

### IN THE MATTER OF:

TOLEDO EDISON COMPANY and CLEVELAND ELECTRIC ILLUMINATING CO.

Docket lios.

50-346A 50-500A

(Davis-Besse Nuclear Power Station, Units 1, 2 and 3)

50-501A

and

CLEVELAND ELECTRIC ILLUMINATING co., at al.

50-448A 50-441A

(Perry Nuclear Power Plant, Units 1 & 2)

Place - Silver Spring, Maryland

Date -Monday, 22 March 1976 Pages 0220 - 7745

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## UNITED STATES OF AMERICA

# NUCLEAR REGULATORY COMMISSION

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4	In the Matter of : Docket Hor.
5	TOLEDO EDISON COMPANY and : 50-346A CLEVELAND ELECTRIC ILLUMINATING CO. : 50-500A : 50-501A
7	(Davis-Besse Nuclear Power Station, : Units 1, 2 and 3)
6	and :
9	CLEVELAND ELECTRIC ILLUMINATING CO. : 50-440A : 50-441A
10	(Perry Nuclear Power Plant, : Units 1 and 2) :
12	:
13	First Floor Hearing Room,
14	7915 Mastern Avenue, Silver Spring, Maryland.
15	Monday, 22 March 1976.
16	The hearing in the above-entitled matter was
17	reconvened, pursuant to adjournment, at 9:30 a.m.
18	BEFORE:
19	MR. DOUGLAS RIGLER, Chairman.
20	MR. JOHN FRYSIAK, Member.
21	MR. IVAN SMITH, Member.
22	APPEARANCES:
23	(As heretofore noted.)

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CONTENTS

Direct Cross Redirect Recross

Witness

Dr. Harold Wein (Continued)

Exhibits

(None)

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Whereupon,

DR. HAROLD WEIN

PROCEEDINGS

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

CROSS-EXAMINATION (Continued)

BY MR. REYNOLDS:

Q Dr. Wein, I believe at the end of the week last week we were discussing your testimony relating to your concept of natural monopoly.

Could you tell me whether it is your belief that the generation of electric power is a natural monopoly function?

A Let me interpret that question in the way I think you mean it and if that's right, I'll be glad to answer it.

The term "natural monopoly function" is a term which you use but which I don't.

Now if you mean by a "natural monopoly function" -and I reinterpret your question as saying is it the case that
if there is only one firm engaged in the generation of
electricity in a particular market and in that market there
were two firms engaged in the generation of electricity and
if in that market it could be shown that if there's only one
firm engaged in the generation of electricity it would have
the lowest cost as compared to two firms, three firms, and

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so on, if that's what you mean by your question, then the answer is if that were the case that in a particular market one firm engaged in generation would have lower costs or two firms or three firms or four firms, then the answer is yes, if that were the case.

Q Is it your view that generation is a natural monopoly in the capital area?

A No, no, it's not a natural monopoly in the capital area because by definition of "capital area" you have CBI engaged in generation, you have Toledo Edison engaged in generation, you have Ohio Edison engaged in generation, you have Duquesne engaged in generation, you have Pennsylvania Power engaged in generation, you have the City of Cleveland engaged in generation, you have Painesville engaged in generation, you have many others.

Now I must have enumerated at least eight firms and if you are to tell me that if we had only one firm engaged in generation and that one firm would be more efficient than any other possible combination, then of course by definition it's a natural monopoly.

Q If a group of 800-megawatt base load generating units tied together and operated as an integrated part of a single electric system can provide all the power required in a given economic market area at a laubstantially lower cost than that achieved by any other available alternative,

would that not constitute a natural monopoly regardless of how the system ownership were divided up?

A No, because natural monopoly is not -- in economics is not a question of the hardware. Natural monopoly in economics is a question of a firm---

Now you said we have more than one firm. Now the question is do the economies come from the fact that we have an integrated system and some other alternative, electrically integrated, technologically integrated, and some other alternative of having such integration involving more firms?

Well, then it would not be a natural monopoly because there are many firms involved.

Q If generation is in your view not a natural monopoly in the CAPCO area, then as an antitrust economist, what is your basis for your opinion that municipals and cooperatives must have direct access to CAPCO's nuclear units?

A This is very clear, the fact that four firms are not a natural monopoly does not imply that these four firms may not be so economic compared to other firms and if they combine and prevent these other firms from gaining access to important factors they are exercising monopoly power.

Not only natural monopolies exercise monopoly power. In fact, most of the antitrust cases are brought

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against companies where they are not natural monopolies but they nevertheless have monopoly power.

Natural monopolies can engage in monopolistic practices but it doesn't follow that all those who engage in monopolistic practices are natural monopolies.

Q Let me ask you, Dr. Wein, why is it on pages 46 and 47 that you changed the word "market" to "area"?

A Well, I was defining the term "horizontal integration" and a firm which has many different plants or stores or whatever the nature of the business is but sells in effect only one product or one line of commerce, it would be horizontally integrated whether it had many of those in a particular market or whether it had many in different geographic areas which constituted separate markets.

That's essentially the idea behind it.

MR. REYNOLDS: Can I get that answer read back?

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

BY MR. REYNOLDS:

- Q Let me ask you why did you insert the word "private" on page 47 in the last sentence to your response to question 30?
- A Well, because I thought of TVA, for example, which does not engage in local distribution.
  - Q What do you mean by local distribution?

A TVA doesn't own, for example, the distribution systems of the municipalities to which it sells wholesale power.

Q Does TVA sell power at retail?

A I think it does to a certain extent, yes, but not primarily and certainly not in all the regions in which it operates. At least that's what I remember Mr. Kampmeier saying.

Q On page 47 of your testimony ou address the question of whether economies of scale provide an economic rationale for vertical integration. Have you ever heard the term "economies of vertical integration"?

A Yes, I've heard that term.

Q How would you define that term?

A Well, economies of vertical integration can be said to exist if a firm, by owning two or more levels of production, can operate more cheaply than if it owned only one.

So, for example, if I were engaged in making steel ingots or raw steel and also using that raw steel to roll it into a variety of shapes, and if I made my raw steel as we usually do in large plants by having a source of hot iron I would save a great deal of heat which otherwise would be lost if I were to buy hot iron from another company - if I were to buy iron from another company which could of

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pay the transportation for the iron, I would then have to reheat the iron in order to get it into a molten stage.

Similarly, if I were engaged in the rolling of the steel, then if I did not combine the two I would have to take the steel ingot and reheat it and actually have to reheat it more than I would if I bought it in the cold stage.

So that some processes are so closely interconnected that if you break them you will be expending more money rather than if you integrate them and therefore you do it.

Now those are the economic efficiencies.

Now I've just taken an example from a manufacturing process. There are many other sorts of things in which
the same thing takes place but that doesn't mean that these
are natural monopolies. You can get very integrated and not
be a monopoly at all.

Q Is there any distinction in your mind between economies of scale and economies of vertical integration?

A Well, yes, the two can be distinguished but that doesn't mean that-- Well, yes, the two can be distinguished.

Q Your testimony focuses entirely on economies of scale and not at all on economies of vertical integration in the electric utility industry. Isn't that correct?

A No, I don't think I would characterize it that

way.

Q Where is it that you discuss economies of vertical integration in the electric utility industry?

A Well, I think all through there I'm trying to make a distinction that what economies one gets from economies of scale sometimes will lead to vertical integration and sometimes it will not, and if it leads to vertical integration, the economies of scale that you get at one level of integration doesn't necessarily mean you get economies of scale at the other level or that if you do that they are necessarily in equal amount.

of scale and by using large generation equipment if the market is large enough but it doesn't follow from that that you get economies of scale in local distribution level electricity simply because you have economies of scale in generation.

Now that constitutes to me a discussion of vertical integration in the electric industry.

Q Will you give me what your distinction is between economies of scale and economies of vertical integration?

A I thought I had already done this.

Q No.

MR. MELVIN BERGER: 1'11 object as asked and answered.

MR. REYNOLDS: The witness has testified what he thought economies of vertical integration was and he testified he thought there was a distinction. I am now asking him to tell me what that distinction is.

CHAIRMAN RIGLER: Yes, I understand the question.

I think the problem is he covered the distinction in his last answer.

Is that what you were intending to do?

THE WITNESS: In that answer and also in the example I gave of the steel industry you have economies of vertical integration by saving heat. There may not have been one economy of scale in there in terms of the largest size units, but whatever that was you still got it from saving heat.

CHAIRMAN RIGLER: Can you give a very quick summary of the distinction between the two?

THE WITNESS: Sure. Yes.

You get economies of scale --

BY MR. REYNOLDS:

- Q And in the electric industry context, please.
- A Well, now, read the question.

CHAIRMAN RIGLER: Will you rephrase it, please?

BY MR. REYNOLDS:

Q What I'm looking for is a concise statement of the distinction between economies of scale and economies of

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vertical integration in the context of the electric utility industry, as you understand it.

Well, if you mean by "the electric utility industry" a vertically integrated generation, transmission and distribution company, that's one thing. If for example we ha. Iy a local distribution company that's another. In a local distribution company there may not necessarily be any economies of scale. There could be but there may not necessarily be.

Well, let's take the other situation so that we can define any distinctions.

I'm not finished yet. I'm trying to answer the question.

That's what I was hoping for. Q

If you won't interfere I'll try to answer.

If you take a generation, transmission and distribution company, it is, under my definition, vertically integrated.

Now the question here is do you get advantages by having under one ownership the generation units, the transmission units and the distribution units. And my answer is you do not necessarily get advantages in those three levels of electric power industry by having them all in one firm.

Now you could get some advantages.

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The way one plans generation and transmission these days is that it would probably facilitate the planning if you were an electrical company who is engaged in generation and transmission. It would facilitate your planning by having both, for example, in the alternate organizational forms I mentioned that take place.

It's quite possible you could have a separate transmission company but this would require then coordination with those entities which were engaged in generation and so it is in this sense that you might get through ownership an easier way to plan the coordinated development of transmission and generation units and in that sense you might get some advantages from having a generation and transmission company within the same corporate entity.

But that's quite different, you see, from the example I gave you of the steel industry. There you lose the heat just by not having them physically interconnected within the same case. In this case you facilitate planning and if your planning with two entities was just as good as your planning with one entity you would not have to have one firm doing it. You would simply have their joint planning.

So this is why you do not necessarily get economies of vertical integration in the electric industry.

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CHAIRMAN RIGLER: Yes, but I thought the question was what is the distinction between the two.

THE WITNESS: Okay, I'm sorry, I forgot that part.

Now, the economies of scale in the electric industry at different stages are different. If, for example, I was solely concerned with generation and if the markets were large enough the generating units are of such nature that I would get a lower cost by getting into larger scale generation than smaller scale if my market were large enough For a given size market there would probably be one or several optimal types of generation equipment I could put in. So that the economies of scale in the electrical industry are, as is well known, they depend upon, in the nature of the technoligical units involved and we do know that if I had an output, a market which would take 2000 megawatts of power then it would be better for me to put in larger units, say from 500 on up than putting in 40 or 50 megawatt units.

On the other hand, again if I were isolated I couldn't take advantage, say, of putting in two 1000 megawatt units because I would have to carry one as reserve.

So that when you talk about the economies of

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about with respect to a given market, with respect to a particular kind of unit, with respect to whether there is or there is not coordination and so on.

Now, in common parlance, i.e., as engineers or technocrats talk about it, they're looking at a piece of equipment and they're saying, But you know, given today's prices for all the factors of input you. could get, by putting in a 1000 megawatt generator, a better heat rate and a lower capital cost than if you put in a 50 megawatt generator. That's what they mean by economies of scale. That is a purely technical sort of thing and it has very little -- you can't simply take that factor and jump to the economic concept which is a firm engaged in a particular question.

### BY MR. REYNOLDS:

Q Are economies of scale always a function of the market to be served in any industry?

Market and the technology at the time. The size of the market doesn't give you economies of scale, it's the technologies which give you economies of scale. The factor inputs, the prices of the factor inputs, another question as to whether you could take advantage of it has to do with the extent of the market.

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Q Let me ask you this, Dr. Wein:

Have you made any studies on which you could base the conclusion that there are not necessarily economies to be derived from vertical integration in the electric utility industry?

I haven't but I've thought about it. not seen any studies which have shown that. I've seen studies by my friend Ullo, who used to work for me at the Federal Power Commission, who started out to see whether he could tell whether one electric company was more efficient than another. The answer was he couldn't. And then Dr. Pace tried it in his Ph.D thesis and his answer was it is very difficult to tell whether one electric company is more efficient than another. If I couldn't tell whether one electric company was more efficient than another it would certainly be more difficult to say something about whether there are economies of vertical integration. Apart from that, we don't have very many large private -- Well, I can't think of any large private system which isn't vertically integrated and so it would be very difficult for me to compare that sort of thing.

- Q Would you agree that generation and transmission must be jointly planned in order to achieve minimum loss?
  - A I assume you mean in a particular market area.

Q Right.

Well, I think they should be jointly planned, sure.

Q All right.

Now, what possible economic incentives do you see as existing in connection with the creation of a transmission only company which has no affiliation with generation?

- A What incentives could I see for it?
- Q What economic incentives can you see to that?
- A Gee, I can see a lot, depending on which viewpoint one takes, whether one takes the viewpoint of social accounting or private accounting.
  - Q Let's take the viewpoint of private accounting.
- I could probably make as much money in so doing as if

  I wanted to plan a completely vertically integrated system.

  I doubt that we would be subject to some sort of regulation.

  It seems to me that the economic incentives would be just the same, that I could sell transmission services.

For example, suppose I said, Look, I'm going to build a transmission network, since we're going to start de novo, since obviously right now you can't do it, but I'm going to build a transmission network and I'm going to take

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together the cities of New York, Philadelphia, Washington, Pittsburgh and Cleveland and I will have transmission around there and I know in these areas there are lots of generating companies and I will say, Well, if you're a generating company located in Philadelphia and MELF wants to buy power from you, this is what it will cost you to wheel it; and I might get an awful lot of business that way and there might be, of course, unfortunately, an awful lot of competition between the generating companies, if they had to face that kind of a question, but if I were a transmission company and I had that monopoly over the network that would be a pretty lucrative thing.

But of course I charge the same rates for everybody, there wouldn't be any discrimination. It just means that now the local companies would have a wider option from generating companies.

CHAIRMAN RIGLER: In order to provide that kind of service, though, you would have to have high voltage lines between all of these service points.

THE WITNESS: Yes.

CHAIRMAN RIGLER: And isn't it likely that
many of these lines would never be used, that there would
be inefficiencies in your company?

THE WITNESS: If I were a stupid planner, that would be the case, but, in effect, I would not -- you see,

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I would not put in a high voltage line unless I knew that there was some pretty heavy generation that's going to go over it. In other words, there are some massive loads of power. So what I would do, in effect, is what the railroads did in the early days and it's really no different. They build big lines, but where do they build them from? Well, first, in the early days the great centers of the population were in the east, so you have got these great lines going from the great cities and that's what they did first. Eventually, as the things grew up they built collatoral lines and in effect that's what they would have done in this.

