NUCLEAR REGULATORY COMMISSION

Regulatory Docket File

IN THE MATTER OF:

	Docket Nos.
TOLEDO EDISON COMPANY and CLEVELAND ELECTRIC ILLUMINATING CO.	50-346A 50-500A
(Davis-Besse Nuclear Power Station, Units 1, 2 and 3)	50-501A
and	
CLEVELAND ELECTRIC ILLUMINATING CO., et al.	50-440A 50-441A
(Perry Nuclear Power Plant, Units 1 & 2)	

Place - Silver Spring, Maryland

Date - Tuesday, 23 March 1976

Pages 7047 - 7210

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UNITED STATES OF AMERICA

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(Davis-Besse Nuclear Power Station, Units 1, 2 and 3)	:	
and	:	
CLEVELAND ELECTRIC ILLUMINATING CO. et al.	:	50-440A
	:	50-441A
(Perry Nuclear Power Plant, Units 1 and 2)	:	

First Floor Hearing Room,
7915 Eastern Avenue,
Silver Spring, Maryland.

Tuesday, March 23, 1976.

The hearing in the above-entitled matter was reconvened, pursuant to adjournment, at 9:30 a.m.

BEFORE:

MR. DOUGLAS RIGLER, Chairman.

MR. JOHN FRYSIAK, Member.

MR. IVAN SMITH, Member.

APPEARANCES:

(As heretofore noted.)

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C O N T E N T S

Witness	Direct	Cross	Redirect	Recross
Dr. Harold Wein (Continued)		7049		

Exhibits

(None)

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P R O C E E D I N G S

Whereupon,

DR. HAROLD WEIN

resumed the stand, and having been previously duly sworn was further examined and testified as follows:

CROSS-EXAMINATION (Continued)

BY MR. REYNOLDS:

Q Dr. Wein, what is Ohio Edison's share of the regional power exchange market as you define it?

A Well that will vary from time to time --

MR. REYNOLDS: Can we start off today with some understanding that you will talk into the mike or speak up or something so that we can get it all down without having to do a lot of repeating?

CHAIRMAN RIGLER: Off the record.

(Discussion off the record.)

CHAIRMAN RIGLER: Will you read back the witness' answer please.

(Whereupon, the reporter read from the record as requested.)

THE WITNESS: That also depends upon what one wants to define. That depends upon how you want to define the share of such market and if you use kilowatt hours, i.e. the energy received and delivered to other systems either within CAPCO or outside.

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But there is no necessary stability to those numbers because inherently it depends upon the situation. One year a company may, because inherently in say a CAPCO agreement, where say Toledo Edison has purchased, or has built a large nuclear plant way beyond its own ability to utilize all that power, it will then be sending out power to the other systems.

And of course, in other years, the other thing would happen.

So that when you take all the kinds of transactions within say the CAPCO system, that share is not necessarily stable and it has really not the same meaning as shares, say, in wholesale firm power or retail power.

Similarly, if you take transactions outside of the system, say with Ohio Power, it is going to depend again on what Ohio Power has.

And so if you get the idea of the bundled options, these are the options which are varying all the time, depending upon circumstances.

And so the idea of kilowatt hours as a share for a particular person is just devoid of sense, given the nature of the kind of market.

Now if you wanted to define share, not in the sense of kilowatt hours but ability to utilize the network any time they want for whatever purpose they want, they all have

mm3

equal shares. In other words, they all can utilize the network.

Q Well, what is the Applicants' share of the regional power exchange market?

A Well, as I just defined it, they all have 100 percent share of whatever -- of the network.

Q So when you say 100 percent, are you talking about the participation in the network? Is that the unit that you are using as a measurement of market power in that situation?

A In this situation, each applicant can use that network whenever it requires the need of it, so long as the network is capable of performing it.

Q All right.

If a particular small system were able to construct transmission facilities economically to an alternative supplier which could provide the types of coordinated transactions that you place in the regional power exchange market, what impact if any would that have on your assessment of Applicants' market power in the regional power exchange market relative to that small system?

Well the assumption is -- let me get it -- they can construct transmission to some other pool economically, and the other pool is willing to give them all the sorts of transactions that are involved in that pool.

Q Well, I said another system in another pool.

mm4

A Well, another system -- another sy stm might be able to give them some, but not all.

Q Well, let's assume that it can give them all.

A Well, if it can give them all and a small system could, in fact, then get all these, which mean not only all the operational coordination, but all the developmental coordination, then of course -- and if it is economical for the small system to do it -- then, of course the alternative would be essentially equal, and so their monopoly of their own network would not have any alternate -- hard to tell, but would not have the competitive impact where they don't have that alternative.

It is clear that if you had an alternative just as good and you can get it, then the fact that one system doesn't give it to them, but the other system can get something equally good, negates the power in that respect of the monopoly situation.

Q What is the basis for your conclusion that a single system could not give them all the types of coordination transaction that the CAPCO companies can give a small system.

MR. MELVIN BERGER: Objection.

I don't think Dr. Wein said that a small system couldn't give it. I think it is a mischaracterization of his testimony.

CHAIRMAN RIGLER: I think he did. He can correct

that in his answer.

mm5

THE WITNESS: I said -- I asked him whether a single system could or couldn't. I mean, if a single system were large enough, suppose it were AEP, that would be one thing. If it were the Consumers Power Company, that would be another thing. It just wouldn't get all.

BY MR. REYNOLDS:

Q Did you make an examination for each small system in the CAPCO area of the opportunities that small system or those small systems might have to interconnect with non-CAPCO suppliers?

A Well, I only read one study. I think it was given by a CEI witness --I am trying to remember his name, Caruso -- I think it is Caruso or a name like that--in which he argued it would be practicable for them to build a network to get PASNY power.

That is all I did. I am in no position to make studies on whether they could. And I don't think anybody could unless they actually went out on the ground and surveyed, got all the prices and estimated land and all that sort of thing.

Q But that study you are talking about was something you saw after you had submitted your prepared testimony, is that not correct?

A I am not sure whether I saw it after or before.

mm6

I don't remember.

Q You, yourself, undertook no study though to ascertain whether or not small systems could interconnect with non-CAPCO systems, that could provide a small system with the opportunities of coordination available from CAPCO members, is that right?

MR. MELVIN BERGER: Excuse me, could or would Mr. Reynolds?

BY MR. REYNOLDS:

Q Could or would.

Did you make any study in that regard, Dr. Wein?

A Well I didn't make any study, but I simply made a simple reflection on the only system of equal size where they could connect with the AEP. And for many of them, AEP is rather far away and I don't think that somebody -- but in any case, I myself made no such study.

Q Is Ohio Power part of the AEP system?

A Yes.

Q Do you know if Ohio Power is presently building an interconnection to the City of Orrville?

A I am just trying to think.

There was some flak. I think they are, but I don't want to take that on my --

Q Is the City of Orrville located in what you have defined as the Ohio Edison service territory?

mm7

A I think I would put it there. Yes, it is right on the fringe.

Q And why is it then, Dr. Wein, that in your view Ohio Power would not be a part of the regional power exchange market in this particular proceeding, as you define that market?

A I think I have already explained that yesterday.

Q Well on the basis of your explanation yesterday, if I am correct that there is an interconnection that has either been built or is being built between Ohio Power and the City of Orrville, how do you explain that Ohio Power is not one of the systems to be included in the regional power exchange market?

A I have explained that at least three times, and I don't think I have to go through that again.

CHAIRMAN RIGLER: Well you do, subject to an objection by your counsel or by one of the lawyers. It is not for you to make that judgment, Dr. Wein.

THE WITNESS: All right.

MR. MELVIN BERGER: I will object to that.

I believe Dr. Wein's written testimony specifically addresses the question why isn't Ohio Power part of the regional power exchange market.

CHAIRMAN RIGLER: All right. We had a long colloquy on that. The objection is sustained.

mm8

MR. REYNOLDS: My question went directly to -- my question was addressed to the Ohio Power position in connection with the interconnection with Orrville.

CHAIRMAN RIGLER: Correct.

MR. REYNOLDS: Now with that circumstance, Ohio Power is not included in the regional power exchange market, and I don't believe that is addressed in his direct testimony at all.

CHAIRMAN RIGLER: It isn't, but he indicated yesterday twice why he had excluded Ohio Power.

Now your question is in the nature of argument, it goes to attacking the validity of his conclusion. He indicated that that was his conclusion, he indicated that again this morning that he is going to stand on that testimony for the reasons stated.

Now do you feel that the Orrville situation undercuts that testimony?

You have that argument, but there is no use taking it back to the same grounds again. We are not here to argue with the witness. And where he has made exactly clear what his position is, it is pointless to ask him the same question time after time.

MR. REYNOLDS: Well let me ask him this question, then.

mm9

BY MR. REYNOLDS:

Q As I understand it, Dr. Wein, you did not take into consideration in the planning of your regional power exchange market, the fact that there is an interconnection being built between Ohio Power and the City of Orrville.

Is that correct?

A No, it is not correct, because the logic of not including Consumers Power and the logic of not including any other system far greater than the City of Orrville, like PJM, go to the City of Orrville. And there is no point in worrying about the City of Orrville when there is an interconnection between Ohio Power and the City of Orrville.

Ohio Power is not in the CAPCO regional exchange market.

Q Let me ask you this, Dr. Wein.

Suppose it were economically feasible for Painesville to interconnect and coordinate with MELP. Would that eliminate any market power possessed by the Applicant relative to Painesville insofar as the regional power exchange market is concerned?

A As Painesville and MELP now exist, today?

Q That is right.

A I think it would be negligible elimination of market power.

Q How would you determine how much market power

num10

remains?

A Well, I will give you the inegredients of determination.

Your question is in the form which indicates there might be a number, and that is obviously not the nature of it.

Painesville is very small, MELP is very small. They both, can't as of today have access to nuclear units. All they can do is interconnect with each other and that may give them some possible -- some possible help in emergencies. They could get nothing which is involved in either access to large plants, they cannot get involved into all -- they cannot get access to all the other elements involved in operational coordination of pools such as CAPCO gives them.

And so to the extent that they might be somewhat better off in emergency situations with each other, that would be a help. But that is a very small thing in terms of the ability for them to compete with any of the CAPCO companies in this case.

Q What is the basis, Dr. Wein, for your statement that today neither Painesville nor MELP can have access to nuclear generation?

A So far as I am aware they do not have access to nuclear generation.

I understand that you have proposed -- well you have proposed something from MELP and you have proposed

mml1

something for Painesville, and I am not sure whether Painesville has signed that or not.

My recollection is that they may well have. But there is a contract which seems to me quite different. It doesn't include in that that Painesville and MELP would have access with each other via CEI. It simply gives Painesville a limited amount of nuclear power and is somewhat similar to your Proposal -- I think 44, is it? Is it 44, is that the number, the proposal which has been in this proceeding and each of us have commented about?

As I understand that, Painesville is even a little more restricted than that.

Q Have you read the contract that you are referring to?

A I think I may have come across it in some of the other witnesses' -- or their comments.

I finished my answer.

end AM-1

I have finished my answer.

Q All right.

Do I understand your testimony correctly to be that market power in the regional power exchange market arose out of the ability to deny options to particular small systems?

A It grows out of the ability to deny options to small systems. It grows out of the inherent size and control they have of already existing markets. It grows out of lots of things.

Q Let me ask you this:

If the option that was denied was an unreasonable option would that constitute an exercise in market power in your view?

MR. MELVIN BERGER: Unreasonable on what terms, according to whom?

BY MR. REYNOLDS:

Q On economic terms?

A Yes, in the context of this industry I think so. It's an exercise of market power.

Q Okay.

I presume that the City of Cleveland might like to have as one option free firm power. Now if that option were denied the City of Cleveland by CEI, in your view that would be an exercise of market power?

A Did you say free?

Q That's right.

A No, I don't think I would go that far.

Q Well, where would you draw the line?

A Draw the line between what, free and not free?

Q Well, what you have indicated would be a reasonable option -- denial of an unreasonable option that you feel would constitute an exercise in market power as distinguished from the denial of an unreasonable option that you feel would not be an exercise of market power.

A I'd use the concept of plane of equality within that particular market configuration. Where that term was given very precise meaning by the court was in the St. Louis Railway Terminal case. It would seem to me that would be the way to draw the line.

Q What was the definition of "plane of equality" in that case?

A Essentially based on costs.

Q And what is the definition as you understand it?

A I just told you.

Q All you said is it's based on cost.

A The court said that when any competing railroad runs across the river and gets into and uses the facilities of the St. Louis Railway Terminal Company what goes on there is the cost of his entering into that, and these costs are to be considered on the same basis as costs are constituted

eb3

and calculated for all the other members. It has nothing to do with the value of the service. It has to do with the costs of each of the members and a new member gets the same treatment and the same cost formulae that exist.

That's my understanding of the case. That's what I mean, that the plane of equality means the costs which are involved in a company joining a particular system. He pays whatever costs he has; he pays it on whatever the formulae are in exercising these costs or in computing these costs.

Q So if the City of Cleveland were to participate in a nuclear facility on the same costs, the same costs as each of the Applicants, that would be an indication of plane of equality. Is that correct?

A You seem to persist in misunderstanding me. Maybe it's my fault and not yours.

I didn't say the same costs. I said the same method of calculating the costs. The same method may not yield the same costs.

Q Can you give me an example of when the same method would yield different costs?

A Sure.

It may well be that if the City of Cleveland joins the system an additional cost would have to be imposed on the system, which is different than the costs which the

jb4

others impose on the system so there the formula would be additional costs, additional costs for each one.

Well, additional costs for one might be different than additional costs for another which might be different than the additional costs for the third, but the formula of the additional costs that you impose is the same but the numbers could be different.

Q If a small system had nothing to offer in, let's say, a staggered construction arrangement, would you conclude that the refusal to provide that option to the small system would constitute an exercise of market power?

MR. MELVIN BERGER: What option, Mr. Reynolds? You said "that option." I'm not sure what you're referring to.

BY MR. REYNOLDS:

Q The option to participate in a staggered construction arrangement.

A Well, the hypothetical you give me is contradictory unless the small system were zero. If it were more than zero it has something to offer.

Q But you're saying that if the small system had nothing to offer in the way of staggered construction then you would not consider that to be an exercise of market power if you refuse that option to a small system?

A I'm not going to say that because you obviously

eb5

have a different meaning of "staggered construction" than I do when you say they have nothing to offer.

Q Well, what's your definition of staggered construction?

A Staggered construction simply means this, that I would build a 1,000-megawatt plant but I can't build a 1,000-megawatt plant; I can't build it for ten years, but if I add four other people there then I and the four can build it. Therefore, you may build it or I may build it. That's not the importance that I attach, that a particular company has to build it.

The importance is that they pool the loads in order to be able to get the particular size unit which if they didn't pool the loads they would not be able to get for some time in the future. When it comes to actually building it, it's a construction company who builds it, it's General Electric who provides the other things. All the utility company does is pay the money, by and large.

So it isn't the question of who builds it and who says that "I'm going to build it this year and ten years later you build it." The essence of staggered construction is the sharing of a unit and taking advantage of it at a time period sooner than you would have been if you were not to share it.

That's essentially the essence of that notion.

eb6

Therefore, a small company, if it shares in it, is in fact engaging in staggered construction.

Q And what in your view would a three-megawatt system have to offer to a staggered construction program even as you define it?

A Three megawatts, and if its growth is going to be at the rate of eight percent a year in eight years or nine years it will have six megawatts. And if the small system were to combine with many other small systems they might add 200 megawatts.

Q And as you understand staggered construction or as you have described it, am I correct in concluding that you believe the utility does nothing more than provide the financing for the construction program?

A Oh, I wouldn't go that far, that it does nothing more, no. It may provide the selection of the site. It may provide certain criteria and things of that nature. It may do some supervision. But in any case I simply used that example to point out to you that the economic essence of staggered construction does not go to the actual physical details of the construction; it goes to the sharing of the unit.

It doesn't matter whether a company ever builds one, as it were, itself, in its own territory. And if you look at the forward thinking in the area when they're

eb7

thinking of putting many units in an industrial park, many nuclear units, and of larger size than we have now, it may well be that one group might build them all.

Q Dr. Wein, are you at all aware of what the NRC requirements are for construction responsibility of nuclear facilities?

A Just in a vague way.

Q Are you aware of the financial responsibility requirements that are associated with the construction of nuclear facilities before the NRC?

A Before the NRC?

Q Yes.

A No. I assume somebody has got to pay for it some time. I'm aware though that a lot of --

Q Am I --

A Go ahead.

Q Am I correct that one of your assertions in your testimony is that large fossil-fired units are more efficient than smaller units, smaller fossil units?

A Will you show me where I said that?

Q Well, do you have any recollection that you did not say-- Would you dispute that? Would you quarrel with that?

A No, I --

CHAIRMAN RIGLER: Show it to him.

eb8

MR. REYNOLDS: What was that?

CHAIRMAN RIGLER: Show it to him.

MR. REYNOLDS: I was just trying to see the extent to which he could remember his own testimony.

BY MR. REYNOLDS:

Q Pages 49 and 50.

mpb1
1B

I guess it's down at the bottom of page 49.

A Well, I said according to the 1970 national power survey:

"Economies of scale are inherently more pronounced with nuclear generating units than with conventional fossil fired units."

Now, where does that imply what you said?

Q Well, if you look up above that --

A Look up above where?

Q I'm sorry, you said --

A You said at the bottom of page 49.

Q That's where you're reading from?

A Yes.

Q Well, look at the answer to 32, starting at near the top of the page. What I was asking was whether --

A There's nothing in there which implies what you said. That's a discussion of economies of scale.

Q Would you agree or disagree with the statement that large fossil fired units are more efficient than small fossil fired units?

A I wouldn't disagree with that.

Q Thank you.

A You asked me a different question. I thought you --

CHAIRMAN RIGLER: All right, let's not argue

mpb2

back and forth. Just concentrate on the question.

BY MR. REYNOLDS:

Q And the large fossil fuel unit would be a lower cost source of power, is that correct?

A Than a small fossil fired unit, is that what you mean?

MR. MELVIN BERGER: Lower cost than what?

BY MR. REYNOLDS:

Q That's right.

A I think all of the conditions equal the large one would be more efficient or lower cost than a small one.

Q All right.

Let me ask you, Dr. Wein, would it be your opinion that a refusal by an owner of a 600 megawatt coal fired plant to grant access to a smaller system not capable of enjoying economies of scale available in such a unit would be inconsistent with the antitrust laws?

A It depends on the circumstances.

MR. MELVIN BERGER: I think it's calling for a legal conclusion. I objectio-- as it whether it is inconsistent with the antitrust laws.

CHAIRMAN RIGLER: Overruled.

THE WITNESS: It depends on the circumstances.

BY MR. REYNOLDS:

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Q Let's assume that it were -- let's assume that the 600 coal fired plant was a CAPCO unit and that the small system was the city of Cleveland.

A That's not enough of the circumstances to enable me to draw a conclusion one way or the other.

Q What other circumstances would you need in order to assess whether or not a refusal of access to the coal fired unit was inconsistent with the antitrust laws?

