status. The issue was discussed at workshops in the standby rates docket, but it was never resolved. I don't think it was addressed either in the Staff's recommendation in that docket nor in the orders in that docket. I think it's a fair issue to raise at this time.

Q If you were aware that the intervenors being represented by Mr. McWhirter, the Industrial

Intervenors, were seeking that particular situation, would you modify your testimony on PageS 23 and 24, and if so, how?

A Yes, I would have modified my testimony to simply state that they should not be allowed to take supplemental energy when it's truly standby power, that is, power taken to replace power ordinarily generated by the customer's generation during a forced or maintenance outage.

Q Were you the Lead Staff Member in Docket 85673-EI on the generic design of standby service rates and the approval of the original standby service rate schedules?

A A slight correction. The docket number, I believe was 850673-EU, and the answer to your question is, yes, I was.

Q Gulf's response to Interrogatory No. 76 of Staff's Third Set, indicates the number of days with on-peak hours, for which no portion of the on-peak hours were designated as a supplemental energy period in 1988 and '89. This is Exhibit 498 for purposes of this proceeding.

Would you accept, subject to check, that for the two years the average number of days in this response is 6, and we've provided you with a copy of

Exhibit 498?

A I'd certainly accept that, subject to check, eyeballing the numbers it looks to me like 6 is about right.

Q And that is a matter that would be subject to a mathematical computation, correct?

A Yes, sir.

Q Is there a basic problem of underrecovery of the production and bulk transmission plant costs if standby service is billed on the current SE rider, or a separate rate schedule with flexible time of use periods, such as those used in the SE rider?

A I'm sorry, Mr. Palecki, you lost me in the last, second half of that question and I'm going to have to ask you to repeat it.

MR. STONE: Excuse me, Mr. Palecki, but how does this line of questioning relate to Mr. Wright's rebuttal?

MR. PALECKI: It directly relates with the cross examination that was conducted by Mr. McWhirter. And I think it fits right into his rebuttal as well, specifically pages 23 and 24 of his rebuttal testimony.

MR. STONE: If you insist.

Q (By Mr. Palecki) My question was is there a basic problem of underrecovery of the production and

bulk transmission plant if standby service is billed on the current SE rider or under a separate rate schedule with a flexible time-of-use period, such as the SE rider? (Pause)

MR. McGLOTHLIN: Commissioners, it's my recollection that Mr. Wright did not address this in his rebuttal testimony. I object it on the basis of being beyond the scope of the rebuttal.

COMMISSIONER GUNTER: Do you want to respond? Or am I to take your side?

MR. PALECKI: I think this directly relates to the SE rider. There was substantial cross examination that was conducted.

COMMISSIONER GUNTER: Cross examination is one thing. Your cross examination is not on somebody else's cross examination, what did he file, what's before you.

MR. PALECKI: Well, he has discussed the SE rider in quite a bit of detail in his rebuttal testimony. This was my last question on this line.

MR. McGLOTHLIN: I'd like to hear the question again, and have Mr. Palecki show me how it relates to his prefiled rebuttal testimony.

COMMISSIONER GUNTER: You're jumping in pretty quick though, I'll tell you, because we granted

some great liberties. I understand you're not getting your due process, but you were not here when your colleague was.

MR. PALECKI: I'm not sure Mr. McWhirter's testimony was exactly corresponding with the --

MR. BURGESS: Mr. McWhirter's testimony is a good characterization. (Laughter)

MR. PALECKI: His questioning, let me put it that way.

COMMISSIONER GUNTER: Ask your question one more time.

WITNESS WRIGHT: I think, Mr. --

COMMISSIONER GUNTER: No, he's going to ask his question. He asks questions, you respond.

Q (By Mr. Palecki) This is this last question in this particular line of questions.

Is there a basic problem of underrecovery of production and bulk transmission plant, if standby service is billed on the current SE rider or on a similar rate schedule, separate rate schedule with flexible time-of-use periods, such as those used in the SE rider?

A The word I was sticking on in your question was "underrecovery." My answer is that there probably is and there surely may be, but the way I would

characterize the problem, would be as a problem of rate design because of the daily demand charge in the standby schedule being computed on the basis of all days with on-peak hours, and then taking out a pretty substantial number of those days, I guess to indicate -- the exhibit indicates there is 14 or 15 days each month that would be taken out for the purposes of computing daily demand billing charges, if it were taken under the SE rate.

To take standby service under a SE type rate, you would have to recompute the daily demand charges to reflect the much-reduced number of hours with on-peak periods in them that count toward billing determinations. That's the problem.

The problem I was having, Mr. Palecki, is I couldn't conclude there was necessarily an underrecovery but there is a substantial problem in the rate design.

Q Thank you. Mr. Kilgore's deposition, Exhibit 13, provides the ratio of on-peak billing kW to 12 CPKW. For PXT customers on the SE rider, is the ratio of on-peak billing kW to 12 CPKW, .9505?

MR. McGLOTHLIN: I renew my objection. I think that's clearly beyond anything that Mr. Wright addressed in his rebuttal testimony.

MR. PALECKI: This isn't the Industrial Intervenors' witness, and I don't know if the objection is --

MR. McGLOTHLIN: He's not my witness, but it's certainly --

COMMISSIONER GUNTER: He's certainly within his right to make an objection -- any counsel's right to make an objection. His objection is that you're outside the realm of his filed testimony, rebuttal testimony.

MR. PALECKI: We'll go ahead and move on to another matter.

Q (By Mr. Palecki) Mr. Wright, are the equivalent of service drops allocated or assigned to primary and transmission voltage customers?

A Mr. Palecki, I'm sorry, I can't understand your question as asked. You said, "equivalent service drops." Do you mean are, in fact, under Mr. O'Sheasy's cost study secondary level service drops allocated to primary and transmission voltage level customers or do you mean something else? (Pause)

Q Have you reviewed the calculation of standby kW on the bottom of Page 2 of 3 of Mr. Kisla's Exhibit 1?

MR. McGLOTHLIN: Could I hear the question

again?

MR. PALECKI: Have you reviewed the calculation of standby kW on the bottom of Page 2 of 3 of Mr. Kisla's Exhibit 1.

A Mr. Palecki, I recall looking at that calculation during the course of preparing my rebuttal testimony, it has been about five weeks since I did so, and I don't have a copy of Mr. Kisla's testimony with me.

If you could furnish one, perhaps I could respond to what question you intend to follow with.

Q Yes, we will furnish you with a copy of Mr. Kisla's Exhibit 1. Specifically, referring to Page 2 of 3, would you agree there is a 5-megawatt error in the calculation of standby service kW?

MR. McGLOTHLIN: Objection, beyond the scope of rebuttal.

COMMISSIONER GUNTER: Did you hear the objection?

MR. PALECKI: Yes. I don't believe it is beyond the scope of rebuttal. I believe that there was rebuttal concerning the testimony that Mr. Kisla submitted, and I think that whether or not there is a 5-megawatt error in the calculations of Mr. Kisla, it is directly on point.

COMMISSIONER GUNTER: Let's get to where we are in his rebuttal testimony. Did you rebut Mr. Kisla?

MR. VANDIVER: If you give us just a minute, we'll find it

COMMISSIONER GUNTER: Do what?

MR. VANDIVER: If you give us just a minute, we'll find it.

COMMISSIONER GUNTER: All right. Be a good -- let's take a quick, real five-minute break.

(Recess)

COMMISSIONER GUNTER: You were going to find the reference in the prefiled?

MR. PALECKI: Yes, Commissioner Gunter, we were going to refer you to Pages 21 through 24 of Mr. Wright's testimony where he testifies in detail concerning the standby rates. This was a worksheet that was included in Mr. Kisla's testimony concerning standby rates. And finally, the door to this testimony was opened wide by Mr. McWhirter when he brought up the cogenerator question in the first place.

So I don't see how Mr. McGlothlin can even object to this line of questioning.

COMMISSIONER GUNTER: I'm going to allow the question. Go ahead.

Q (By Mr. Palecki) With reference to Mr. Kisla's Exhibit 1, is there listed a five megawatt error in the calculation of standby service kW? I'd refer you to B, C and D at the bottom of the page. (Pause)

A Bear with me a moment, please. Pause

Q It should say the word, "Error."

A Maybe I'm just missing your question altogether, Mr. Palecki. I thought you were asking me to evaluate this data and tell you whether I believed there was an error in this calculation. Are you just asking me to look at the column heading that he's labeled "Error"?

Q Well, no, actually the next question was to ask you to evaluate.

A Okay.

Q The next question is is the five megawatts listed as an error actually standby and not an error?

A Okay. And on that point I must regrettably ask you to bear with me a little longer. (Pause)

Okay. What I've done is looked at the column above the bottom set of numbers, labeled, "Winter A," and also at the column next to it, labeled, "Winter Cold." What these data appear to me to show are scenarios of operating conditions before and after

outages of the customer's generating equipment and with a load reduction implemented by the customer in partial response to the outage.

If you look at the data, it shows that, prior to the outage, the customer was generating 32 megawatts and buying 10 from the Utility. After the outage, the customer was generating 14.5 megawatts. By virtue of load reduction, the customer was using 37 megawatts, rather than the 42 total prior to the outage.

And taking then the difference between the -- during the outage generator output of 14.5 kW and the total plant load during the generator outage of 37 kW, this indicates to me that the customer was -- the customer increased his demand on the system in response to the outage from 10 megawatts prior to the outage to 22.5 megawatts prior to the outage.

COMMISSIONER EASLEY: After the outage?

WITNESS WRIGHT: I'm sorry, you're right, after the outage. Okay.

This indicates to me that standby demand during that period is 12.5 megawatts, and that the customer took an additional 12.5 megawatts to replace power that he was otherwise generating himself prior to the outage.

To the extent that the line in the bottom set

of numbers, labeled "A," claims an actual standby demand of 7.5 as opposed to a calculated standby demand of 12.5 calculated as I just described, the claim that the actual standby demand of 7.5 is in error by five megawatts.