Now, it is not uncommon in other countries to have transmission owned by the government that, in effect, becomes a common carrier.

I might add that the transmission integration that
the private companies do in effect makes it a common
carrier for themselves, but not for others who are not in
it.

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BY MR. REYNOLDS:

Q In the situation that you referred to with respect to transmission as a common carrier system in other countries, is not the generation also owned by the government?

- A Yes. But it doesn't have to be.
- Q Do you know of any situation where generation and transmission are separately owned?
  - A You mean in other countries?
  - Q Yes. Or here.
  - A I can't think of any at the moment.

All that indicates is that under different conditions, different organizational forms come about.

Well, let me just think. Let me just think.

Am I not correct, in the Pacific intertie that is built by the gover ment, just a sole transmission line, nothing else? Others use it, not only the power authorities up there use it, but so do privates.

Also there was a plan by the Southeast Power

Administration to connect their dams all through that area of
the country, to build a transmission network. Of course it
never did get built, because there was -- it got killed in
Congress.

- Q Those dams are generation though, isn't that right?
- A Yes, but they were going to build a transmission that was to connect their different hydro to each other in order

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to get efficiency of their hydropower and sell it to preference customers. You don't build transmission lines and not connect it with anything, let me put it that way.

Q Dr. Wein, let me read you a statement by Dr. Hughes during his testimony in this proceeding, appearing at pages 3899 and 3900 of the transcript.

Dr. Hughes testified, and I am quoting:

"The natural way to plan, develop and operate a bulk power system is to treat generation and transmission together because in scaling, sizing, locating facilities, designing them, they have to mesh well and good system planners can put the pieces together better than separate organizations operating through the mechanism of the market.

"So in general, generation and transmission tend to be integrated. Once you have a territorial base of individual systems it is a logical development for the transmission in that area to reflect whoever is generating and serving the load."

Now will you explain to me in what ways you feel that Dr. Hughes is in error in connection with that statement?

A Let me have it before me so that -- before I answer that question.

(Handing document to the witness.)
Well, I want to read the first part of it:

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"The way in which the system grew up was to have integration from generation on through distribution. And as systems consolidate within any given area, the consolidation affected bulk power and retail stages. And the natural way to plan and operate a bulk power system once it has grown up and consolidated in that way is to treat generation and transmission together because in scaling, sizing, locating facilities, designing them, they have to mesh well. And good system planners can put the pieces together better than separate organizations operating through the mechanism of the market."

Now the first part is the way the systems grew up.

I have gone through my discussion on the different organizational forms to cover how the systems graw up. They could have grown up in another way, is which I contend.

Now that the systems have grown up, i.e. now that the CEI has a territory, obviously CEI, being a vertically integrated company, when it plans its generation, obviously must plan its transmission.

And when it plans its generation it obviously must forecast its loads, all of which are within its own system.

Now the natural way to plan and develop CEI once it has already gotten to this stage, obviously is to do it.

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Now the next part of his comment:

"Once they have done this, good system planners can put the pieces together better than separate organizations operating through the mechanism of the market."

That is a little vague to me because if I follow that logic out, then what I would be saying is that in the entire United States we ought really to have only one organization operating the transmission and generation of this company because good system planners can put the places together because than the operation of the market.

planners operating within their given situation such as operating the CEI, or an Ohio Power, given the fact that they are what they are, they don't need the intervention of the market if you mean by that some other independent firm. They are operating within a particular area which is theirs. They obviously use the intervention of the market. If there were no market they couldn't plan it, because good system planners don't plan systems unless they take into account the prices, the alternatives and so on, which is the market.

So that part is a little vague, but I assume that that is what he means. He doesn't mean that they don't use the mechanism of the market to plan because that would be absurd. That means they don't use prices to plan and that is

obviously absurd.

What he is saying is they don't, in planning within their territory, have to ask Ohio Power what they should do. That is essentially what he is saying.

MR. SMITH: Don't you see natural efficiencies, however, when you can substitute a simple executive decision for an arm's length bargaining that would exist if you had separate transmission and generating entities?

THE WITNESS: No, I am not sure, Mr. Smith, that. there would be natural efficiencies.

I can see that it would be an easier conclusion to come to when you have executive decision. But there might be inefficiencies. For example, if I were a transmission company bargaining with a GaT company, I would be constrained to do as efficient a job as I could, or not my rates would be high and the GaT -- generating part of the business, he would say, well, you are too high, we can't sell that. Either you put your rates down or we can't get that business, that is all.

And so you might have it, whereas within one company operating on its own, there is nothing to constrain them. They might, for example, because it would add to the rate base of building an excessive transmission system. Who is there to say that it is excessive? No regulatory commission ever goes, to my knowledge, into the details of the design of anything in an electric power system. They don't even know that

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they are being charged overprices for electric generation.

No regulatory commission ever did that. So how could they ever know wheth & a transmission system was efficiently designed.

Se that I think then that the natural efficiencies, if you were to replace that phrase by, it is easier and it may eliminate mistakes -- in other words, I might be a transmission system that made a mistake on where I thought the big development was going to be, and therefore I got a spur out which is empty.

But the private systems make those mistakes too.

They also make mistakes in forecasting where the development is going to be.

BY MR. REYNOLDS:

Q If you had a separate transmission company which was charging a high rate, what would you suggest that the generating company do?

Go out and shop around for another transmission company?

A No, I said if we had a separate transmission system, if that was subject to regulation, now I would have really a good fight on my hands so that a regulatory commission really could get some information.

The generating company is, you know, pretty savvy about transmission, and it can go to the regulatory

commission.

And there are other transmission systems
throughout the country that may be very similar, and it would
have that. And so you would have a fight between two
elements of relatively equal size and ability and that
would be very helpful to a regulatory commission.

Q So you are contemplating that your generation company also would have transmission as well as a separate transmission company?

A No, I didn't say that at all.

I said you would have the generating company which is a pretty big outfit, you have other transmission companies throughout the country, the generating company would be savvy about the transmission business.

This is what I said. It would not be a small, uninformed customer.

Q Are you advocating the establishment of separate transmission companies?

A No, not in this hearing I am not advocating the establishment of separate transmission companies.

Maybe at sometime in the future I might.

What I am advocating is that the transmission be treated in such a way that anybody who wants to get on it does, and pays a fair charge before using it.

CHAIRMAN RIGLER: Dr. Wein, let me ask you a

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question.

In the CAPCO area if there was separation generation transmission so that you had five generating companies, how many transmission companies would you expect to find in that area?

THE WITNESS: You mean right now? As of now? CHAIRMAN RIGLER: Yes, sir.

THE WITNESS: And we were starting sort of do novo, right? We have five companies and the question is, would there be five transmission companies, would them be four, would there be three, would there be two, would there be one?

I don't know. I really don't know what would happen. I could conceive that there might be several.

Some -- and they would be interconnected just like a railroad is interconnected, you see.

But I could conceive, for example, that I might have a transmission company which might stretch all the way, say, from Chicago up along the shores of -- along the shores of Lake Michigan, across the Michigan peninsula all the way to Buffalo with feeds off it, which might be one transmission company which would be operating interstate. And I might conceive of a north-south transmission line.

CHAIRMAN RIGLER: Would you expect that CET would have at least two transmission options to interconnect with Chio Edison?

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THE WITNESS: Yes, probably.

CHAIRMAN RIGLER: And would that raise the cost of transmission?

THE WITNESS: I don't know.

Nobody has ever really tried this kind of creative engineering because there has been no reason for them to do so.

BY MR. REYNOLDS:

Q Dr. Wein, are you suggesting the feasibility of competing transmission companies? Will you give a Yes or No answer to that?

- A Well, you have to tell me in what area.
- Q Let's say in the CAPCO area.

A No, I don't think I am at this point saying that you necessarily have to have competing transmission companies although if "feasibility" means "possible," sure it's possible.

what I am suggesting is that such transmission networks that exist should be open to entities which are not in the CAPCO Pool under fair charges.

CHAIRMAN RIGLER: That's the problem they've been having with this line, is that that leads to the result that you can have or that it's proper to have just the one transmission network. But your answers to the previous line have been that you favor competing transmission networks within the CAPCO area.

THE WITNESS: Let me put it this way, Mr. Rigler:

The logic of the argument as I see it is this:

Is transmission necessarily a natural monopoly?

And my answer is No, it is not necessarily a natural monopoly.

CHAIRMAN RIGLER: Yes, you said that on Friday.

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more efficient—— I mean does the transmission network as it now exists, is that more efficient than if MEND or the others and so on started to build their own? And the answer is Yes, it is because of the size of the system, the fact that the system is there, the problems of siting and things of that nature, and the system itself has probably got a considerable amount of extra capacity which is natural to build in for the future. So it is not efficient if it were possible for these entities to get the transmission.

The next question is would it be better, in terms of the social accounting, to have competing transmission networks? And what I was saying is that it could be that that would be better but that would be a very difficult and long, factual investigation as to whether one then is trying to get on the drawing boards and create some different type of transmission network for the United States to see whether it would be better than what we have now.

The next point is supposing that what we have now is about as good, given the cost of change, as you can get.

The next question is should it be owned by one company or five companies, and that's still a different question.

In other words, I'm always trying to make a distinction between the technical advantages of interconnection and designing an operational network as against the

one company because in addition to the hardware aspect which is all you can get in terms of design, you know, and with mathematics and mathematical engineering, you still have, in addition, all the other ingredients in operating a transmission or generation or distribution company efficiently. It has to be properly maintained. You have to engage in day-to-day operations which may be good or bad depending upon the nature of your management personnel and so on.

If you're engaged in generation you have to engage in contracts for fuel; some people may be better than others and so forth. So that you have many more ingredients than simply the transmission hardware or simply the generation hardware.

And that's where the question of do different firms help in that regard, and my answer is Yes, I think they would.

#### BY MR. REYNOLDS:

Q What is the basis for your statement that there's excess capacity in the transmission system in the CAPCO area?

A Well, this is the third hearing I've attended and my recollection is that every one of the engineers that I've spoke to said that's generally the case, that at the present time you have -- between particular points you may

have a 345 line; a 345 line is built in anticipation of a great deal of generation coming on but the generation is not yet there. So in that 345 line you have a heck of a lot of capacity.

Q What engineers told you that there was excess capacity in the CAPCO transmission system?

A I can't think of anybody with respect to CAPCO but it seems to me that this is generally the case.

Q And the three cases were Alabama and Consumers -is that not right? -- and this?

A Yes.

Q How do you measure capacity in transmission?

A Well, I suppose -- All I can tell you about that is what I read in the Power Survey. Not being an electrical engineer, you generate capacity as the amount of load a line can handle without excessive loss or without burning up.

MR. SMITH: Mr. Reynolds, are you able to state what the Applicants' position is on that point?

MR. REYNOLDS: On which point?

MR. SMITH: On whether there is excess transmission capacity? I was just wondering if you are able to
state what your position is.

MR. REYNOLDS: I think the position goes to what purpose you're talking about excess capacity, or in what

context you're talking about excess capacity. In terms of making the determination whether there is excess capacity depends on a number of different variables that have to be looked at, the types of power transactions that a line is used for and the different arrangements.

I don't have any -- Applicants will, in their affirmative case, certainly speak to that point.

MR. SMITH: I just thought it might be helpful if we knew as the case progresses.

CHAIRMAN RIGLER: Well, for example, we know that CEI has the capacity to carry capacity power to the City of Cleveland because they stipulated that.

MR. REYNOLDS: That's right.

CHAIRMAN RIGLER: But we don't have at this time a general stipulation with respect to capacity of the CAPCO systems to wheel power from outside the area to various municipalities within the system.

MR. REYNOLDS: That's right.

MR. SMITH: Do you mean your position has not been formulated or you just prefer not to reveal it until your affirmative case?

MR. REYNOLDS: What I'm saying is it's not for me to testify on the complex subject of capacity of transmission that involves engineering questions, reliability questions and all sorts of other questions. I have no problem giving

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the Board the Applicants' position as to capacity of transmission and excess capacity at the time the Applicants put their case on, but I'm really not the one to testify on that.

MR. SMITH: It may be in unfair question. I may be asking you too simplistic a question.

MR. REYNOLDS: The problem is that there are a number of variables that go into responding to your question.

For example, the question as to excess capacity could be answered in different ways, depending on whether you're talking about at the present time or you're talking about capacity that contemplates whatever the planning is for the future and the loads that are anticipated for a five-year period.

It's not the type of thing where you can make a simplistic answer that says excess capacity can be determined by looking at this particular point in time, for example.

It's a lumpy concept and it depends on a number of variables that obviously have to be taken into account.

Now what I was basically exploring with Dr. Wein-He had made the statement that clearly there's excess
capacity in the transmission system of the CAPCO companies
and I was asking him what the basis for that was and how he
arrived at that conclusion.

THE WITNESS: That's an exceedingly intricate, complicated type of consideration which doesn't lend itself

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I'm reluctant to give you a position. The Applicants obviously have a position. But it's the type of thing that I think has to be spelled out by the witnesses and it's going to take a fairly intricate explanation in order that the Board will understand the whole concept of capacity in transmission lines and when you can determine that there is excess capacity and whether you look at excess capacity and make that determination as of today or as of five years from now, or when you make it, and the different variables that go into it such as your present load and your projected load and your present planning of generation and your future planning of generation.

That's why I'm reluctant at this stage to try to give you a generalized answer because I really think it would be inadequate and I think we have to get into an awful lot of other factors and variables.

CHAIRMAN RIGLER: As the Board looks at the problem.

Dr. Wein is advocating that you allow the municipal systems in the CAPCO area to be able to ship on or attach to the transmission system today because he feels there's excess capacity. Now the Applicants can come back and say Yes, there may be excess capacity today and we're not utilizing our lines to the full extent possible but we built those lines to project our needs five years, tell years into the

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future and they're going to fill up and then what do you want us to do? Push you off of our system as these fill up?

And to come back to that the municipal says Well, let us into the system as a part member so that we can help you plan and we can help you develop these lines to meet all of our future needs, and we keep going back and forth that way.

MR. REYNOLDS: Right.

I think that's where the issue is joined. I agree with you.

But what I'm saying is I think to give you the Applicants' position is going to take a fuller explanation than what I anticipate Mr. Smith had contemplated by his question, and it is one that is a complicated response that calls for some engineering analysis and some expertise in the area, and we are intending to go into that in some detail in our affirmative case so that the Board will be advised of our position fully.

MR. HJELMFELT: Do I understand then that Applicants propose to file some supplemental expert testimony?

MR. REYNOLDS: No, fact testimony. It's the facts of the situation as it exists in the CAPCO area. We don't propose to file any additional testimony but we do intend to go into it.