A Well, I think I would need the circumstances which would let me determine whether or not there was a Sherman violation, a Sherman Act violation, either section 1 or section 2.

CHAIRMAN RIGLER: This begs the question, doesn't it?

THE WITNESS: Well, I don't understand the question.

Do you want me to enumerate the kinds of circumstances required in a Sherman violation? Would I be responsive then?

BY MR. REYNOLDS:

Q Let's take the circumstances as you know them as they are in this particular case right now.

A I think in this particular case now I might conclude that CEI was violating the Sherman Act. I understand that there is a case before the District Court

mpb4

in Cleveland where the city is alleging that.

Q I'm talking now about whether or not refusal to grant the city of Cleveland access to a 600 megawatt coal fired plant, given all the circumstances in this case, whether you would view that particular refusal as being inconsistent with the antitrust laws.

MR. MELVIN BERGER: I'll object again on the basis of calling for a legal conclusion.

CHAIRMAN RIGLER: He is an expert antitrust economist, a former economist with the Department of Justice working with the antitrust division. He is certainly qualified to answer.

Overruled.

THE WITNESS: Yes. Let me, then, try to ---

CHAIRMAN RIGLER: He can give his opinion as to whether or not an inconsistent situation would exist.

THE WITNESS: I can envision circumstances in this industry or in the Cleveland or CEI territory in which I think I can come to that conclusion.

CHAIRMAN RIGLER: Mr. Reynolds is hypothicating the exact circumstances of the case, the situation in the area which you studied in connection with your expert testimony. As you know, it has been alleged that one of the acts that may violate the antitrust laws is a refusal to grant access to nuclear plants. Now, he's saying

mpb5

substitute a coal fired plant. Does your conclusion change?

THE WITNESS: Well, as I understand 104C it doesn't go to necessarily violating, it goes to the question of inconsistency with.

CHAIRMAN RIGLER: All right, that's his question.

THE WITNESS: Yes, I think I might argue that, yes. Under these circumstances I think I might argue with no other alternatives equally good if there were no other ways by which they could get the economies of scale, if this 600 megawatt fuel plant were the way, there were no other ways, yes, it would be the case. I think I could draw that conclusion.

By given the circumstances of this case I mean to include all the testimony that has been excluded from the circumstances of this case.

BY MR. REYNOLDS:

Q Am I then to assume that your answer, Dr. Weiss, is no, given the circumstances of this case but if you could assume some other circumstances you might conclude yes?

A I don't think that was my answer.

Q Well, I thought you answered me yes you might conclude that if I could assume, and then you went on to state certain assumptions. Are you saying that the certain

mph6

assumptions that you have plugged in are those that exist in your view in the present situation, or are those additional assumptions?

A I thought my answer said that I would if the 600 megawatt coal plant were the only one. Now, the circumstances of this case of course are not -- they're not the only one. There are nuclear plants, so the refusal of a 600 coal fired plant but not the refusal of access to a nuclear plant, I would not conclude anything about that.

Q So am I correct that we're really talking about access to economies of scale and not access to nuclear?

A Well, now, when you say "we are really talking" I don't know what the question is. You first asked me about a 600 megawatt fuel -- fossil fuel plant and I said if that were the only one that were available, there wasn't anything else, given what I know about this case including all that, yes, I could conclude it.

Now, what is it that you are asking me?

CHAIRMAN RIGLER: Let me ask you a question at this point.

Does your analysis change depending upon whether the large plant as to which the smaller system is seeking access is a nuclear plant or a large fossil fired plant?

mpb7

THE WITNESS: No. The essential economic analysis in this case is not determinent upon whether it is nuclear or fossil fuel with one assumption and with one caveat and that is that is apparently is the opinion of people in the CAPCO territory, i.e., those who are building the nuclears that the nuclears are more economical than the fossil fuels and if you make that assumption then a fossil fuel would not give you the same access to economies as a nuclear.

Now, if you assume they are both equal then it would make no difference.

BY MR. REYNOLDS:

Q Do you know whether the Mansfield plants are nuclear or coal fired plants?

A They are coal.

MR. SMITH: Going back to the fossil fuel compared to the nuclear you still have the same proportions of economies between the Applicants and Cleveland. The problem here, as I see it, when you're measuring a competitive situation is not the absolute cost involved but the relationship between the cost of one competitor to another competitor. Wouldn't the same proportion prevail whether it be fossil or nuclear in the hypothesis given you?

THE WITNESS: No, I don't think so, Mr. Smith,

mpb8

because if you look at the construction programs for the future the proportion of nuclear is going to become greater than coal.

MR. SMITH: That's true but in the hypothesis given you CEI is going fossil and not nuclear, so they would --

THE WITNESS: Well, if the CAPCO Pool were going fossil and not nuclear it would make no difference if that were the case, but that does not seem to be the case.

BY MR. REYNOLDS:

Q Let me just follow up Mr. Smith's question.

As to each unit or each plant the proportion would be the same for the Applicants -- as between the Applicants and the small system?

A I see. Let me see if I understand that.

In other words, if I am going to build a 1000 megawatt coal plant and then I'm going to build a 1200 Mw nuclear plant I would give you the same proportion that I have of coal to nuclear in your proportion access to that. In that case you get the same thing.

I think maybe that is perhaps what Mr. Smith meant.

Q No.

A No?

mpb9

Q No, I'm saying if you're going to build a -- if you're going to talk in terms of participation in a coal plant the proportion is going to be -- the proportionate advantage with respect to the coal is going to be the same for the Applicants and the small system. Equally so if I then talk about a nuclear plant and I talk about another coal plant. As to each isolated unit, in other words, the proportion would be the same.

A When you say the proportion --

Q The proportionate advantage.

A I still don't know what the proportionate advantage means here. I could understand it if you said that the Applicants are taking 90 percent of the coal plant and the munies take 10 percent. The Applicants are taking 80 percent of the nuclear plant and the munies then can have a proportionate figure, is that what you're saying?

MR. SMITH: No. In evaluating a competitive situation you're not concerned solely with absolute costs and prices but you're concerned with relative costs and prices.

For example, take a price squeeze situation, take an example and double it. Do your competitive relationships change?

THE WITNESS: All other things equal, no.

mpb 10

MR. SMITH: Well, wouldn't the same thing be true in relation to access to a fossil fuel plant and a nuclear fuel plant?

THE WITNESS: It would depend upon the weighting and the absolute amount of the cost advantage. It depends on the weighting.

Look, suppose a nuclear plant were 10 percent more efficient than a coal plant and one of the Applicants says that, Well, I want to have my -- I want this share, so that 85 percent of my costs are taken from the nuclear plant which is more efficient. Obviously he is going to have a greater cost advantage than some other thing and essentially, if I understand the question, he gains access but he gains access in such a way so that when you put in the absolute amounts that he has of each of these different efficiency plants and weight it for each the sum of the costs will come out equal. That's essentially, I take it, what you're asking me and now to go to the question as to whether they have a relative cost advantage or not, they could if the weighting were different.

I'm not sure that I am understanding the question or not.

MR. SMITH: I think so.

But I think the qequestion assumes that the benefits of economies of scale are apportioned proportionately

mpb 11

I would assume.

He's meraly trying to find the difference between the concept of economies of scale in fossil and nuclear. He's trying to show the nexus in this, is that what your point is, Mr. Reynolds?

MR. REYNOLDS: Yes.

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ebl

BY MR. REYNOLDS:

Q Have you, Dr. Wein, made any studies as to how the cost of an 800-megawatt coal-fired plant compares to the cost of an 800-megawatt nuclear plant?

A No, I have made no studies.

(Pause.)

I'm still not sure that I answered his question.

Q Dr. Wein, let me ask you to turn to page 102 of your testimony. There you use the term "operating coordination."

Will you explain to me what that term means?

A It embraces a variety of meanings.

The members of a pool, depending upon-- I'm not reading.

Q Well, I was just looking at what you were referring to. I gather you're now referring to Department Exhibit 588.

A That's the number.

Q All right.

A The members of a pool make arrangements with each other to engage in certain kinds of power transactions of the sort which I characterized as being in a power exchange market. For example, they may, if they are a very weak pool where there is not a great deal of coordination, they may be very limited such as, for example, in reserve sharing. That might be a form of operating coordination which they

eb2

may engage in.

They may engage in provision for each other of emergency power or maintenance power. If they do nothing more than that then they would be a fairly loose sort of pool in which the CEI authors of this Justice exhibit entitled "Power Pool Rates," they call that sort of thing a link pool.

The degree of --

CHAIRMAN RIGLER: He's asking you to define "operating coordination," what are the elements of that.

THE WITNESS: I'm trying to say the elements of operating coordination will vary from pool to pool. In the weakest form it may be limited to such things as reserve sharing, emergency exchange, maintenance exchange.

In the stronger pools it may go to -- such as the team pool it may include all these elements but in addition it would include, for example, operating the system as a single integrated system in which case, for example, you would have economic dispatch and what that would mean is they would so attempt to operate the pool that the lambdas would be equal for every generating unit on the line.

So the operating coordination then is simply a sort of a spectrum of things depending upon the nature of the pool and its ultimate purpose is to operate in the strongest pools such as team pools or corporate pools, to

eb3

operate the system so that all the kinds of power transactions that one can engage in that will give you economy will be taken advantage of such as, for example, economic dispatch which simply means if I'm getting power on the system from a unit that has an incremental cost of ten kilowatts and there's another unit on the system which has an incremental cost of five kilowatts and it's not operating, shut off the ten kilowatts, even if it is owned by Toledo Edison, push it down and bring on the five kilowatts.

And then essentially then that would be a very integrated operation because you're always at the most efficient point. So that operating coordination would be the attempt to gain all these forms of power coordination as you are operating the system day to day.

BY MR. REYNOLDS:

Q How many pool agreements have you looked at, Dr. Wein, or examined?

A I've not examined the details of any pool agreement. That was Mr. Kampmeier's job. I've read a lot of stuff about pools.

Q What's the basis for your assertion that all pools have reserve sharing agreements?

A If a pool didn't have a reserve sharing arrangement I don't know what it would have. I think if it didn't have that it wouldn't be called a pool.

eb4

Q Well, what is the basis for your saying that they all have reserve sharing arrangements? Is it just what you stated? Is that the extent of your --

A Well, I have read this document. I have read the EEI. I have read the Power Pool.

One of the basic things you get out of a pool, one of the big basic economies you get out of a pool is reserve sharing. If you don't have that it would hardly deserve the name of a pool. There's no literature I've ever read about a pool that indicates you can have a pool without reserve sharing of some sort.

Q Let me ask you this:

Is any agreement which specifies that the parties to an agreement will provide capacity in the event of an emergency on another party's system a reserve sharing agreement as you understand reserve sharing?

A No, it would be in addition to a reserve sharing agreement.

Q What do link pools do with regard to development coordination?

A Well, apparently they vary. I'll give you what the CEI people say they do.

"Link pools are those that provide primarily for multiple interconnections with only modest construction coordination."

eb5

Q Is that the sole source of your information for your testimony in this regard?

A These people are the only ones I know of who use these terms, where it has been written down so you can see what it means. That's their definition. I'll adopt it.

Q Let me ask you, Dr. Wein, is there in your view no difference among link pools and the extent to which the individual members of a holding company pool are treated as a single system in development coordination?

A Say that again.

(Whereupon, the Reporter read from the record as requested.)

THE WITNESS: I don't understand that question. A link pool is not a corporate pool.

BY MR. REYNOLDS:

Q What is your understanding of the difference between theextent to which link pools engage in coordinated development and the extent to which corporate pools engage in coordinated development?

A Corporate pools engage in a great deal more coordinated development than link pools. The link pools, as the definition says, have only modest construction coordination. The corporate pools have great coordination of construction.

Q Can you tell me which team pools engage in

development cooperation as completely and extensively as corporate pools?

MR. MELVIN BERGER: I think I'm going to object. I think Mr. Reynolds is getting into some fairly detailed engineering areas and I don't believe that this witness is qualified as an engineer, although I do realize he included some material of CEI publication in his testimony.

MR. REYNOLDS: Mr. Chairman, I'm getting into material that Dr. Wein has seen fit to set forth in his direct testimony and I'm trying to determine the extent to which there is any basis for his statements or if he has any knowledge of the testimony that he set forth and presented to this Board.

CHAIRMAN RIGLER: The objection is overruled.

THE WITNESS: Yes. Well, I think the CAPCO Pool, as I understand from reading some of the material and also from their own advertisements --

BY MR. REYNOLDS:

Q I can't hear you, Dr. Wein.

A I said the CAPCO Pool, as I understand from reading some of the testimony and some of their own advertisements as to what they allegedly do, has as close a coordination of construction as a corporate pool.

Q Did you read any of the CAPCO agreements in addition to the testimony and the advertisements you alluded to

eb7

in forming that opinion?

A I read drafts of some but it seems to me that it is a fact that they have coordinated as they've answered, all of them, in the Attorney General's Report. You go to each question as to what they're going to build and what their proportion is going to be and what their loads are going to be, and they've got that all the way out until 1983 or '84. And I can't envision a corporate pool doing anything other than that. You can't do more than that.

Even in corporate pools each of the entities in the corporate pool have relative discretion as to some smaller items but not to large, backbone transmission lines or large generating plants or large hydro developments or large pumped storage developments.

But a corporate pool, just as CAPCO, if it needs to build a 12-kilovolt line, is going to have discretion to its independent members. But when it comes to the major things CAPCO seems to me by their answers to do as much as it is possible to do.

MR. SMITH: Dr. Wein, do corporate pools necessarily coordinate among contiguous systems?

THE WITNESS: Well, I'm taking a corporate pool in the sense of a contiguous system, yes, because if it were a corporate pool but they were not contiguous they could not engage quite in the same way.

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BY MR. REYNOLDS:

Q Dr. Wein, what is the basis for your assertion that Duquesne can buy economy energy directly from Consumers Power by linking with Toledo Edison's interconnection with Consumers Power as you state on 105 of your testimony?

A Well, that sentence should be taken to read if they have the interconnection with Consumers Power they can buy anything that Consumers Power has available which they need. It might be economy energy, it might not be.

Q Do they have an interconnection with Consumers Power?

A I didn't say Duquesne has. I said Toledo has, and therefore Duquesne, having an interconnection with the CAPCO Pool, can buy anything from Consumers Power that Consumers Power is willing to sell them and they're willing to buy. They have the connection.

Q And what's the basis for that conclusion?

A That they have the connection?

Q That Duquesne can buy anything from Consumers Power that Consumers Power may have because Toledo Edison may have an interconnection with them?

A I didn't say that. I said Duquesne can buy anything that Consumers Power has that Duquesne is willing to buy. There are lots of things Consumers Power has that Duquesne won't buy, but there are some things that Consumers

eb8

Power has which Duquesne can't get within the pool that they would buy.

And the basis of the fact is that if you look up Duquesne's form you will see that Duquesne has in fact bought stuff from Consumers Power.

I don't know whether you're denying that Duquesne can use the CAPCO Pool and that Toledo Edison has an interconnection with Consumers. That's obviously not true if you deny it.

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Q Do you know if Duquesne has ever purchased economy power from Consumers?

A I just explained to you that economy power is used as an example. I can't get from the form FPCs whether it is economy power or anything else. All I know is it is non-firm power. It could be anything that is classified as non-firm.

Q So you just plugged in economy power off the top of your head in that statement, is that right?

MR. MELVIN BERGER: Objection.

I think that has been asked and answered.

CHAIRMAN RIGLER: Sustained.

BY MR. REYNOLDS:

Q Do you know if Ohio Edison can purchase economy energy directly from Consumers?

A Ohio Edison, just like Duquesne, can purchase anything from Consumers, which Consumers is willing to sell and Ohio Edison wishes to buy because they have the transmission service available to them via Toledo Edison.

CHAIRMAN RIGLER: Now, is that as part of the CAPCO arrangement, or is that the independent arrangement?

THE WITNESS: That is part of the CAPCO arrangement.

CHAIRMAN RIGLER: So by reference to CAPCO contract provisions, Ohio Edison or Duquesne can require Toledo Edison to wheel them power from Consumers?

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THE WITNESS: That is my understanding. If it does not deteriorate the system, and there are no other reliability problems involved.

BY MR. REYNOLDS:

Q Then you determine that by reading the contracts?

A It is my understanding.

Q And what do you base that understanding on?

A It is based on discussions.

Q Discussions with whom, Dr. Wein?

A I think I have had numerous discussions with Mr. Mayben and some with Mr. Kampmeier. Primarily Mayben, I believe.

Q And it is your testimony that Mr. Mayben has told you this?

A It is my recollection that they can do that.

Q And he told you that they can do it on the basis of the CAPCO contracts?

A Well I am not sure whether he said they can do it on the basis of the CAPCO contracts. I am not sure that the CAPCO contracts are completely finished or written.

Q Well I thought you just answered the Chairman that your understanding was that it was a result of the provisions of the CAPCO contracts rather than any bilateral agreements which permitted this kind of transaction.

A Well I am not sure, I may have misspoke. They

mm3 1 have the capability and they have engaged, as I see through
2 the Form 1s, for years in all these sorts of transactions.
3 I see no evidence to indicate that this would not continue.
4 They have engaged in them, they do engage in them,
5 and they doubtlessly will continue to.
6 Q Does the '73 Form 1 indicate such transactions?
7 A Yes, it indicates transactions with many people
8 outside the CAPCO system.
9 Q Does it indicate it with Consumers and Duquesne?
10 A In one year there was.
11 Now if I wanted to look back over a period of
12 eight or nine years I can tell you what has happened. They
13 don't have to be every year with the two same companies. It
14 depends on the needs and the availabilities.
15 Q And which FPC form would I look through to find that,
16 Dr. Wein?
17 A I think you would look to the Form 12s.
18 Q For which year?
19 A Every year.
20 I will read you one from --
21 Q Let me --
22 A Just a minute. You asked me which year now, and I
23 am going to tell you. I am reading one from 1973.
24 Q All right.
25 A Private systems. This is the Cleveland Electric

mm4

Illuminating Company, year ended December 31, 1973.

It has received 1,225,000,000 kwh from Ohio Power Company.

It has received 564,000,000 from PJM.

Q Do you know whether CEI has direct interconnections with Ohio Power Company?

A Just a minute.

Q Or PJM?

A It doesn't have direct connections with PJM.

Now let me go on. I just gave you the CEI. I will go to something else.

Q Have you ever read the contract between CEI and Ohio Power?

MR. MELVIN BERGER: I object.

I think Dr. Wein is still in the middle of an answer.

CHAIRMAN RIGLER: Save the question.

(Pause.)

BY MR. REYNOLDS:

Q Are we still waiting to --

A Yes.

You know you take plenty of time. Just let me take some time.

(Pause.)

Let me read the following from --

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Q Could you tell us where you are reading from, Dr. Wein?

A Yes.

I am reading from Exhibit HM4-8J2. That is Moses and it is Form 12 for Duquesne.

Q Whose Form 12?

A Duquesne.

Q I see.