MR. PALECKI: Thank you. We have no further questions.

COMMISSIONER GUNTER: Commissioners, any questions? Redirect?

MR. BURGESS: Yes, sir, I do.

REDIRECT EXAMINATION

BY MR. BURGESS:

Q Mr. Wright, you were asked a line of questions by Mr. McWhirter regarding the appropriateness of the use of the forced outage rate as opposed to the use of the availability factor. Do you recall that?

A Yes, sir.

Q Are you aware of the position on this issue taken by the Florida Electric Power Coordinating Group?

A Yes. Well, at least to some degree. In reviewing the Florida Electric Power Coordinating Group's Generation Expansion Planning Studies document, I just happened to observe at Page 26, that in reliability analyses, units are apparently added

according to their availability. I'll read to you this sentence -- let me read to you two sentences:

"Whenever the yellow LP became higher than one/tenth of a day per year, capacity was added to the system in increments of the selected unit size and type being analyzed. For example, if combustion turbines were being added to the system, 75 megawatt increments of capacity were added with combustion turbine availability until the reliability criterion was met."

MR. BURGESS: Thank you, Mr. Wright, that's all we have.

COMMISSIONER GUNTER: All right, got any exhibits?

MR. BURGESS: Yes, sir. I believe any prefiled exhibits have been stipulated to and we would ask the admission of Exhibit No. 613 amended from the form in which it was initially offered, amended by the Commission's ruling on inadmissibility of certain portions of it.

COMMISSIONER GUNTER: All right. You just eliminated the testimony --

MR. BURGESS: Yes, sir.

COMMISSIONER GUNTER: -- of Pierce Wood, which was originally attached?

MR. BURGESS: Yes, sir.

COMMISSIONER GUNTER: All right. Without objection, so ordered.

(Exhibit No. 613 received into evidence.)

COMMISSIONER GUNTER: Thank you, Mr. Wright?

WITNESS WRIGHT: Thank you very much, Commissioner Gunter.

(Witness Wright excused.)

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COMMISSIONER GUNTER: Let's call our next witness, Mr. Pollock.

JEFFRY POLLOCK

was recalled as a witness on behalf of the Industrial Intervenors and, after being previously duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. McGLOTHLIN:

Q Mr. Pollock, did you prepare rebuttal testimony in this case and submit it in prefiled form?

A Yes.

Q Do you have any corrections or additions to make to the prefiled rebuttal testimony?

A No.

MR. McGLOTHLIN: I ask that the prefiled rebuttal testimony of Jeffrey Pollock be inserted at this point.

CHAIRMAN WILSON: It will be inserted into the record as though read.

MR. McGLOTHLIN: Would you identify the exhibits that accompany your prefiled rebuttal testimony?

A Yes. (Pause)

Q Would you identify by title those exhibits.

A Yes. My Exhibit JP-2 consists of three schedules. They, however, address the testimony which has been previously stipulated of Public Counsel witness Rothschild.

MR. McGLOTHLIN: Could I have an exhibit number assigned to that, please?

CHAIRMAN WILSON: It will be Exhibit 614.

MR. PRUITT: 614.

(Exhibit No. 614 marked for identification.)

MR. McGLOTHLIN: Please summarize your rebuttal testimony. And, I'd like to point out, Commissioners, that by stipulation a portion of that testimony relates to the cost of capital study. He will not include that in his summary, but it should be inserted, also.

CHAIRMAN WILSON: Yes.

GULF POWER COMPANY

before the

Florida Public Service Commission

Docket No. 891345-EI

Rebuttal Testimony of Jeffry Pollock

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Jeffry Pollock, 12312 Olive Boulevard, St. Louis, Missouri.

Q ARE YOU THE SAME JEFFRY POLLOCK WHO HAS PREVIOUSLY FILED TESTIMONY ADDRESSING COST ALLOCATION/RATE DESIGN ISSUES ON BEHALF OF THE INDUSTRIAL INTERVENORS IN THIS DOCKET?

A Yes.

Q WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A I shall respond to the recommendations sponsored by Robert Scheffel Wright and James A. Rothschild on behalf of the Office of Public Counsel (OPC).

Mr. Wright testifies in support of the Equivalent Peaker (EP) method of classifying and allocating production capital costs. Although it is not clear from his testimony, I am assuming that he is implicitly supporting the 12CP method to allocate the "equivalent peaking" capital costs. The various problems with the EP and 12CP

methods are discussed on Pages 7 through 22 and Pages 31 through 33 of my direct testimony and in Appendix C. At this time, I shall address:

- How the EP concept is not an accurate reflection of the utility system planning process;
- Various inconsistencies in Mr. Wright's allocation of capital and operating costs and in the arguments he poses which are unrelated to the capital substitution (CAPSUB) postulate underlying his EP method;
- Mr. Wright's criticisms of the REP method;
- The proposed modifications to the REP cost-of-service study; and
- The minimum demand charge for Rates PX/PXT.

Mr. Rothschild alleges that the cost of equity for industrial customers is 40 basis points higher than the corresponding cost of equity for residential and commercial customers. Although he did not quantify the rates of return for any specific rate class, the impact of his recommendation would be to require industrial customers to pay higher rates of return on rate base than either residential or commercial customers. In other words, cost-based rate-making would not be achieved by equalizing the class rates of return at parity--contrary to this Commission's long-standing policy.

Q **MR. WRIGHT TESTIFIES THAT HE INTENDS TO OFFER ENHANCED REVISED VERSIONS OF TWO COST-OF-SERVICE STUDIES CONTAINED IN HIS DIRECT TESTIMONY, EXHIBITS 350 (RSW-1) AND 351 (RSW-2). HAVE THESE ENHANCED STUDIES BEEN PROVIDED AT THIS TIME?**

A No. Mr. Wright should be required to file all of his evidence in direct testimony, as is the case for other intervenor witnesses.

Q DO YOU HAVE ANY EXHIBITS TO SUBMIT IN CONNECTION WITH YOUR REBUTTAL TESTIMONY?

A Yes. I am sponsoring Exhibit JP-2 (614), consisting of three schedules. These schedules were prepared by me or under my supervision and direction.

REBUTTAL TO ROBERT SCHEFFEL WRIGHT

EQUIVALENT PEAKER METHOD

Q MR. WRIGHT CONTENDS THAT THE EQUIVALENT PEAKER (EP) METHOD IS BASED ON, AND CONSISTENT WITH, UTILITY GENERATION PLANNING PRACTICES. DO YOU AGREE?

A No. As I stated in my direct testimony, the EP method is at best an oversimplification of the utility generation planning process. However, its failure to accurately replicate planning considerations severely distorts the cost-of-service relationships.

Q IN WHAT WAY IS THE EQUIVALENT PEAKER AN OVERSIMPLIFICATION OF THE PLANNING PROCESS?

A Wright's Equivalent Peaker concept focuses on only one of many planning considerations--the trade-off between capital and operating

costs. As I shall demonstrate, however, he fails to carry the production (capital and operating) cost trade-off to its full and logical conclusion. In fact, his defense for failing to be logically consistent has nothing to do with the theory underlying the EP method; namely, that a utility incurs the high capital costs of a base load unit only to achieve fuel savings.

Q IS THERE ANY EVIDENCE TO DEMONSTRATE THAT A UTILITY SYSTEM DOES NOT BEHAVE THE WAY MR. WRIGHT'S THEORY SAYS IT MUST?

A Yes. In the case of Gulf Power and the Southern Company system, Plant Scherer Unit No. 3 is such an example. Scherer 3 is a relatively expensive base load unit. Mr. Wright's EP theory says that the utility must have incurred that investment to save fuel costs. Because of its high fuel costs, Georgia Power classifies Scherer 3 as "peaking" capacity for purposes of allocating investment among the Georgia territorial utilities. The facts do not support the assumption of the EP method that fuel savings were either the sole, or even the primary, cause for constructing the unit. Nor do the facts support Mr. Wright's claim that his Equivalent Peaker concept accurately tracks the utility's planning process.

Q HOW DOES MR. WRIGHT'S EQUIVALENT PEAKER CONCEPT FAIL TO ACCURATELY EMULATE THE SYSTEM PLANNING PROCESS?

A Above all else, the job of a system planner is to provide a system that will meet peak demands reliably. In quantifying the cost of a

hypothetical minimum system designed solely to meet peak demand, Wright would substitute peaking capacity for base load capacity on a MW-for-MW basis. However, the forced outage rate of peaking units is about 50% whereas the corresponding forced outage rate of coal-fired base load units is closer to 7%. Therefore, if one begins with a system having 2,135 MW of base load capacity and substitutes 2,135 MW of peaking capacity, the latter system would be only 53.76% (50% ÷ 93%) as reliable as the former at the time of the system peak. One would have to increase the amount of peaking capacity from 2,135 MW to 3,971 MW (2,135 MW ÷ 53.76%) to provide the same degree of reliability. By failing to recognize these fundamental relationships, he has substantially understated (by almost half) the percent of production investment which should be classified to demand even under the EP concept. This is but one of several examples of how Mr. Wright's cost-of-service methodology is a seriously flawed image of the planning process.

Q HOW ELSE DOES MR. WRIGHT'S EQUIVALENT PEAKER CONCEPT FAIL TO ACCURATELY EMULATE THE PLANNING PROCESS?

A Underlying Wright's Equivalent Peaker concept is the idea that all kWh loads contribute to the selection of the type of unit to be built. While it is certainly true that a utility projects both peak demand and energy sales, it is incorrect to say that all kWh loads influence the decision of what type of unit is to be built. Instead, once projections indicate the need for additional capacity,

the planners perform a "least cost" analysis which typically identifies the most economical unit. Such an analysis of the various options reveals that the total life cycle net present value revenue requirement will "break-even" on the basis of far fewer than 8,760 hours. Studies which I have made comparing the life cycle cost of base load and peaking capacity indicate a break-even threshold of between 1,000 and 2,000 hours per year.