MR. HJELMFELT: I'll make my objections at the

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appropriate time to that.

MR. REYNOLDS: Okay.

BY MR. REYNOLDS:

Q Would you consider it feasible to have competing generation only companies in the CAPCO area, Dr. Wein?

A Do you mean by "feasible" possible, or do you mean would they make money if they did it, or what does that mean?

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mpbl 1E Q Well, do you think that --

CHAIR N RIGLER: Do you mean does he think that Ohio Edison should compete with Tolsdo Edison for the sale of '\*s generation output for their respective generation outputs?

MR. REYNOLDS: No, what I'm really asking is whether in terms of his, Dr. Wain's concept of generation-only companies and transmission-only companies whether he thinks that you could have in the CAPCO area competing generation-only companies which would effectively supply the generation to the customers in the CAPCO area and earn a profit on it.

BY MR. REYNOLDS:

- Q Can you answer that?
- A Assuming they had access to transmission at a reasonable rate, is that the idea?

Obviously they have to deliver the power over something.

- Q Well, assuming you had also competing transmission only companies and they had access to the transmission of
  the competing transmission companies at a price.
- A. Under those things I think it's feasible not only for companies in the CAPCO area but for companies outside the CAPCO area to be selling companies inside the CAPCO areas, consumers inside the CAPCO area. I think

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that's quite possible and Lionel Weiss wrote a paper on that.

And would you consider that kind of an arrangement to be preferable to the situation that now exists in the CAPCO area with respect to the Applicants' coordinated arrangemen. ?

Are you asking me for my social judgment of it, is that what you mean by preferable?

I'm asking for your economic judgment.

Well, my economic judgment on it can't be exercised because I don't have the data in the sense that I'm not sure whether it would come out cheaper or not cheaper. If it came out cheaper I'd say yes, it certainly would be preferable and by cheaper I mean result in lowered delivered prices, say, to load centers, then I would say it is preferable. It certainly would lead to probably greater competition and in this sense it would be preferable in my judgment.

MR. SMITH: When you speak of competition in transmission do you necessarily include a substantial amount of redundancy in transmission?

THE WITNESS: No. I don't.

MR. SMITH: How could that 'e?

THE WITNESS: Well, you have to have redundancy in anything, if you are going to have competition you have

to have redundancy or you're not going to have competition because there are unexpected contingencies which you plan to meet.

Let me go back, because that's the only thing which comes fairly close to this, to the railroads.

between the period of, let's say 1910 to 1930. Originally there wasn't any redundancy, there wasn't enough railroad capacity. Then many lines grew up, so if you were to take the great systems that went between New York City and Chicago you would find the New York Central, you'd find the Pennsylvania Railroad, you'd find between Buffalo and Chicago the Nickel Plate and so on. You had a lot of railroads going there and they were competing and the reason why they were competing was because there was enough market. Now, they didn't go by the same routes. The New York Central didn't go the same way as the Pennsylvania or the B6O going to Chicago.

Now, when the markets shrink the redundancy comes in and so eventually these railroads dropped their lines. Instead of having, as the New York Central once did, for example, six tracks between New York and Buffalo, you get down to two, side by side.

chairman Rigler: But did the market shrink in railroads? Didn't the overall amount of tonnage carried

rise?

got redundancy.

it was rising but the capacity was much bigger than the -it could take a great deal more and so you had redundancy,
if you see what I mean. In other words, the capacity of
the rail network was much greater than the increase in
rail tonage and so you come to about a peak schewhere
around World War II and then you sort of hold constant,
but at the same time you're increasing primarily through
better communications, you're increasing the capacity of
the rail network itself. And then it goes down, so you've

CHAIRMAN RIGLER: What goes down?

THE WITNESS: The total ton-miles go down and you have redundency for a variety of measons.

Now, you do have competition, all the rails are interconnected. Now, you could take a shipment in New York and it would get — end up, say, in Ean Diego and it wouldn't go over one line, it would go over many lines, or if you were a shipper and you were in New York you could specify, if you wished, that the shipment go on the New York Central from New York to Buffalo and from there take the Nickel Plate over to Chicago for some reason, whatever you want. You could specify that.

So that you have an interconnected rail network,

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but you have many different companies and they are competing with each other for the custom of the shippers who have the authority to say which way they want that particular car to go.

Now, to be sure, eventually a time comes when that system is too big. The rise of the trucks, for example, and the highways, the decline of passenger transportation. That right of way is too large and you've got to cut back on it because it is expensive.

there isn't any reason why that I can see — there may be good reasons, but I can't see it a priori. There isn't any reason why I couldn't have, say, a 345 network which starts somewhere in Boston, goes through the great populated areas and ends up in Chicaço. There is nothing inherently crasy about that and I could have had, then, a firm which says I am in 345 transmission or whatever and I may have supplementary services, I can give you 138 if you want and so on. You may have other firms just as you had within the great transpontinental railroads of the United States, others which are purely regional but nevertheless hooked in because they have subtracted their primarily supplying the inversticies between these great systems.

CHAIRMAN RIGLER: Can you have two firms on

this 345 kv from Boston to Chicago?

Chicago, as it were the crow flies, and the other one can go from Boston to Euffalo to Chicago and the other one go from Boston to New York to Philadelphia to Pittshoph and then to up and swing that way to Chicago. You could have that and actually when you look at the rail — the transmission maps put out by the FFC, I don't happen to have one with me, you'll see that in effect this is what you're getting. You're getting this dense network of major arteries with these capillaries, as it were, off them.

Now, this is something which dynamically evolves over time in accordance with the growth of the industry, the shifting of loads and things of that nature, and there is nothing inherent in saying yo 've got to have only one firm. All that that really means is you have to have some interconnection and if you're smart you'll start to do some planning about it.

Now, the question is if planners plan will they also compete. That is really, I think, the fundamental question which has been raised here. If you have members of a pool will they want to compete with each other. If you have coordinated planning will you necessarily eliminate competition between the members of this coordinated

planning team. The only thing I can say is I don't know, but I think if you marge tham all in one firm you surely would probably eliminate more competition than you would if they were independent firms. But that's not necessarily the case, you know. Oldsmobile competes with Pontiac and they're all owned by General Motors.

But this is my belief.

And I think it is better, then, to have many firms rather than one even though the many firms do a certain amount of planning with each other end that's why strictly speaking you don't have natural monopolies, you simply have optimal structures in the purely theoretical engineering sense, not necessarily in the economic sense.

BY MR. REYNOLDS:

Q Dr. Wein, do you know what the fitancial conditions of the railroads is today?

A It depends on which railroad you're talking about. If you're talking about the Southern Pacific and the Southern Railway, they are in pretty dam good shape. If you are talking about the New York Central or the Penn Central, they are in bad shape and they got in bad shape because they got involved in a misbegotten merger on the theory that they were going to be very more efficient.

Q Well, Dr. Wein, --

A I haven't finished yet.

-- on the theory they were going to be very more efficient. It turns out that they were wrong. It turns out that one member of that merger, Mr. Proman, was always against it and finally quit, but there was a great interconnected network.

Q Let me ask you, Dr. Wein, do you know whether it would be possible in the state of Pennsylvania to have the kind of a situation you suggest where you have competing generation-only companies and competing transmission-only companies under the Pennsylvania law?

A Well, apparently the legislature of Pennsylvania in their wisdom seems to prohibit that.

Q So it's your understanding that that kind of an arrangement would not be possible, is that correct?

A I suppose under the law, I don't really know.

That's a legal question.

O Do you know whether such an arrangement would be possible in Ohio under the state regulatory framework that exists in Ohio?

A What kind of an arrangement are you talking about?

Q Let's say competing transmission-only companies or competing generation-only.

Well, I hate to give legal opinions, but I did

read the Ohio statute and so far as I can see if by
some act of the board of directors of each of the four
companies approved by their stock holders, which could
show -- which could be shown before the PUCO to engage
in -- would result in benefits to the consumers and not
detriments, that these boards of directors decided to set
up four companies, one of which would own transmission,
which is now owned by CAPCO, and the other of which would
own generation and the third which would own, say, their
local distribution, three companies, I don't know that
that would be made illegal by Ohio law, but -- I mean,
I'm not an attorney and I don't know that that question
ever has come up.

## Q Let ue ask you this:

Would you envision two gameration-only companies competing by planning to meet the same load?

A Sure I could envision that. It happens all the time in other industries.

Q Would you also envision two transmission-only companies competing to carry the same load?

MR. BERGER: When you say envision do you mean is it possible?

BY MR. REYNOLDS:

Q In the economic sense under Dr. Wein's concept that he has described this morning.

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the example: I've got now two great transmission nets, one going from New York to Chicago along the route of the New York Centra', and west along the shores of Lake Brie and into Chicago, and the other one going the way the Pennsylvania did, and there's a city along the way, let's say Cleveland, which would be fairly close. And there are some generating companies, one around New York and one in Philadelphia and one maybe in Pittsburgh and one in Buffalo and the city of Cleveland puts out bids, What can I get this power for and all the generating companies which would be on this path would bid for it, those who wanted to, and there would be some on the New York Central network as it were, and some on the Pennsylvanid network which stops off at Cleveland and then they would be competing for the same market. They might win or lose. There is nothing impossible about it, it just means

Oh, yes. The answer is sure. I'll give you

And you would conceive of two generation companies building capacity to serve the same load in that kind of a situation?

that if you live within one organizational framework you'll

find it impossible to conceive of any other ones. Buc

there are people who can't conceive of other ones and

not just uninformed economists like myself.

They are building capacity and having in mind

potential markets just as I can conceive of two steel companies, both thinking they would like to get General Motor's business. Sometimes they get part of it and sometimes they get all of it and sometimes they get none of it and they are all building capacity with that in mind. And even though it cost \$500 million to build the one million integrated steel plant which would add one 170th of the capacity of the United States, roughly comparable to building a 1000 megawatt plant, they'll go ahead and do it and nobody says, Why this is a terrible waste, you're duplicating facilities. You ought to get together in one major steel combine and plan it. That I think would certainly violate the antitrust laws.

But there has been this myth of natural monopoly which says that somehow or other the duplication is so terrible a thing that you just can't have it.

Now, in the case of generating companies, I don't think it's that terrible.

And you could see two transmission lines being built to serve -- to carry the generation from the same generation plant?

A Well, my Lord, especially if some of the Westinghouse dreams come true I can think of four of them because there we're talking about putting nuclear plants in great parks where you have 40 or 50 thousand megawatts

being generated all in one point. I don't see why
that couldn't be served by five different transmission
companies and that may be the technology of the future.

MR. REYNOLDS: Is this a good place to take a break?

CHAIRMAN RIGLER: Yes, we'll take ten minutes at this time.

(Recess.)

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CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Q Dr. Wein, on page 47 of your direct testimony you give as an example of a horizontally integrated electric utility at the distribution level, a firm which owns electric distribution facilities only in more than one geographic market -- I'm sorry, one geographic area but does not produce electricity or own transmission facilities.

Do you know of any such fi ms?

A No, I don't know of any.

I think that example was simply to illustrate what it would be if there were such.

Q All right.

On page 50 you make reference to the technology of transmission and state that "it is continually improving and that higher voltages are certain to be used in the future."

What voltages do you have in mind?

- A Well, 345, 500.
- Q Those are presently-used voltages, right?
- A Yes, but a great many more, though -- but a great many more of those lines would come in. It is possible that we might get 750, things of that nature.
- Q And by that you mean a great many more of the 750 than are in use today?

Is that what you are saying?

A Yes.

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Q And when you indicate the future, what time period do you have in mind?

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A Between now and the next twenty years.

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Q Next how many years?

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A The next twenty years.

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Q I see.

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A And there will be more of them coming in.

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Q I'm sorry, I can't hear you.

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Could you talk into the microphene or speak up a

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little bit.

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A Yes.

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Between now and the next twenty years, and there

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will be more of them and they will be coming in gradually.

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And if we are still, twenty years hence as I am sure we will

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be, based on central system generation of vary large plants,

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there will many more of them. And as I indicated, the

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current thinking in the nuclear is to put them in nuclear

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parks for lots of reasons, primarily safety and things of

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If we do have nuclear parks, you are going to have

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probably very large -- very high voltage lines taking the power out, radiating out in different directions to load

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centers.

that nature.

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Q And what would be a very high voltage line in that

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'	context in your view?
2	A 500, 750.
3	Q I see.
4	A It might even go to DC, I don't know.
5	Q Well now, on page 50, you make reference to the
6	significance of high-voltage DC lines being more accnomical
7	for long distance than extra-high-voltage AC lines.
8	Do you know if there are any DC lines in existence
9	in the State of Ohio or in Pennsylvania today?
10	MR. MELVIN BERGER: Where are you referring to
11	on page 50, Mr. Reynolds?
12	MR. REYNOLDS: If you look at the bottom, I guess
1.3	it starts three lines up from the bottom.
14	THE WITNESS: I don't know of any DC lines,
15	transmission lines in Ohio. No.
16	BY MR. REYNOLDS:
17	Q How many long-distance, high-voltage DC lines are
18	there in the United States?
19	A I think there is only one now.
20	Q And that is the one you referred to on page 51?
21	A Yes.
22	Q Have you made any studies to determine the relative
23	cost of high-voltage DC lines versus high-voltage AC lines
24	over given distances?
25	A No, I haven't made any study.

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What is the basis for the statement you made at 0 the bottom of page 50?

The existence of the Pacific Northwest Intertis. I assume if an AC line were more efficient, that it would go into a DC line.

And what did you base that assumption on?

That the people who -- originally the federal government, who wanted to build it were rational. Ultimately the private who built it were equally rational.

Now as my memory comes back, I also remember a talk given by a former Commissioner of the FPC, Howard Morgan, who had just returned from the USSR and was talking about -- he had just returned from the USSR and was talking about the technologies that they were planning in the USSR, and amongst them were these very high-voltage DC lines. Ho alleged that the Russians thought that there were great efficiencies in this.

I don't think it is a unique concept.

On page 51 of your direct testimony, you state that if the amount of power distributed increases, but density does not, no economies are necessarily obtained unless conditions A and B exist. And then conditions A and B ame that the consumption per customer increases and that the number of customers per mile of distribution network increases.

Have you made any studies to determine that the oconomies are not necessarily obtained?

A Well I think that is -- you don't really need to make a study to come to that conclusion.

Q Why do you say that?

A Well, suppose I build a distribution line in a town and it runs two miles through that town. And there is one house every tenth of a mile so that I would have in one mile, ten customers, and in the next mile ten, so that I would have twenty customers on that line.

And if I simply extended that line out another two miles and I got another ctwenty customers, I am not particularly gaining any economies of scale comparable or nothing significant. I might be losing comparable to keeping the two lines. And instead of having twenty customers, have 500 customers because the city grew. So the two lines now would be -- the lines would be serving 25 times the amount. And so you would be getting one line carrying a great deal more power on it.