A "Respondent" -- Duquesne -- "The Cleveland Electric Illuminating Company, Ohio Edison Company, Pennsylvania Power Company and the Toledo Edison Company are parties to the CAPCO transmission facilities agreement dated as of September 14, 1967, which provides for construction, operation and maintenance of an adequate transmission network to permit the five companies that are parties to the agreement to utilize their respective capacity entitlements in various jointly committed generating units for effective coordination of the operation of the CAPCO companies among themselves and with other systems, power pools and coordination groups and for the equitable sharing by the parties of the resulting benefits and responsibilities."

It seems to me that language says they do it not

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only with themselves, but with other groups, and that is filed.

"The CAPCO transmission facility agreement was accepted for filing with the Federal Power Commission on September 7, 1972."

I don't want to burden this hearing with reading out a lot of statistics which shows that there are varying power flows back and forth over the years.

Q Have you read the agreement between CEI and Ohio Power, the interconnection agreement?

A I haven't read that.

This is the sort of stuff I have read.

Q Have you read the interconnection agreement between CEI and PJM?

A No.

Q And what is the basis for your stating that CEI has no direct interconnection with Ohio Power or with PJM then?

A I am not sure. I am just trying to keep in mind the transmission map. I might be in error.

If you have a transmission map I will be glad to rectify the error.

It wouldn't matter whether they did or they did or they didn't.

MR. MELVIN BERGER: Would this be a good time for a break?

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CHAIRMAN RIGLER: Do you want to go on on this line for a little more, or are you about to move to another line.

MR. REYNOLDS: I could go on a little longer.

CHAIRMAN RIGLER: On this line?

MR. REYNOLDS: Yes.

MR. SMITH: Dr. Wein, assume a situation where there would be no provision in a pool for, say the CAPCO pool, for transmitting power from a utility outside the pool through a member of the pool.

Take the situation you have described, and let's assume that Consumers has available very cheap economy energy, Toledo has available medium-priced economy energy, and Duquesne at the moment has on the line high-priced energy.

If Toledo has the opportunity to purchase the economy power from Consumers, thereby freeing medium-priced power to transmit to Duquesne, would those arrangements be feasible? I mean, would it be feasible then for Toledo to buy the cheap Consumers power and sell its medium-price power to Duquesne.

THE WITNESS: Well as I understand it, as a matter of the electrical question, it is certainly feasible because they have been transmitting power for years through the network.

As a matter of economics it would be desirable for them to do so, particularly if they are going to

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operate as an integrated system. If they are able to get cheaper power, than by what they are trying to do under economic dispatch in an integrated system is to get that cheaper power on the line and push off the expensive power so that you eventually reach an equilibrium that all your power sources, all your energy is coming from generation which has the equal incremental costs at that particular time.

That is what they attempt to do.

MR. SMITH: So then there would not be necessary a specific agreement to transmit power to members from outside the pool among themselves?

THE WITNESS: I think if they would engage in economic dispatch, that would cover the situation.

It seems to me to be so inherently beneficial to all the members of the pool that if that were their aim -- apparently that is the aim of the CAPCO pool.

Now whether there would have to be an agreement written, I don't know. I haven't read it. But just reading this -- reading the Form 12s, it seems to me that that is implicit in it, and when they say they want to coordinate their transmission facilities not only amongst themselves, but with outside companies, that would be one of the situations that I think would be covered.

BY MR. REYNOLDS:

Q IN the absence of any agreement, who would get the

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cheap power of Consumers, Duquesne or Toledo?

A Well they do have -- they usually have -- what happens here is, I believe in CAPCO that is it, but I would have to refer to a document. There would be a split in savings benefit in this case. Consumers would get half the benefit.

It other words, if Toledo said, I can get the energy of 5 mills, my own cost is 8 mills, there is a difference of 1 1/2 mills. I buy it at 6 1/2, Duquesne's cost is 9 mills, then Duquesne gets part of it. It splits the saving.

Q But who splits the -- who is the one who splits the savings with Consumers, Toledo or Duquesne?

A Toledo splits the savings with Consumers, 6 1/2 or 5 1/2 to 8. And then apparently Duquesne is getting some of Consumers which is lower than it, and it splits the saving with -- I mean Toledo's, which is lower than it, and it splits the saving with Toledo.

Q I think you made a correction.

A Did I misspeak and say Consumers?

Q I thought you wound up saying that Duquesne would then get part of Toledo's power. Is that what you meant to say?

A Yes. Duquesne would get part of Toledo's power and split the savings with Toledo.

CHAIRMAN RIGLER: Mr. Reynold's question was though, in the absence of an agreement.

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THE WITNESS: Well I don't know in the absence of an agreement how they would split it up.

But according to this document they generally use a split-the-savings basis.

CHAIRMAN RIGLER: But in the absence of an agreement, if Toledo bought all of its cheap power from Duquesne and then sold the higher-price power on its system -- wait a minute. If Toledo bought all the cheap power from Consumers and then sold its higher-price power to Duquesne, there would be nothing to prevent that, right?

THE WITNESS: Well there would be nothing to prevent that if the parties had not agreed as to the basis of all these power transactions which they do agree to.

CHAIRMAN RIGLER: Now are you saying that occurs in CAPCO agreements, a provision for splitting the savings?

THE WITNESS: I will check them for you, I think it does.

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Well, apparently this is what they do. According to this document they don't do it quite that way.

"Economy energy is the only class of service for which there exists a basic rate uniformly used by the majority of the pools in the survey. In other of the pools priced economy energy in general at the rate of the suppliers out of pocket or incremental cost plus one half of the difference between the suppliers cost and the receivers decremental cost."

WEll, that is in fact what I said and amongst those they list Team Pool 1, which is CAPCO.

BY MR. REYNOLDS:

Q Just so I'm clear that we're on the same wave length, what you said, as I understand it, is given the hypothetical that Mr. Smith stated,that Toledo Edison would buy all of the cheap power from Consumers and split the savings with Consumers and that then Toledo Edison would sell to Duquesne its medium priced power and split the savings with Duquesne and Duquesne would not get any of the cheap Consumers power directly.

A I don't know what electricity they would get but in effect that's how it would work, yes, as I understand

mpb2

this thing.

CHAIRMAN RIGLER: We'll take a ten minute recess at this time.

(Recess.)

CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Q Dr. Wein, let's assume that Consumers had a wheeling contract with Duquesne Light -- assume that Consumers had a wheeling contract with Toledo Edison -- strike that and I'll start over again.

Assume a wheeling contract between Toledo and Duquesne and that in that circumstance, then, Duquesne could go directly to Consumers and purchase the cheap power and pay a facility's use charge to Toledo Edison to wheel that power over Toledo's lines to Duquesne, would that not be correct?

A Toledo --

MR. MELVIN BERGER: Objection. I think there is something missing in that hypothetical.

THE WITNESS: Toledo could not go directly to Duquesne. They would have to go over somebody else's line.

BY MR. REYNOLDS:

Q All right, let's say there is also a wheeling contract with Ohio Edison, then Duquesne could go directly

mpb3

to Consumers for the power to be wheeled over the Ohio Edison line and Toledo Edison lines?

MR. MELVIN BERGER: Who has the Ohio Edison wheeling agreement, Ohio Edison and whom?

BY MR. REYNOLDS:

Q Ohio Edison and Toledo and Duquesne.

MR. MELVIN BERGER: You mean there are three parties to the wheeling agreement?

MR. REYNOLDS: Yes.

THE WITNESS: You mean Duquesne has one separately with Ohio Edison and Ohio Edison has one separately with Toledo and Toledo has one separately with Consumers, or do you mean Ohio Edison has one with Duquesne which has also got one with Toledo which has also got one with Consumers and all the intervening people have agreements with all the parties involved? There are lots of combinations when you have three entities involved.

CHAIRMAN RIGLER: Why don't you take Duquesne out of your example and let it be a sale from Consumers to Ohio Edison with Toledo Edison being the wheeling party?

MR. REYNOLDS: Okay.

BY MR. REYNOLDS:

Q Let's do that. That will simplify it.

mpb4

A What's the question?

Q We're assuming that you've got a wheeling contract between Ohio Edison and Toledo Edison and then that Ohio Edison goes directly to Duquesne -- I mean to Consumers to purchase the cheaper power and then pays to Toledo Edison a facility's use charge in order to have that power wheeled to Ohio Edison.

Do you have any -- would that be the way that that transaction would work?

A I don't know how the transaction would work, you're assuming that that's the way it would work.

Q Do you have any problem with that assumption, Dr. Wein?

A If that's the assumption, that's the assumption.

Q Now, do you know whether the CAPCO companies engage in that kind of a transaction or whether they would accomplish that transaction by a buy-sell arrangement as we discussed earlier?

A I'm not sure. I don't know how it would work.

Q You don't know?

A All I have is an answer, A-7, to the Attorney General and it says as follows:

"CAPCO companies periodically review their interconnections with systems which are not members of CAPCO to determine the

mpb5

adequacy of such interconnections for the purpose of justifying the criteria of reliance upon resources outside CAPCO not more than one day per year."

Now, I don't know when -- if this is a kind of transaction which takes place I don't know what the terms are, I just haven't read that.

Q Let me ask you this hypothetical, Dr. Weiss:

Let's assume three systems: System A is a small municipal system, System B is an investor-owned system --

A Wait a minute. Let me write this down.

Q All right.

System A is a small municipal system; System B is a large investor-owned system and you've got a third system, System C.

A What is it?

Q It doesn't matter.

A Well, it's got to be one or the other.

Q An investor-owned system.

A Small or large?

Q It doesn't matter.

A All right. Just an ICU, okay.

Q Now, let's assume that B is between A and C and B has agreed to wheel for System A power from

mpb6

System C and assume that System C has low cost power; System B has medium cost power and System A has high cost power.

A Okay.

Q And that A and B have equal opportunity to purchase System C's low cost power.

A Yes.

Q All right.

Now, in that situation would you expect that System B would enter into a wheeling transaction with A in order to transmit to A the power from C or would buy System C's lower cost power and resell it to System A?

A Are you asking me what I would expect them to do?

Q Wait a minute. I misspoke.

Would you expect System B to enter into a wheeling transaction with A in order to transmit System C's low cost power to A --

A I thought the hypothesis was that they had a wheeling agreement.

Q -- or --

A Or what?

Q -- would you expect System B to buy System C's lower cost power and then resell its medium cost power to A?

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MR. HJELMFELT: I object.

MR. MELVIN BERGER: I object.

MR. HJELMFELT: The hypothetical as given was that B has agreed to wheel power from C to A.

MR. REYNOLDS: That's right. And then the question was whether they would enter into a wheeling transaction or a buy-sell transaction given the fact that there is a wheeling agreement. That was the --

MR. HJELMFELT: Has the A contracted for the power with C?

MR. REYNOLDS: The assumption is both A and B have equal opportunity to go out and buy System C's lower cost power.

THE WITNESS: I would if B were really intending to monopolize the business B would not want to do it. On the other hand --

CHAIRMAN RIGLER: B is --

THE WITNESS: Just a minute, let me finish, please.

If A, which under your hypothesis was highest cost, therefore they could pay C a much better price and C would prefer to sell it to A and if A and B had a wheeling contract then B ought to wheel. But since B doesn't want to do that, B will say, No, I'll buy it, and that's exactly the sort of thing I had illustrated in my quotation

apb8

from Justice Holmes.

Now, are you asking me what the contract should provide? The question then is you had better give me the details of the contract.

BY MR. REYNOLDS:

Q Well, B could bid up to its medium cost power.

A Pardon me?

Q B could bid a price up to its medium cost power for C's low cost power.

A But A could outbid them because they would save more and therefore C would prefer to sell to A.

Q And what, then, would be the advantage to A if you're saying they can outbid them --

A Of course. Suppose C's power was -- you can get it at 3 mills and B says, Well, I've got 5 mills, I'd rather buy it at 3 mills and A says, It's 10 mills, anything below 10 mills saves me.

CHAIRMAN RIGLER: Why wouldn't A be better off to bid only up to the limit of 5 mills because I know they can but the power from B at 5 mills.

THE WITNESS: That's not in the hypothetical that they could buy the power from B at 5 mills.

You said B could purchase it from --

BY MR. REYNOLDS:

Q I said B would resell it at its medium price to

mpb9

System A

A Well, if B would resell it, if B would resell that -- you see, if in fact B needed the power, it's a question as to what's happening here. If B needed the power because they didn't have enough power they could buy it at 5 mills, their cost is 5 mills and C's is 3 mills. B says, Well, I would rather buy that power at 5 mills -- I mean at 3 mills rather than produce it at 5 mills. Thereupon, B says, I offer C 5 mills for it. That means B is going to use it. It's not available to A any more.

The question is if they both -- if it has enough power for both then they ought not to do it. If there is only enough power for B and C then B buys it and C can't get it even though -- I mean A can't get it even though A is willing to pay more than the 5 mills that B is going to pay.

Q But that's on your assumption that B needs that power itself?

A Well, you have to tell me what the assumption is.

Q Well, my assumption was that B had no need for the power, that the only question was whether B would enter into a wheeling transaction in order to get that power or enter into a buy-sell transaction.

mpb 10

A Okay, then it's even worse. If B has no need for the power then C might be able to sell it to A at 4 mills.

What you're saying is B is in a position to make sure that A can't get it for better than 5 mills under either assumption, whether it needs it or it doesn't need it.

Q B could bid up the price to 4.99 mills and then sell it to A for 5, couldn't it, sell its own power to A for 5?

A Well, that seems to me, then, interposing B as a determinant and an arbiter of the price at which A could get from C if B weren't interfering in the transaction.

Q And isn't that what competition --

A Not at all. That's not competition in this case. Competition would have B, if it needs the power, buy the power at the best price it could get it. If it doesn't need the power but simply is buying it in order to forstall a competitor from buying it and bidding up the price, that doesn't seem to me to be what would happen in constructive competition.

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Q Wouldn't System B be negligent in its responsibilities if it did not buy the C power for 4.9 mills instead of the 5 mill medium-priced power it otherwise would have?

MR. MELVIN BERGER: Objection. Responsibilities to whom?

BY MR. REYNOLDS:

Q To its customers?

MR. MELVIN BERGER: To its retail customers?

MR. REYNOLDS: Right.

THE WITNESS: Well, B would be negligent if it could obtain from C a power lower than its own, of course assuming whatever the transaction or transmission charges were and so forth.

On the other hand if A has a wheeling contract with B, it's either a wheeling contract or it isn't a wheeling contract and-- I mean what you're saying is that B will pick and choose.

Now if B didn't need the power but simply bought it in order to push the price at least to 5, that's one situation. If B needed the power it could be outbid if it had a wheeling contract because it is not worth more than 5 mills to it but it's worth more than 5 mills to C.

Now if B needed the power --

BY MR. REYNOLDS:

Q You mean to A.

eb2

A I mean to A.

But if B needed the power and it didn't have a wheeling contract then of course it might say "Why should I do this for you," and they oftentimes say that.

Q But if A could get the medium-priced power from B directly, why would it outbid B for C's low-cost power?

A Well, the question here is-- You see, the question here is what the purpose of B is in bidding the power. If B needed the power and B could get the power at 5 mills, then B says "No, I don't want to buy it at 5 mills because that's what I can produce it at," if C wanted to pay 6 mills or 7 mills, then B says "Well, I'll buy the power and sell it to you at 7 mills," it is interposing itself in between two parties who would ordinarily make a transaction.

CHAIRMAN RIGLER: You misspoke when you said C was the purchaser. You meant A.

THE WITNESS: I'm sorry, A and C could enter independently into a transaction and B is entering into it only in order to bid up the power to A.

BY MR. REYNOLDS:

Q What if it has entered into it to lower the cost to itself?

A Well, but then I'm saying if it is doing that then its top price is something less than the transmission cost from C to B, and take 5 mils minus that, that's its

eb3

top price for it. A's top price will meet that but B says "I won't do it."

CHAIRMAN RIGLER: The question is why would A's top price beat that if you further assume that B is willing to sell power to A at 5 mills?

THE WITNESS: Well, but then if B is willing to sell power to A at 5 mills and it doesn't itself need the power then it is eliminating the possibility that A can get it from C for 4 mills, or 3-1/2 mills. It's foreclosing that possibility.

You have to assume one thing or the other, either they need the power or they don't need the power. And if they're entering the market in order to raise the price to A, that seems to me to be--

BY MR. REYNOLDS:

Q Isn't B always going to need the power if it can get it cheaper?

A Yes, but the question here is whether A can get it cheaper than C if B weren't around.

MR. SMITH: You always have to bear in mind in your hypothesis that both have equal opportunity to buy C's power.

MR. REYNOLDS: That's right. That's what the hypothesis assumes.

MR. SMITH: And yours doesn't work if you bear that

LD4

in mind because there's no way ever that B could buy from C without double transactions. Of course you're not using transactions twice in your hypothesis. But there's no way ever that B could buy from C and resell it to A cheaper than A could buy it from C, no matter what you put B's cost of power at. I mean either B needs it or he doesn't.

This is not electric power economics. This is geometrical axioms. This is the sum of the parts equals the whole.

MR. REYNOLDS: Be will lower its cost to its system and displace its own power.

MR. SMITH: It can only lower its cost to its system at the cost it pays for C's power which is also available to A at that price.

MR. REYNOLDS: But C's power is always going to raise to the level of B's -- whatever B is bidding on C's power and then B will sell to A its medium-priced power.

(The Board conferring.)

MR. SMITH: B cannot sell to A at a price higher than A can buy it from C, and that's your fallacy, so there's no way that B can buy from C and resell so long as C is standing there as an alternative supplier to B.

MR. REYNOLDS: But C will sell to B at the price that B bids up C's low-cost power.

MR. SMITH: Okay.

eb5

MR. REYNOLDS: And then B will turn around and sell to A at its medium price.

MR. SMITH: Is B's medium price higher or lower than C's price?

MR. REYNOLDS: Higher, but lower than A's price.

MR. SMITH: A's price for what?

MR. REYNOLDS: For its own power.

MR. SMITH: Why does A ever want to buy anything from B when it can buy from C cheaper, given your hypothesis that --

MR. REYNOLDS: Because B will send up C's price.

MR. SMITH: But it never bids it up higher than its medium price.

MR. REYNOLDS: But it will bid it up at least equal to its medium price. And then why would A go to C? A can go right to B and get it.

MR. SMITH: The best you could ever have would be equality.

MR. REYNOLDS: That's right. That would be the competitive results.

MR. SMITH: Then insert transaction costs. Then you have a double transaction instead of a single transaction.

THE WITNESS: Counting the transaction between B and C as one, and then you have a transaction between B

eb6

and A as one, where originally you might have had it from A to C.

CHAIRMAN RIGLER: On the other hand, that could be offset by transmission cost savings; if you're pumping the power in at one end of the B system and taking it out the other end you save some transmission costs I would assume.

THE WITNESS: What is this?

CHAIRMAN RIGLER: If the C power is flowing into B's system at one point and B is pumping power into the A system at another point across the system you don't have to transmit that power all the way across the system.

THE WITNESS: Well, that's how that happens all the way anyway. You're not really saving. It's the same way it would work in any case.

MR. REYNOLDS: You would save the utility use charge.