Q **CAN YOU ILLUSTRATE THE CONCEPT OF A BREAK-EVEN THRESHOLD?**

A Yes. Let's assume the life cycle capital and operating costs of base load and peaking capacity were as follows:

Option	Capital Costs ($/kW)	Operating Costs ($/MWh)
Base Load	$250($C_B$)	$ 25(O_B)
Peaking	$ 70(C_P)	$145($O_P$)

The break-even threshold would be as follows:

$$C_B + O_B \times BET = C_P + O_P \times BET$$

$$BET = \frac{C_B - C_P}{O_P - O_B}$$

$$= 1{,}500 \text{ Hours}$$

Given this relationship, it would be unreasonable to allocate the "above-the-cost-of-peaker" costs on the basis of loads in all

hours, because the decision of the planner--which the EP theory says should govern the allocation--was based on the loads of only 1,500 hours.

Q **ARE YOU AWARE OF ANY EFFORTS TO CONFORM TO THE "EP THEORY" TO THIS PLANNING REALITY?**

A Yes. During the course of the most recent Florida Power Corporation base rate proceeding, FPC witness William Slusser prepared a modification of the EP method which allocated the capital costs deemed by the study to be energy-related on the basis of demands in the highest 1,500 hours, to reflect the break-even type of analysis performed by planners. That effort was the origin of the "Refined Equivalent Peaker," or REP, which has appeared in this case as a Company response to Staff Interrogatory No. 2.

Mr. Wright's insistence on clinging to total annual energy consumption in the face of this reality indicates that he is trying to conjure a planning process conform to his notion of how to allocate costs rather than trying to build a methodology that accurately parallels the planning process.

Q **DOES MR. WRIGHT'S EP CONCEPT "FOLLOW THROUGH" WITH THE PRODUCTION COST TRADE-OFFS IT CLAIMS TO RECOGNIZE?**

A No. The EP concept recognizes only half of the relationship between capital costs and operating costs on which it is purportedly based. According to Mr. Wright, more capital-intensive base load investment

is made to secure low operating (fuel) costs, and his method of classifying production plant costs between demand and energy components purportedly reflects this capital side of the trade-off, as illustrated below:

Load Factor Versus the Per Unit Production Plant Cost Under the EP Method

Rate Class	12CP Average Load Factor (1)	Net Production Plant ($/CPkW) (2)	Relative Unit Cost (3)
RS	59%	$277	90
GS	63	287	94
GSD	79	324	106
LP/LPT	89	349	114
PXT	108	395	128
OS & SS	131	451	147
Total Retail	71%	$307	100

Source: Derived from Exhibit ___ (RSW-2).

As can be seen, the higher the load factor, the higher the allocated per unit production plant cost. Because base load units are typically more expensive on a per kW basis, the above differences mean that the higher load factor rate classes are receiving a larger portion of base load capacity under the EP method relative to a

"slice-of-the system" approach, like the Near Peak Method. Wright's EP concept, thus, allocates different mixes of technologies to each rate class.

But Mr. Wright's version continues to use a "slice-of-the system" approach to allocate operating costs. A "slice-of-the system" means that each class is served from the same mix of base load and peaking energy. As illustrated in Exhibit JP-1 ( ), Schedule 2, this means that the same per unit operating cost is allocated to each class.

Thus, while Mr. Wright would levy a higher daily charge on a high mileage driver who prefers to rent more capital-intensive/fuel efficient cars, he refuses to acknowledge that the high mileage driver is also entitled to receive the correspondingly lower mileage charges: even though he would argue that the fuel benefits are the only reason to rent the more expensive car.

Q HOW DOES MR. WRIGHT EXPLAIN HIS POSITION THAT NO ADJUSTMENT TO REFLECT THE FUEL TRADE-OFF IS NEEDED?

A He explains it--not by defending the EP theory--but by actually abandoning the EP in favor of a completely different rationale for an energy-based allocation of capital costs.

Q PLEASE EXPLAIN.

A Mr. Wright's "defense" of the EP is the contention that the allocation of base load plant costs ideally should parallel the classes'

respective ratios of the base energy they receive to the total energy they consume. In other words, Mr. Wright says, in effect, never mind if the EP study is logically inconsistent; my real belief is that a fair apportionment of base load plant costs would be one by which each class' share of base load plant costs would approximate the share of inexpensive base load energy. Starting with the premise that average-cost pricing of fuel implies that each class' share of base load energy is equivalent to its share of total energy consumption, Mr. Wright concludes that, but for the need to recognize that all classes to contribute to the need to build capacity necessary to serve peak demands, simple economic equity means allocating the full cost of base load units on energy.

Q IS THE RELATIONSHIP BETWEEN A CLASS' RATIO OF BASE ENERGY AND TOTAL ENERGY RELATED TO THE EQUIVALENT PEAKER'S CAPSUB RATIONALE?

A No. It is wholly independent of and unrelated to the CAPSUB theory underlying the EP method. Mr. Wright's defense is truly an apples-and-oranges mixture of ideas, and it is no defense to the failure of Wright's EP study to be internally consistent.

Q DOES AVERAGE-COST PRICING OF FUEL IMPLY THAT EACH CLASS SHOULD GET A SHARE OF BASE LOAD ENERGY PROPORTIONAL TO ITS SHARE OF TOTAL ENERGY CONSUMPTION?

A Yes.

Q **DOES THAT OBSERVATION SUPPORT HIS CHOICE OF A PRODUCTION COSTING METHODOLOGY?**

A No. Mr. Wright mistakenly believes that cost allocation must follow the pricing assumptions used to recover fuel costs from each class. That would defeat the purpose of a cost-of-service study which is to determine a cost basis for setting rates. It is the costs that determine the prices, and not vice-versa.

Q **IS THERE ANYTHING WRONG WITH THE COMMISSION'S PRACTICE OF RECOVERING AVERAGE FUEL COSTS FROM ALL CLASSES?**

A No. Average-cost pricing may be a practical necessity when fuel and purchased power costs are recovered through a separate adjustment clause mechanism, as is the case in Florida and in other states. It would be misleading to assert that the average-cost pricing of fuel should in any way constrain the derivation of the base rate revenue requirement using a methodology that purportedly recognizes production cost trade-offs.

Q **HOW IS THE BASE RATE REVENUE REQUIREMENT DERIVED IN A CLASS COST-OF-SERVICE STUDY?**

A The procedure for using a cost-of-service study to derive the base revenue requirement of each rate class can be illustrated as follows:

Example to Illustrate the Derivation of Base Revenue Requirement for a Rate Class

Description	Total (1)	Fuel (2)	Nonfuel (3)
Total Revenue Requirement (from Cost-of-Service Study)	$ 1,000	$ 400	$ 600
Less: Fuel Clause Revenues	(390)	(390)	--
Franchise Taxes @ 2.5%	(25)	(10)	(15)
Other Revenues	(10)	--	(10)
Base Revenue Requirement	$ 575	$ --	$ 575

Q **WHAT WOULD HAPPEN IF, TO APPROPRIATELY RECOGNIZE THE PRODUCTION COST TRADE-OFFS, FUEL COSTS WERE ALLOCATED DIFFERENTLY THAN FUEL IS ACTUALLY BEING RECOVERED UNDER AVERAGE-COST PRICING?**

A The base rate revenue requirement would automatically compensate for the more symmetrical fuel cost allocation, as illustrated thus:

Example to Illustrate the Effect on Base Rates of a Symmetrical Fuel Cost Allocation

Description	Total (1)	Fuel (2)	Nonfuel (3)
Total Revenue Requirement (from Cost-of-Service Study)	$ 950	$ 350	$ 600
Less: Fuel Clause Revenues	(390)	(390)	--
Franchise Taxes @ 2.5%	(24)	(9)	(15)
Other Revenues	(10)	--	(10)
Base Revenue Requirement	$ 526	$(49)	$ 575

Q **WHAT IS THE SIGNIFICANCE OF THE NEGATIVE BASE REVENUE REQUIREMENT SHOWN ABOVE UNDER THE FUEL COLUMN?**

A The $(49) amount is in effect a "fuel symmetry" adjustment like the one employed in the Corrected REP method [Exhibit JP-1 ( ), Schedules 12 and 13)]. Thus, even if fuel is completely removed from the study, a fuel symmetry adjustment can be used to appropriately recognize the capital/operating cost trade-offs without disturbing the Commission's practice of recovering fuel costs based on average-cost pricing.

Q **IS MR. WRIGHT CORRECT IN ASSERTING THAT EQUITY CAN BE ACHIEVED BY THAT MATCHING THE BASE LOAD PLANT COST RESPONSIBILITY AND THE BASE LOAD FUEL RECEIVED?**

A No. To do so would be tantamount to allocating all base load capital costs relative to total kWh loads. This implicitly assumes that base load plants are built solely to provide fuel savings in each and every hour of the year throughout their 30 to 40-year useful lives, rather than to maintain system reliability. Such a proposition is indeed far-fetched especially considering the very speculative nature inherent in any projection of fuel costs. It even conflicts with the assumptions of the Wright EP, which holds that a quantifiable portion of investment is made for the purpose of meeting peak demand.

Further, this proposition completely ignores differences in class load factors. In other words, a class having an above-average load factor, by definition, should be assigned a larger share of the variable operating costs relative to its share of plant responsibility, because it is making more efficient use of capacity. A lower load factor class, by contrast, is making less efficient use of the capacity, and therefore, it should be assigned a lower share of the variable operating costs relative to its share of plant cost responsibility. This is nothing new, and it is not even a function of Capital Substitution or any other cost allocation theory. It simply reflects the reality that higher load factor customers use more energy per unit of capacity than lower load factor customers. This relationship holds irrespective of the mix of generating capacity

that may be allocated to them. To match the allocation of plant to the fuel cost responsibility, as Mr. Wright suggests, would ignore differences in load factor between the classes and would, therefore, be inequitable.

Thus, in the course of backstopping the deficiencies of the EP study, Mr. Wright is at odds not only with his own principles of cost-causation, but also with reality, equity and common sense. Further, by supporting the proposition that average-cost pricing of fuel should dictate the allocation of base load plant costs, he has turned those principles topsy-turvy.