But you would be getting density.

as much power, but the lines would be twice as long. So in effect you would have twice as much cost there.

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1G ebl 1 So you could carry more power but you wouldn't have 2 any more density. 3 Suppose you extend the line another two miles and 4 had no operating and maintenance crew so you're serving 5 double the number of customers for the same labor cost. 6 MR. MELVIN BERGER: What is the question, 7 Mr. Reynolds? 3 BY MR. REYNOLDS . Would that give you any economies over what you 9 had before extending the line? 10 Well, I suppose that the labor crews before 11 were fully utilized. Then you would have to -- And if they 12 weren't fully utilized then presumably you could utilize 13 them a little more and to that extent you would save a little 14 15 labor expense, yes. Suppose that you needed no addition to your in-16 ventory of distribution materials, would that result in 17 economies? 18 I don't see how that would be possible if you 19 double the length of the line. 20 Well, Dr. Wein, --21 MR. MELVIN BERGER: Let Dr. Wein finish his answer, 22 please. 23 THE WITNESS: I don't see how that would be

possible if you double the length of the line. What you are

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then doing is obviously making a wrong computation for given reliability as to how much inventory you needed. You either do that or your reliability would go down; your chances of running out would increase greatly and therefore the reliability would go down.

So it seems to me that's a proposition, if you analyze it, that looks to be inconsistent.

BY MR. REYNOLDS:

Q Well, is it your view that every company's inventory is exactly proportional to its load?

A No, I didn't say that its inventory is exactly proportional to its load.

Q Well, to the load of its line?

A Well, it depends on the composition of the load and things of that nature. Industrial customers would have one sort; if it were residential it would have another. But in general you would—— For the same kinds of customers, the same kinds of line, then generally your inventory would roughly be proportional to the frequency of runouts that you expect and the frequency of maintenance that you expect on a particular line.

MR. REYNOLDS: Can I get the last part of the answer, please?

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

BY MR. REYNOLDS:

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Would it be your view that a utility with 20 0 miles of line would have double the inventory of a utility with 10 miles of line in the residential area?

Well, it would depend upon what the frequency A of maintenance was that you would require. It would depend upon what frequency of forced outages, forced maintenance that you did not anticipate that you're willing to accept. So it may well be that if -- If, for example, I have 10 miles of line and another one has -- and then I add another 10 miles to it, and if you say that the frequency of forced outages won't change, that it could be-- If I have to-- If I get a snowstorm and a limb falls across the line once a year and if you say that if the line now is doubled that it is still going to fall only once a year, then that part of the maintenance won't ---

CHAIRMAN RIGLER: Well, isn't the answer to the question No?

THE WITNESS: Yes.

CHAIRMAN RIGLER: All right.

THE WITNESS: I wanted to put out all the assumptions that were required to make the answer.

BY MR. REYNOLDS:

Dr. Wein, to what issues in this case do you understand the retail market to be relevant?

MR. MELVIN BERGER: 'I'm not sure I understand what

Mr. Reynolds means by "issues."

Could he be a little more definitive on that?

CHAIRMAN RIGLER: Do you mean the issues in controversy?

MR. REYNOLDS: Dr. Wein's understanding as to the issues in controversy in this case.

CHAIRMAN RIGLER: I think maybe you should give them to him if that is the thrust of your question.

MR. REYNOLDS: I have no problem in giving them to him. I would like first to see if I can determine from the witenss what his understanding is of the issues that his discussion or the retail market relates to. After that if he wishes to go through it with the matters in controversy I have no problem.

But I'm trying to find out what it is that he views as relevant issues for purposes of his retail market discussion.

CHAIRMAN RIGLER: I think that's proper crossexamination and I think it is permissible to ask the witness
his view before you show him the document. However, I would
just note that I doubt that even the members of the Board
could go down a serial list of eleven issues right now and
remember which is which.

MR. REYNOLDS: I appreciate that. I'm not necessarily asking for a verbatim account of a particular matter eb5

in controversy. What I'm really saying is that in preparing the testimony we have heard that he had discussions and saw material relevant to this proceeding and the issues in this proceeding, and I'm trying to ascertain which issues in his mind his retail market discussion is relevant to. That's basically where I was going.

THE WITNESS: Well, I suppose I have to repeat the answer that I gave the other day, that ultimately in the electric power business the name of the game is getting retail sales. These are your loads and this is what you are producing primarily.

You ultimately are trying to produce firm power at retail for the most part at as low a cost as possible.

Now if you can't do that you really can't, for example, be a self-generating municipal. You won't stay in business very long unless what you come out with with respect to your rates to your retail customers are as low as you can possibly get them.

tion, if you are, say, a municipal and own your distribution system, you are also trying to get as low as you can in purchasing this firm power so that your retail rates will be as low as possible, low enough so as to prevent the municipal distribution system from being out-competed, as it were, by a private and having to sell out.

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Therefore, the question of retail markets is what really guides the whole development of this industry, the capturing of the loads of retail markets, the ability to produce firm power so that it will be as economical as possible and you are doing that in order to be able to capture retail loads.

So it seems to me that underlying all the other issues in this case, the basic raison d'etre of the dispute is to finally get down to as low cost as you can in retail distribution.

Now the question as to whether monopoly exists in the retail market has consequences or whether a dominant position exists in the retail market has consequences. It has consequences for the scale of generation that a particular entity can engage in. It has consequences for the alternatives that are available. So unless you put the retail markets in this proceeding it seems to me that you are failing to understand the reason for the fights, the reasons for the disputes, rather.

BY MR. REYNOLDS:

Did you reach your conclusions in that regard on the basis of an examination of any statements of issues in controversy in this proceeding?

- Well, now I'll have to go through and look at --
- My question is whether you went through it at an

earlier time in connection with the preparation of your testimony.

A Oh, yes, I went through it at an earlier time and I thought that unless one really discusses the way I discussed it, not in terms of whether John Smith was captured by one company or another but generally the manner in which I set forth the dominance in the retail market was indeed relevant.

CHAIRMAN RIGLER: The question is you examined this question with the issues in controversy as set by the Board in mind?

THE WITNESS: Yes. And I thought that this discussion was relevant to all of them separately and collectively.

## BY MR. REYNOLDS:

- Q And are you aware that Dr. Hughes defined no relevant retail market?
  - A Yes.
  - Q Would you say he was in error?
- A I don't know that his purpose is exactly the same as mine.
- Q Did you talk to Dr. Hughes before preparing your testimony?
  - A No, I didn't.
  - Q As I understand it you delineated separate

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relevant retail markets, one corresponding precisely to the retail service territory of each CAPCO member. Is that correct?

A Yes.

Am I also correct that in the Alabama Power proceeding you defined "relevant retail market" as being identical in scope with Alabama Power's service territory?

MR. MELVIN BERGER: Objection: irrelevant.

CHAIRMAN RIGLER: Let me hear it again, please.

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

CHAIRMAN RIGLER: I'm going to overrule that objection. I think in terms of market definition any distinctions between the two might be useful in analyzing how he defines the market, so we'll permit that.

THE WITNESS: The answer is Yes.

BY MR. REYNOLDS:

In the Consumers Power case did you not also define "relevant retail market" as having the same scope as Consumers' territory?

MR. MELVIN BERGER: Same objection.

CHAIRMAN RIGLER: Overruled.

THE WITNESS: Yes

BY MR. REYNOLDS:

Dr. Wein, can you list for us the circumstances,

if any, under which you would not find the relevant retail market to coincide with the service territory of the major utility under study?

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

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

THE WITNESS: Yes, if there were two utilities in the same service area, two IRU's, for example, in the same service territory.

CHAIRMAN RIGLER: Suppose these are two with overlapping service territories?

THE WITNESS: Then it would depend on the extent to which they overlap, and it would depend on whether there were agreements to compete or not to compete, rather; things of that nature.

CHAIRMAN RIGLER: Off the record.

(Discussion off the record.)

CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Q If the area in which two investor-owned utilities serve overlapped, how would you define their respective service areas?

A Well, I suppose overlapping is a sort of a, you know, a quantitative thing. I'm thinking, for example, you

might overlap as, say, Ohio Edison and Chic Power by having a few cities within economical access --

Q I'm sorry, I can't hear.

A It depends again on the extent of overlapping but essential'y my definition of the geographic extent of the market has to do primarily with the question of influence of prices in an area and whether there would be mutual influence so that the setting of a price in one particular piece of geography would influence the price in another area, another geographic area. You have this mutual influence so that the prices would tend to equality, so that each of the competing or each of the firms could not set its price in this particular region without the other firm taking that into consideration in making its price, and vice versa.

It's that which defines the geographic market area rather than anything else. So when you say "overlapping" you have a geographic concept in mind, I suppose, which follows transmission lines or something of that sort. And that is not enough for me to say whether they'd be in the same market area or not.

It's a question as to whether the price influence would be the same.

Q So if the retail prices for Ohio Edison, let us say, and the retail prices for Cleveland Electric were

A No.

Q Why is that?

A It could be identical because of happenstance.

The question here is -- Or it could be identical for lots of other reasons.

identical, would they be in the same retail market?

price and Cleveland felt that it had to meet that price because of certain consequences it foresaw if it didn't meet that price then I would say they would be in the same area.

But they could have been identical for quite different reasons not because of CEI taking into account Ohio Edison's potential competition or yardstick competition or vice versa.

CHAIRMAN RIGLER: You said they would be in the same area. Did you mean they would be in the same geographic market?

THE WITNESS: The same geographic market if there was the mutual influence. It's not simply the fact that their prices were the same. I might get an electric utility located in the State of California having the same identical prices as someone in the State of New York. It doesn't mean they're in the same market area.

BY MR. REYNOLDS:

Q Then you could not just look at the prices. You'd have to make an investigation as to what the underlying

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factors were that caused the prices to be set at whatever level they were set. Is that what you're saying?

A You'd have to look to the underlying factors of supply and demand. You would have to look to the underlying legal factors which would either prevent or not; things of that nature. You'd have to look at all those factors.

Q And did you make that kind of an investigation in examining the CAPCO market areas?

A Well, I think my various cases is the kind of investigation I made.

Q Did you make any investigation as to the reasons why the average bill in 1974 for 500 kilowatt-hours per month of residential service by Consumers Power was \$12.74 and was \$12.85 by Toledo Edison, which are adjacent systems?

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

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

MR. MELVIN BERGER: Was that 1974, Mr. Reynolds?
MR. REYNOLDS: Right.

THE WITNESS: No, I didn't make that investigation.

I didn't consider it relevant.

BY MR. REYNOLDS:

Q Why would that not be relevant in determining what the relevant retail market was, or what the relevant retail

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markets were in this case?

A Well, first because it seems to me that Consumers

Power and Toledo had an agreement as to customers and secondly.

because no matter what Consumers Power charged, Toledo

Edison was under no legal constraint or economic constraint

to change its prices, and vice versa. They do not set

their prices— They are not influenced in their prices

by what each does.

CHAIRMAN RIGLER: Are there any customers who could be served by either of the systems at the customers' option?

THE WITNESS: Yes, there are customers which could be served, particularly along the borders of Michigan and Ohio where the two systems are there, and they don't — They don't serve each other's customers and they never have.

BY MR. REYNOLDS:

Q What is this agreement you were talking about between Toledo Edison and Consumers?

A I'm now going on memory of practically three years ago.

The companies operate very closely. There was a question as to whether the Southeastern Michigan Co-op, which was located in southeast Michigan but also across the border in Ohio and wanted to --

MR. STEVEN BERGER: I can't hear Dr. Wein well at

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all.

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CHAIRMAN RIGLER: Will you speak into your microphone, Dr. Wein?

THE WITNESS: Suppose Southeast Michigan wanted to get power transmitted by Toledo from Buckeye, of which they were a member, as I recall. Toledo refused but in between, there were lots of memoranda between Toledo and Consumers and things of that nature, all to the effect—Of course the decision was No, they would not transmit it, and this was a customer of Consumers. It was not a customer of Toledo's, Southeast Michigan, and yet Toledo refused even to wheel it.

And the whole tone of the correspondence it seems to me was that they would not go for customers in each other's territory and that's about what I can recall.

CHAIRMAN RIGLER: Absent any agreement not to compete, would they be in the same retail market?

THE WITNESS: Well, absent any agreement not to compete, the Consumers probably would not be the to get any customers in Toledo's market because of the legal restrictions of the State of Chic.

For example, if a customer in Ohio wanted to be served by Consumers Power, he would have to disconnect for 90 days and that itself is enough of a bar to eliminate any retail competition for Consumers in Ohio's territory.

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Now, for Toledo Ohio to go into Hichigan, that legal thing did not prevail and I suppose that Toledo then could go into there.

But if that were really significant then

Consumers, I suppose, if they really wanted to keep all

those customers would have applied for public utility

status in the state of Ohio, if that were that important
to them.

CHAIRMAN RIGLER: Let me ask a question which anyone may answer.

Does the Ohio anti-pirating statute apply only to municipal statutes or does it apply to industrial customers that have never been engaged in generation?

THE WITNESS: It's my understanding that it applies to any retail customer.

MR. REYNOLDS: That's right, any retail or wholesale customer.

THE WITNESS: Or wholesale customer, yes.

MR. MELVIN BERGER: That does not quite coincide with our understanding. We would agree that it would apply to any retail customer, whether it's residential, commercial or industrial. However, I do not believe that we agree that the anti-pirating statute itself applies to wholesale.

MR. HJELMFELT: I didn't hear precisely what

everyone else said, but the anti-pirating statute would not apply to a retail customer who is being competed for by an investor-owned utility and municipal system, as I understand it.

CHAIRMAN RIGLER: It would not?

MR. HJELMPELT: It would not.

chairman RIGLER: So that your understanding is that a retail industrial customer would have the option of shopping without having to go isolated for 90 days.

MR. HJELMFELT: That's correct and that certainly has been what happened in Cleveland.

MR. PERI: I might say that's my understanding also.

MR. MELVIN BERGER: I would like to correct
my statement, also. The 90 day statute does not apply
to municipal systems at all. It only applies to
cooperatives and to investor-owned utilities, so it would
have no effect on competition with municipal systems. It
would have an effect, however, on competition between
investor utilities and—other investor utilities or
cooperatives.

MR. REYNOLDS: Let me add another modification to that which is that I think it would apply if you were talking about a municipal as a wholesale customer and service to that customer. Then I think the 90 day provision

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would apply.

MR. HJELMFELT: I think where we're left is the parties are in dispute as to the effects of the operation of the 90 day law. I don't think it's at all clear that it applies to competition for a municipal wholesale customer either.

MR. MELVIN BERGER: Can I attempt to summarize, taking the risk of muddying up the water? I don't think there's any dispute among the parties with regard to the application of the 90 day law for retail.

Am I correct in saying that?