THE WITNESS: No, you wouldn't save the utility use charge. It would be the same use charge in any case.

MR. SMITH: Another fallacy that you're using here is you're not quantifying your amounts.

MR. REYNOLDS: I'm not sure I follow you, Mr. Smith. Why would that make a difference?

MR. SMITH: Well, let's assume there's a finite amount of power available.

MR. REYNOLDS: All right.

eb7

MR. SMITH: And only sufficient to supply A's needs. That is the finite amount.

MR. REYNOLDS: All right.

MR. SMITH: Then I don't think it would work.

MR. REYNOLDS: Why is that?

MR. SMITH: Because B could then not buy C's power to reduce its average cost of power.

MR. REYNOLDS: Why is that? I mean you've got the same-- Why wouldn't they do it for the exact same amount and sell that amount to A?

MR. SMITH: You can't buy power at one and at X dollars and sell it at the other end at X dollars and still make out on it.

THE WITNESS: You're not making out on it at all.

If it buys-- Can I add to the colloquy, since the question was addressed to me?

It is certainly the case that in this case we have two buyers, A and B, and by hypothesis, A is a very small municipal and B is a very large IOU, and there is a wheeling agreement.

Now the second hypothesis is C is at 3 mills and B is at 5 mills, and there is some transmission cost right through.

Now since there is competition for this load of C which is available at 3 mills, Mr. Reynolds is right in

eb8 1 saying that it would go up to 5 mills but then it doesn't
2 make any sense for B to sell A its needs at 5 mills. That's
3 number one.
4 So B has got to sell it at something above 5 mills
5 and the transaction doesn't make any sense at all.
6 The second point: Bearing in mind the hypothesis
7 of a very small municipal system and a very large ICU, it
8 may be that what A is asking for is 10 megawatts of power
9 at this charge, which would be very small. And when you feed
10 that into B's system, which is very large, you would not find
11 any reduction in that at all, that 3 mill. You missed that
12 in the fourth decimal point. I mean before you could catch
13 it you would get it in the fourth decimal point whereas to
14 A, which is a small system, this is a very large proportion-
15 ate saving to them whereas to B, for this small a load,
16 it could be absolutely a trivial saving to them. It would
17 not even be wiped out in the bookkeeping costs.
18 So that's the second point I think that you're
19 making, Mr. Smith, that the size of the load is very impor-
20 tant here. It is small. It is a small load and it gives
21 a big reduction for the small municipal but by hypothesis,
22 it gives a trivial reduction for the other.
23 Now I think when you start to look at it in that
24 way, then the need for B to interpose himself becomes
25 less and less.

eb10

transaction cost of B before that makes sense, but you haven't quantified those aspects of your hypothesis. They're not fed into your picture.

THE WITNESS: He couldn't in any event, Mr. Smith, buy it at 4.99 at all because A is willing to pay 5.

CHAIRMAN RIGLER: No, A is only willing to pay 4.99.

THE WITNESS: No, B is willing to pay 4.99. B is the big IOU. He never could buy it at 5 -- at 4.99. He couldn't buy it at all in competition with A if that were all that were involved.

MR. REYNOLDS: Whatever the figure, B will buy at 5 mills less the transmission cost, whatever that happens to be, which is always going to be less than what A would be able to buy it at.

THE WITNESS: No, but then if he sells it back to A, if that transmission cost is in fact a cost, then what it amounts to is that B is buying the power at the same price that B can produce it and then he's selling it back to A at the same cost that he can produce it and that -- that's all that happens so why should B buy the power.

MR. SMITH: But isn't his point valid, notwithstanding the actual figures we're using, but isn't his point valid that if the cost of handling by B in a buy-sell arrangement to A is less than A's cost of transmitting from

eb'.1 1 C, then something can be worked out, given the right prices?
2 We have not received the right prices in this hypothesis.
3 THE WITNESS: I don't think so because I think
4 your idea about the geometry of it is right. It doesn't
5 really matter how we arrange it.
6 Let us assume that B and C are only 10 miles apart.
7 C is the surplus --
8 MR. REYNOLDS: I really don't know what we're
9 doing now.
10 THE WITNESS: And A is 100 miles.
11 MR. SMITH: Please don't answer for my benefit
12 now. I think Mr. Reynolds -- it would be better for him to
13 develop it for himself.
14 CHAIRMAN RIGLER: I have a question I want to put
15 to you, Mr. Reynolds, at this point.
16 You are arguing that the acquisition of the C
17 power at any price up to 5 mills should not be considered
18 anticompetitive because B's purpose is merely to lower its
19 power cost throughout its system by averaging in cheaper
20 power, and its primary purpose therefore is not to deprive
21 A of the power but merely to lower its own costs and thereby
22 maximize its profits.
23 MR. REYNOLDS: Right.
24 CHAIRMAN RIGLER: If I accept that, where does
25 your hypothetical lead you in terms of what the Board is

eb12

considering? It seems to me that you cannot argue that A is every bit as well off if it merely buys the power from B at 5 mills even though that may be the net result of the hypothetical as you have structured it because we have had repeated testimony that it is the availability of the option that is necessary for A's survival and that A's check on the prices that B can charge it, namely the 5 mill top, is going to be governed by the fact that it can get wheeling of the lower-cost C power.

MR. REYNOLDS: Let me ask you-- Maybe we ought to do it by asking the witness:

BY MR. REYNOLDS:

Q Given the hypothetical we've been discussing in a competitive market, would you ever have -- would System B ever engage in the wheeling transaction?

A Well, I'm now a little confused as to whether this is a new hypothesis or not. Is there a contract to wheel between A and B, or isn't there?

Q There is an agreement to wheel and A and B have equal availability to C's power and compete for that power and the question is whether in that situation there would ever be any incentive on B's part to wheel the power, or on A's part to ask to have the power wheeled as opposed to doing the transaction on a buy-sell basis?

A Well, certainly if A could get the power from C

eb13

at a cheaper price than B could it would ask to wheel. That's number one.

Number two, if B said No, the wheeling contract doesn't allow me to do that, if that were it, and then B, according to your hypothesis, says Well, my power is 5 mills and I can buy it for 4.99 -- let's suppose the transmission charge is a half a mill between B and C and a half a mill from B and A, so that C's price, if A gets it, A can offer C -- It would have to pay a mill,whatever the price is. If he got it at 3 mills it would be delivered to A at 4 mills; if he got it at 5 mills it would be delivered to A at 6 mills.

Now if B then, because A is in the market, bids up the price, and the maximum it could bid up the price to would be -- if its own generation is 5 mills it could bid it up to 4-1/2 mills, and that is what it can do. It can't go any higher than that; 4-1/2 mills plus 1/2 a mill is 5 mills and therefore it prefers to keep the power itself.

A then could get the power; since B has bid it up to 4-1/2 mills, A would have to go to 5-1/2 mills to get the power from C.

B then says Why buy the power from C? I can get it at 4-1/2 mills and it costs me 1/2 mill; that's 5 mills, and I'll sell it to you for 5-1/2 mills.

Then the question is why should B interpose

eb14

itself into the contract to start with if it knows that the other fellow is going to force him up to his own generating cost? B would stay out.

If B stays out this becomes a game problem. B figures "If I stay out he might get it for 4," you see, "or he might get it for 3-1/2 at C's delivery point and get out to 4-1/2. Therefore, he beats me."

B then says "Well, what's really involved in this? Is this going to reduce my average system cost by one one-hundredth of a mill, or is going to reduce it by a mill?"

Well, of course if it's going to reduce it by a mill he'd bid for it. If it's going to reduce it by a trivial amount he wouldn't.

So B then is manipulating the market in order to deprive A of getting an advantage because by hypothesis B really couldn't bid the power away from A. He just couldn't. He couldn't give A a better deal. He would still have to get it at 5-1/2 or what he's willing to pay C for so A couldn't use the power. He's going to lose. He's never going to get the power.

Now if he's never going to get the power against C's competition and he enters it only to prevent A from getting a better deal, that seems to me to be a fact that he would have to consider. That's why A would want to have wheeling.

eb15

Q And would you therefore conclude that B's activity in that situation was destructive competition rather than constructive competition?

A Well, just from this one point, this one instance, I don't think I could conclude very much of anything. I conclude that B simply went ahead and simply entered into spoil the price for A and not doing any good for itself, and that would not seem to me to be very much.

Now if you were to say that A and B were in some competitive battle, they're in some competitive battle and the whole class of transactions of this sort were involved so that B would refuse to wheel, even if it couldn't make any deal for itself, even if it didn't need it, --

Q We didn't assume that, did we, Dr. Weiss?

A I'm trying to explain why this one isolated case would not allow me to conclude very much.

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2A mm2

CHAIRMAN RIGLER: Let's go back to your question.

Assume that despite Dr. Wein's answer, we would find that the economics of the hypothetical as you have posed it, meant that A never called upon B to fulfill its contractual obligation to wheel.

MR. REYNOLDS: You say did or did not?

CHAIRMAN RIGLER: Did not. That was your question, wasn't it?

MR. REYNOLDS: Yes, I just didn't hear you.

CHAIRMAN RIGLER: Wasn't your original question, why would A ever have occassion to call upon B to wheel, given the economies of the hypothetical as you posed it.

Where would we go from there?

The problem is, doesn't A still need that wheeling contract even if it never exercises its rights under that contract in order to keep a checkpoint on the price B will charge it for power?

MR. REYNOLDS: I will respond to that if you wish.

CHAIRMAN RIGLER: Yes.

MR. REYNOLDS: That would be so in the absence of a contract to provide -- let me get my A,B and Cs correct. That would be in the absence of a contract by B to provide power to A at its average system cost.

CHAIRMAN RIGLER: Wouldn't A need the wheeling contract in any event because A has no guarantee that B's

mm2

average system cost would not balloon from the 5 mill figure to even higher?

MR. REYNOLDS: But regulation in the industry does build in that saf eguard.

CHAIRMAN RIGLER: We are departing a little bit from the ordinary cross-examination here, but I think the colloquy is helpful and that is why we permitted it to go on so long. And I appreciate counsel's responses.

It seems to me that regulation is still going to allow B to recover its cost and make a profit. If B is operating inefficiently A could still find itself in a position of buying high-cost avarage power even if a regulatory scheme were in effect.

You have not satisfied me as to why A doesn't need that wheeling contract even though it never exercises its rights under that contract.

MR. REYNOLDS: We are talking now about a situation without the wheeling contract. If these prices balloon, then it would raise the price that it bid on C's power and in order to reduce its avarage system cost and thereby would bring the prices of A, B and C into equality.

CHAIRMAN RIGLER: Is that answer dependent upon perfect functioning of the regulatory scheme, or let us say the prompt functioning of the regulatory scheme to adjust prices?

mm3

MR. REYNOLDS: It would not depend on that.

CHAIRMAN RIGLER: Would it be influenced by the speed with which the regulatory scheme allowed B to change its prices?

MR. REYNOLDS: No.

MR. MELVIN BERGER: I believe Dr. Wein would like to add a comment.

CHAIRMAN RIGLER: He is welcome to.

THE WITNESS: I think when you bring the regulatory scheme in, you have to bring it in all or you have to not bring it in at all.

Presumably C is selling its power pursuant to a regulatory scheme. If its rates were 3 mills, it couldn't sell them at 10 mills, B would not be able to bid them up. The price is 3 mills. If this is a wholesale firm power transaction, then it would come pursuant to regulatory scheme. The price is 3 mills, B gets it at 3 mills no matter what his prices are.

So that is an inconsistent assumption in reference to yor answer.

On the other hand, if it is not a wholesale firm power but part of the things we call the bulk power transactions, the regulatory scheme would not even be involved.

MR. LESSY: I don't see how B's average price

would be C, and C is 3 if B were the larger. I am just trying to follow the hypothetical/even as given.

nm4

In other words, why would the larger system have a higher price than the smaller IOU under the A,B,C, regime. That throws the numbers way off.

CHAIRMAN RIGLER: No, A's price was 10; B's price was 5; and C's price was 3. That is their production cost.

MR. LESSY: Why is the production cost of B the largest, higher than C?

CHAIRMAN RIGLER: C may be an even larger. C may have hydropower.

THE WITNESS: It didn't matter what it was.

BY MR. REYNOLDS:

Q Dr. Wein, let me ask you a question that I meant to get back to and we got off on this discussion.

Was it your suggestion during the colloquy that we had here, that no large system should engage in an economy interchange transaction with a smaller system?

A No, that was not my suggestion.

Q You did say, didn't you, that an exchange of 10 megawatts with system C in this hypothetical was so trivial an amount as not to be detectable?

A It was trivial for B but not for C. That doesn't mean that C would not get a very great advantage and B only a small advantage.

mm5

Q All right.

And B is the large industrial-owned utility?

A Yes.

Presumably the transaction in the assumption was a very small amount which would satisfy C; not a very big amount which would satisfy B.

MR. SMITH: Don't you mean A, the buyer, not the seller?

THE WITNESS: I mean A, which would satisfy A, and not a very large amount which would satisfy B.

I am not suggesting they should not engage in any economy interchange if it is really economy for them.

BY MR. REYNOLDS:

Q Can you tell us, Dr. Wein, what interconnection points the CAPCO transmission has with non-CAPCO systems outside the states of Ohio and Pennsylvania?

A I suppose I can go through and check them out. It is not something I commit to memory.

Do you want me to go through that? I will just take the next 20 minutes reading them.

MR. MELVIN BERGER: Is there a reason for knowing precisely what interconnections we are talking about, Mr. REynolds?

MR. REYNOLDS: On page 104 Dr. Wein testified that the associated transmission called CAPCO transmission

mm6

is similarly planned and constructed, including interconnection points with non-CAPCO systems both within and outside the states of Ohio and Pennsylvania.

THE WITNESS: What about it?

BY MR. REYNOLDS:

Q What I'm trying to ascertain is what interconnection points the CAPCO transmission system has with non-CAPCO systems outside the states of Ohio and Pennsylvania.

A Well, Toledo has one with Michigan. That's one state outside. It's got an interconnection point with Michigan.

I'm not sure about West Virginia. I think one of the-- There may be something in West Virginia.

Michigan is the one that comes to mind.

CHAIRMAN RIGLER: Mr. Reynolds, may I interrupt you for a minute? I want to go back to our last colloquy discussion.

You told us that as little System A was considering the purchase of 10 Mw of power from big System B--

THE WITNESS: Big System C.

CHAIRMAN RIGLER: --big System C, that Dbig System C may not even want that 10 Mw because it is de minimis given the overall load on that system at any point. And the mechanics of going through the buy/sell transactions would not justify it because the effect on the system cost would not be seen until you reached, I think you said the

wb1

fourth decimal.

THE WITNESS: Yes.

CHAIRMAN RIGLER: Earlier, when Mr. Reynolds was asking you about staggered construction, he asked you what the addition of two or three megawatts would do from the little system to the staggered construction schedule of the big CAPCO companies, and you said that it could be important.

Is there any inconsistency in those positions, or can they be rationalized?

THE WITNESS: I think in my answer -- and you can check in the transcript, he said What would Pitcairn add? and I said Pitcairn would add 3 Mw. Well, is that important? I said, No, you have to consider the entire municipals forming together in an association, acting together, where it might be 200 Mw. It's in that connection that I put it.

Sure, Pitcairn wouldn't add anything. It would hardly be worth their while for either Pitcairn or CAPCO to consider that. But now when you're considering MELP and you're considering the associations such as AMP-Ohio, you are now pooling the loads of little ones and bigger ones and middle sized ones, and you can go up. And, as I pointed out in my direct testimony, if you assume the rates of growth for the municipals are the same as that, you might get in 1983 them having a load of maybe 800 Mw. That's a significant amount to engage in staggered construction.

wb2

CHAIRMAN RIGLER: I'm sorry to have interrupted, Mr. Reynolds. Please go on.

MR. SMITH: Along that line, too, wouldn't there also be a difference in evaluating capacity and in evaluating a short term, or a term purchase of power?

THE WITNESS: Yes, there would be a great deal of difference, of course.

End 2A

apb1
2B

MR. SMITH: The hypothesis we had, though, envisioned a continuous, or didn't it -- was it firm power or economy?

THE WITNESS: The hypothesis was vague and then when you put in the regulation, well, that had to be firm in which case you just couldn't bid up price.

BY MR. REYNOLDS:

Q Dr. Wein, on page 129 you make reference generally to evidence in other regions in which corporate pools and team pools operate which you indicate would support the proposition that members of those pools do not compete. What evidence did you have reference to there?

MR. MELVIN BERGER: Is this 129?

MR. REYNOLDS: That's right, starring on the sixth line from the top.

MR. MELVIN BERGER: Thank you.

THE WITNESS: Well, I don't think -- essentially I had in mind A.E.C. and Alabama Power, the corporate pools. I'm not sure offhand, now I think of the team pools.

Well, I'll let that stay as far as the corporate pools. I'm not sure about -- the team pools, Michigan -- the Michigan Pool, that's another team pool. There is lots of evidence in that case that they don't compete.

BY MR. REYNOLDS:

mpb2

Q And what evidence do you have in mind?

A Well, with respect to whom do you mean?

Q Let's take the Michigan Pool.

A Well, that happened three years ago. There were numerous documents I read having to do with Detroit Edison and Consumers Power which satisfied me then.

Q Did you examine that evidence again in preparation for your testimony here?

A No.

Q Did you read the decision of the Consumers Licensing Board?

A I did.

Q Do you know what that board's finding was with respect to competition in the Michigan Pool?

MR. MELVIN BERGER: Objection, I think it's irrelevant.

CHAIRMAN RIGLER: Overruled.

THE WITNESS: Well, the Board obviously didn't conclude what the Department was urging or they disagreed with the Department on numerous points.

CHAIRMAN RIGLER: Was the existance of competition within the Michigan Pool one of the issues decided by the Board?

THE WITNESS: I don't recall that now. It was a big fat opinion. I don't remember on that particular

mpb3

point what this board said.

BY MR. REYNOLDS:

Q And what evidence did you have in mind when you prepared your testimony with regard to AEP, for example?

A Well, I don't think the corporate pools have their subsidieries compete with each other --

Q And do you base that assumption on anything in particular?

A -- when they're contiguous.

Yes, it's essentially when you say anything, yes, it's based on my understanding as to why corporations in the electric power industry wish to merge. One of the reasons they wish to merge is to make sure that the companies do not engage in competition. I could not see, for example, in the Alabama case that Alabama competed with Georgia even though they could have for different customers along the boundaries between Alabama and Georgia and similarly for customers along the boundaries of Mississippi where they have a subsidiery and Alabama. They could have competed but there was no evidence to indicate that they did.

I can't see why a corporate pool where it has continuous electrical systems would wish them to compete with each other. It might, but it seems to me the motives are much stronger for them not to compete with

mpb4

each other rather than to compete with each other in this particular industry. It's not necessarily true of other industries.

Q On page 108 of your direct testimony you state that:

"..... a municipality which now builds a 100 mw thermal unit to serve its customers is an economic waste compared to its joint ownership of 10 percent of a nuclear plant with a 1,000 mw capacity...."

Do you see that?