Q IS IT MR. WRIGHT'S CONTENTION THAT NO ADJUSTMENT TO THE ALLOCATION OF FUEL COSTS IS NECESSARY BECAUSE GULF POWER GENERATES 99.6% OF ITS ENERGY FROM COAL?

A His observation that Gulf Power is primarily a coal-fired utility is certainly correct. If anything, this should reinforce the notion that there is no capital substitution because the opportunities for significant fuel cost savings are minimal. Further, his contention has absolutely nothing to do with the production cost trade-offs that may have caused this utility to opt for primarily coal-fired capacity rather than combustion turbines. If a combustion turbine is to be the yardstick to determine how to classify and allocate production capital costs, then consistency demands that this same (arbitrary) yardstick also be used to determine how production operating costs should be allocated.

Q **IF A COMBUSTION TURBINE WERE USED AS THE YARDSTICK TO CLASSIFY AND ALLOCATE PRODUCTION CAPITAL COSTS, SHOULD ALL CLASSES CONTINUE TO BE ALLOCATED A "SLICE-OF-THE SYSTEM" AVERAGE OPERATING COST?**

A No. As I demonstrated in Appendix C to my direct testimony, a full and consistent application of the Capital Substitution theory (which uses a combustion turbine unit as the yardstick) inevitably results in allocating below-average operating costs to the higher load factor rate classes.

REFINED EQUIVALENT PEAKER METHOD

Q **BEGINNING ON PAGE 27 OF HIS TESTIMONY, MR. WRIGHT OFFERS FIVE CRITICISMS OF THE REFINED EQUIVALENT PEAKER (REP) METHOD. HIS FIRST CRITICISM IS THAT THE REP METHOD DOES NOT TRACK UTILITIES' ACTUAL GENERATION EXPANSION PLANNING PROCESSES. IS THIS A VALID CRITICISM?**

A No. Mr. Wright apparently believes that inputting a utility's total energy loads into the economic analysis is tantamount to considering all (year-round) kWh in the generation expansion planning process. This step is a far cry from determining which energy loads, if any, actually cause the utility to make capital investment decisions.

Further, Mr. Wright's understanding of the utility generation planning process does not comport with the practices of other utilities, including at least one utility in the State of Florida--Florida Power Corporation. Mr. Wright has not presented any evidence to support his understanding of the utility generation expansion planning process.

Q **MR. WRIGHT ALSO CRITICIZES THE REP METHOD FOR NOT RECOGNIZING POTENTIAL LONG-RUN MARGINAL OR INCREMENTAL PLANT COSTS OF OFF-PEAK ENERGY USE. WHAT IS HE GETTING AT HERE?**

A He apparently believes that additional off-peak energy use could cause the utility to install additional capacity. However, he has not provided any proof that this potential exists either for Gulf Power Company or for any other utility.

It is also curious that Mr. Wright has chosen to introduce marginal costing concepts to backstop the EP method while arguing, at the same time, that average-cost pricing of fuel should dictate how base load plant costs are allocated. Mr. Wright, thus, is mixing bananas along with the apples and oranges.

Q **MR. WRIGHT'S THIRD CRITICISM IS THAT THE REP METHOD RESULTS IN A LESSER DEGREE OF "FUEL COST MATCHING" OR LESS FUEL EQUITY THAN THE BASIC EP METHOD. IS THERE ANYTHING WRONG WITH HIS OBSERVATION THAT THE LP/LPT AND PXT CLASSES WOULD PAY FOR ONLY 23.64% OF GULF'S BASE LOAD COAL PLANTS WHILE RECEIVING 29.87% OF COAL-FIRED GENERATION?**

A No. To the contrary, the differences in percentage allocators reflect the fact that Rates LP/LPT and PXT are high load factor classes.

Q **WHAT DO THESE ALLOCATORS REPRESENT?**

A The first allocator, 23.64%, represents the percent of production plant allocated to the LP/LPT and PXT classes under the REP method,

as presented in Gulf's response to Staff Interrogatory No. 2 [attached to Mr. Wright's Exhibit ____ (RSW-2)]. These classes, by comparison, comprise 22.4G% of the total retail 12CP demands.

The second allocator, 29.87%, is the percent of total retail energy required by the LP/LPT and PXT classes.

Because the LP/LPT and PXT classes have above-average load factors (as shown in the table on Page 8), it follows that the energy allocator (29.87%) should be bigger than the plant allocator (23.64%) if the study is to accurately reflect differences in class load factor.

Q MR. WRIGHT ALSO CRITICIZES THE REP BECAUSE OF ITS RELIANCE ON THE HIGHEST DEMAND HOURS UNDER THE LOAD DURATION CURVE. IS THERE ANY MERIT TO THIS ARGUMENT?

A No. Notwithstanding his observation that base load plants operate in the hours beyond the break-even point, his arguments have nothing to do whatsoever with cost-causation. (Base load units typically do not operate all 8,760 hours per year.) However, the capacity required to meet peak demand--the first step in the planning process--is determined by the highest demand hours. If it weren't for the high demand hours, a utility would have little reason to install anything other than a base load unit.

Q **PLEASE EXPLAIN.**

A Appendix C, Schedule C-2 shows the load duration curves of the various rate classes and the proportion of base load and peaking capacity required to serve each class on a stand-alone basis at the lowest overall cost. With the notable exception of the outdoor service class, the load duration curves of each rate class are demonstrably flatter beyond the break-even threshold (the area to the right of the shaded area). The flatter the load curve, the higher the load factor. The Rate PXT class, for example, has the flattest load duration curve and also the highest load factor of any class (Appendix B, Schedule B-1). It is no coincidence that because of its flatter load curve (i.e., higher load factor), the PXT class would require the least amount of peaking capacity.

In other words, as the load curve becomes flatter--as is the case beyond the break-even threshold--then there are fewer trade-offs to consider and, therefore, less capital substitution. Without capital substitution, there is no basis for the EP method.

Q **MR. WRIGHT CLAIMS THAT THE REP METHOD PLACE THE COMMISSION IN A CLEARLY AND UNCOMFORTABLY INCONSISTENT POSITION WITH RESPECT TO PRODUCTION PLANT COST ALLOCATION AND THE PRICING OF COGENERATION POWER PURCHASED BY UTILITIES. IS HE RIGHT?**

A No. Mr. Wright is, once again, putting the cart before the horse by using pricing assumptions to judge the appropriateness of a costing methodology.

If anything, Mr. Wright's QF analogy shows how the Commission follows through the logic of using the same type of unit (e.g., a base load coal-fired unit) to determine both avoided capacity and operating costs. The EP method, by contrast, uses one theory to allocate capital costs (i.e., CAPSUB) and yet another unrelated theory to allocate operating costs (i.e., average-cost pricing of fuel).

Further, if a QF were to operate at a high capacity factor, then the percentage of avoided capacity payments (i.e., base load plant responsibility) would not match the corresponding percentage of avoided energy payments (i.e., base load fuel). In other words, there would be no matching between avoided base load plant costs and avoided base load energy costs, as Mr. Wright claims would be equitable under his EP concept.

MODIFICATIONS TO THE REP METHOD

Q ALTHOUGH MR. WRIGHT IS UNWILLING TO GIVE HIS FULL SUPPORT TO THE REP METHOD, DOES HE, NEVERTHELESS, RECOMMEND SEVERAL MODIFICATIONS TO THE REP COST-OF-SERVICE STUDY PROVIDED IN RESPONSE TO STAFF'S INTERROGATORY NO. 2?

A Yes. In the event that the Commission adopts the REP method, Mr. Wright recommends that:

(1) The extra capital costs associated with base and intermediate units should be allocated to the on-peak hours as defined in Gulf Power's tariff;

(2) Additional investment in conductors should be allocated to those primary and high voltage customers served from dedicated distribution substations; and

(3) Fuel inventory should be classified and allocated relative to energy.

Only the first modification has anything to do with the REP method.

Q **IS IT APPROPRIATE TO ALLOCATE THE EXTRA BASE AND INTERMEDIATE CAPITAL COSTS TO THE ON-PEAK HOURS AS DEFINED IN GULF POWER'S TIME-OF-USE RATES?**

A No. This is yet a third example of Mr. Wright's insistence that pricing assumptions should dictate how a costing methodology is to be implemented. I have previously demonstrated that the hours beyond the break-even threshold, although inputted into the economic analysis phase of the generation expansion planning process, do not cause a utility to incur the extra capital costs associated with base load capacity. Mr. Wright's first modification should be rejected.

Q **IS THERE ANY BASIS FOR MR. WRIGHT'S RECOMMENDATION THAT GULF ESTIMATE THE RATE BASE VALUE OF PRIMARY AND HIGHER VOLTAGE-LEVEL CONDUCTOR THAT FUNCTIONS AS DEDICATED DISTRIBUTION FACILITIES, OR AS HIGHER VOLTAGE SERVICE DROPS, AND ASSIGN THESE ESTIMATED AMOUNTS TO THOSE CLASSES TO WHICH DEDICATED SUBSTATION FACILITIES WERE DIRECTLY ASSIGNED?**

A It is difficult to assess Mr. Wright's position because he fails to provide any specific examples to demonstrate that customers served from dedicated distribution substations cause Gulf to make additional distribution plant investment in Accounts 364 through 369.

In principle, it would be preferable to directly assign plant to specific customer classes provided that it is practicable to do so and that appropriate adjustments are made to prevent overallocating distribution costs to the same class. This may not be an easy task.

For example, let's assume that Gulf could identify a 46 kV feeder that serves only one specific Rate PXT customer. It would be easy to directly assign the cost of this radial feeder to the class. The hard part is that there may be many other instances where a similar radial feeder could be directly assigned. Although Gulf may be readily able to identify the cost of one radial feeder serving a particular customer, it may be impossible or at best very time consuming to identify a multitude of radial feeders serving specific customers or customer classes.