MR. REYNOLDS: By investor-cwnsd utilities.

position, the witness is correct in saying there could not be competition between Consumers and Toledo Edison for retail industrial customers because when you are talking about competition for service between two investor-owned utilities the 90 day provision would apply.

MR. REYNOLDS: Only as to emisting, not as to any new industrial customers that might move into an area, but as to existing, yes.

MR. MELVIN PERGER: We would agree with that.

CHAIRMAN RIGLER: As to new industrial customers, going back to your original answer about the geographic market being determined by the price influence that competing

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utilities can exercise, why wouldn't there be retail competition, then, between Consumers and Toledo Edison?

of potential competition in the sense that before our -clearly if we're talking about a residential customer the
thing is so trivial they're not going to worry about
whether somebody's going to build his house on one side
of the border or not. On the other hand, if you're talking
about substantial loads the question that comes in is
this:

theoretically Consumers wants to get that

load and so does Toledo, but if Consumers charges a price

low enough to attract it away from Toledo it must see

what the consistency of that rate is with all its other

rates and the question then is would Consumers attempt

to tamper with its own rate structure, in other words,

open up the flood gates to all its other industrial

customers inthe state of Michigan who could say, We're

getting the same kind of power, why are their rates

lower than ours? And the same argument would go for

Toledo.

So it's my judgment that they do not so attempt to change their prices in order to get a particular customer because the consequences of that are very much more severe.

In short, it is for the total loads that they have a small thing in order to deteriorate a rate structure which you're quite satisfied and happy with now.

CHAIRMAN RIGLER: Wouldn't the same considerations apply to retail competition between the city of Cleveland and CEI?

the question is whether CET would. Well, I suppose between the city of Cleveland and CET that would, but I would put them in the same market area for that purpose, that they do really have significant influence on each other.

## BY MR. REYNOLDS:

Q Wouldn't it be equally true that if Consumers wanted to compete for a municipal customer that it would also have to consider the impact on its entire rate structure?

A Yes, it would, it would.

MR. MELVIN BERGER: For a municipal customer anywhere.

THE WITNESS: He apparently means in Ohio.
BY MR. REYNOLDS:

a Anywhere.

A Well, I think Consumers' wholesale rates are certainly -- that's why I defined the Consumer's market as

the entire service area of Consumers. They do take that into consideration and they take into consideration the rates of competing systems. They take into consideration very carefully the rates of the board of Water and Light in Lansing.

And if Toledo Edison wanted to compete for a customer of Ohio Edison, wouldn't it also have to take into consideration the effect on its rates to all its other customers?

MR. MELVIN BERGEP: If you say Ohio Edision is this one being served by Ohio Edison?

THE WITNESS: He means the potential one.

BY MR. REYNOLDS:

- Q Yes, let's say --
- A. Say what, a potential one? We already stated that --
- Q Well, let me ask you: an existing customer of Ohio Edison?
- A Well, a retail customer? Then the 90 day law would prevent that.
- Q Let's assume for a minute that there was a waiver of the 90 day provision.
- A Well, I did not define markets on all the possibilities that could take place. I defined them as the law exists. I also pointed out that if conditions

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change the markets wouldn't necessarily be the same,
particularly with respect to the possibility of potential
competition and the question as to whether the city of
Cleveland, for example, would get on, I say geographic
market areas vary with the times, the technology and
the conditions. They are not always the same.

CHAIRMAN RIGLER: Right, but you're saying the influence of a competitor's price is a principle factor in determining the gaographic area.

THE WITNESS: Yes, I am saying that, but I'm saying if that is eliminated by law, that influence is no longer there.

BY MR. REYNOLDS:

- Q Do you know if there is yardstick competition between Toledo Edison and Compumers?
- A. Well, I have not examined the rates. I would doubt it very much.
- Q Is there yardstick competition between MELP and CET?
  - A For retail sales?
  - Q Yes.
  - A Yes, I think there is.
  - What about Toledo Edison and Chio Edison?
- A I don't really think so. I assume you mean now for wholesale sales or retail sales or what?

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- For any kind of sales. a
- I don't really think so.
- Is there competition between Toledo Edison and Ohio Edison for industrial -- new industrial customers that move into their area, move into Ohio?
- Well, no new industrial customer my as into Ohio without having considered a great deal of other things and the competition between Chio Edison and Toledo Edison is about the same as the competition in that regard of any other utility in the United States which a potential industrial customer can sell. In that sense there is competition.
  - And what is that competition?
- I think that is very remote from the antitrust considerations involved here. In other words, if I were an aluminium company and had a possibility of locating in Seattle or locating in Chio or locating in Maine or locating in others, the rate structures of companies are not designed to take account of the possibility that an aluminium company might come into this state.
- So it's your view that there is no real competition between Toledo Edison and Ohio Edison for example, for new industrials that might move into the state of Ohio?

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A Well, if you mean does that significantly affect the reasons for their making the rates the way they are, the answer is no, I don't think there is.

CHAIRMAN RIGLER: Off the record.)

CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Q Dr. Wein, we're still waiting for an answer to the question as to whether it's your view there is no competition for industrial customers between Toledo Edison and Ohio Edison.

A In the sense in which I said would that competition influence their rate structures, the answer is no. There are very few industries which when they are considering a location in a particular area would make it solely on the basis of a difference in the price of electricity because for most industries the price of electricity is a very small part, there are some of course in which it is very high and there the competition — as for example, in making aluminium, and there the selection choice ranges over a very, very wide geographic area.

Now there may be a company which has decided to settle in Ohio and has an alternative between going in Ohio Power's tetritory and going intoToledo Edison's territory and all other conditions equal, it might as

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well move to Ohio Power if the rates are lower.

Now, what is the response of Toledo Edison to that? The answer that I'm saying is Toledo Edison can't really respond very much to it and does not set its structure of rates on the basis of considering that a particular company may move in, and that's because the new business is always a very small proportion of the total existing loads that go on. If you assume that evan the total existing loads that might grow at a rate of 5 percent that means in any year it's only one-20th of that and it would not change its rate structure simply because some particular industrial says, Well, if you meet Ohio Power's industrial rates we'll come to settle around Toledo because Toledo is just as good as settling in some Ohio Power territory. I don't think that is the way they compete and in that sense I don't think there is the kind of competition relevant in this particular proceeding.

- And would you also feel that -- strike that.

  Is it your view that there is any competition for new residential customers based on rate differentials between, let's say, Toledo Edison and Chio Edison?
- A You mean whether an individual purchases a house or builders develop --
  - Any kind, a new residential customer who goes

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into the area --

A You mean he has a choice as to whether he goes to Ohio Power's territory or Toledo Edison's territory?

I don't think there is any significant competition there.

and you're going to put 100 houses in where you're two miles from the existing line of Toledo Edison and two miles from the existing line of Ohio Edison.

THE WITNESS: I think if I were -- it would depend. Let me put it this way: assuming that all things were equal, the price of the land, the attractiveness of the land et cetera, et cetera, et cetera, and if I were building, say, single residential houses that would not particularly bother me. That's the customer's responsibility.

On the other hand, supposing they were building a large block of apartment houses, where I would put the rates into that, I might make that decision as to go one way on the other, but what I'm arguing is neither Ohio Power nor Toledo Edison would in particular change their rate structure in order to get this one guy rather than lose him.

In short, it is too insignificant in the light of the total damages which could come to them from trying to tailor rates to catch a particular customer.

Now, in the case of -- supposing hypothetically

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that for some curious reason Dow wanted to build a plant in Ohio to manufacture magnesium and other things. The companies might tailor a special rate and so classify it for Dow because Dow, let's say, is going to take a great deal of power. They might tailor a special rate with each other, in which case, then, they get outside the existing rate structures for their industrials in order to avoid kickbacks. But of course in the state of Ohio I think that's very unlikely because the industrial customers there are very sophisticated buyers of electricity whereas a similar thing which took place in the state of Alabama where you had special rates with one customer, they're not quite that industrially sophisticated and that might get by.

So it is that sort of thing.

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## BY MR. REYNOLDS:

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And would your answer with regard to your industrial customers and your residential customers be the same if I were to ask you the question but ask it in terms of commercial customers, new commercial customers moving into an area?

Yes, unless by a "commercial customer" again we're thinking about some enormous federal installation perhaps which would take an enormous amount of power, in which case I might again try to go to the device of special rates, but it would be very difficult.

- If we were talking about a special rate wouldn't that need regulatory approval?
  - You mean in the State of Ohio?
  - Right. 0
  - I'm not sure that it would. A

Suppose a customer went out in rural territory and that's where he intended to settle and he was not within the boundaries of a municipality; he's simply out there in the country. I'm not sure that that would require in the State of Ohio any regulatory approval.

CHAIRMAN RIGLER: You mean if you get outside of these defined boundary areas you can discriminate in your rates if you are an IOU?

THE WITNESS: You can discriminate in your rates

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even within the defined territories.

CHAIRMAN RIGLER: You mean I can go to one industrial customer and give him a better rate than his neighbor across the street if they each take the same load?

THE WITNESS: If the industrial customer is not within the confines of a city or a town or some governmental structure which has authority to negotiate the rates and accept them. They're the ones who, in the first instance, accept them or don't accept them.

Now if this new customer is within a municipality and a new rate is set for him and the municipality objects to that rate because its other industrial customers are objecting, then it would have to go to the Public Service Commission.

CHAIRMAN RIGLER: Would the same hold true of residential customers in rural areas? Toledo Edison can just set any rate it wants, because these customers are not within the confines of a municipality?

THE WITNESS: I think that is correct. I'm not sure how that operates. I'm not sure.

BY MR. REYNOLDS:

Q Do you know whether any of the Applicants in fact do set rates on any kind of discriminatory basis as you're suggesting?

A Oh, I think their rates are inherently discriminatory,

yes.

CHAIRMAN RIGLER: I was not suggesting, by the way, that they set discriminatory rates as between customers of equal load classification. I was just probing.

MR. REYNOLDS: I appreciate that. I would like to know the basis for Dr. Wein's last answer where he indicated he felt the Applicants' rates were inherently discriminatory.

BY MR. REYNOLDS:

Q I believe that's what you said, Dr. Wein, isn't it?

A Yes.

Q What's the basis for that statement?

A All you have to do is look at the rate schedule. If you know what it means in economics you can see they're completely discriminatory. For example, their declining block rates, all you have to do is know what discrimination means in economics to know that a declining block rate is a discriminatory rate.

This is nothing new to me. It's been said for a very long time. It started out with Pigou, the economist who held Marshall's chair in economics, Albert Marshall, a great English economist.

Any text book in public utility economics will tell you that, that they are discriminatory.

Industrial rates are, too, I might add, though they are more complicated. They are essentially that sort of thing.

Q Dr. Wein, let me ask you, what is the purpose of defining a relevant market?

A A relevant product market or a relevant geographic market?

Q Either or both.

A I suppose we have to do them both combined.

Q All right.

A The purpose is to see whether what might be considered market power exists in that market. That might be one purpose. It's a purpose which in antitrust investigations one would --

MR. STEVEN BERGER: I can hear you, Dr. Wein.

THE WITNESS: It's a purpose which in antitrust investigations is necessary. You simply can't look at the size of a company. You have to look at it in terms of a relevant market because relevant markets are where compatition is supposed to take place, and competition in fact means the ability of different entities in a market to affect the prices and other important terms of sale, reliability in this industry.

market, you don't have a universe of discourse in which to

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assess the evidence in terms of market power.

MR. REYNOLDS: I'm going to have to have that read back because I missed portions of it since I couldn't hear Dr. Wein. He faded in and out.

Would you read the answer back, please?

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

BY MR. REYNOLDS:

Q Let me ask you, do you define four or five separate retail markets as being relevant in this proceeding?

A Did I define four or five?

Q Right.

A Well, let me count them up: CEI, Toledo, Chio Edison, Duquesne, Pennsylvania Power. Five I guess.

Q Well, will you take a look for me at the table set forth on page 82 and explain to me why you combined the markets of Ohio Edison and Pennsylvania Power in that table?

A Page 82?

Ω That's right.

A Well, the purpose there is that I was trying to contrast the total retail sales in these companies. I could have pulled out Pennsylvania if I wanted. It wouldn't have made much difference. I was simply contrasting retail sales and industrial sales. I suppose the point I was trying to make was about the importance of industrial sales for these

companies.

Q And what about Table 2 that faces page 68?

A Well, as I recall, I simply compressed Ohio

Edison and Pennsylvania Power, not necessarily saying Ohio

Edison's territory is exactly the same as Pennsylvania

Power's territory, but if I put in another line there wouldn't

have been any difference. In other words, if I had pulled

out Pennsylvania Power separately, it wouldn't have made any

difference.

Q Well, is it your view there is or is not a separate retail market for Pennsylvania Power and Ohio Edison?

A Well, to the extent that there is some difference, which there is between the prices charged by Pennsylvania Power and Ohio Edison because they operate under different regulatory schemes and face different conditions, I guess I would say that there is probably a separate -- probably a separate retail market and wholesale market for Pennsylvania Power.

On pages 110 and 111 you state that:

"....if there were only one retail seller of diamonds in....Washington, D. C. he would not be able to charge a monopoly price....
for....long because diamonds would flow in from Philadelphia, New York, Chicago, et cetera....
We would therefore expect, and correctly, that the

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geographic retail markets for diamonds would encompass the entire United States. . . "

Isn't that correct?

A Yes.

If in response to a monopoly price set by a Washington seller, a London firm opened a retail store in Washington, then according to your definition London would be in the same retail diamond market as Washington, would it not?

Yes, I think it probably is.

Dr. Wein, aren't you confusing the wholesale diamond market with the retail market?

No.

According to your definition aren't you defining a retail geographic market as that area around a single geographic point which encompasses all suppliers who are able to compete within that geographic area?

Λ Who are able to compete?

That's right, whether they be in Loadon or New York?

Λ You mean in the diamond example?

Q Right.

I'm encompassing all suppliers who have potential influence in setting the prices and you could not get -- You see, the retail prices of diamonds in London would not have

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probably too much effect on the retail prices of diamonds in Washington, but as I understood your hypothetical, a London firm opens up a store in Washington.

The selling and the purchasing of diamonds at retail gets a little more difficult when you're crossing international boundaries though even there it does take place. A certain amount of mutual trust has to take place between people who are buying diamonds in the United States at retail and somebody says Well, have you gone to this great jewelry store in London? And if he knows in fact that it is, all he has to do is get a catalogue.

I have a catalogue sent to me every year from Gump's in San Francisco. I rarely ever get to San Francisco but I do know Gump's and I now and then buy things through the mail from them.

Well, in the retail sales of diamonds, once the knowledge is there it's conceivable that you do have competition within -- and particularly where we're talking about a subclass of the diamond market, expensive gams, and I rather suspect that is a rather world-wide retail market; not \$50 diamond rings but \$50,000 diamond rings and up I believe is quite an international market at retail.