A Yes.

Q If the municipality engaging in joint ownership does no more than put up 10 percent of the money required to build the 1,000 megawatt nuclear unit and thereby increases the transaction cost of constructing the plant, is that not an economic waste?

A Well, now, are you assuming all other things equal?

Q Yes, that's right.

A Now, you have to tell me what the magnitude of the transaction costs are, whether in fact they are substantial compared to the 100 megawatts or the 1,000. We're comparing two things, the question is which is more

mpb5

economic waste. If one dominates the other then it's not.

Q I'm not asking for the degree of economic waste, I'm asking if it is an economic waste.

A You have to give me the alternatives. Economic waste compared to what?

Q If there is an increase in the transaction costs of constructing the plant by virtue of their participation is that an economic waste as compared to their not participating?

A No, because there might be a decrease in transaction costs fighting cases before the FPC and other places. Transaction costs go up and down, you exchange one for another. Is it more expensive to engage in [illegible]ation with Pitcairn or to sell them wholesale power or admit them to a pool? I don't know which it is. If you admit them to the pool you eliminate some transaction costs and incur others.

CHAIRMAN RIGLER: Mr. Reynolds, is your question to the witness allowing for the savings in transaction costs achieved through cancellation of the single 100 mw unit?

MR. REYNOLDS: I'm sorry, I don't understand what you just asked me.

CHAIRMAN RIGLER: They cancel the small 100 mw unit in order to purchase the 10 percent interest in the

mpb6

1000 mw unit, that was your hypothetical, right?

MR. REYNOLDS: Right.

CHAIRMAN RIGLER: And your question was whether there was an economic waste through the increase in transaction costs associated with the 1000 mw unit and I'm asking you if your hypothetical allowed for the savings in transaction costs by virtue of the fact that the 100 mw unit was not being built.

Maybe I should ask the witness:

Is that a relevant consideration?

THE WITNESS: It is an extremely relevant consideration.

MR. SMITH: It goes farther than that. You have too many variables. Even comparing transaction one with transaction two you still don't have your "X" until you know what the efficiency of ten percent of 1000 is compared to the 100,000 unit. You don't have a workable equation until you fill all those out.

MR. REYNOLDS: Well, let's try it this way:

BY MR. REYNOLDS:

Q Dr. Wein, you drew the conclusion that a municipality which builds a 100 megawatt thermal unit to serve its customers is an economic waste compared to its joint ownership of ten percent of a nuclear plant with a 1,000 megawatt capacity, is that correct?

mpb7

A That's what I said.

Q Now if you had a parallel alternative available to the municipality of engaging in a joint ownership which would entail it to put up ten percent of the money required to build the 1000 megawatt nuclear unit and increased the transaction costs of constructing the plant, my question is whether that situation would not result in some economic waste?

MR. MELVIN BERGER: May I have the question read back?

(Whereupon, the Reporter read from the record as requested.)

MR. MELVIN BERGER: I don't understand the question. I don't understand what parallel alternative is being referred to, parallel to what?

MR. SMITH: Isn't the question simply this: That because of the nature of the municipality if the transaction costs are so unwieldy as to outweigh any efficiencies then would you not have an economic waste? Wouldn't that be true?

BY MR. REYNOLDS:

Q Will you answer that question?

A I think that's essentially what he's driving at because transactions -- Dr. Hughes uses that term but I am not particularly fond of it. In any case, what we're

mpb8

really saying is, Look, if you build a 100 megawatt steam plant, over the life of that steam plant it might cost you $5 million in discounted present value. If, on the other hand, you participated in the same megawatts, but now you've got a piece of a nuclear plant and over the 30 year life it will cost you $3 million, so you want to save $2 million. The question is if the additional other things, whatever they are and which he hasn't specified, but whatever you mean by transaction costs over a 30 year horizon whatever they cost comes out equal to $2 million, then there is no point in -- you've got to swap. If it comes out equal to $3 million you ought not build the steam plant, that's all.

That's what he's asking me, if the question is to have any sense.

Is that the question?

Q I think that's what Mr. Smith was asking.

MR. SMITH: What is your question?

MR. REYNOLDS: Well, I was leading up in that direction and it seems we reached an impasse and since you asked the question I'll move on.

CHAIRMAN RIGLER: Let's go on to something else, then.

BY MR. REYNOLDS:

Q Dr. Wein, let's assume that the small question is

mpb9

barred by law from joint ownership in the nuclear plant and can only obtain power from that nuclear plant by a unit power purchase. Also assume that the small system can construct a 100 megawatt plant with a cost to it, by virtue of its tax exemption, equal to or less than the cost of purchasing power from the large size nuclear plant. What do you visualize as the benefit to the small system of the unit power purchase?

A Let me get this clear. It can construct a 100 megawatt fuel plant cheaper than it can buy unit power, is that what you're saying?

Q Equal to or less than the cost of purchasing power from the large size nuclear plant.

A And it makes this calculation over the life of both plants, it's reasonably certain that this is the case, is that the idea? IT's betting on the prices of coal or fuel oil or whatnot?

Having taken all of these things into consideration it says it's cheaper for me to have the thermal power. If it came to these calculations I don't think it would actually enter into it, into that arrangement but that's quite a different thing from having the opportunity to do it because when you put the question realistically nobody can predict 30 years in advance, small systems or big systems. It may turn out that five years from now

mpb 10

that thermal plant is more expensive than expected because the price of coal, say, or natural gas or oil has gone up faster than they thought and faster than, say, the price of nuclear fuel has gone up and under those considerations, taking into account that they are a growing system, they might at that time wish to have the opportunity to enter into for some new nuclear that's around, they might wish to have at that time the opportunity to enter into -- to get access to it either through a unit contract or through ownership.

I guess this is what I have to say about that.

Q But if at the time that calculation had to be made the small system on the basis of that calculation determined that by virtue of its tax exemption the cost of the 100 megawatt plant was equal to or less than the cost of purchasing power from the large size nuclear plant then the nuclear plant would not be a unique resource, would it?

A No, that's not it because then if they had determined that that was the only basis then they wouldn't ask for a unit power contract, they'd ask for a piece of the plant and own it.

Q Well, the assumption was the small system is barred by law from joint ownership of the nuclear plant.

A Well, but under that case I suppose they would

mpb 11

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try to go through some arrangement such as AMP Ohio would not be barred by law.

ZC eb1

Q But if you were to accept my assumptions then the nuclear plant would not be a unique resource?

A Well, if you're telling me that they can't get it, if it is illegal for them to buy it in that way, then I suppose it's not a unique resource. It's unique but they can't get it according to law.

Q If the 100-megawatt unit were cheaper to the small system by virtue of its tax exemption, would there be economic waste in the construction of that 100-megawatt unit?

MR. MELVIN BERGER: Objection. I don't think that question hangs together.

CHAIRMAN RIGLER: I don't understand the question either. I'm also having some difficulty with the hypothetical, particularly since we assumed that it's the tax exemption that provides the sole basis for making the smaller plant cheaper. I assume it would always be a combination of factors to be evaluated in pricing your plant. I don't see where the line is going to lead you.

MR. REYNOLDS: Well, we'll still have an opportunity to show you I hope.

CHAIRMAN RIGLER: You certainly will, but if you can tell me in advance it helps me to follow where you're going and evaluate the evidence as we go along.

I do understand that you've argued through these proceedings that small systems can achieve all the benefits

eb2

that they could get through wheeling or participation by virtue of other benefits if the CAPCO companies are willing to extend them. Is that correct?

MR. REYNOLDS: That's right.

CHAIRMAN RIGLER: And it seems to me this question ties in with that line of thinking. Is that right?

MR. REYNOLDS: Well, this is another part. It's related to that but it's different.

CHAIRMAN RIGLER: Rephrase your current question. I'll listen to you for a while longer but I would like to have some indication that it's all going to tie together.

Off the record.

(Discussion off the record.)

CHAIRMAN RIGLER: On the record.

MR. REYNOLDS: To respond to your question as to where this fits in, it is Applicants' position that a small system can construct a small coal-fired facility with its tax exemption for a price which is equal to or less than the cost to the Applicants to construct a large nuclear facility.--

CHAIRMAN RIGLER: You mean on a per megawatt basis?

MR. REYNOLDS: On a per kilowatt-hour basis.

(Continuing) -- and that therefore the nuclear facility is not a unique resource, and just to round that out, which is not to suggest that the Applicants have any reluctance to give access to the nuclear facilities because

eb3

we've already made ourselves clear on that.

But in terms of the legal principles that the Department of Justice and the Staff seem to be relying on, it is certainly relevant and important to our case to establish the extent to which the nuclear facility is or is not a unique resource.

MR. SMITH: Don't you have a further point there, a related point?

You said that the costs would be less than the Applicants can build a nuclear facility, and if that is true wouldn't it also be true that the cost would be less than a municipal can participate? Therefore, any situation inconsistent with the antitrust laws would be attributable to the municipal's failure to build its own coal-fired small plant and not by its inability to participate in nuclear power.

I've said the same thing you're saying anyway but in this situation I'm putting the focus on the municipal's cost and not the Applicants' cost.

MR. REYNOLDS: Yes, I think I agree with you, with your statement. I think we've said the same thing, but I agree with the way you stated it.

MR. SMITH: It is the same. If they have equal or better options open to them, then it is not a unique resource and then there is no situation inconsistent with

eb4

the antitrust laws related to the nuclear plants.

MR. REYNOLDS: Right.

CHAIRMAN RIGLER: Mr. Reynolds, I don't think we put the conclusion to the witness and it seems to me that a good way to tie this down in your line of questioning, one way or another, would be to ask the witness to comment upon the conclusions as stated in the assumption in the exchange between you and Mr. Smith.

Either he's going to agree or disagree and he can tell you why in either case, and then we can move on.

MR. REYNOLDS: Okay. I guess my preference would have been to have the witness out of the room for the discussion and then run through the line, but that's all right, we've done it this way. Why don't we ask the witness.

MR. SMITH: You should be quite mindful of the conditions of the assumption, too.

THE WITNESS: Well, this is why I want Mr. Bloom to read it because I want to be mindful of the conclusions. It sounded like a very far-reaching conclusion and I think it was less so when you put in all the conditions.

CHAIRMAN RIGLER: Well, I think what he should read to you then would be Mr. REynolds' statement to me.

(Whereupon, the Reporter read from the record as follows:

"Mr. REynolds: To respond to your

eb5

question as to where this fits in, it is Applicants' position that a small system can construct a small coal-fired facility with its tax exemption for a price which is equal to or less than the cost to the Applicants to construct a large nuclear facility,--

"Chairman Rigler: You mean on a per megawatt basis?

"Mr. Reynolds: On a per kilowatt-hour basis.

"(Continuing) -- and that therefore the nuclear facility is not a unique resource, nad just to round that out, which is not to suggest that the Applicants have any reluctance to give access to the nuclear facilities because we've already made ourselves clear on that.

"But in terms of the legal principles that the Department of Justice and the Staff seem to be relying on, it is certainly relevant and important to our case to establish the extent to which the nuclear facility is or is not a unique resource.")

THE WITNESS: What was the conclusion Mr. REynolds stated?

MR. REYNOLDS: The one that he just read.

eb7

THE WITNESS: Please state it again, if there was a conclusion there. I thought all he said was this is our position.

CHAIRMAN RIGLER: Take that as the conclusion.

THE WITNESS: I see. Now what's the question?

CHAIRMAN RIGLER: Can you accept that position? Does that position make sense to you? Do you agree with it?

THE WITNESS: Well, let me first ask him what he meant by "we have already agreed to give access."

CHAIRMAN RIGLER: Assume that they have made available--

You state it, Mr. Reynolds.

MR. REYNOLDS: I think really that that is not relevant to the question that the Board is asking. For purposes of what the Board is asking let's assume for a minute that access has not been given to the nuclear facility.

THE WITNESS: Okay.

There are of course some major factual questions. THe first is whether in fact it is true that they could, municipals, because of their ease of getting money, the fact that they can get money at a lower rate of interest than Applicants, would get money --

CHAIRMAN RIGLER: That's the premise.

THE WITNESS: Yes. I would to point out that that is a premise but that there is a very severe factual

eb8

question as to the importance of it, given the economies of a 100-megawatt fossil fuel as against a 1,000-megawatt nuclear fuel.

The second question is even if that were true as a matter of construction, just simply the capital, as to his next factual question, that is, per kwh it would be cheaper, that is an enormous question about which there would be very grave doubt because if that were true -- now just note the implications of that. If it were true that the small steam plant could, on a kwh, simply because of a different -- let's say in terms of nine percent money as against six percent money -- be cheaper, then what that is implying is that the economies of scale have a constraint to a particular magnitude.

For example if we were to assume that the cost of interest were, say, 20 percent, which is a pretty large assumption, and the difference here were 33 percent, nine to six, what we're saying is there is only a six percent swing between a 100-megawatt unit and a 1,000-megawatt unit in capital cost.

This goes against all the --

CHAIRMAN RIGLER: But that's the premise.

THE WITNESS: Yes. But I wish to point out the things involved here.

Now the next thing that was not made clear was

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whether this hypothetical steam unit was going to get all the other access. Was it going to get equal reserve sharing? Was it going to get its wheeling so that it could put together the options that it needed, and so on and so forth? Was this there? That's not clear.

Because if you simply build a 100-megawatt steam plant and that's your largest unit, you then have to have a reserve standard of 100 megawatts down, the largest unit down. You have to have 100 megawatts reserve. If you don't get equal reserve sharing or you don't get wheeling, things of that sort, you really don't have anything on which you can base it.

So simply to say that they can build it cheaper and they can operate it cheaper without bringing in all these assumptions makes that proposition extremely suspect, and of course they left that open-ended.

MR. SMITH: That is subsumed in the assumption that the cost per kilowatt is less.

THE WITNESS: Then let me simply put it and state the assumption very clearly.

I have assumed that the 100-megawatt steam plant is so served and the price of coal and everything else, or whatever it's going to buy is such over the lifetime -- the expected life of this for 30 years, and solely because of your tax advantage this thing is going to come on. We're

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going to give you all the other things: wheeling, reserve sharing, and everything else.

If that is subsumed-- Now Mr. Smith says it is subsumed, and you're shaking your head and saying it is not subsumed.

CHAIRMAN RIGLER: I don't think the question of other services is included in the premise. The question is addressed to whether the nuclear facilities are unique as compared to other generation units.

Is that correct, Mr. Reynolds?

MR. REYNOLDS: That's correct.

THE WITNESS: Unique? That's not the question, if I may say so. The question is as to whether it's unique with respect to its cost-saving aspects and if you're talking about cost-saving aspects then we'd better get the assumptions under which the two are involved.

If the assumption is forget about wheeling, forget about reserves, forget about anything, I've got an isolated steam plant, buy a part of it, it's cheaper than anything you fellows can do, by definition it's not unique and what's the purpose of that sort of assumptions?

I mean I can assume anything I want, so long as it's not inherently self-contradictory. It is not inherently self-contradictory that a steam plant of the sort that Mr. Reynolds hypothesized could produce it. It's

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just a question whether those assumptions go into the real world or they don't.

I can assume that I can make a plant that is going to burn peanut shells. There is nothing inherently contradictory about it.

MR. SMITH: I am still a little bit troubled, just for neatness, that your hypothesis goes as a relationship between the small muni's, the small plant, and the Applicants' cost in the big plant. I still think you have sort of an imbalance there, and I think that the tendency is to answer-- I think you probably answered as if the hypothesis were the muni's cost in the big plant, not the Applicants' cost, although I think both points bear measurement.

MR. REYNOLDS: Well, Mr. Smith, --

MR. SMITH: I don't want to cause you any more complications but I do think it sort of dangles there at end where you're comparing the muni's low cost in the coal-fired with the Applicants' high cost in the nuclear. I think that's a valid point, but it's only part of it.

MR. REYNOLDS: Is your question now-- I'm not sure what you're asking me.

MR. SMITH: I don't even have a question. I'm just telling you that --

MR. REYNOLDS: I think we're looking at a

eb12

competitive situation.

MR. SMITH: Yes.

MR. REYNOLDS: And what we are trying to show is that within the parameters of this competitive situation that the small municipal systems are not going to be competitively disadvantages by virtue of the fact that they cannot get, let's say, access to the nuclear plant in the event that they can, at a lower cost, build their own coal-fired plant that will meet their needs.

MR. SMITH: Right. And that's a valid, arguable point.

My point is that there is also the other side of it which is different now upon reflection and that is when you compare the muni's cost on both the small and the large you still have an arguable point because of its own foolishness if the municipal fails to take advantage of its best options then any anticompetitive effects are attributable to the municipal's shortcomings and not the structure of the industry, even though they may perish in the process.

MR. REYNOLDS: That's right.

MR. SMITH: Which is a definitely different point than you raised.

THE WITENSS: Is this a hypothetical assuming --

MR. SMITH: Yes, it's all hypothetical.

THE WITNESS: I understand. But is this hypothetical

eb13

assuming, for example, that the actual rates of interest which they're comparing-- This thing is talking about some tax advantage or something of the sort, that if I built a 1,000-megawatt coal-fired plant as against the same interest cost as a 1,000-megawatt nuclear plant that the coal plant is more expensive than the nuclear plant?

MR. SMITH: My point is simply this:

Let's assume the Applicants, corruptly, for the worst motives and all, denied the municipal utilities access to the nuclear power plants. And assume further that they could have helped themselves by other courses of action. It's their responsibility to do that and if they fail to it, that is a proximate cause of any anticompetitive effect.

THE WITNESS: Yes, I'm agreeing with that. If in fact they had alternatives that were clearly superior, if in fact they did and they were clearly superior and they were just too dumb to take it, well, that's tough.

But now I wanted to find out, because in testing finally whether this is inherently -- Without even going into the figures as to what it cost to build a nuclear plant or a coal plant, I just want to know whether if I build a fossil fuel plant of 1,000 megawatts, are you assuming anything as to whether it would be as efficient as a 1,000-megawatt plant nuclear, less efficient, equally efficient, more efficient, no assumptions at all? Is that it?

eb14

MR. SMITH: I don't think there's a question now.

MR. REYNOLDS: The tables are turned now on who is asking the question and who is getting the answers.

CHAIRMAN RIGLER: Right.

Has the witness' response made his position clear with respect to this line of questioning?

MR. REYNOLDS: I think it is as clear as we're going to get it.

CHAIRMAN RIGLER: All right. Then why don't we break here for lunch and pick up with a new line after lunch. We'll be back at 2:10.

(Whereupon, at 1:10 p.m., the hearing in the above-entitled matter was recessed to reconvene at 2:10 p.m. the same day.)

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AFTERNOON SESSION

2:10 p.m.

Whereupon,

DR. HAROLD WEIN

resumed the stand, and having been previously duly sworn was further examined and testified as follows:

CHAIRMAN RIGLER: Let us proceed.

CROSS-EXAMINATION (Continued)

BY MR. REYNOLDS:

Q In providing access to the benefits of coordination a small system by requiring any of the Applicants in this proceeding to enter into a transaction which would not result in a benefit sufficient to outweigh the transaction cost to any of the Applicants, that is that the transaction would not reap a net benefit to any of the Applicants, would you regard a refusal by any of the Applicants to engage in such a transaction to be an act inconsistent with the antitrust laws?