Even assuming that all 46 kV radial feeders can be identified and directly assigned, there remains the problem of allocating the remaining 46 kV investment. By definition, the customers who are directly assigned the cost of 46 kV radial feeder should not bear any of the cost associated with the remaining 46 kV system. Therefore, it becomes necessary to remove the loads associated with the direct assigned investment in determining the allocation factors that would apply to the remaining investment.

Although the above-described process would increase the complexity of the study, it is not clear whether it would measurably increase the accuracy of the results.

Q ON PAGE 33, MR. WRIGHT RECOMMENDS THAT FUEL INVENTORY BE CLASSIFIED AS ENERGY-RELATED "SIMPLY BECAUSE FUEL IS ENERGY-RELATED AND ALLOWABLE FUEL INVENTORY IS A FUNCTION OF PROJECTED GENERATION." DO YOU CONCUR WITH MR. WRIGHT'S RECOMMENDATION?

A No, not entirely. While I agree with his statement that fuel inventory is a function of projected generation, that does not justify classifying this fixed rate base component to energy and then allocating it entirely on the basis of total kWh loads. To do so would ignore the purpose of having a fuel inventory--which is to enable the utility the operate the plant to meet the loads as they materialize. Absent a fuel inventory, the plant could not be relied upon to provide dependable capacity to the system. I would argue, therefore, that fuel inventory is vital to maintaining system reliability, and it, thus, should be allocated accordingly. Allocating fuel inventory entirely on total kWh loads fails to give any recognition to system reliability and is, therefore, improper.

Q DO YOU HAVE ANY RESPONSE TO MR. WRIGHT'S GENERIC CRITICISMS OF COSTING METHODS THAT CLASSIFY ALL PRODUCTION PLANT COSTS TO DEMAND?

A I have previously addressed the appropriateness of this approach in my direct testimony. Mr. Wright's criticisms of all-demand costing

methodology aside, I have demonstrated in my direct testimony that the Near Peak method, with all production plant costs classified to demand, yields similar results to the corrected REP method, in which some production plant costs are classified as energy-related and allocated to classes in a manner which I believe more closely reflects utility system planning practices than either the EP method which Mr. Wright champions or the REP method which Gulf provided in response to Staff Interrogatory No. 2. The Commission, thus, can comfortably rely on either study as a primary guide for determining the distribution of any base revenue increase that Gulf may be awarded in this Docket.

DESIGN OF RATE PXT

Q MR. WRIGHT RECOMMENDS THAT GULF IMPLEMENT A LOCAL FACILITIES OR DISTRIBUTION DEMAND CHARGE BASED ON EACH CLASS' DISTRIBUTION UNIT COST, CALCULATED USING 100% RATCHETED BILLING DEMAND AND APPLIED TO THE CUSTOMER'S HIGHEST MEASURED DEMAND DURING THE CURRENT MONTH OR IN A SPECIFIED PERIOD PRECEDING THE CURRENT BILLING MONTH. DO YOU AGREE WITH MR. WRIGHT'S RECOMMENDATION?

A No, not entirely. Although I agree with the concept of a minimum demand charge, I object to a 100% ratchet based on the customer's highest measured demand during a two-year period. A 100% demand ratchet is extremely harsh, it fails to balance the interest between ratepayers and shareholders and it is not consistent with industry practice. The same thing may also be said about establishing a

ratchet period beyond 11 months following the establishment of a higher maximum demand.

If Mr. Wright's recommendation is adopted, then, to balance the interests of Gulf and its ratepayers and to be consistent with industry practice, the local facility demand ratchet should not exceed 90%, and the ratchet period should not exceed 11 months.

REBUTTAL TO JAMES A. ROTHSCHILD

COST OF EQUITY BY CUSTOMER CLASS

Q HAVE YOU REVIEWED THE TESTIMONY OF JAMES A. ROTHSCHILD WHEREIN HE ALLEGES THAT THERE ARE DIFFERENCES IN THE COST OF EQUITY OF SERVING VARIOUS CUSTOMER CLASSES?

A Yes, I have. His recommendation is based on three erroneous premises. First, he claims that "it is well recognized that serving industrial customers entails a higher degree of risk than serving residential or commercial customers." (Testimony at Page 52, Lines 6-8.) I shall demonstrate, however, that this proposition is far from being "accepted," as he claims. In fact, several analysts have demonstrated that the opposite may be true; namely that residential customers may be more risky to serve than industrial customers.

A second false premise is the assumption that the variability in the percent of sales growth is a reasonable "proxy" for measuring the variability of each class's contribution to the utility's

earnings, or income (Testimony at Pages 52-54 and Schedule 11, Page 2). This assumption is not supported by any empirical analysis presented in his testimony. Other analysts, who have addressed this subject in much more depth, have refuted this assumption. I shall demonstrate that, for Gulf Power Company, variability in class kilowatthour sales is not a proxy which can be used to measure the variability in class contributions to income.

His third erroneous premise is the assumption that differences in stock market price volatility, as measured by Value Line's Beta statistic, can be explained solely by the differences in the industrial sales mix (as measured by the percent of industrial kWh sales to total sales)--Testimony at Pages 55-59; Schedule 11, Pages 1, 3 and 4.

Finally, setting industrial class rates of return higher than the other classes on the theory that industrials are more risky may only exacerbate the utility's risk, thereby increasing the cost of capital to the detriment of all ratepayers.

Q TURNING TO MR. ROTHSCHILD'S FIRST PREMISE, IS THERE AGREEMENT AMONG FINANCIAL ANALYSTS THAT INDUSTRIAL CUSTOMERS ARE MORE RISKY TO SERVE THAN RESIDENTIAL OR COMMERCIAL CUSTOMERS?

A Certainly not. Mr. Rothschild has overlooked several in-depth studies which have been presented on the subject of class risk differentials, in both the literature and various regulatory proceedings.

Some of these studies refute the notion that there is any quantifiable risk differential, while other studies have concluded that the risk to serve residential customers may be greater than the corresponding risk to serve industrial customers.

Q **CAN YOU CITE SOME SPECIFIC EXAMPLES?**

A Yes. I am aware of several studies which attempt to determine empirically whether there is any relationship between electric utilities' customer mix and investors' perception about the riskiness of those utilities' securities. For example:

> In an article in "Public Utilities Fortnightly" for July 30, 1980, Mr. Nick Poulius concluded from his analysis that electric utility bond ratings appear to be positively influenced by industrial sales, i.e., the greater the ratio of industrial sales to residential sales, the higher the bond rating.
>
> In a 1981 Arkansas Power & Light rate case before the Arkansas Public Service Commission (Docket U-3108), Dr. Paul Garfield presented studies from which he concluded that electric utilities with heavy reliance upon industrial sales do not test out to be more risky than those with only minor dependence upon industrial sales.
>
> In their April, 1981 'Report to the Delaware Public Service Commission on Class Rate of Return Differentials by Customer Class for Electric Utility Services rendered by Delmarva Power and Light Company,' Mr. Harris and his associate, Mr. Joseph Brennan, concluded on the basis of various studies that customer mix has no impact on the traditionally accepted risk indicators, bond rating and beta.

In the same Report to the Delaware Commission, and in subsequent testimony in a Delmarva rate case (Docket No. 81-12), Harris and Brennan claimed to establish a relationship between 'cost of capital' and customer mix such that investors require a higher common equity component for firms with a greater concentration of industrial sales.

In the above Delmarva case (Docket No. 81-12), Drazen-Brubaker & Associates replicated the Harris-Brennan 'cost of capital' study using consistent (Standard Industrial Code) definitions of classes rather than the unstandardized definitions used by Harris and Brennan; in the revised study the purported relationship vanished.

In a report prepared for the Electricity Consumers Resource Council, FINCAP, Inc. conducted numerous empirical tests relating customer mix and both traditional investment risk indicators and capital costs. ('An Examination of the Concept of Using Relative Customer Class Risk to Set Target Rates of Return in Electric Cost of Service Studies,' October, 1981.) Once again, the conclusion drawn was that the empirical analysis failed to develop sufficient evidence to support the hypothesis that customer mix impacts utilities' investment risk and capital.

In their October 27, 1988, Article in "Public Utilities Fortnightly," Messrs. James A. Waddell and William M. Takis presented an analysis which directly measured the inherent riskiness of earnings from each class. They concluded that there is no significant difference in the financial risks associated with Connecticut Light and Power (CL&P) Company's full requirements Residential, Small (SGS) and Large General Service (LGS) classes and recommended that equalized rates of return should be used in the class cost-of-service study. Their analysis revealed that despite the greater sales volatility, the overall financial risk of the LGS class was lower than the corresponding risks of serving the Residential and SGS classes.

Therefore, I disagree with Mr. Rothschild's assertion that it is a "well accepted fact" that industrial sales are more risky. If anything, the literature gives more weight to the contrary proposition; in any event, he has not proven it is true in the case of Gulf Power Company.

Q MR. ROTHSCHILD CITES STATEMENTS MADE BY MOODY'S AND STANDARD & POOR'S AS SUPPORT FOR HIS ASSERTION THAT THE GREATER RISKINESS OF SERVING INDUSTRIAL CUSTOMERS IS WELL RECOGNIZED. HAVE YOU REVIEWED THE SPECIFIC PASSAGES QUOTED IN MR. ROTHSCHILD'S TESTIMONY?

A Yes, I have. Mr. Rothschild overstates his case when he claims that the cited passages support his assertion. Although I do not have the 1979 "Standard & Poor's Rating Guide," I could not find a similar passage or other material which asserted that industrial sales were more risky than residential or commercial sales in a more recent version of S&P's "Credit Overview." The only passage that I was able to find on the subject concerned "the size in growth rate of the market, diversity of the customer base and its economic strength (as measured by trends in population, unemployment, and per capita incomes)." This was but one of the many non-financial rating criteria cited by S&P. S&P's rating methodology profile involves the analyses of twelve criteria including:

Non-Financial Criteria

- Market of service territory
- Fuel/power supply
- Operating efficiency
- Regulatory treatment
- Management
- Competition/monopoly balance

Financial Criteria

- Construction/asset concentration risks
- Earnings protection
- Debt leverage
- Cash flow adequacy
- Financial flexibility/capital attraction
- Accounting quality

(Source: S&P's "Credit Overview", Page 34.)