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Tathink if I had used, instead of diamends, group masterpieces of art, then one would realise that their was quite an international market.

- Q Is it your view that the priors that Sympa's prices respond to the retail prices in Washington?
  - A No, I don't think so.

I am simply saying -- I used that to give you the idea of trust.

are talking about the real expensive study, particularly if you are talking about the real expensive study, once the element of trust is established, the proportion of transportation sesses compared to the value of the diamend is so little, that thee the information flow — that is really the essential problem in that — once that trust is communication barrier is broken down, there is no reason why the prices would not be the same, or very close, they would respond to each other.

- you to explain to me why you would not put Constant and and roledo Edison in the some rotail number where their prices are virtually equivalent, or certainly tend to equality?
- A I don't think they tend to equality, assessmally.

  And if they did tend to equality, it was not because of the competition because Consumers and Woledo. The have already given that anguer once.
  - Q But I thought you just bold me that the fact

Gump's prices might tend to equality to the prices here in Washington, was not due to the competition between Gumps and a retail outlet in Washington.

A I never said anything about Gumps' prices tending to equality with anything in Washington.

CHAIRMAN RIGLER: Right. He said just the opposite.

THE WITNESS: I said I used that, Mr. Raynolds.

I am getting impatient because I am not very comfortable

and I don't like to be badgered with foolish questions.

But I said that in the illustrative question of trust. I said the reason why I would shop at Gumps is, I knew about them. I didn't say anything about Gumps being in competition with anybody else in Washington.

BY MR. REYNOLDS:

- Q Could you put Gumps in the same retail market?
- A J didn't.

CHAIRMAN RIGIER: He didn't.

THE WITNESS: I would like to have a break. I am getting very irritable.

CHAIRMAN RIGLER: We will break for lunch. We will take one hour today.

(Whereupon, at 12:45 p.m., the hearing in the above-entitled matter rwas recessed, to resume at 1:45 p.m. this same day.)

## AFTERNOON SESSION

1:55 p.m.

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CHAIRMAN RIGLER: Let us go ahoad.

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DR. HAROLD WEIN

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

CROSS-EXAMINATION (Continued)

BY MR. REYNOLDS:

Q Dr. Wein, a little earlier this morning, my recollection is that you indicated the significance of the relevant markets, the analysis of relevant markets is in order to assist in the measurement of monopoly power, is that right?

A Yes.

CHAIRMAN RIGLER: I thought he said market power.

THE WITNESS: I said market power, yes.

BY MR. REYNOLDS:

Q All right, market power.

Would you say that I was incorrect if I suggested it was useful as a measure of monopoly power?

A Well monopoly strictly means one seller, and there are degrees of market power which one seller would have the maximum assuming it were a monopoly. Even if it were not a complete monopoly it would have degrees of market power.

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Essentially you have to view it as that kind of a concept.

Q Well all right.

so the only difference in terms of the relevant market analysis between the market power and monopoly power is one of degree, is that what you are saying?

- A Yes.
- Q . How would you define monopoly power?
- A It is the power to determine prices to exclude customers to engage practices which in contrast to a competitive market would not be possible.
  - Q I am sorry, I cannot hear what you are saying.
  - A Can you hear me now.
  - Q I have lost your answer.

Will you read that back for me.

(The reporter read the record as requested.)

THE WITNESS: Let me repeat it.

not customers, to engage in practices which would not be possible under competitive market conditions. As for example, the imposition of discriminatory rates or prices, to engage in a whole variety of actions which would not be possible under competitive conditions.

BY MR. REYNOLDS:

Q If a given electric utility did not have the power

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to exclude competitors, and if its prices ware regulated by a regulatory agency, could it have monopoly power?

A Well, if it could not exclude competitors then it is very difficult to understand why it would be regulated.

But assuming that that is a historical happenstance and that existed, then the question as to whether it had monopoly power because of regulation is, yes it has monopoly power. It may not be able to practice the monopoly power as completely as it could without regulation. And so it goes to the degree and the nature and effectiveness as to its practice.

As to the use of this power, that goes to the effectiveness of regulation. Sometimes regulation is effective more or less; sometimes it is quite ineffective.

So the answer is yes, it has power.

Q Is it your view that regulation in the electric utility industry is in part designed to protect against the electric utility from excluding competitors?

A Well, I don't understand that.

Are you asking me about a particular state law, or are you asking me about the federal?

Q Either one.

A Well they vary.

Under the Pennsylvania law as I understand it, it would be very difficult to get new utilities into Pennsylvania.

Under the Pederal Power Commission, I don't know that the

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Federal Power Commission with respect to electric companies -whether there is anything in the statute that says one thing
or another about whether they are designed to exclude
competitors.

example, in natural gas has certificated new pipelines. On the other hand it has also allowed pipelines to be marged and then found them to be -- that decision to be overturned by the federal courts.

So I am not sure what the bearing of regulatory intent is, given the wide variety of state commissions, and apparently of the Federal Power Commission as well.

It seems to me that nobody comes to the Federal Power Commission asking for a Certificate of Convenience and Necessity in the electrical industry. They first -- insofar as they are subject to that under the state regulation they go to the state first.

Q What did you mean when you said that in your view there was no need to regulate electric utilities if they had no power to exclude competitors?

A Well if they had no power to exclude competitors, namely anybody who wants to can come into the business of selling electricity and that would -- a real possibility.

In other words, there were companies who would come in and say, well, I can establish myself in Ohio as the new

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very low, were minimal, then I wouldn't think that regulation was required at all because there wouldn't be any monogoly power.

So where the barriers are low and anyone can enter, there isn't any monopoly power and so you wouldn't need regulation.

Q So you do see regulation as a function of exercising control over the ability of entry into the electric utility industry by new --

A What I did say, Mr. REynolds, I said some states will limit and require entrants to get state permission to do it. I am not sure that that is required of all states.

Q Is it true in Ohio?

A No, I am not sure that if Consumers Power wanted
to sell in Ohio that they had to get a Certificate of Convence of
and Necessity. I don't think they do. They could come in
there, but if they wanted to exercise powers of eminent
domain they have to declare it, I suppose -- be declared, I
suppose, a public utility to do so. But -- so in that sense
I don't think that the State of Ohio is necessarily regulating
to keep people out, or the Public Utility Commission in the
"State of Ohio.

But now if you wanted to build a -- Suppose

Consumers wanted to build a transmission, they would have to

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go to the Siting Commission and the Siting Commission would determine whether they would allow them to build transmission or not. In that case it would depend upon that particular state agency.

But the barriers other than legal in this industry are very severe and as a consequence, whether they are aided, impeded; or whether the regulatory agency is neutral about it, the barriers are very, very substantial.

- Q Is it your view that any of the Applicants involved in this proceeding have the power to exclude competitors?
  - A Oh, I think they do. Sure.
  - Q Which ones?
- A All of them. Their mere existence, their size and their control over transmission and generation and distribution are enough to exclude any company actually wishing to enter into that business, any private company.
- Q And what about Duquesne Light Company?

  Would you say it has the ability -- power to exclude competitors from Pennsylvania?
- A Pennsylvania? Duquesna in Pennsylvania?

  Duquesna is only 800 square miles, primarily

  Alleghany County. What would that have to do with Philadelphia?

It certainly has the power to exclude anybody who wants to come into that 800 square miles, not only because

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of Pennsylvania law, but for these other practical reasons.

MR. REYNOLDS: May I have the previous question and answer read.

(The reporter read the record as requested.)
BY MR. REYNOLDS:

Q What are the other practical reasons you had in mind?

A Well, here you have a system of about 2500 megawatts as of now. All your transmission of all the customers pretty nearly -- in that area the customers of it, it would seem to me that even if Pennsylvania law said, okay, anybody can enter into it without going in and competing --

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

A -- go in and compete for retail customers, it
would be a very difficult thing to amass the capital, go to
Wall Street and say, "I am going to compete for the market
of Duquesne Power Company. There is U.S. Steel that is taking
900 megawatts, and there is Jones & Laughlin that is taking
950, I think I might be able to get them away from Duquesne."

And I think anybody who has any sense at all,
would turn down any such request for funds. I know if I were
an investment banker on Wall Street I certainly wouldn't give
any private company any encouragement at all to try and get
customers and establish a viable vertically integrated
generation transmission system in Duquesne's territory, 300

miles. It seems to me to be a virtually impossible sort of thing.

Q Let me ask you this, Dr. Wein.

Is there anything that Duquesne is doing which, if Duquesne ceased that activity, the ability of another entity to enter into the market would be enhanced?

A Well, another entity -- supposing again that we didn't have the problem of Pennsylvania laws.

Q Well lat's suppose we have the problem of Pennsylvania laws as they exist today. Answer my question.

A Well there are still --

MR. MELVIN BERGER: Please don't interrupt

Dr. Wain. I think he was giving the answer and stating the assumptions that are permitted in that answer.

and, if for example they were allowed to engage in wheeling; if for example the three companies that Duquesne had acquired were able to get access to more efficient generation and they had wheeling privileges, they might conceivably stay in the business, they might even conceivably grow. These are municipal companies and public companies and they have some advantages which would override perhaps at least at the level and scale they wanted to come in.

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CHAIRMAN RIGLER: The quertion was, though, what practice of Duquesne --

they refused to give them access to nuclear power; two, they refused to give them wheeling; three, they actually refused to even sell them wholesale power so that they could not stay in at that level. And these practices would seem to me to be something which they are doing which prevents companies from either staying in or if they are in, from growing somewhat larger.

BY MR. REYNOLDS:

- Q Dr. Wein, can you tell me which enuities Duquesna Light refused to give access to nuclear power to?
- A Well, I think the City of Pitcairn asked them for nuclear power.
  - Q What do you base that on?
  - A Documents that I've read.
- Q What entities in your view has Duquesne Light refused to wheel power for?
- A Well, I'm assuming that when the Eurough of Pitcairn asked to be admitted into the CAPCO Pool, they intended to have all the advantages of the CAPCO Pool which includes wheeling, and they were refused admittance to the CAPCO Pool. So I simply interpret that as equivalent.
  - Q You suggested that if municipalities in the

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Duquesne area had not been refused wheeling or access to nuclear power that those municipalities would have been able to grow.

Do you know under Pennsylvania law the autent to which municipalities in the State of Pennsylvania can take on customers butside the corporate limits?

MR. MELVIN BERGER: Objection. I believe there is a somewhat slight mischaracterization of Dr. Wein's testimory and I also believe Mr. Reynolds is asking for some legal conclusions on Dr. Wein's part.

CHAIRMAN RIGLER: Well, the second part of the objection is overruled,

I do have a little problem with the first part of the question. You started out asking him if there are any practices which Duquesne, if they ceased doing, would enable other entities to compete better in the Duquesne area, and then you sort of translated that into actual examples and I don't know that in his original answer he suggested that Duquesne either had or had not refused to wheel. He was pointing to practices which if ceased would result in increased competition.

MR. REYNOLDS: I balieve my last question went to his response which indicated that if certain practices were not on-going, the ones that he assumed Duquesne was engaging in, that the municipals in the area would be in a

position to grow, and I was asking him the extent to which it's his understanding that Pennsylvania law would permit any municipalities in the State of Pennsylvania to expand beyond its corporate limits.

CHAIRMAN RIGLER: I'll permit that.

MR. REYNOLDS: That was the basis for my question. CHAIRMAN RIGLER: I'll permit that.

Pennsylvania statutes is that they could not empand beyond their corporate limits if they were already -- if there already was service provided to the customers by some other utility.

Now in the case of new customers where service was not provided I'm not quite sure what Pennsylvania law says. Also, I'm not sure that Pennsylvania law would prevent a municipality from incorporating an outside area into its municipal limits. I'm sure of these, but these are the possibilities one would have to look into.

BY MR. REYNOLDS:

- Q But you have not looked into those possibilities?
- A I did, but my memory is kind of gone on all the fine points. My counsel informed me that the Pennsylvania laws were more restrictive even than Ohio, and I said Well, let's read it.

And I read it and I came to the conclusion that

also some advantages in Chic law.

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I said all that before, and that's the same answer I gave you now.

have a virtual monopoly of all the generation, the trans-

mission, and a great deal of the distribution centers, plus

I might also add since you've given me the opportunity to think a little more that not only do they have
that individually in their can territories but by virtue of
the CAPCO Pool, they have it collectively, so it makes it
even more difficult for anybody to get into the CAPCO area
because you now have a fairly tight-knit group which has
greater power to exclude.

CHAIRMAN RIGLER: And that's a monopoly, according to your definition?

THE WITNESS: Yes.

CHAIRMAN RIGLER: So within the CAPGO area they would have a shared monopoly?

THE WITNESS: They would have a shared monopoly.

CHAIRMAN RIGLER: Because earlier you defined monopoly as a single company --

THE WITHESS: Yes.

CHAIRMAN RIGLER: -- exercising monopoly power.

speaking there are other smaller entities in it so they are not solely one company, but considering that they have 95 percent of, say, generation and equally large percentages of retail and transmission facilities and what-not plus the fact that they are tightly knit together through the Pool, they collectively share in even greater power than in the absence of that Pool they would have, even though each were

the ame size as it is now.

BY MR. REYNOLDS:

Q Dr. Wein, is it your view that this shared monopoly you just described is one which the Applicants have wrongfully acquired?

A You mean is it legal? Is that what you mean by "wrongfully"?

Q All right, wrongfully acquired in terms of whether the acquisition of that shared monopoly was inconsistent with the antitrust laws?

MR. MELVIN BERGER: Objection. I think this is calling for a legal conclusion.

as to that, and I think I'm going to permit the witness to answer. My only hesitation is that you are asking a question about how that monopoly power was acquired and inevitably that might lead you into the situation which existed, the details of the situation as it existed prior to 1965 if there were a series of steps that led to the --

Assuming he answers in the affirmative, then in order to flesh out the answer he might have to lead you through a series of events which transpired pre-1965.

Dominance alone does not constitute monopoly. But in the issues in controversy we have started with the stipulated dominance and the questions in controversy are whether this

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dominance gives them the ability to hinder or preclude competition and then are they exercising that ability.

And it seems to me you may be leading him into something that was cut off I think at the Applicants' request during the framing of the issues in controversy.

I'm willing to let him answer. I just call this to your attention.

BY MR. REYNOLDS:

Q Let me ask you this preliminary question, Dr. Wein.

Is it your view that the sharing of monopoly that you just

made reference to came about with the formation of CAPCO?

A No, it didn't come about with the formation of CAPCO necessarily. CAPCO was just a movement in a direction which had been taken before that. CAPCO simply made for even greater interconnection, greater coordination, greater coordinated planning and operation which, to some extent, had gone on before that.

But the answer is No, it is not only with the existence of CAPCO.

Q All right.

So that you're telling me that there was a shared monopoly before the existence of CAPCO?