A If the entities desiring this access were willing to pay the others the cost of their transaction costs plus whatever would be a fair rate of return involved in that and they still refused, then I would under the conditions of this case, say that it would be inconsistent.

And by benefits here I exclude what a company providing the access might consider a benefit, such as it

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might increase the state of competition or such that I might not be able to sell them as much power as I ordinarily would, or that they will stay in business longer than they ordinarily would.

The entities which was giving access might include those as detriments, very severe detriments. I am excluding that sort of consideration.

Q At the bottom of page 109 and going over to the top of page 110, you indicate that:

"Increasing actual or potential competition between the charter members and the newcomers referring back to CAPCO is unfortunately viewed by the charter members as a cost to them."

What is the basis for that statement?

A Well I think my whole reading of testimony -- after all now, I have been involved in -- this is the third case that I have been reading Dr. Pace, the third time. And I have gone through the arguments here and it seems to me that that is their view.

If it were not their view I could not understand the refusal. I just couldn't understand why anybody would refuse a transaction in which you would be paid all the costs that were required for you to make that transaction, plus they pay a rate of return.

If you refuse that, I find no other basis.

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Now it would have been perfectly true not only in CAPCO, but some of the people in CAPCO about -- how bad it is to have public entities compete with private ones because they are subsidized, et cetera, et cetera. And it is simply this whole ambience, which is what I had in mind.

Q Is it your understanding Dr. Wein that any of the small municipal systems of the CAPCO area have offered to pay the transaction costs plus a reasonable return to any of the Applicants for the -- in exchange for the benefits of coordination?

A I don't know.

Q You have included in your testimony, an extended discussion of electric utility efforts to capture industrial markets.

Do you mean to imply that it is inappropriate for utilities to attempt to win these markets?

A No, not in that discussion.

The question is how they attempt to win them and the effects of their winning them, things of that nature.

Q Do you -- strike that.

Are you suggesting in your direct testimony that the private electric utilities have gone about the business of capturing the industrial markets in an improper manner?

MR. MELVIN BERGER: Can I ask what part of the testimony Mr. Reynolds is referring to?

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MR. REYNOLDS: All right.

I am looking at page 59 going over to 60, 61, 62.

THE WITNESS: Well, I just read 59, 60 and 61 and far from historical discussion, I think what I am suggesting there is that the acquisition of these industrial plants lessen possibilities of municipals to coordinate with them. And alternatively, the acquisition of municipals lessen the possibility of industrials to coordinate with them and that the whole process was cumulative and reinforcing.

Now I think as I tried to argue that the standard of Section 7, and the basis of trying -- the Congressional basis of Amended Section 7, the Congressional basis was to try to halt these measures of acquisition in their inciplency so that they don't tend to monopoly.

Now that of course is something, which if this case had gone back to 1950, and had someone attempted to challenge mergers and acquisitions both of industrials as well as municipals, it may well have presented a very interesting Section 7 question.

Now if your question is, is this process illegal, I don't know because it hadn't yet been litigated. This question so far as I know has not been litigated, but it seems to me as an economist I am simply giving my judgment that this was a self-reinforcing process which tended to make a competitive alternative less and less feasible.

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Now in addition to that as I have referred to the planning documents of CEI, they obviously feel that too and they are very anxious to acquire industrial self generation. They are very much upset. I recall one document -- we hear a report public power is putting in 10 megawatts. Why should that upset them? They have a program laid out for the acquisition of industrials if they can do it, very detailed, and it involved all sorts of things.

All this is in my testimony. But it is only in that sense in these pages that I am referring to the industrials.

Now I could, of course, refer you to Mr. Kampmeier's testimony on price squeezes involving industrials. That opens up another arena. It opens up the arena as to whether the industrial contracts in fact are discriminatory and whether they are based on value of service and in this sense impose a burden on all the others in an industry which is to make a particular fair rate of return.

I have argued that, and I am prepared to argue that. I haven't particularly mentioned it in this testimony.

Q Well, do you have any -- strike that.

Would you suggest, Dr. Wein, that there is anything inconsistent with the antitrust laws for an electric utility to seek to compete with industrial self generation in order to displace the industrial self generation by

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providing the power more economically than the self generation could do it?

A Well there is a question as to whether it is discriminatory and whether, in setting rates for the industrial self generator, it is setting rates below what it would -- what is required, for example, to yield a fair rate of return, and possibly even below cost. Setting rates to the industrial even below their own cost of making it and recouping the revenue by setting higher rates elsewhere. And in this manner, able to eliminate the competition of, say a municipal which is not able to do that because it doesn't operate in any different areas, or it does not have the financial strength to do so.

It would seem to me that setting rates below cost would be something which I would consider illegal.

Q Did you take a look at the industrial rates of the Applicants?

A Yes, I did.

Q I thought yesterday you said that you couldn't understand those industrial rate schedules.

A I did. It is very difficult.

Nobody can really understand them until you start to take a piece of paper and pencil and work out the different rates.

I note one thing, for example, that industrial

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customers have uniform power load factors of .85. Now anybody that knows anything about this knows there is no uniform power rate -- power load factor of .85. It is going to vary from plant to plant, from industrial customer to industrial customer and so on.

Now insofar as this doesn't reflect the costs of the different plants, it doesn't reflect the costs which the rates are supposed to be based on, that indicates an element, for example, of discrimination.

Now I don't have to look at the detailed rates to know that industrial rates are quite low and that if one were to take all the considerations into account it may be that they should be higher, and maybe higher than municipal rates which are of equal volume and have other desirable characteristics such as Mr. Kampmeier pointed out. I don't want to repeat his testimony.

So that I don't have to study each rate to come to the conclusion that I am coming to. All I have to know is that the utility industry and the design of their rate structures are being inherently discriminatory because they have taken a rate structure design which is discriminatory even though that is approved by the regulatory commissions.

The mere fact that they are able to do this indicates that they have monopoly power and there is a great deal of economic testimony to indicate -- economic articles,

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economic literature to indicate that a public utility firm operating under a regulatory constraint will find it profitable to give some customers rates at below their costs, even below their marginal costs.

MR. SMITH: If they have monopoly power, why do they do that? Why don't they charge as high as they can?

THE WITNESS: Monopoly power -- there is an economic theorem, in fact it is very similar to the lamda theorem in economic dispatch -- that if you are a monopolist you have a choice of charging a uniform monopoly rate, a uniform monopoly price, the highest price. Everybody pays that high price.

Or, there are different elasticities of demands within the market. You will make even more profit if you charge a different price. Thereby, people who have the least elasticity get the highest price and people who have less, they get a lower price so that the marginal revenue from all the markets are equal.

That would give you the maximum you could make, or the minimum you can lose.

It is that discriminatory structure which a discriminating monopolist would use.

Now, why do they -- how is it possible that they can make money by selling below cost to a particular firm, let's say an industrial?

That comes about, Mr. Smith --

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MR. SMITH: That isn't exactly my question.

My question is, in a given market will you have an industrial?

THE WITNESS: Yes.

MR. SMITH: Why do it?

THE WITNESS: Why do what?

MR. SMITH: Why sell for anything less than you have to?

THE WITNESS: Well for this reason:

If you are -- you see, the public utility companies, every one of them is subject to some rate of return regulation which goes over their whole system. It is not out of any particular customer. It is on the whole system.

If you are saying you are going to earn 9 percent, you are going to earn 9 percent and the regulatory agency doesn't look into each particular market -- though the FPC has done so in recent years, the FPC doesn't look in each particular market. Therefore, if are constrained to earn a maximum, let's say it is 8 or 9 percent, the question comes up, is it profitable for you, if you can discriminate by charging in those areas where the elasticity demand is very high, a very low price in order to make it up in another area.

Now the answer is yes, it would, because you can increase the rate base thereby.

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Now I can refer you --

MR. SMITH: You are not exercising monopoly power in an area where you have a higher elasticity of demand?

THE WITNESS: Oh, yes you are. You are exercising monopoly power, because if you didn't have monopoly power you couldn't take into consideration elasticity of demand of any particular class of customer. It is only when you have monopoly power that you are able to do this.

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You have monopoly power if you sell below cost. Nobody could sell below cost if it didn't have monopoly power and was able to recoup the revenue in some other market. You do it for a particular reason. One of the reasons is that of course you could expand your rate base, simply put. The theoretical argument is a lot more complex. Another reason is you could run out on the customers who don't have that particular thing. They're not in the market you are, they're not spread all over the country or the market area that you're in, so you can run them out.

I can read you the two basic propositions which this literature has formed, if you would like me to read it.

MR. SMITH: No, I think you have answered. Thank you.

BY MR. REYNOLDS:

Q Do you know whether any of the Applicants, Dr. Wein, have ever charged an industrial rate that is below their cost of service?

A I have not made any -- well, just a minute, now, just a minute. I shouldn't answer that that quickly.

There are some numbers in here that gave me some -- made me --

Q What are you looking at?

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A I'll tell you when I find it. It's the Attorney General's report.

(Pause.)

Okay, I'm looking at Ohio Edison, question 11A:

"The Ohio Edison Company average cost bulk power supply is as follows: ...."

At the side of generating facilities, finally, total cost in mills per Kwh 9.32. This is for the period ending, I guess, 1973, so it's the average for 1973.

"At the delivery points from the primary transmission backbone system 345 and 138 kv..."

An industrial customer will take it at most at 138 kv. It isn't going to take it at 345.

"Total cost in mills per Kwh 1207..."

Now, the average, if I can look at the Ohio Edison 1973 FPC Form 1 and we'll just compare these two numbers.

MR. MELVIN BERGER: May we have a moment, please, to get that?

(Pause.)

THE WITNESS: My recollection is the average industrial is --

(Handing document to the witness.)

THE WITNESS: Here is something called

mpb3

"Commercial and Industrial Service,Water,Heating,Large Light and Power,Schedule 25A."

BY MR. REYNOLDS:

Q Where are you reading from, Dr. Wein?

A I'm reading from FPC Form 1 "Ohio Edison Sales of Electricity By Rate Schedules" page 414.

MR. MELVIN BERGER: For the record this is Exhibit NRC-165.

THE WITNESS: Here you have rate schedule A, the average revenue in kilowatt hours 11.9,this is also '73. At the delivery point it's 1207.

Here's another one. I can read it. It's industrial power 10.9; it's rate schedule 31 I believe.

BY MR. REYNOLDS:

Q I'm sorry, what schedule did you get your figures from again?

A Page 414.

Q The 1973 Ohio Edison FPC?

A Yes.

Now you must compare these rates with,of course, the other rates, residential, commercial, lighting, so there are two at least that are below the cost of Ohio Edison and its primary delivery point at 345 and 138 kv.

I could look through the others but these numbers struck me as I went through.

pb4

Q And that's the basis, then, on which you conclude that Ohio Edison, for example, charged industrial rates below the cost of service?

A I've just given you two rates.

Q What you have given me is the basis for your conclusion?

A I've given you two rates in this particular instance.

CHAIRMAN RIGLER: To support the conclusion?

THE WITNESS: To support the conclusion which I made on theoretical grounds.

BY MR. REYNOLDS:

Q So the answer is yes?

MR. MELVIN BERGER: What is the question?

BY MR. REYNOLDS:

Q The question is whether the two rates you just pointed me to are the basis for your conclusion that Ohio Edison charges an industrial rate below its cost of service?

A I have given you two instances in which it has done so. I can not tell from the others, for example, because I haven't been able to get the voltages to see what it is. Some of these industrial rates are in voltages and I would have to go through and look and see what they charge at different voltages.

mpb5

But that's enough, it seems to me, to give a good deal of -- to give support to the theoretical proposition.

In this book it's at 345 and 138 and it's lumping them together, 12.5. Suppose they had a rate purely at 138, it's going to be higher than 12.5.

Q Now, before we got into that diversion I had asked you a question you have not yet answered. Let me ask you again and get an answer to it.

A I am not sure what diversion you are talking about.

Q I'll ask it again. My question was whether in your view you consider it inconsistent with the antitrust laws for an electric utility to seek to compete with industrial self-generation in order to displace industrial self-generation by providing the power more economically than self-generation can do it?

A I think I have answered that.

MR. MELVIN BERGER: I would object to that as asked and answered.

CHAIRMAN RIGLER: Sustained.

BY MR. REYNOLDS:

Q Have you made any studies of the rate of return allowed to electric utilities under regulation compared with the rate of return earned by most large

apb6

manufacturing companies capable of installing their own generation?

A. Are you asking me did I make a study? I have seen all sorts of comparisons. I, myself, didn't make a study.

Q. What do those comparisons show?

A. Well, it depends on what years you are talking about. For example, if you take the period from roughly '50 to '60, say the post-war period, you will find that the rate of return for the steel industry was on the average over the decade less. That's an industry which is capable of making its own generation. It was less than that of the electric power industry, I believe, as a whole.

Then, during the decade from '60 to '70 I think the gap narrowed. In the steel industry and the aluminium industry, for example, it started to move up somewhat faster.

I don't know where that gets you, but that's about what it is, as I recall. They vary obviously. The others are very cyclical compared to the electric utilities.

2D

2E eb1

Q Do you know why small municipal and small private systems didn't purchase industrial self-generation equipment of the industrial plants located in and around the environs of cities which had municipal and small systems as you indicate on page 60?

A I just didn't get that question.

Q You indicate on page 60 that many of the self-generation plants were in and around the environs of cities which had municipal and small private systems. Do you know why it is that those municipal and small private systems did not purchase the generation equipment of the industries?

A Why the municipal systems didn't purchase the generation equipment of the industries?

Q Of the industrials located in and around the environs of those cities?

A I'm not sure they were available for purchase in those days.

Q Well, how did the private utilities purchase them?

A Well, the private utilities purchased the whole-- If you go back to the early days, which this is talking about, for example, Toledo Edison, they purchased a whole electric railroad system. They didn't just purchase the industrial equipment; they purchased the whole system. They got the load of the system; they got whatever the industrial

eb2

generation was in that system.

And then they purchased a lot of municipal systems and by doing all these sorts of things they were able to grow very much larger and therefore they were able to install larger generation equipment than small industrials were able to do.

But as I indicated, roughly by 1920, according to Kampbeier, you still had roughly an equal amount of industrial self-generation as against utility self-generation. In the early days you had more.

By now of course you have only maybe five percent of industrial self-generation compared to that. That's because you now have these very large utility companies which by accumulating all these loads over a long period of time can put in very much larger units than even the biggest of the --

CHAIRMAN RIGLER: But that's way off the track of the question. The question was:

For the industrial plants outside of the small cities, do you know why the cities didn't buy the industrial equipment?

THE WITNESS: He doesn't give me a time frame and the answer is even if he gave me a time frame, I wouldn't know the details of every reason why they didn't or why they did.

eb3

CHAIRMAN RIGLER: Okay.

BY MR. REYNOLDS:

Q And similarly you don't know the details of why the private utilities did or did not purchase certain industrial self-generation systems. Is that correct?

A If you mean I don't know the details of the transactions on every one of those things, --

Q Right.

A -- I submitted evidence which was stricken in this proceeding which would give you the details of the cost and that was a relevant detail for me. I didn't have to know any other detail.

Q Dr. Wein, at the bottom of page 61 and over to the top of page 62 you indicate that the process of acquiring industrial self-generating plants led to:

> ". . . .the capture of virtually the entire retail and wholesale markets for electricity in many states and regions of the country by very few large private vertically integrated utility companies."

Would you tell us which states you had in mind, and what percentage these companies have of the total generation and of the wholesale and retail markets in those states?

A Well, I've given those kinds of figures in the Consumers case for the State of Michigan.

eb4

Q You say I can find that information in your testimony in Consumers? Is that what you're telling me?

A I say I've given information-- No, not about all the states. I wasn't really concerned with all the states.

But if you look at it you will find that. . . .

(Pause.)

Q What is it you're looking at now, Dr.Wain?

A I'm looking at Lindseth's speech before the EEI convention in 1965 and I'm trying to see if he has some numbers in here.

Q Is that the source of the information that you based your statement on that I read to you from the bottom of page 61 and carrying over to page 62?

A Before you asked me another question. Let me see if I can find it.

(Pause.)

MR. REYNOLDS: Mr. Chairman, could I have an answer to that question?

MR. MELVIN BERGER: There's a question presently pending. I think it's unfair to ask the witness a second question on top of the first one.

THE WITNESS: Well, let me put it this way:

I can't put my finger on that particular statement but we know that as of 1972 there were 405 private systems. I know from the report made in 1912 that there were many

eb5

thousands of them. Those 400 private systems have 77 percent approximately of the total generating capacity of the entire United States, so you have then-- Given the 50 states, you have a small number of systems which have displaced a very larger number of systems which, if you go back, say, to the turn of the century, are many thousands.

Essentially it's that kind of reasoning. I feel fairly sure that I could go through it state-by-state and show it may be from two to seven or eight which are the dominant systems whereas if you go back in time there are a great many others, a great many more in those states.

MR. REYNOLDS: I'm going to move to strike that as totally non-responsive to the question.

CHAIRMAN RIGLER: You asked him the source of his information. He's given it to you.

MR. REYNOLDS: As to the statement that he made with regard to self-generation industrial systems, that in many states and regions of the country these systems have been captured by very few large private vertically integrated utility companies. His response did not go to that at all.

THE WITNESS: Where is that statement I'm supposed to have made? I understood you to say-- I didn't understand the self-generating systems to be in your original question.

Now what statement are you referring to?

MR. REYNOLDS: I think the problem is maybe you ought to listen a little more carefully to the question.

BY MR. REYNOLDS:

Q Look at pages 61 and 62.

MR. MELVIN BERGER: I think Mr. Reynolds' comment is improper. I think the witness has been trying to be responsive.

THE WITNESS: I might add if I got some clear questions I could respond clearly, and if there weren't all that stage whispering down there I could keep my attention focused a little more clearly.

CHAIRMAN RIGLER: All right. That's enough.

You were reading, Mr. Reynolds, from --

MR. REYNOLDS: The bottom of 61 and carrying over to page 62.

CHAIRMAN RIGLER: And you say your question was posed in terms of self-generation, and Dr. Wein indicated that he did not understand the question to refer exclusively to self-generation.

Is that the controversy?

MR. REYNOLDS: I guess that's the controversy.

Now I will go back and restate verbatim what my question was if it will clarify things.

CHAIRMAN RIGLER: All right.

BY MR. REYNOLDS:

eb7

Q Dr. Wein, you indicate on the bottom of page 61 and the top of page 62 that the process of acquiring industrial self-generating plants led to:

> ". . . .the capture of virtually the entire retail and wholesale markets for electricity in many states and regions of the country by very few large private vertically integrated utility companies."

A Now that is of course a mischaracterization of what I've said and I should not have given you credit for saying what I thought you said.

My statement says:

> "The process was initially reinforcing and cumulative, and it led to the monopolization of generation and transmission and thus the capture of virtually the entire retail and wholesale markets for electricity in many states and regions of the country by very few large private vertically integrated utility companies."