If industrial sales versus residential and commercial sales have any influence on S&P's determination of a utility's rating, then it is, at best, a second-order effect. This was precisely the conclusion of the FINCAP Report which was based on in-depth interviews with eighteen leading investment analysts, including those with the major investment banking firms and bond rating agencies. Specifically, the authors found a clear consensus among the analysts that risk perceptions were more a function of the effects of "inflation, high interest rates, and capital market uncertainty," "earnings erosion (attrition), regulatory lag and heavy financing requirements," "uncertainties associated with nuclear projects and large magnitudes of construction work in progress (CWIP)," "the unknown future of federal energy and environmental regulation," and "difficulties in forecasting load growth and energy sales." FINCAP also found that

only when a utility's customer mix is dominated by one customer class and that class is vulnerable to major economic shocks did the security analysts believe that customer mix "might have some material effect (although less than the other risk factors identified above). . . ."

Q **DO INDUSTRIAL SALES REPRESENT A DOMINANT SHARE OF GULF POWER'S SALES MIX?**

A Certainly not. According to its "1989 Annual Report to Stockholders," Gulf Power's territorial sales mix is as follows:

Gulf Power Territorial Sales Mix

Class	1989 (1)	1988 (2)	1987 (3)	1986 (4)
Residential	42%	42%	42%	43%
Commercial	28	28	28	27
Industrial	27	26	26	25
Other	3	4	4	5

If anything, Gulf Power's territorial sales are dominated by residential and commercial customers.

Q THE QUOTE FROM THE 1989 MOODY'S PUBLIC UTILITY MANUAL REFERS TO UNIFORMITY OF RESIDENTIAL SALES GROWTH AND THE SENSITIVITY OF INDUSTRIAL SALES TO FLUCTUATIONS IN THE ECONOMY. DOES THIS SUPPORT MR. ROTHSCHILD'S ASSERTION THAT SERVING INDUSTRIAL CUSTOMERS IS MORE RISKY THAN SERVING EITHER RESIDENTIAL OR COMMERCIAL CUSTOMERS?

A No. Virtually all financial analysts, even Mr. Rothschild, would agree that risk is a function of the variability in earnings. Neither Moody's nor S&P make any reference to the volatility of earnings of the various customer classes served by a utility. Although the passage from Moody's supports Mr. Rothschild's empirical analysis that growth in industrial sales is less uniform than the percent growth in either residential or commercial sales, he has failed to prove that this lack of uniformity matches the variability in the income contributed by industrial customers.

Q IN YOUR OPINION, IS THE VARIATION IN CLASS ENERGY SALES AN APPROPRIATE PROXY FOR THE VARIATION IN CLASS INCOME?

A Absolutely not. Mr. Rothschild has ignored the fundamental differences in the design of industrial rates, as compared to residential rates. For example, Gulf Power's industrial rates consist of separately stated demand and energy charges. Also, Gulf Power is proposing to reimplement a demand ratchet based upon each customer's contract demand. This would ensure that industrial customers will pay a reasonable share of the costs of local facilities which they impose on Gulf, irrespective of their actual operating levels.

Residential rates, on the other hand, consist basically of customer and energy charges. The latter must recover both fixed and variable costs. Mr. Rothschild also ignores the fact that weather conditions are perhaps the largest factor influencing year-to-year kilowatthour sales to residential customers. Since the residential rate depends upon kilowatthour sales volumes to recover both fixed costs and variable costs, it is obvious that variations in kilowatthour sales will have a more pronounced effect upon the earnings from the residential class than they will on earnings from the industrial class.

Q WOULD A CHANGE IN KILOWATTHOUR SALES PRODUCE A CORRESPONDING CHANGE IN NET INCOME FOR THE RESIDENTIAL AND INDUSTRIAL RATE CLASSES SERVED BY GULF POWER?

A No. Exhibit JP-2 ( ), Schedule 1, demonstrates that a 10% decrease in kilowatthour sales would translate into a 17% decrease in the net operating income derived from the residential class, but only decreases of 2.3% and 0.7% in the income derived from the LP & LPT and PXT classes. Although the analysis was based on Gulf Power's revised cost-of-service study at proposed rates, the application of the other cost allocation methods would not materially change the relationships.

Q **WOULD CHANGES IN KILOWATTHOUR SALES NECESSARILY RESULT IN CORRESPONDING CHANGES IN BILLING DEMAND FOR INDUSTRIAL CUSTOMERS?**

A No. Although industrial sales may fluctuate in accordance with economic conditions, it is usually the case that kilowatthour sales exhibit more variation than do either actual kilowatt demands or billing demands. If an industrial rate is properly designed (such that the demand charges recover fixed costs, while the energy charges basically recover variable costs), increases or decreases in the level of kilowatthour sales will produce increases or decreases in revenues that are in line with the increases or decreases in variable costs. Under these conditions, the operating income or earnings to the utility from its industrial sales will remain relatively unaffected, as demonstrated in Schedule 1.

Q **IS THERE ANY OTHER EXPLANATION, BESIDES THE DIFFERENT RATE STRUCTURES, THAT LEAD YOU TO BELIEVE THAT THERE IS NOT A 1-1 RELATIONSHIP BETWEEN SALES VOLATILITY AND EARNINGS VOLATILITY?**

A Waddell and Takis concluded that it was unrealistic to assume that variations in earnings (the relevant consideration for determining investor risk) exactly mirrors variations in sales. The basis for their conclusion was the observation that there are differences in the proportion of fixed costs relative to total costs to serve the various customer classes. If a class has a relatively higher ratio of fixed costs (those which do not vary with sales volume) to total

costs, then variations in net earnings will be more volatile relative to a given change in sales. Quoting Waddell and Takis:

> Intuitively, if most of the costs of production are fixed costs, a reduction in sales will reduce revenues but will not change costs significantly. Net revenues (operating income) will necessarily fall. If most costs are variable, however, the loss of sales in revenues will be largely offset by a reduction in costs. Operating income in this case should be more stable. (IBID, Page 29)

Their conclusion, thus, was that variations in sales will have a more pronounced effect on operating income from a customer class with a high percentage of fixed costs relative to total costs (i.e., is more capital-intensive).

Q HAVE YOU COMPARED THE RELATIVE CAPITAL-INTENSITY OF THE RATE CLASSES SERVED BY GULF POWER?

A Yes. Exhibit JP-2 ( ), Schedule 2, demonstrates that the RS, GS and OS classes are more capital-intensive than the LP & LPT and PXT classes. In fact, serving PXT customers is about 35% less capital-intensive than serving residential customers.

Looking at this proposition from a somewhat different perspective, Schedule 3 compares the ratio of customer and demand-related costs to total revenue requirement, including fuel and conservation cost recoveries, by rate class, based on Gulf Power's cost-of-service study at proposed rates. The ratio of fixed costs-to-total revenue requirement varies widely from 62% for the residential class to only 44% and 34% for the LP/LPT and PXT classes, respectively.

Simply stated, even if it were true that PXT kilowatthour sales were more volatile, it does not follow that the PXT class's earnings volatility would be any greater than the corresponding earnings variability of the residential class. This is consistent with the analysis conducted by Waddell and Takis which demonstrated that the lower financial risk associated with serving industrial customers offset the greater sales volatility. In other words, greater sales volatility--assuming it exists for Gulf's LPT and PXT classes--is not a sufficient condition to justify setting the LPT and PXT class rates of return above parity.

Q MR. ROTHSCHILD'S SCHEDULE 11 SEEMS TO IMPLY A RELATIONSHIP BETWEEN THE BETA, OR RISK OF A UTILITY, WITH THE PERCENTAGE OF INDUSTRIAL SALES TO TOTAL RETAIL SALES. ARE MR. ROTHSCHILD'S FINDINGS VALID IN YOUR OPINION?

A No. Mr. Rothschild has not provided any statistical analysis to confirm that investors perceive utilities with a higher industrial sales mix to be more risky than utilities having a high residential or commercial sales mix. To prove this hypothesis, Mr. Rothschild should have first analyzed all of the factors that could have an impact on a utility's beta factor. Once a valid statistical relationship has been demonstrated, it would then be possible to incorporate industrial sales mix into the analysis. Only under these circumstances is it possible to test the hypothesis that industrial sales mix effects the stock market price volatility of a utility.

Mr. Rothschild's comparison proves nothing. The different betas could be explained by any number of factors. His study is analogous to one which takes the average income for people of above-average height and the average income for people of below-average height and compares the difference in average income to the difference in average height, thereby "proving" that each inch of additional height results in so many dollars of additional annual income.

Q ARE THERE OTHER CONSIDERATIONS WHICH DEMONSTRATE THAT INDUSTRIAL CUSTOMERS ARE NOT MORE RISKY TO SERVE THAN OTHER CUSTOMER?

A Yes. Not only are there fundamental differences in the design of industrial rates--including separately stated demand and energy charges and a demand ratchet--industrial customers are typically required to execute multi-year contracts. The term of contract under Rate PXT, for example, is for an initial period of five or more years and thereafter from year to year until terminated by twelve months' written notice. Residential customers, by contrast, are usually not required to sign multi-year contracts for the supply of electric service, so that the "assurance" of collecting revenues to cover the cost of installed plant is less in the case of a residential customer.

Q **LET'S ASSUME, CONTRARY TO THE FACTS YOU HAVE SET OUT, THAT INDUSTRIAL CUSTOMERS ARE MORE RISKY TO SERVE THAN OTHER CLASSES. IF THE COMMISSION WERE TO SET INDUSTRIAL RATES OF RETURN ABOVE PARITY, HOW MIGHT GULF POWER BE AFFECTED BY SUCH A POLICY?**

A The simple answer is that Gulf Power would probably become a more risky utility. By setting industrial rates above parity, Gulf Power would become more dependent on the revenues derived from the assumed riskier rate classes than if the rates were set to parity for all customer classes. To the extent that the greater risk would cause Gulf Power's cost of capital to increase, the result would be higher rates for all customers.