MR. MELVIN BERGER: Objection. I think that's a mischaracterization of Dr. Wein's testimony.

MR. REYNOLDS: If it is he can tell me.

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CHAIRMAN RIGLER: If se, the witness can deal with it in his answer.

THE WITNESS: Well, I think what you had before the formation of CAPCO was a great deal of cooperation between these companies and they each had in their service territories and they took good care not to infringe on their service territories, for example to the extent of swapping customers which has been excluded from the evidence between Ohic Edison and Toledo Edison.

And in order not to overlap they engaged in many acquisitions since 1950 which I think might have drawn very severe problems under Section 7, the amended Section 7 of the Clayton Act. And if I were to go into the entire history of the acquisition and elimination of companies it would seem to me that just as this history might itself have been judged as illegal --

CHAIRMAN RIGLER: But that's not the question. It relates to shared monopolies, not the activities of any individual company, in acquiring competitors within its service area.

THE WITNESS: I think they were sharing it tacitly by refraining from competing in each other's territory. That seems to me to be shared. It's not shared in-That's underlying CAPCO anyway. But back in 1950 or 1940, the means of interconnection, the great advantages of

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interconnection and pool operation were not as great as they are now, and underlying CAPCO is also, it seems to me, the same idea of not competing for customers of any sort in each other's territory. I think they had that before CAPCO, but they didn't have the operational and planning coordination.

Now right now it's extremely difficult without that kind of coordination to get into, as an independent or even as a municipal, to get into the electric power industry in a particular region.

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So this question of sharing has to be interpreted in that sense. When I agreed to what you said, Mr. Rigler, that it is a collective monopoly, what I am agreeing to is that with respect to the power exchange market it is a collective monopoly and with respect to the wholesake and retail markets, it is a monopoly of each company within their respective territories which only exists because these companies refused to compete against each other. But each

MR. REYNOLDS: Just so the record is clear, I will withdraw the earlier question that I left hanging that the Chairman had indicated might get us back into matters we had already excluded.

BY MR. REYNOLDS:

one of them has that.

Q On page 113 of your testimony in your discussion of retail geographic market boundaries of Toledo Edison's service territory you state:

"This is a definite geographic area of about 2500 square miles centering around the City of Toledo as previously described."

You then go on to show Toledo Edison's share of retail sales in this area.

My question is, what makes that area a definite geographic area other than the fact that Toledo Edison serves it?

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A What makes anything a definite geographic area is finding out the bounds of it by some particular way in which you would define area.

I can say this is its latitude and longitude and these are where its transmission lines and its distribution lines and its generating plants are, and it covers 2500 square miles. That is a definite geographic area.

I didn't say that was necessarily a geographic market. That is where that company happens to exist.

Q What is the significance of the use of the word "definite?"

A Well I suppose the only significance of that word was there seems to be no doubt in anybody's mond that if you say what is it, that is it. And apparently it may be language that I took out of Moody's. I don't know, but --

CHAIRMAN RIGLER: Couldn't it just as easily have covered 2700 square miles, or 300 square miles, or 41 communities instead of 477

THE WITNESS: Yes, I am simply describing what Toledo Edison is. And it is definite because they draw a map about it. That is all. I am not attributing any significance to that.

## BY MR. REYNOLDS:

Q Would you also characterize the area within the corporate limits of the City of Toledo as a definite area?

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- A Of course.
- Q By the way the city of Toledo is not in the center of Toledo Edison's service area, is it? It is in the for northeast corner?
  - A That is right.
- Q Let's suppose Toledo Edison served only within the City of Toledo at retail, and that constituted a relatively small portion of the 2500-square-mile area you referred to as the definite geographic area.

Then would it not be correct to conclude that Toledo Edison has no monopoly power at the retail level?

MR. MELVIN BERGER: That question seems to be hanging.

In what area?

BY MR. REYMOLDS:

- O In the 2500 square mile area.
- A Do you mean if Toledo Edison served only in the
- Q If it served only within the City of Toledo at retail.
  - A Yes.
    - 2 And --
  - A And what?
- Q And that was only a small portion of this 2500square-mile area you referred to, then the question is,

would I not be correct in concluding that Toledo Edison had no monopoly power at the retail level?

A Mell, no. It would depend upon what else you found in that 2500 square miles outside of the City of Toledo, or whether there were agreements or not.

Suppose it were now all served by, let's see,
Ohio Power? Everything else there but Ohio Power. And there
was an agreement between Ohio Power and Toledo Edison which
said, "You stay in Toledo, you stay in the City of Toledo only
in those annexed areas of the city and all the rest of the
stuff is ours, and all that is yours."

Then it would seem to me that they would have monopoly in that area, in the Toledo area.

- Q In which area the City of Toledo area?
- A The City of Toledo, yes.
- Q But not in the larger 2500 miles?
- A No, they wouldn't necessarily have monopoly in the larger 2500-mile area.

The question now, however, is what would be the geographic market which is what I am interested in. Would it be fair to say that the City of Toledo itself is the geographic market relevant in this hearing or is it not?

And then you go back to the same definition, are the conditions such, factual, legal, conspiratorial which would or would not permit price influence?

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conspiratorial, there weren't economic, there weren't regulatory barriers, therefore every time the City of Toledo wanted to set municipal rates, residential rates, commercial rates or industrial rates and had to take account of what Ohio Power was doing and vice versa, Ohio Power had to take account of what Toledo Edison was doing them the geographic market area would be that area in which these prices were

If there were price influence, i.e. there weren't

- Q Is Bowling Green in Toledo Edison's retail market?
- A I think so.

mutually influenced.

- Q Does Toledo Edison serve any retail customers within the corporate limits of Bowling Green?
  - A I don't know.
- Q Wouldn't that be important to know in defining relevant retail markets?
- A No, it wouldn't. I have already given you the definition.

The City of Bowling Green had to take into account the influence of Toledo Edison, whether Toledo Edison had a few customers in it, or no customers in it.

- Q Do you know that that is a fact?
- A That what is a fact?
- Q That Bowling Green does take into account Toledo Edison in setting its -- in setting the Bowling Green rate?

A When you say, do I know that is a fact, how can

I ever find out whether that was a fact?

I mean I don't know what the municipal distribution people in running the City of Bowling Green's system have at their hands. I have made the judgment on the basis of my experience that every municipal company has to take into account the prices of the investor-owned utility in whose area it exists and who can be considered as a potential customer or purchaser of their municipal system.

Now I don't have to make any studies further than that.

- Q That is based on your experience where, Dr. Wein?
- A It is based on my experience in Michigan, based on talking to people in California municipal systems, based on talking to people down at the Public Utility Commission in Ohio, and also people in Alabama.
- Q Do you know if the Toledo Edison rates and the Bowling Green rates tend toward equality?
  - A You mean their residential rates?
  - Q Any of their rates.
- A Well Bowling Green is -- well their retail rates.

  CHAIRMAN RIGLER: What do you mean by tend toward equality?

BY MR. REYNOLDS:

O Dr. Wein, what do you understand that term to mean?

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You have used it in your testimony:

Yes. I think that over a period of time are likely to fird that Bowling Green's rates will be either -will be fairly close to Toledo Edison's rates. And if there is a change --

CHAIRMAN RIGLER: Are they approaching parity? THE WITNESS: They may approach parity, but they may not. There may be some differential between them.

But if there is a change in the direction one way going up in Toledo's, there is likely to be a change in Bowling Green insofar as Bowling Green is reflecting very much the same sorts of cost factors.

CHAIRMAN RIGLER: But doesn't tend toward equality mean they are always coming closer together so that the differential between the rates is always lessening?

THE WITNESS: Well all other things equal, that is what it would mean, yes.

CHAIRMAN RIGLER: But is that what you mean, than? THE WITNESS: Yes, this is what I would mean by tending toward equality.

BY MR. REYNOLDS:

- But you don't know in the Bowling Grasn situation whether that is the case or not, is that correct?
  - No. I really don't know that.
  - If Toledo Edison has no retail customars in Bowling

Green, then Bowling Green would have 100 percent of the retail market in the corporate limits of Bowling Green, isn't that correct?

- A By definition, yes.
- Q And wouldn't that give Dowling Green monopoly power within the city limits?
  - A No.
  - Q Why is that?
- A Because they couldn't stray very far from the rates of Toledo Edison.
  - Q How do you know that?
- A I think I have answered that a long time -- on several times in this proceeding. I will answer it again.

because those who have promoted them, and the citizens who have voted on them believe that they will get at least as good service at at least as good prices as they could get from being served by an independent private utility. It will take some patience for citizens to come up with if that promise happens not to come about in one year or two years.

But the system would certainly not survive very
long as a municipal system if their rates were out of line with
the rates of the utility. There is no reason for it to exist.
So even though they had 100 percent of all the customers in
the City of Bowling Green, they couldn't stray very far from the

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rates which Toledo Edison was charging for similar types of customers and classes of customers.

Q Would you similarly feel that the Pitchian
Municipal Electric Utility System has no monopoly power over
retail electric sales in Pitchian?

A Yes.

CHAIRMAN RIGLER: You would concede, would you not, that for any given one-year period they have a monopoly?

I mean as of right now --

THE WITNESS: No, I won't even concede that Mr. Right for this reason:

The essence of monopoly power is not that I happen to have a customer and you don't. That is not the essence of it.

The essence of monopoly power is that if I happen to have that customer, I can charge any price I want. I am insulated from any other influence, so that I can charge him whatever the maximum profits I can make, given the nature of his demand and my supply. That is the essence of it.

In the electric utility business it is obviously always, somebody is always connected to some system and so if I had a town in which there were two utility companies serving, north of this boundary it is system one, and south of the boundary it is system two, now I could then say they have monopoly in the north and they have monopoly in the south,

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because the customers aren't going to change their lines.

And then by going to the extreme, you finally get down-even if I had system A has Jones and next door system B has Smith and next door system D has something else, then he has got a monopoly with respect to Jones, Smith and so on, which is absurd.

The idea of monopoly power is the shielding, the ability to impose a monopoly price if you so desire as a monopoly polist where you don't have to take into consideration any other influence.

So I can have the customers, but I may not even within a year, you see -- even within a year I may change the prices because Toledo Edison has changed the prices. Or I might raise it less than I would have.

## BY MR. REYNOLDS:

Q Well, on your logic then, would I be correct that
CEI does not have monopoly power in any municipality it serves
since the city can condemn CEI's property if the rates are too
high?

- A No, I don't think that would follow.
- Q Why not?
- A Well with respect to the City of Cleveland, I guess it is the whole factual situacion. I don't know whether the city can condemn the rest of the City of Cleveland or not.

But even if it could condemn the rest of the City of

Cleveland, the question is what would MELP do with the rest of the City of Cleveland? It doesn't have the capacity to serve the City of Cleveland right now. It is in very bad financial condition so its condemnation in saying, okey, we condemn all of CEI's plants and distribution in the City of Cleveland and somebody says, well that is fine, what are you going to pay it with? You can't just condemn without acquiring and now you have to suppose the City of Cleveland as a realistic matter would go out to Wall Street and him their bond attorneys to get the money for them or negotiate the funds for them.

And I think one would have to live in - well, one would have to make a very serious reservation about that possibility right now.

MR. SMITH: Do you know if there is sufficient CZI generation located in the City to support the CZI load in the City?

matter of fact. I am trying to think of -- enough within the City boundaries? I don't think there is enough to support that even if they could acquire any and pay for it. They still would require additional power and they still would require all the problems of how you get it without wheeling and so forth.

2	1	BY MR. REYNOLDS:		
	2	Q So the Lake Shore plant within the		
	3	A Yes, Lake Shore is.		
	4	Q Do you know what the capacity of that plant is?		
	5	A Well as I recall it was 600,000 magawatts		
6		600 megawatts.		
	7	Q Do you know what the load of CEI is in Cleveland?		
	8	A The load of CEI in Cleveland is roughly, as I		
	9	recall, a third of their total load. That is subject to mamow		
	10	but somewhere in that magnitude.		
	11	That is almost well, it is over a 3000-magawatt		
	12	system.		
	13	Q In your testimony, is not the threat of condemnation		
	14	the essence of what you have termed potential competition?		
	15	A No. That is an ingredient.		
	16	MR. MELVIN BERGER: Can you point to		
	17	MR. REYNOLDS: He has already answered the question		
	13	THE WITNESS: I didn't finish my answer.		
	19	BY MR. REYNOLDS:		
	20	Q You may continue.		
	21	A Thank you.		
	22	That is an ingredient. It is an ingredient in it.		
	23	But by no means the only factor. In fact, if there were not		
		all the other factors such as access to economical plants,		

access to wheeling, complete coordination and so on, that

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becomes a very hollow threat. It requires all those other things plus the existence of a possibility of the municipals getting together before that becomes a real threat.

What is potential competition then?

If you are asking me what is potential competition, A I will --

What is potential compatition in the electric utility industry if we focus on the municipal systems?

Well I think I have explained that. It co.si ts of the following ingredients:

One, the ability of municipalities to get together through some organization such as, for example, AMP Chio; to get together for the purpose of selling and generating and transmitting power to their municipal customers. And if they had certain access to nuclear plants, if they had access to them on a plane of equality as the other CAPCO members, if they had wheeling, if they were part -- if they engaged in operational and planning coordination, they would then to me constitute a potential competitor, one with the capability standing on the edge of the market. And they stand on the edge of the market in the entire CAPCO area if they have that.

... And that is what I mean by calling that potential competition.

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I think if that were given to them there would be beneficial affects even if in fact they never did go to the extent of some sort of ampanded Buckeys operation. It would force the other companies to set a limit price, the limit price being that price low enough so that this potential competitive entity would not necessarily come into being, but it would already have, then, the influence.

I believe you have indicated in your direct testimony that this entity standing on the adge of a market must have a significant probability of entry to be a potential competitor, is that correct?

Yas.

MR. MELVIN BERGER: Could I ask for the reference please?

MR. REY OLDS: Page 143.

BY MR. REYNOLDS:

Would you define what you mean by significant probability of entry?

A Yes.

Significant probability of entry, obviously not characterized by a number, 5 percent, 10 parcent, 50 percent, it's characterized by the emisting companies who ask themselves whether under these conditions do we think that there is this chance for this company to come

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in. They set the numbers. For example, they might say one percent is significant for them because the loss if they came in even using a one percent chance is significant enough, substantial enough for them to lower their prices, try to prevent them from not coming in. They might say it's five percent. In short, the margin of potential loss, if they did come in, the lower the probability we labe before an existing entity would say it is a significant possibility.

You see, if I'm going to lose ten cents I'm not going to worry about it but if I'm going to lose revenues that might approximate \$300 million or \$500 million a year, even if it were a one percent chance, I might lower my rates because one percent of \$500 million a year is a significant amount of money.

So that's the nearest I can give to you. It's not necessarily a particular number.