CHAIRMAN RIGLER: What process?

THE WITNESS: The process of acquiring-- As I said, the process of acquiring in the early days the industrial plants and the process of either buying up the generation of the industrial plants. It's the whole business all put together.

eb8

The point I'm trying to make is that this process over this entire period was cumulative and it was self-reinforcing and it led to the wholesale and retail markets being captured by a relatively few number of private companies. Now it's that that I'm trying to explain.

BY MR. REYNOLDS:

Q And which states did you have in mind?

A I've already answered that, the State of Ohio and the State of Pennsylvania amongst those, the State of Michigan; pretty nearly all the industrial states in the United States; the State of Alabama where there used to be lots of small textile mills with self-generation; there are still a few left.

2F mml

Q What is the source of the data on page 80 on which you base your assertion that industrial self generation in the service areas of the CAPCO companies has declined?

A I think I gave a long talk about that. The exploration I think was stricken. But I can give it to you.

Oh, is it still there? Well it is given there.

Q I am just asking what the source of the data was, Dr. Wein.

A Which data do you mean?

There is a lot of data there that come from different sources. Now which do you mean, all the data in the answer to Question 40?

Q On page 80.

A Yes.

Are you talking about the entire iron and steel industry?

And then I am talking about the states of Ohio and Pennsylvania, and I give you exactly -- on page 81 it says:

"The source of iron and steel production and electricity use from the Annual Statistical Reports of the American Iron and Steel Institute."

It is stated there on page 81.

Q And that is where the data came from for your conclusion with regard to the CAPCO companies?

A Well I explained exactly what I had done. That is where the data came from.

Q Is that for the other industrial self generation in addition to the steel industry in the CAPCO areas?

MR. MELVIN BERGER: Is what?

MR. REYNOLDS: The data that he has referred to at the bottom of page 81, the source.

MR. MELVIN BERGER: Could I have the question read back, please?

(Whereupon, the reporter read from the record as requested.)

MR. LESSY: Mr.Reynolds you never identified the lines on page 80. which you were seeking support of. I don't have the lines either.

What lines would that be? That might be helpful.

MR. REYNOLDS: Lines 9 and 10 from the top on page 80. Dr. Wein has told us that industrial self generation in the service areas of the CAPCO companies has declined. Then he gives us an example with regard to the steel industry.

And what I am trying to find out from Dr. Wein is the source of his information which would lead him to testify in this proceeding that industrial self generation in the service areas has declined.

BY MR. REYNOLDS:

Q Can you answer that?

mm3

A Well the argument is right there. I can't say it any better.

Q All right.

Let's take your data for a minute, Dr. Wein. On page 80 you indicate that in 1947 the United States steel industry generated 9.2 billion kilowatt hours.

Is that correct? Do you see that?

A Yes.

Q And then on the same page you indicate that in 1973 the United States steel industry generated 11.6 billion kilowatt hours.

A Well now you have got to read in between to see why that is really not an increase in the proportion. You have got to read in between, Mr. Reynolds.

Q So are you telling me that those figures do not represent an absolute increase in the total generation of the steel industry between 1947 and 1973 of 2.4 billion kilowatt hours, or 26 percent?

A Please state the question.

CHAIRMAN RIGLER: Well let's not waste time. Obviously they represent that, Mr. REynolds. In absolute terms of course there is an increase. You start out with 9.2 and you increase it to 11.6.

Now let's not waste time on it.

mm4

BY MR. REYNOLDS:

Q Well then I would like to know what the basis is for the statement that industrial self generation in the service areas of the CAPCO companies has declined.

We are given data that show that there has been an absolute increase --

A I will read the whole --

Q -- to support that there has been a decline.

MR. MELVIN BERGER: I will object as asked and answered by Question 40.

CHAIRMAN RIGLER: I am going to sustain it on the basis that the witness has stated two and three times now that he relies on the remainder of his answer in No. 40.

Now if your point is that steel generation alone would not account for all of the industrial generation in that area, the witness is stuck with his answer. And if the answer is defective, so be it.

But there is no point in arguing with him over it. You can also argue that in absolute terms the self generation in the steel industry itself let up.

He indicates however that it is a percentage of load. Self generation in the steel industry declined, and that is his answer. Going back and forth is not going to advance the ball. If you want to assert that he cannot support his answer to Question No. 40, yes, industrial self generation

mm5

in the service area of the CAPCO areas has declined. You are able to make that argument now because he has told you exactly what he relies on to support it.

If he doesn't have enough support, that is his problem.

BY MR. REYNOLDS:

Q Dr. Wein, did you make any analysis of CEI's purchase of the four 46,000 kilowatt steam generating units of the Union Carbide Company to which you refer on page 83?

A I have made no analysis of it.

Q Do you know what the reason may have been for Union Carbide in selling its capacity?

A No, I don't.

Q On pages 84 and 85 of your testimony you refer to a plan by CEI to replace industrial self generation.

Do you have any reason to believe, Dr. Wein, that CEI, it has in any way exerted undue pressure on the industrial customer to sell whatever generation they may own?

A I don't know what pressure CEI has exerted on its customers, undue or otherwise.

Q You are not intending to suggest at page 93 of your testimony, Dr. Wein, that tethere is something wrong or inconsistent with the antitrust laws with Ohio Edison purchasing power from Republic Steel Corporation, or from Youngstown Sheet and Tube Company, are you?

mm6

A I think my testimony speaks for itself.

MR. REYNOLDS: Could I get a response to the question, please?

CHAIRMAN RIGLER: Answer the question, please.

THE WITNESS: I thought I had.

He says page 93. He doesn't tell me what on page 93. All I can say is my testimony speaks for itself on page 93. It is a description.

BY MR. REYNOLDS:

Q And 93 is intended as nothing more than a descriptive account of the purchases by the Applicants of power from certain industrial customers, is that right?

In other words we should not read anything more into it other than it is a narrative that you set forth?

A You should on page 93 read what page 93 says. It is simply describing things.

Now at the bottom of page 93 it is now contrasting what would be the case with an isolated generating utility, whether it could do the same sorts of things.

Now this is what the testimony says. It says the isolated utility couldn't quite do the same sorts of things and therefore it gets some disadvantages through isolation.

That is all the testimony says, and I can't say anything different.

Q All right.

mm7

At the bottom of page 97 and carrying over to page 98 of your testimony, you state, "Some residential and commercial retail customers may prefer to buy interruptible power rather than firm, but the choice is never available to them since in the CAPCO service area no such rates are available."

What is the source of your information for that statement?

A ON the retail and commercial?

I looked through sample schedules, sample rate schedules for retail and commercial. I couldn't see any interruptible rates filed.

Q Why did you amend this part of your testimony?

A Where?

Q You added residential and commercial before the words "retail customers."

A Because an industrial, obviously, is a retail. And at this point I wasn't think of that. Some industrials have interruptible, of course.

Q Will you define for me what you understand to be an interruptible service?

A Interruptible service is service which gives you power if and when it is available. If there is an emergency on the system and you are on an interruptible schedule, you will probably be the first one to be shed.

mm8

Q All right.

And on page 93 you state correctly that Duquesne Light does offer an interruptible service rate. And also CEI has four customers with interruptible service; Union Carbide, Sabin Chemicals, Jones & Laughlin Steel and NASA.

MR. MELVIN BERGER: Where does that appear in the testimony?

BY MR. REYNOLDS:

Q Do you know whether that is the case, Dr. Wein?

A I have not examined all the interruptible rate schedules. If you tell me that is it, I am perfectly willing to accept it subject to whatever use you wish to make of it.

Q Do you know whether any electric utility offers an interruptible residential rate?

A Well I said I couldn't find any in the CAPCO schedule.

Q Anywhere in the United States do you know of one?

A I did not examine all the residential schedules in the United States.

CHAIRMAN RIGLER: Do you know of any?

THE WITNESS: I don't know of any.

BY MR. REYNOLDS:

Q Do you know of any with respect to commercial rates?

A No.

mm9

Q Do you know if such service would be technically feasible if for example only one customer on a block desired such service?

MR. MELVIN BERGER: Objection.

This seems to be getting to an engineering problem.

CHAIRMAN RIGLER: Overruled.

THE WITNESS: I am not sure whether that would be feasible or not. It would depend on the nature of the supply, how in fact the power was gotten to him. And interrupting him you might have to interrupt 50 others. So I really don't know.

BY MR. REYNOLDS:

Q Are you aware of any studies that support your suggestion that residential customers might prefer interruptible service?

A It doesn't have to be a study.

I know I would prefer some interruptible service. I don't think I am unique. I would willingly take my chances of being the first to be shed and pay much, much less for it. There might be 10,000 such people who might do that; there might be lots of commercial companies who might do that.

Q Do you know of any commercial customer who has ever requested a CAPCO company to provide interruptible service to it?

A I already said I don't know, and I never said that they did. I said they may, that is all I am saying. The

mm10

purpose of putting in "may" means that there may be preferences which are quite reasonable, but which are never granted because the people who ask them have no particular power in order to maintain them, in order to get what they want.

Q In the absence of a request for such service you would not expect to find a filed tariff rate for that service, would you?

A I would not expect anybody to request it if they knew all the tariffs do not have it.

end 2F

ebl

MR. SMITH: Mr. Reynolds, didn't you establish this very point when the CEI studies were introduced? I guess you didn't establish it though. You cross-exemined on it, showing that certain consumers in Cleveland would prefer to have less reliability and pay a lower rate for it.

MR. REYNOLDS: I think we're talking about somethink different than the preference for interruptible service which now seems to be the thrust of Dr. Wein's testimony.

THE WITNESS: Interruptible service, as I understand it, is a service with much less reliability. Interruptible service is a class of an unreliable service. It's an instance of it.

BY MR. REYNOLDS:

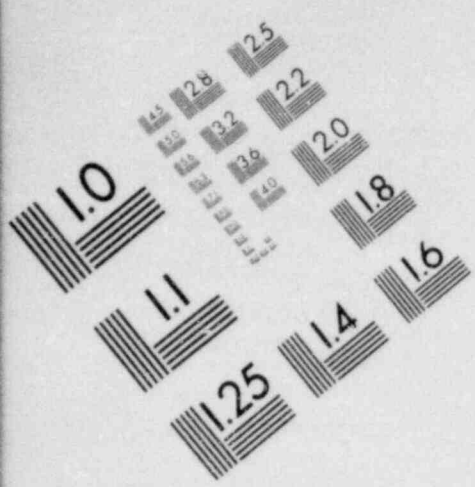
Q At whose option is the service interrupted, the customer's or the utility's?

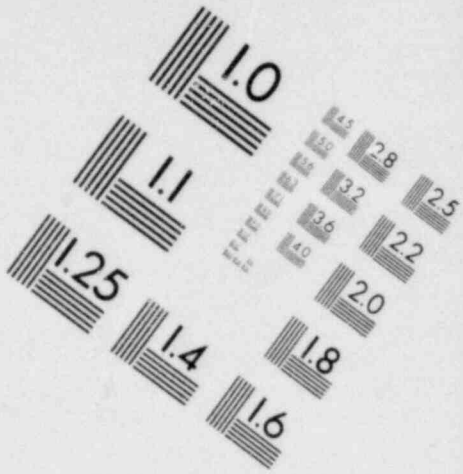
A It's interrupted at the utility's option. The customer can't interrupt the service. He either takes it or he doesn't. He turns on a switch or he doesn't turn on a switch. He doesn't go and cut the line and open the switches or close them or anything of that sort.

CHAIRMAN RIGLER: We'll take a very short break, about seven or eight minutes at the most. We're only going to run another hour.

(Recess.)

CHAIRMAN RIGLER: On the record.





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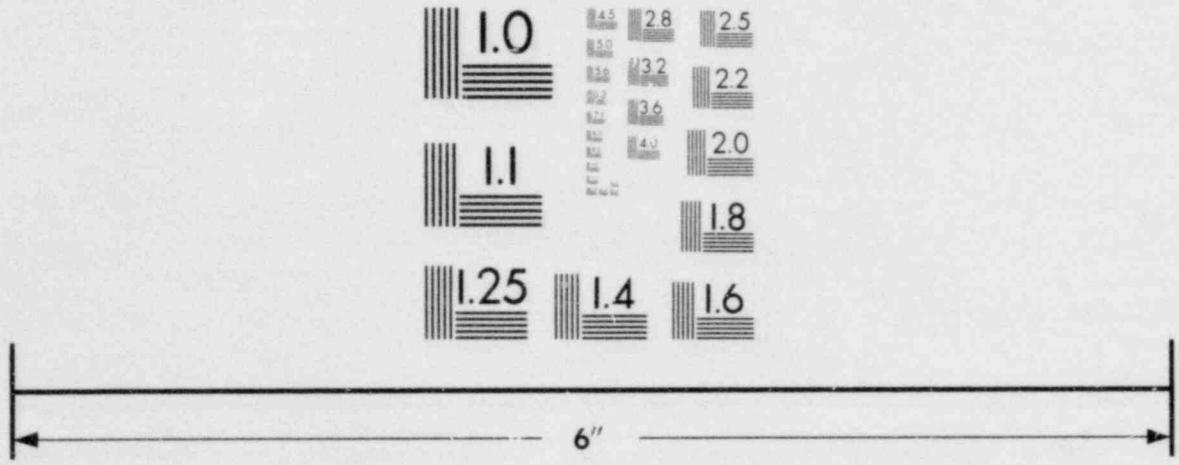

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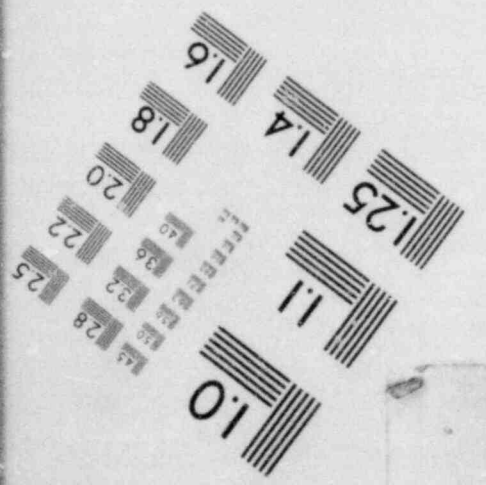

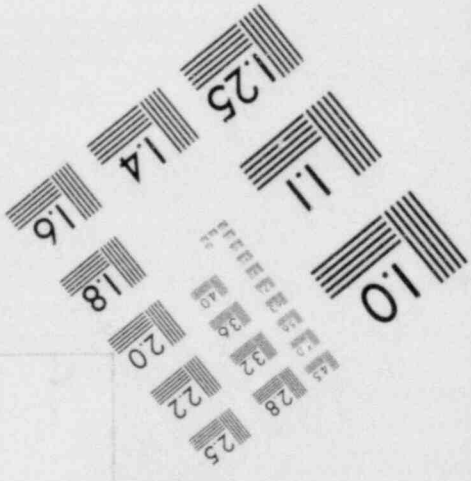

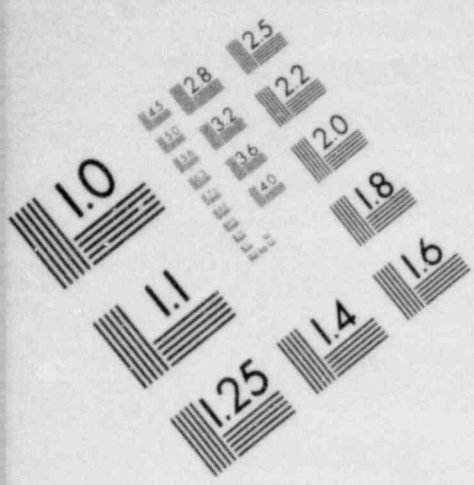

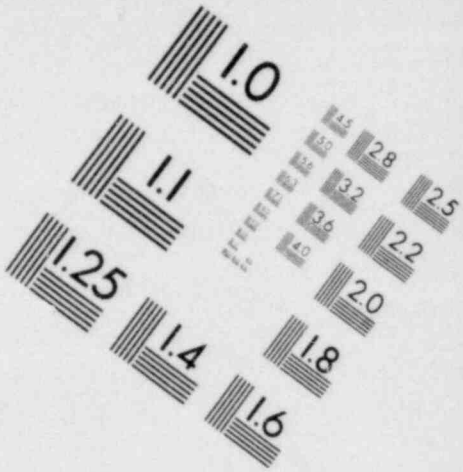

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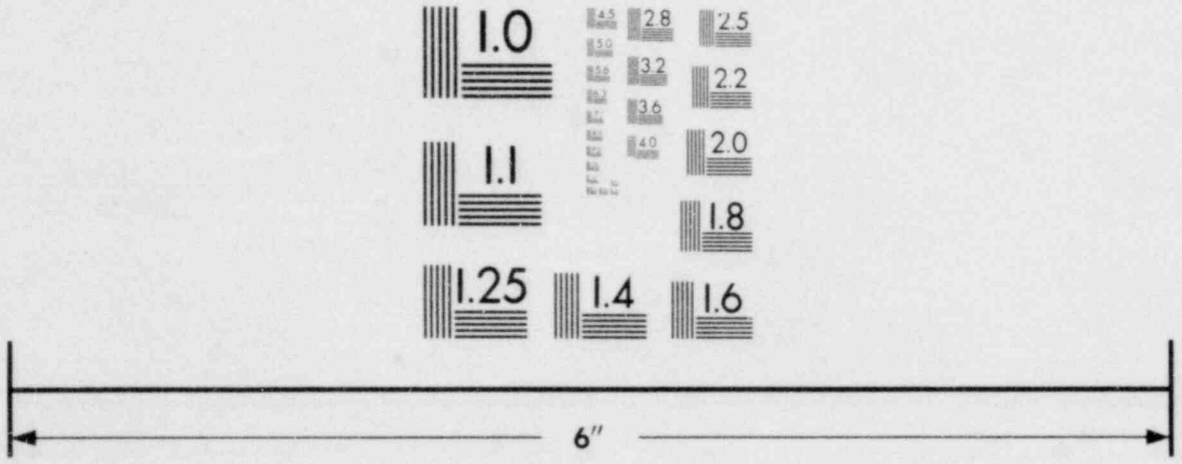

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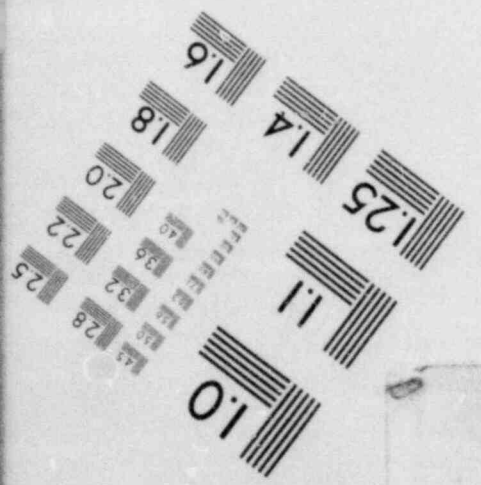

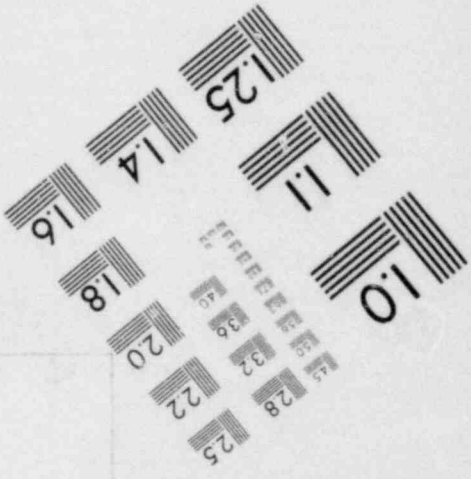

eb2

BY MR. REYNOLDS:

Q At page 93 of your direct testimony, Dr. Wein, you made the following statements starting with the tenth line from the bottom of the page:

"Duquesne also has an interruptible service rate used by two customers in 1973, taking a total of 115 million kwh at 9.4 mills. An isolated generating utility interconnected with a self-generating industrial which had surplus power could not as economically absorb such power as an interconnected generating utility which had provision for economy interchanges and reserve sharing."