Mr. Rothschild overlooks the facts that Gulf's industrial customers must compete with firms located elsewhere and that electricity can be a significant operating cost. Arbitrarily setting industrial rates above parity could place these customers at a competitive disadvantage. This could lead to a temporary or even a permanent drop in Gulf's revenues as the affected customers either shift production to lower cost sites or curtail operations. The resulting drop in income would have to be absorbed by shareholders or recovered from the other ratepayers.

Q **IN YOUR OPINION, SHOULD THE COMMISSION CONTINUE ITS LONG-STANDING OBJECTIVE OF MOVING CLASS RELATIVE RATES OF RETURN TO PARITY?**

A Yes. Based on the more in-depth studies presented on the subject of class risk differentials and on the analysis presented in Schedules

1 through 3, it is my opinion that there is no basis for ascribing a higher risk, and a higher rate of return, to industrial sales than to the sales made to other customer classes. The proper definition of cost of service comprehends that each rate class produce the same rate of return.

Q **DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

A Yes, it does.

A My rebuttal testimony addresses the issues raised in the testimony of Mr. Wright concerning the equivalent peaker method and the refined equivalent peaker method. And, in addition to that, I also address several other issues. Namely, the allocation of fuel inventory, the direct assignment of certain components of the distribution system and the rate PXT design.

With respect to the testimony of Mr. Wright on the equivalent peaker -- refined equivalent peaker method, the rebuttal revisits the same flaws that were identified and which I discussed with you this morning in my direct testimony: The fact that the method is only applied to capital costs and does not or is not applied to fuel costs; that all kilowatt hours in the year, although considered in system planning, do not influence the type of unit to be built; and the fact that the equivalent peaker studies failed to account for the lower reliability of peaking capacity which would be substituted for baseload capacity if all the utility had to do was operate that peaking capacity during peak hours.

It's my position that only the hours up to the break-even point between technologies affect the decision to invest in higher capital cost units, and

the refined current peaker method was an attempt by Florida Power Corporation to recognize that planning reality into cost allocation theory.

Mr. Wright also discusses the desirability of trying to match the percentage of baseload plant costs with the percentage of baseload energy. I would submit that that has nothing to do with the equivalent peaker method or the underlying capital substitution theory on which the equivalent peaker method is based; that to do so would ignore the differences in class load factor.

Class load factor is the relationship between average demand and peak demand. By definition, if your high load factor, vis-a-vis the system, your proportion of average demand is always going to be greater than your proportion of peak demand. Therefore, the methodology is to properly reflect load factor. Even if you allocate baseload units, High load factor classes should get a larger share of the baseload operating costs than they do the baseload fixed costs by virtue of their higher load factor.

Any reasonable cost allocation method would recognize these differences, and load factor is a fundamental difference that differentiates characteristics of various classes.

I also reject Mr. Wright's proposed

refinements to the refined equivalent peaker method. He suggests using the tariff parameters in the on-peak period to determine the hours over which the excess capital costs be allocated. I think that's unacceptable because the assumptions used for pricing purposes should be derived from the cost allocation study and not vice versa; in other words, costing is separate from pricing.

On the issue of fuel inventory, it's my position that fuel a inventory is another component of a power plant. It's the same as the boiler and the turbine, without which the utility cannot provide reliable capacity. I would propose to allocate that fuel inventory the same way as production plant is allocated.

Finally, with respect to the PXT rate design, Mr. Wright suggests that the local facilities charges be based, or be developed and recovered through a separate charge employing a 100% demand ratchet in the same sense as that would apply to the standby customers. I feel that such a 100% demand ratchet is far too stringent, it'snot consistent with generally accepted industry practice as I believe it is, and fails to balance the interest of the customers in the utility.

However, if the Commission chooses to reimplement some form of ratchet provision to recover local facilities charges, or costs, it's our positin that that ratchet be set at a level not greater than 90% based upon the highest demand imposed on the utility over the previous 11-month period.

That concludes my summary.

MR. McGLOTHLIN: We tender the witness.

CROSS EXAMINATION

BY MR. BURGESS:

Q Mr. Pollock, as I understand it, one of your criticisms of Mr. Wright's methodology is that his classification of production costs is not consistent, in your opinion, with the costing method for fuel, is that correct, or with the pricing method for fuel?

A It's my position that his method is flawed because it fails to recognize the fuel side of the capital cost, operating cost tradeoff that's underlying the equivalent peaker concept.

Q Which is basically is that the energy charges are, for the fuel costs are based on the average cost, is that correct?

A Yes. As I expressed it this morning, the capital cost is allocated on a load duration basis, while the operating costs are allocated on a

slice-of-the-system basis. The two theories are not compatible in the same study. (Pause)

Q Are you saying then that you don't have a disagreement with Mr. Wright on the basis of the charge for fuel; that your disagreement is the calculation and the classification of energy versus classification, the classification of production into energy and demand?

A I think it's both.

Q So --

A I disagree with his acceptance of the allocation of operating costs on a per-kilowatt hour basis as being inconsistent with the underlying theory of his allocation for capital costs, and Ialso disagree with his assumption that 1 kilowatt of peaking capacity is as reliable as 1 kilowatt of baseload capacity, and it's that assumption which drives the classification of production plant between demand and energy, or demand and load duration.

Q When you say "the operating costs," you're including the fuel costs?

A Yes, I am. Fuel would be the major component.

Q Well, the classification of production costs would be dealt with in base rate, is that correct; it would be determined in this docket?

A That's that's an issue, yes, is how those costs should be classified. Yes.

Q And the fuel costs are dealt with in the fuel adjustment docket?

A Well, you see, that's where we run into the problem.

Q Is that correct?

A The fuel costs -- the recovery of fuel costs, the level of the fuel adjustment factor is determined in a separate docket.

Q So if the Commission determines that the production costs are properly classified on the peaker method, it can simply address the appropriate fuel costs in the fuel adjustment docket, can it not?

A I would say they could but I say that it's probably an impracticality to do so, and in my rebuttal testimony, I outline a procedure -- in fact, I've implemented a procedure in the corrected refined equivalent peaker method, a fuel symmetry adjustment which avoids the need to have to address that issue in the context of a very busy fuel adjustment hearing.

Q A busy fuel adjustment hearing. But, the purpose of the fuel adjustment hearing is to set the proper cost of fuel, is that correct?

A The fuel adjustment mechanism is a way for

the utilities to recover their fuel costs. And base rate case is a mechanism to determine the appropriateness of the base rates. It's my position that you can't determine that appropriateness in a vacuum, using a cost allocation methodology that's heavily tied to trade-offs between capital costs and operating costs.

Q Is it one of the goals of the fuel adjustment docket to set the appropriate cost of fuel?

A It is to set the appropriate recovery factor that should be applied in each six-month recovery period.

Q Is that different than recovering the appropriate cost of fuel?

A Not if you use a costing methodology that is not based upon trying to measure production cost trade-offs.

Q So then the Commission would be better off determining the appropriate cost of fuel in the fuel adjustment docket, correct?

A No, I wouldn't agree with that. If they're going to adopt a methodology for establishing base rates, that looks at both production and operating cost trade-offs, then the completeness of that methodology needs to be dealt with in the context of the base rate

case. Otherwise, you're going to set the base rates too high for some classes, too low for others.

MR. BURGESS: Thank you, Mr. Pollock. That's all.

CROSS EXAMINATION

BY MR. STONE:

Q Mr. Pollock, you have testified before this Commission on rate cost of service and rate design issues in many previous proceedings, isn't that correct?

A Yes, I have.

Q Has this Commission historically considered the concept of gradualism or transition from previous rates in setting rates?

A Yes, they have.

Q Has this Commission historically considered the concept of fairness in setting rates?

A Yes.

Q Is it appropriate for this Commission to consider the of ease of understanding or simplicity in setting rates?

A Yes.

Q Does price stability have value for Gulf's industrial customers?

A Very definitely so.

Q Are the class and individual customer load shapes, including load factors of Gulf's industrial customers, the result of rate levels and strutures of Gulf's industrial rates?

A Certainly the rates, to the extent that they reflect the appropriate cost of service, will provide the incentive for all customers, including the high load factor customers, to utilize capacity and energy, in the most efficient way possible. So to that extent the current price signals have had an impact in encouraging customers -- perhaps not as strong as an impact as I would like, but they've had an impact in encouraging customers to use demand during off-peak hours when the capacity is available; thereby improve their load factors, improve the system load factor and lower system costs.

Q How do the demand costs compare between the 12 CP method and the equivalent peaker method?

A If you're referring to the equivalent peaker method sponsored by Mr. Wright, I think it's pretty evident that the demand costs under the 12 CP and one-thirteenth average would be much higher in relation to the corresponding peaker demand cost. And the opposite would be true with respect to the energy charges. Under the equivalent peaker method, the

energy charges would be significantly higher than under the 12 CP and one-thirteenth method.

Q In other words, if prices are set to the cost of the EP method, the demand charge utilizing EP would be less than the 12 CP?

A Yes, it would, given the same revenue requirement.

Q How long has Gulf's -- how long have Gulf's prices been set utilizing the 12 CP method?

A Well, since at least the early 1980s is about as far back as I can recall.

Q Have customers on Gulf's system responded to the price signals sent by Gulf's price structure?

A That's a difficult question to answer, but certainly they live with these rates and live with the relationships embodied in the Company's cost studies over time. So they've certainly become accustomed to it. And to the extent that there is an incentive to use more electricity during off-peak hours, they will take advantage of that incentive to the extent possible.

Q Are you aware of any customers having invested money to control peak demand on their premises?

A I'm not aware specifically. Generally

speaking, industrial customers faced with higher demand charges, and things of that nature, have a very compelling incentive to invest in demand control measures so that they do not impose a high peak demand when cost consequences would be significant. I think Stone Container is a pretty good example of that.