Now will you explain to me what it is that you mean when you say that the isolated generating utility could not as economically absorb such power?

A Well, what might happen there, what I had in mind as I read this thing-- Well, what I had in mind is the following, and it's right there. Let me just read it.

"The former would require curtailment of its own generation and then increasing it when the surplus power available declined or ceased."

So if an isolated self-generating utility let's say had a load of 25 million kilowatt-hours and it had to take surplus power of 20 million kilowatt-hours, it would have to operate its equipment down to 5 or it might -- and

eb3 1 that would of course entail a good deal of cost to it to
2 start up this unit or not. It might of course be equal to
3 25, in which case it would have to shut down completely
4 and it would have to shut down and then it would have to
5 start up.
6 This 25 million kilowatt-hours might be for two
7 days or something of that sort and be a large amount of
8 megawatts, and it would have to shut down.
9 Then one of the quid pro quo's for the purchase
10 of surplus power from the industrial company is the provision
11 of emergency power to the industrial when required at rates
12 comparable to purchase of surplus power, so as a consequence,
13 if it wanted to take that -- suppose it were 25 megawatts
14 of surplus power. The industrial company when it needed it
15 would want 25 megawatts of surplus power which meant that
16 the isolated industrial would have to have the 25 megawatts
17 to give it, which meant that it would have to keep that
18 amount of reserve around.
19 Now if it were interconnected it could peddle
20 that power throughout the system. Some of the other com-
21 panies might take it at this very low rate without neces-
22 sarily increasing the reserves which they have.
23 Q Now what does that have to do with an interruptible
24 rate?
25 A I don't know that I'm talking about interruptible

eb4

rates at this point, am I?

Q Well, then I guess that's what confused me because as I read the two sentences that I just referenced, you go from talking about an interruptible service rate for two customers of Duquesne into the difficulty that an isolated utility might have in economically absorbing such power as an integrated generating utility.

A I should add another paragraph. There should have been a paragraph there. It is not intended to be part of the same discussion.

Q I see.

A I may well have had a paragraph marking but the way this was put together it may well have disappeared.

I think if it is possible we should correct it and put a paragraph there at page 93.

CHAIRMAN RIGLER: All right.

BY MR. REYNOLDS:

Q Have you read any of the contracts of any of the CAPCO companies for the purchase of power from an industrial company?

A Well, I did read the St. Joseph one I believe and I did read the Interlake Iron one.

Q Do you know what rates are in those contracts for the purchase of surplus power from the industrial?

A I don't remember them. They are appendix material

eb5

in there, and I did not particularly take note of the rate.

MR. MELVIN BERGER: Let the record note that when Dr. Wein said "in there" he was referring to the answers to the 20 questions fpr Davis-Besse 2 and 3.

2H
mpbl

BY MR. REYNOLDS:

Q What do you mean when you say on the top of page 94 that emergency power is supplied to industrials "at rates comparable to the purchase of surplus power"?

A Where is that?

Q At the top of page 94.

A Well, as I recall the Interlake Iron contract I think it is the same or very similar to the St. Joe. If Toledo, for example, purchases let's say 25 megawatts for some particular period of time from Interlake Iron and let's say pays, let's say it works out to five mills a kilowatt hour. Then, when Interlake Iron needs some emergency power because some of its generation goes down it gets it from Toledo at that rate.

Q Do you know what the nature of the utility's obligation to supply emergency power to industrials is? Is it a firm obligation or only on an "if, as and when available" basis?

MR. MELVIN BERGER: Are you referring to the contracts that Dr. Wein is referrin to in here or generally?

MR. REYNOLDS: I am referring to the ones he refers to in his testimony.

THE WITNESS: Well, I think in those -- I'm trying to recall. It's a long contract, but there is some

mpb2

notice, I believe, involved on the part of the industrial company.

BY MR. REYNOLDS:

Q I'm sorry, you are fading out.

A I say there is some notice required. For example, Interlake Iron might be expecting that it's going to do maintenance on some of its generation and it must give Toledo some notice about that. If it's a forced outage I believe that if Toledo has it it would give it to them. That's my recollection, but I would have to check the text.

Q The utility doesn't carry reserve capacity to assure its ability to provide that emergency power, does it?

A No because it's large enough so that it doesn't have to. If it doesn't have it it will make its best efforts to obtain it from its interconnected colleagues or elsewhere, but as I recall that's all it says about it.

That's also the same, as I recall, in St. Joe making best efforts.

Q If the private utility does not have a firm commitment to supply emergency power to the industrial and does not build capacity for that purpose, what is the basis for your statement on page 94 that:

"The isolated utility would be

mpb3

required to provide reserves for its own firm load and an additional reserve for the industrial emergency load"?

A Well, because an isolated utility has nothing but its own reserves for its own load and if it wishes to take advantage of this,-- Interlake Iron would not enter into a contract with an isolated utility when it knows that it can not go elsewhere and when it has only a very small amount or enough reserves for its own customer. Interlake Iron would know that it couldn't do that. So when it sold its surplus power to, say, the municipal, it's extremely chancy that the municipal would ever have enough to give it when it's down whereas it's a heck of a lot less risky, less chancy if it is interconnected with Duquesne or if it is interconnected with Toledo because Toledo is very large compared to, say, St. Joseph -- compared to Interlake Iron and Duquesne is very large compared to St. Joe, St. Joseph Lead Company and if they didn't have it they would make the best efforts throughout this very large system to get it. So it is certainly a lot more prudent from the point of view of the industrial to make that kind of a contract.

On the other hand, if the isolated were not isolated and were also on a network, that disadvantage would disappear.

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Q Would you expect an isolated municipal system to invest in a large enough transmission interconnection in order to provide standby capacity for an industrial let's say of 50,000 kilowatts?

A I don't think so. You mean five megawatts, 50 megawatts?

Q 50 megawatts.

A I don't think so. It would have to be a pretty large isolation system to do it.

Q On page 95 you refer to the lower industrial rate which the CAPCO companies offer compared to what most of the municipal generating utilities can offer. Which CAPCO companies are you referring to with lower industrial rates than municipal generating companies can offer?

MR. MELVIN BERGER: Can I have a line reference or the approximate portion of the page?

MR. REYNOLDS: Well, it's six lines down from the top, specifically.

MR. MELVIN BERGER: Thank you.

THE WITNESS: Well, there I think I'm relying on Mr. Kampmeier's testimony. I did go through and try to, through -- through the form 1's, the rate schedules.

BY MR. REYNOLDS:

Q I am sorry, but I am not hearing you.

A I said I was relying on Mr. Kampmeier's

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testimony for that. I did, on my own, go through the rate schedules shown on the form 1 in an effort to compare the volume and the voltage of deliveries for the load delivered of the municipals as against the industrials and one might perhaps draw some inferences there. The industrials get down very close to, or in some cases lower than the municipals and that tends to suggest that these rates are lower than what the smaller municipals can offer. And then if you take into consideration the points which Mr. Kampmeier brought out about the desireability of municipal loads as against industrial loads, things of that nature, it's that sort of thing, all that put together that I'm relying on. Of course, as I've pointed out, you have a rate, two rates which I pointed out are lower than what Ohio Edison produces, the power it sells.

Q Did you see Mr. Kampmeier's testimony before you prepared your testimony, Dr. Wein?

A Yes, I've seen it. I saw it in rough draft and I had a long conversation with him on the telephone.

Q About this subject?

A About this and other subjects, yes. I was very much interested in price squeeze.

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Q Am I correct, Dr. Wein, that you're suggesting on page 95 of your testimony that only the Municipal Electric Light Plant of the City of Cleveland of all the municipal systems in the entire CAPCO territory is capable of serving large industrial customers?

A Well, I think that's about right, yes. Of course "large" is a relative thing.

Read that question, please.

(Whereupon, the Reporter read from the record as requested.)

THE WITNESS: Yes, I said that.

I think you will note that on page 96 in the top third, as Mr. Kampmeier observed from analysis of rate schedules, it is pretty clear that my recollection must have been right, having seen Mr. Kampmeier's testimony before I wrote this.

BY MR. REYNOLDS:

Q Let me refer you to page 104 of your testimony for a minute, Dr. Wein.

In response to Question 85 in lines 18 to 21 you state that"

"What makes the action. . . ."

and there you're referring to private generation and transmission utilities providing wheeling services to competitive cooperatives and/or municipal systems, and you state:

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"What meks the action suspect is that the private G&T's would still face competition from the co-op/muni's and appear on the face to have nothing to gain from their action."

Do you see that?

A Yes, I see that.

Q Are you implying that private G&T's get no benefit from wheeling power?

A Well, let me read the whole thing. This is a long question and I have not committed it to memory.

(The witness reading.)

Well, the answer and the question clearly states that the private companies are being paid a reasonable wheeling charge so they got the benefit of wheeling.

On the other hand a reasonable wheeling charge in light of this question, that's trivial in terms of what's involved. Wheeling charges are very small compared to the total cost of power.

So I'm saying it is suspect on its face in view of the fact that it will increase competition and I do not intend to imply that the G&T companies will not get any benefits from the wheeling. They were getting paid for the wheeling. So far as they had the capacity this additional revenue helped to that extent.

Given that help as against the possibilities of

eb3

competition that it opens up is really what I'm considering.

Q Let me see if I understand you, Dr. Wein.

It seems to me that what you're saying is that the action of the private utilities is suspect if they agree to wheel and it is also suspect if they refuse to wheel. Is that correct?

A No. That's not really what I'm saying.

Q Well, now tell me where I'm wrong.

A I didn't say-- To say "suspect" means to raise a question.

Q What kind of a question?

A The question is what was their intent in doing it. That's the question it would raise.

And the answer I said is: "The conclusion that the action was intended to foreclose some competitive feature, even though not immediately obvious, would depend on whether it fit into a pattern of past conduct, all of which had the effect of eliminating or foreclosing competition, though no one action by itself would necessarily be determinative."

In this case they offered to wheel. They offered to wheel under the possible alternative that here a group of co-ops and municipals were intending to build a transmission and generation system. At that point they offered them this alternative. Before that point-- And since I wrote the question I can tell you what I intended by it;

54

I don't have to speculate.

Before that point they hadn't. In other words, before this possibility came in that we will build a transmission line and a generating plant they were not given this particular alternative. When that alternative becomes real and the G&T company judges it to be substantial enough they offered them this.

Now then, the question is given that, does this mean that they had really intended to foreclose this other system which might have even more deleterious effects on them? And I'm saying well, that's one question, though if I knew only that I would not necessarily come to this conclusion. This is what I'm trying to say.

And I'm not trying to say that if they wheel they're suspect or if they don't wheel they're suspect.

Q Isn't wheeling always in lieu of competing transmission?

A No, it isn't always in lieu of competing transmission because some companies have no competing transmission to which they can go; there's only one transmission they can use; there aren't any alternatives.

So a group of muni's, isolated, located in the CAPCO area, have no alternatives. There is nothing competing there.

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Q Don't the private G&T gain economies of scale in transmission by in effect jointly planning transmission with co-ops and munies?

A You mean if they did would they?

Q Through a wheeling transaction wouldn't they gain economies of scale in transmission?

A Wait a minute now. There are two different ideas you have in there that it seems to me are jumbled.

One, if they are planning to build a new transmission system and they took the co-ops and the munies into account, that's one question. Sure, they might.

The second question is if they wheel do they get it? No, all they get when they wheel is they've got a facility with some excess capacity and they're spreading some overhead on it. Any company gets that. That has nothing to do with economies of scale. All that says is we've got some fixed costs and some excess reserve or excess capacity. If you sell it, it's more economical to do so. That's why they are charging them a wheeling charge and that's why I explained they had benefits.

Now, which of the questions do you want to ask me? The first one or the second one?

Q Well, I think you have answered the question, so we can move on.

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A Okay.

Q On page 156, lines 13 to 16, you state:

"....if full coordination and joint ownership of nuclear units were granted to these municipals, the strengthening of competition and market growth would, I believe, be substantial."

Would the result be the same in your view if a unit power purchase were provided rather than joint ownership?

MR. MELVIN BERGER: Is this with or without full coordination?

MR. REYNOLDS: With full coordination.

THE WITNESS: Well, I would suppose that would depend upon the nature of the unit power purchase, the terms and conditions and things of that sort.

MR. REYNOLDS: Let me have the answer back, please.

(Whereupon, the Reporter read from the record as requested.)

BY MR. REYNOLDS:

Q What more do you need to know about the terms of the unit power purchase, Dr. Wein, before you could substitute it for the words "joint ownership" in that sentence on 156 and feel comfortable with the same conclusion?

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A Well, for example, as you continually point out, a municipal, let's say, gets its funds at six percent, that's what it pays, it gets its funds at six percent but it is offered a unit power purchase at ten percent. That's not as good as buying the plant at six percent, you pay for it and get the money at six percent. Why get the power out of the plant at ten percent when you can get it at six percent? That's one term, a very obvious term.

Another term might be, another thing along the same lines may be that it might happen that in some year a CAPCO company actually pays a lot of state taxes. I mean, that's possible. It is not inherently contradictory and the municipal wouldn't pay the state taxes and you roll that into the unit power. Well, that's another condition. And so on, so it really depends on these sorts of things.

You might then roll in not only the state taxes but the theoretical federal taxes and that's still another condition.

Q Let me ask you, excluding for a moment the question of cost differentials arising from preferential access to capital markets or due to tax treatment, would you, as an economist, have a preference for either direct ownership or unit power access?

mpb4

A Well, I don't think that is an economic question, I think it is a managerial question.

Q So as an economist is your answer no, you would have no particular preference?

A Well, if the hypothesis is if the price were exactly the same, so for 30 years, suppose that were the life of the plant, and I can get unit power from that plant when that plant is operating and if the plant is not operating I could get all the other conditions which we're talking about when we're talking about full coordination, then presumably the price would not be different.

On the other hand, if I owned a plant I might have something to say about how it is maintained and how it is kept up and all that sort of thing and that would give me a little kind of managerial discretion. I might feel a little bit better about it.

There might be a representative sitting on the group that is running the plant.

CHAIRMAN RIGLER: I think we'll break here for the day. What I would like to do is excuse you, Dr. Wein, and I have a question or two about what remains to put to the Applicants.

For your planning purposes, we'll start tomorrow morning at 9:30.

(The witness temporarily excused.)

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CHAIRMAN RIGLER: Have you about concluded your cross-examination, Mr. Reynolds?

MR. REYNOLDS: I think we can conclude by the end of the morning tomorrow morning. I had intend at this time to move to strike the testimony of Dr. Wein appearing on pages 165 to 172 which concerns a discussion of the effectiveness of regulatory agencies in enforcing their responsibility. The basis for my motion to strike it two-fold, the first of which is that I do not believe it is the responsibility of this Commission to pass on the effectiveness or ineffectiveness of the enforcement by other regulatory agencies at either the state or the federal level. I think the discussion turns solely on the effectiveness or ineffectiveness of that enforcement.

Certainly in our view it is terribly important to this proceeding whether or not the regulatory scheme or regulation does in fact exist and that is clearly an important part of our presentation.

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On the other hand it is not, it seems to me, relevant to a determination of this Board or to any of the findings that this Board is to make whether or not other regulatory agencies are acting efficiently or effectively, ineffectively or inefficiently within their jurisdictional bounds. And I think that that is a matter that is outside the scope of this proceeding and outside the scope of this agency's responsibility under 105(c).

I think that that is something that falls solely within the province of the legislative branch that set up the regulation that happens to be in question.

Secondly, I feel that insofar as Dr. Wein is commenting generally on regulatory effectiveness that he does not have any competence of expertise in this area and is not in a position to testify on this matter in a way that is at all helpful to this Board if the Board should reach the conclusion that it should be looking at the effectiveness or ineffectiveness of the performance of other regulatory agencies.

So for those two reasons I would move to strike the testimony beginning on page 165 and going over to 172.

CHAIRMAN RIGLER: Do you have any other untouched areas of cross-examination of the witness?

MR. REYNOLDS: Yes. I have some additional questions on the line that we started regarding direct

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ownership versus unit power access. I think outside of that we're probably talking about a short number of a small number of what I would characterize as miscellaneous questions and then I would like to also ask Dr. Wein some questions with regard to the chart that he displayed in response to Mr. Hjelmfelt's questions last week and made Exhibit 596, I believe, of the Department of Justice. I do have a line of questions regarding that.

CHAIRMAN RIGLER: All right.

Mr. Berger, how much examination is the Department going to have?

MR. MELVIN BERGER: At this point I would anticipate not needing much more than one hour.

CHAIRMAN RIGLER: Now that we hear the areas to be explored tomorrow, I do not anticipate taking our usual half hour break between the end of the cross-examination and the redirect. I think you should be prepared, having heard four days, to proceed immediately to examine on the material covered up to this point. Obviously that would not apply to any materials tomorrow morning, but now you know where the Applicants intend to go.

MR. REYNOLDS: I would also, Mr. Rigler, like to make a request, another request for the study which the NRC Staff supplied to Dr. Wein that relates to kilowatt-hours flowing from the CAPCO members, and also that percent

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of power that flows from outside the CAPCO system into -- outside the system of CAPCO members into the CAPCO area. That may be relevant for some few questions in the cross-examination.

MR. MELVIN BERGER: Dr. Wein has found the study and I will see to it that you get it.

MR. REYNOLDS: Thank you.

CHAIRMAN RIGLER: We'll see you in the morning.

MR. REYNOLDS: Are you going to rule on the motion in the morning?

CHAIRMAN RIGLER: I'm not going to rule on it now. I'm going to re-read the pages. I'm also going to have a response from the Department.

MR. REYNOLDS: I would like to request, though, to the extent this discussion we've just had with Dr. Wein out of the room appears in the transcript that he not be shown that part of the transcript.

CHAIRMAN RIGLER: Mr. Berger?

MR. MELVIN BERGER: Very well.

CHAIRMAN RIGLER: All right.

(Whereupon, at 4:30 p.m., the hearing in the above-entitled matter was recessed to reconvene at 9:30 a.m. the following day.)