Q Does a change in price structure have an effect on the cost effectiveness of the EP measures?

A Well, yes, they certainly could. To the extent that you lower demand charges precipitously and raise energy charges, the need to -- or the penalty, if you will, to control demand is a lot less, and, therefore, there's very less incentive to want to use those demand control measures.

On the other hand, the penalty of using energy is greater, which means the customer is going to do everything in his power to use less energy. But if that use of energy occurs at times other than the system peak, the system load factor will deteriorate.

Q And the deterioration of system load factor, does that have an adverse effect on all the other customers of the company?

A Yes, it will. Because the same fixed costs are going to be there whether you consider them demand related or energy related, they have to be recovered.

If they're going to be recovered over fewer sales, then the unit cost is going to be higher by definition.

Q What effect would the equivalent peaker method have on peak demand usage, relative to the 12 CP method?

A Well, to the extent that the equivalent peaker method results in much lower demand charges relative to, let's say the 12 CP method, and much higher energy charges. The incentive -- there will be less incentive to control demand.

Q Is this contrary to the Commission's goal and the goal of the Florida Legislature to reduce weather-sensitive peak demand?

A I'm not as intimately familiar with those goals as perhaps I should be, but I think the logical conclusion of that is it will cause the Utility to sustain an increase in peak demand that could have been avoided.

Q Mr. Pollock, earlier I believe you mentioned that you never criticized Gulf for running a Cost of Service Study for rate PXT with as few as four customers. As far as you recall, you did not so criticize?

A No, I did not.

Q One issue is currently whether PXT SE

customers should be separated out from PXT non-SE customers to see if the fact that they are SE customers is affecting the rate of return on the non-SE customers. Do you believe this separation would indeed provide relevant information on this comparative rate-of-return question between the PXT SE and the PXT non-SE customers?

A No. I don't believe separating out the SE, the customers that take full requirements and SE would provide any meaningful additional information. And as I understand the problem, it's more in the rate design, in the way that the rate tracks or fails to track recovery of local distribution costs, and I think that that's a problem that can be remedied through the rate design and not necessarily through showing a separate SE class, consisting of, in the case of the PXT, only three customers leaving the and remaining PXT class consisting of only three customers.

What happens when you try to break classes down to that degree, you're not sure if the differences are caused by the fact that customers are taking SE as you are out measuring the differences in the firm load characteristics of those customers. So I don't think that it provides necessarily any additional useful information.

Q Mr. Pollock, several questions were asked of Mr. Wright, whom you are rebutting, relating to basically the theoretical utility or to other utilities within Florida, including utilities that are operating under the SEG concepts.

MR. BURGESS: Excuse me, I need to find out, Jeff, are you getting to responses that were brought out in his testimony in cross examination and rebuttal?

MR. STONE: In part. But he's also rebutting Mr. Pollock's theories on the equivalent peaker, which is a theoretical application of an assistant planning model.

MR. BURGESS: Right. Right. Let me get to the objection. I'll object andf then --

One of the things that happened in prehearing is we were trying to decide the order of witnesses, and with regard to the question of burden of proof, the Industrial Intervenors and the Public Counsel, I would say, would be more or less neutral to one another.

Therefore, there was no logic behind who would go first, it was simply a matter of who volunteers to go first who agrees to go first; somebody had to and somebody had to follow up.

I agreed to go first, with the explicit caveat that it not prejudice us. That is, that by

going first we not give away, to some other adverse party, a more favorable position. Specifically, I had a problem with testimony that would be brought out by our witness in cross examination, that would then be addressed live by the subsequent witness.

And the problem, of course, being that if it were the other way around, then, everything Mr. Pollock says could be asked of my witness following his testimony. It was agreed that we would stay on a level playing field with that regard and that testimony brought out at least my recollection, in discussions with Industrial Intervenors at that time were that no, we would not use the order of witnesses to anybody's advantage or disadvantage along those lines.

And so to the extent Mr. Stone asked questions about the rebuttal testimony as prefiled, I have no problems at all. To the extent we start talking about responses that are drawn from the testimony of Mr. Wright today on the stand, I think it violates the agreement that we've reached in trying to determine a workable order of witnesses.

MR. STONE: I haven't even had a chance to ask my question. I'm not sure that long object would pertain if he heard my question.

MR. BURGESS: Well, it began with the

premise, "you heard Mr. Wright testify, or Mr. Wright responded to some questions." That's the only reason I brought it up. You're right, I hadn't heard the question and that's why I thought I'd bring it up.

MR. McGLOTHLIN: Part of that objection related to an understanding with us, and I think Steve would agree, we haven't tried to take advantage of the order of witnesses. I think the question is -- the issue of the objection is whether the question fairly falls within the scope of Mr. Pollock's prefiled rebuttal, and I think that should be where the emphasis lies.

MR. BURGESS: I agree with that, and I appreciate the Industrial Intervenors not trying to take undo advantage. When we start moving a little bit further that's just the context of where we are.

CHAIRMAN WILSON: You just want me to be on my toes at this point, right?

MR. BURGESS: Well, I want to be on my toes.

MR. STONE: I'm not really sure this question was worth it, but I'll go ahead and ask it anyway.

Q (By Mr. Stone) Mr. Pollock, you agree that we're setting rates for Gulf Power Company and not some theoretical utility or for any of the other utilities in the state of Florida?

A Absolutely.

Q Thank you. (Laughter)

CHAIRMAN WILSON: Well, that was very entertaining. Mr. Palecki.

CROSS EXAMINATION

BY MR. PALECKI:

Q Could you please refer to Exhibit 488. Do you have a copy of that there? If not we can provide you --

CHAIRMAN WILSON: What is 488? Mr. Palecki, what is 488?

MR. PALECKI: I'm not sure what it is. I need my Staff member back to tell me what it is.

It's a list of numbers on a piece of paper. (Laughter)

WITNESS POLLOCK: It's a reponse to Florida PSC Staff's Eighth Set of Interrogatories, dated June 11, 1990, revised Item No. 137.

MR. PALECKI: I'd like you to please look at the 1987 12 CP load factor for PX/PXT class as a whole. Has the 12 CP load factor improved or deteriorated between 1987 and 1989?

A May I ask how the load factor is being calculated? Is the load factor being calculated kilowatt hours that include or exclude the SE,

incremental SE energy?

Q It's on all kilowatt hours.

A So does that include the incremental SE energy?

Q Yes, it does.

A Okay. Thank you.

This shows that from '87 to 1989, the 12 CP load factor is dropping from 101% to 95% for the PXT class as a whole.

Q Please look at these load factors for 1987 and 1989 for PXT SE customers.

Has the 12 CP load factor improved or deteriorated between 1987 and '89 for those customers?

A It too has deteriorated.

Q Is the demand increased by 50% for those customers between the two years, 1987 and 1989 for the SE rider customers?

A The 12 CP demand, yes, it has.

Q Thank you.

We have one further matter that we'd like to go into. Mr. Burgess may object because we were going to ask the witness to comment on testimony of Mr. Wright that came out earlier.

Specifically, we wanted to clarify what the Industrial Intervenors' position is on Issue 158, with

regard to cogenerator's, either experiencing a forced outage or a maintenance outage, and billing on the SE rider rather than the standby service rate schedule solely for economic reasons.

We just want to find out for sure what the Industrial Intervenors' position is on that particular issue, because we're not sure we got a clear answer on that during the direct testimony. Specifically, we want to know what issue is being raised by the Industrial Intervenors.

A We are raising an issue to allow self-generating customers the same ability as other generators or other utilities that own generation, to be able to economically dispatch their facilities when economy power is available.

And perhaps I contributed a little to the earlier confusion, I think that that circumstance applies, unconditionally, as long as the customer can demonstrate that, in fact, economic displacement is, in fact, occuring, and that would be part of the diligence in which the customer and utility would have to work to ensure that there is no violation of that understanding.

So it is essentially using SE as a means of economic dispatch, in the same way as a utility, either

which has units down for maintenance or not, would be able to economically displace its higher cost units.

Q I'm really not sure what you're saying.

Is it your position then that a customer's generator, which is experiencing a forced outage, could be billed on the SE rider rather than on the standby rate service schedule, if the customer has another generator which he could generate, but chooses not to use it for economical reasons?

A Yes. If the customer can demonstrate that that generator was much more costly during the period of demand forgiveness than taking the energy from the utility, as is the case under the SE rider, then the fact that that customer has generation is not sufficient to prevent that customer from using the SE rider, just as any other full requirements customer that experiences a similar outage of his plant would still also be able to have access to the SE rider under the same conditions.

Q So that customer would not be required to take standby service under those circumstances?

A Yes. Just as the supplementary customer or the full requirements customer is not required to take PXT power or be priced under the demand provisions of the full requirements rate schedule that he's on during

the SE period, the same principles should also apply to the standby customers. Otherwise, to do otherwise is to discriminate on the grounds that the customer has generation.

Q Would your answer be the same if the customer's generator was experiencing a scheduled outage for maintenance rather than a forced outage?

A Yes. It would be, for the same reasons. If there is a possibility of economic displacement, then the customer ought to be able to choose between using standby power or using cheaper SE power if it's available than generation.

Q Doesn't that discriminate against customers who have only one generator?

A I don't think it discriminates at all. It's providing equal access to SE power for customers that have generation.

Q Now, would a customer who has only one generator who has a forced outage or a scheduled outage for maintenance, would he, could he be billed under the SE rider rather than standby service as well?

A I don't see how he could, no.

Q So there wouldn't be discrimination between a customer having one generator as opposed to one having two? (Pause)

Staff has no further questions.

A I don't think I answered that last question. I would not view it that way. If a customer has supplementary service, he has the same access to SE power as any other customer.

MR. PALECKI: Thank you.

WITNESS POLLOCK: Thank you.

CHAIRMAN WILSON: Questions, Commissioners? Redirect?

(Transcript follows in sequence in Volume XXII.)