And when you indicate that there is this significant probability of entry in the forsecable future what would constitute the forsecable future in terms of the electric utility industry?

A Whatever the entities in that industry thank they can forsee. This seems to me to be the case. It's perfectly clear that if they didn't view this sort of potential competition as significant, I don't understand

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why these proceedings are going around. It would seem to me they would say, Sure, you can have this, you can have that.

There must be something they fear that is going to be competition which they would rather not face.

MR. REYNOLDS: I move to strike that response, Mr. Chairman.

CHAIRMAN RIGLER: No, I think that was invited by the question.

MR. REYNOLDS: It's highly speculative as to what these proceedings -- as to what these proceedings may or may not bear on --

CHAIRMAN RIGLER: But it related back to your question as to why he considered it significant and he was holding that out as one of the reasons why it would be significant.

MR. REYNOLDS: My question was what he considered to be the forsecable future.

Well, if the Board has ruled, I'm not going to argue with the Chairman. I think it is speculative and unresponsive to the question, but if I have lost the ruling I'm not going to argue.

MR. SMITH: Dr. Wein, does a potential competitor outside the market evaluate the capacity that already exists within a market in determining whether he should

enter?

THE WITNESS: Yes, it does.

MR. SMITH: Would the addition of a substantial amount of additional capacity affect the judgment of a potential competitor?

THE WITNESS: Yes, it would.

CHAIRMAN RIGLER: Is this a good time for a short break? Are you about to go on to a new line, Mr. Reynolds?

MR. REYNOLDS: No, but we can stop here. That's

CHAIRMAN RIGLER: Let's do it.

(Recess.)

CHAIRMAN RIGLER: Back on the record.

BY MR. REYNOLDS:

Q Dr. Wein, let me ask you would you agree or disagree with the proposition that if competitive alternatives available to customers located in different areas are significantly different than the delineation of several relevant geographic markets reflecting those differences is economically appropriate?

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

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

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THE WITNESS: I have to have that before me. It's a very confusing question.

CHAIRMAN RIGLER: Yes, do you have that writtun out somewhere -- in some way that you could give it to him?

MR. REYNOLDS: I don't understand the confusion. It sounded good to me all three times.

CHAIRMAN RIGLER: That's because you have it written out in front of you, I think.

MR. REYNOLDS: Lat me ask you this:

BY MR. REYNOLDS:

If the alternative -- if the competitive alternatives are different in different areas, let's say that the competitive alternatives to customers in Cleveland are different than the competitive alternatives to customers in Painesville, for example. Would, theo, the delineation of the relevant geographic markets to reflect those differences be economically appropriate?

MR. MELVIN BERGER: Are you talking retail customers?

MR. REYNOLDS: Yes.

THE WITNESS: You mean if a retail customer in Cleveland can buy 500 kilowatt hours at five cents a kilowatt hour --

MR. REYNCLDS: You have to talk into the mike,

Dr. Wein, please.

in Cleveland could buy 500 kilowatt hours at five cents a kilowatt hour and a retail customer in Painesville with the same characteristics could buy 500 mills at three cents a kilowatt hour?

BY MR. REYNOLDS:

- Q No, it doesn't have anything to do with the price.
- A You said retail customers buying electricity.

  I don't know what else would be involved assuming that
  the reliability was the same.
- the suppliers of power. If the competitive alternatives to the city of Cleveland to the retail customers in the city of Cleveland differed from the competitive alternatives alternatives to the retail customers in the city of Painesville, for example.
- A You mean the city of Painesville as a generating system, had different competitive alternatives than the city of Cleveland as a generating, is that that you mean?
  - Q That's right.
  - A Now, what's the question?
  - A The question is, then, whether the delineation

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of relevant geographic markets to reflect those differences would be economically appropriate?

A You mean at retail, or at wholesale, or what, sir?

Q At retail.

No, not necessarily at all. I mean a competitive Iternative to the city of Painesville, given its size generation and so on, might be different than the competitive alternative to the city of Cleveland as a generator of power. But then the question here is whether the influence of the prices, whether there would be any influence on the prices that the city of Cleveland charged and the city of Painesville. There may not be because the city of Cleveland has got no way to reach the city of Painesville and the city of Painesville has no way to reach the city of Cleveland. It still may have some influence because the citizens of Painesville might say, How come our rates are higher than the city of Cleveland, although the citizens of the city of Cleveland might say, How come our rates are higher than the city of Painasville. So just because the city of Painesville might, for example, have an opportunity to buy coal, if that's what they use, somewhat cheaper than the city of Cleveland, that would be a different competitive alternative, but that's no justification for saying that the retail markets are

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different, that they shouldn't be put in the same retail market.

Dr. Wein. let's try it this way:

If the retail customers in the city of Cleveland have as competitive alternatives the purchase of power from MELP, the Municipal Electric Light Plant, the city of Cleveland, or from the Cleveland Electric Illuminating Company as their competitive alternatives, and, on the other hand in the city of Painesville the retail customers of electric power in that municipality has as their alternative only the purchase of power from the municipal system of the city of Painesville, would you not than agree that there are different competitive alternatives for the few municipalities?

CHAIRMAN RIGLER: That question doesn't go because there is no competitive alternative in the city of Painesville, if that's their sole source.

MR. REYNOLDS: That's the whole point, Mr. Chairman, thank you. Therefore there are differences because in one there is a competitive alternative and in the other there is not. The answer should be yes.

THE WITNESS: No, the enguer is not yes. Am I being asked the question? CHAIRMAN RIGLER: You are being asked the question.

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answer.

THE WITNESS: Okay, and so I would like to

The answer is not yes; the answer is no. BY MR. REYNOLDS:

Q Okay, why is it the competitive alternatives are not different?

A. I have already emplained to you the reasons and why you would take a geographic market. It has to do with the problem of price influence, whether one takes into consideration the setting of a price or it does not take into consideration the setting of a price.

city of Painesville, the people of the city of Painesville obviously can't buy anything other than from the city of painesville. The city of Painesville, when it's setting its rates it certainly has in mind CET and what its rates outside the city of Painesville are going to be. And no municipal system can survive very long by setting rates that are very much higher than the CEI, so it doesn't really matter that this particular citizen or the citizens in the town can get to CEI temperow. The people who run Painesville's distribution system know that they can not survive by charging rates very far at variance for very long different from that of CEI.

Q Do lyou know if CEI can serve within the city limits of Painesville?

MR. MELVIN BERGER: I think Dr. Wein may have mpb 10 misspoken the last answer. Pherhaps we can have the Reporter read back the answer. (Whereupon, the Reporter read from the record as requested.) BY MR. REYNOLDS: Dr. Wein, I asked if you knew if CEI could serve within the city limits of Painesville. Within the city limits? Yes. I don't know whether they can or not. Do you know that -- were you awars that Pitcairn's rates have consistently been higher than --Duquesne Light's rates at retail for many, many years? No, I didn't know that. 2G 

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Q Do you see any difference, Dr. Wein, in the actual or the potential competitive alternatives available to a community whose present power supplier has a franchise set to expire in three years as opposed to a community in which the power supplier holds a perpetual franchise?

A Read the question, please.

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

assumes "perpetual franchises" mean never. That seems to
me very unlikely but in any case, supposing there were such
a thing as never, sure, as the potential time they mention
here moves closer, obviously the guy whose franchise is going
to end in three years is going to be constrained to do a
little more to make sure that he gets another franchise
than the supplier who has a perpetual because what that means
is if there is such a thing as perpetual, which means that
the city sculdn't even build its own distribution and duplicate within the city, which I don't think it means, but that's
an alternative. If his rates were that bad then the city
might decide to duplicate within the city and build.

So that's number one.

Number two, if his rates were so bad and if this were widely practiced throughout the territory of this company in the areas in which there were perpetual franchises so

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that in fact a nice brief could be made showing that where the supplier has perpetual franchises his rates are 30 percent higher than where he has limited-term franchises for the same kinds of classes of customers, conditions and so forth, it would seem to me that that would lead probably to such political unrest and legislation which might do away with perpetual franchises.

So as a matter of fact and as a practical question, I would suppose that even if somebody had a perpetual franchise, say a private utility within the city, it would, because of all these other forces which bear on potential competition be constrained anyway to set its prices not very much different from where he had a three-year franchise or a five-year franchise or a perpetual franchise.

It would seem to me that the competitive influences would be operating just as well and probably just as effectively. The IOU's, you know, are not devoid of political common sense.

## BY MR. REYNOLDS:

Q Am I correct, based on your prior testimony, that you have not made any analysis of the relative retail rates charged by each of the CAPCO companies and by the municipal and cooperative utilities within the CCT?

A In the sense of an analysis, no, I did not go down and analyze the different contracts. I've looked at some

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of the contracts. Even within the same service texritory of a company there may be little differences and the industrial rates are so complex I can't understand them anyway.

Q Did you make any studies of the cost of transporting electric energy from Cleveland to Pittsburgh?

A No, I could not make such a study. Insofar as I know, nobody has. But I can tell you that it's probably very little, based on my Alabama experience.

CHAIRMAN RIGLER: Look, he asked you a question that could have been answered Yes or No. Let's answer it Yes or No.

THE WITNESS: No, I did not make such a study.

BY MR. REYNOLDS:

Q If the cost of transmitting power from Cleveland to Pittsburgh were significant or large in proportion to the value, would you say that Pittsburgh and Cleveland are in different geographic markets?

MR. MILVIN BERGER: For what product, Mr. Reynolds?
BY MR. REYNOLDS:

Q Electric power, retail sales of electric power.

A You mean if I were a company in Pittsburgh and I wanted to sell something in Cleveland at retail, that I had a load?

Q All right, and the transmission cost were significant.

A Significant means significant enough for me so that I'm not competitive in my retail sales? Is that within your hypothesis?

Q If they were significant enough so you weren't competitive in your retail sales would you say that would put Pittsburgh and Claveland in different geographic markets?

A Yes, if that were the case, if there were no influence.

Q And if it were not significant enough so that you could be competitive would they then be in the same geographic market?

A I didn't finish my answer, so before you ask me another question let me finish the answer to the first one.

The answer to -- The first question was if a producer in Pittsburgh, because of transmission costs being so high, could not possibly compete for a load in Cleveland? Even if he had his own transmission or even if he could wheel and get permission to wheel it, the transmission losses would be so great compared to the delivery that he would not be in the Cleveland market with power from Pittsburgh,

That's the answer. He would not have any competitive influence. Of course that flies in the face of the
facts.

CHAIPMAN RIGLEF: Wouldn't you have to take into

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account the relative cost of producing the power in Cleveland or Pittsburgh?

THE WITNESS: I'm assuming that they are equal companies with equal generation and so on, yes. Of course that would be the case.

BY MR. REYNOLDS:

I think there's another question pending. I had asked you whether in the event the cost of transmitting the power was not so significant as to make the price uncompetitive with -- make the price in Pittsburgh uncompetitive with the price in Cleveland, in that circumstance would you say that Pittsburgh and Cleveland were in the same gaographic market?

MR. MELVIN BERGER: Are you assuming that there are no other factors to be considered, Mr. Reynolds, such as laws?

MR. REYNOLDS: Assuming exactly what we assumed when he answered if they were significant he would not put them in the market. And I'm asking now, assuming if it were not significant would he then put them in the same geographic market?

THE WITNESS: Well, let me --

MR. MELVIN BERGER: Without considering any other --MR. REYNOLDS: On the same assumptions as the first

one.

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The WITNESS: The assumptions I'm making in the first one are pretty obvious. One, all other things are equal; that is to say there is no difference in generation; there is no regulatory banns; there is no difference in anyting except transmission. That's the question.

The second question is transmission is significant enough so that the guy in Pittsburgh says No, if I go and compete there my profits are too low. I'm not going to compete. He's out.

Now if they were insignificant, one, no regulatory problems, two, everything else was the same, yes, if there were no conspiracy not to do so, if they could get into the market, if there were no regulatory berriers, then the producer in Pittsburgh could, because under those hypotheses they have competitive costs; presumably there's a market which could go one way or the other, so it is not tied up by one company rather than the other, and in that case if they were minded to compete they would be in the same market.

CHAIRMAN RIGLER: Off the record.

(Discussion off the record.)

CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Q On the bottom of page 112 and over at the top of page 113 of your direct testimony you refer to Mr. Jones as

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being a captive residential customer of whatever utility system he happens to be hooked into which— Your example would be whatever utility system distributes into Toledo, in this case Toledo Edison.

Dr. Wein, would the Mr. Jones who lives in Bowling Green be any less a captive customer of Bowling Green's municipal system?

A No.

Q Is any Mr. Jones who might be a customer of a cooperative member of Euckeye any less a captive customer of that co-op than Mr. Jones is of Toleda?

A Well, I suppose there it would depend on how close Mr. Jones was to the lines of, say, Ohio Edison compared to how close Mr. Jones was to the particular distribution entity there. And if Mr. Jones said Okay, I'll go off power because I've got some alternative generators anyway which I can use for 90 days; I'll do that, in that sense he is not as much a captive.

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Q In your retail market discussion on page 121, lines 1 to 3, you state:

"New transmission added by Ohio Edison in 1973, excluding a large expensive 133 kv line in East Akron, cost \$52,325 per mile of line."

Then you proceed to apply this figure to your example and state:

\*An SGM attempting to reach a 10 million kilowatt hour load ten miles distant would thus engage in an outlay on the order of \$500,000."

Are you presenting this as a realistic example?

A No. Not having any information about any SGN I am simply saying, well presumably if they want to do that they wouldn't put in 138 kv lines; they'd probably put in less than that. I don't know what they would put in.

So that is simply a method to give you a rough order of magnitude.

Q Do you know what voltage transmission lines was added by Ohio Edison for \$52,325 a mile?

A If you get me the Form 12 I could make a calculation.

I don't commit to memory all the stuff in it. I can certainly

find it in the Form 12.

Q Would you expect it to be 69 kilovolts?

A They had a whole bunch of things in the Form 12.

It wasn't just -- it was so many miles, 1.2 of something.

mm2 1 And then 3.4 or something else and so on. It was that, it was a whole bunch of different voltages. What capacity do you think would be required to 3 sarve a 10 million kilowatt hour industrial load? 4 You mean of line? 5 Right. Q 6 Well it would depend upon -- well, it is only ten 7 miles. It would not be very high, let me put it that way. It would depend upon lots of other conditions that we have to 9 assuma. 10 Let me ask you this: 11 Would 5000 hours on the average per kilowatt over 12 a year, at a capacity factor of 60 percent be reasonable for 13 an industrial customer? 14 MR. MELVIN BERGER: Objection. 15 I think Dr. Wein indicated it would depend on a 16 lot of different factors, and Mr. Reynolds is indicating just 17 one. 13 MR. REYNOLDS: I thought he indicated yes. 19 BY MR. REYNOLDS: 20 Do you have any problem with indicating that 21 that would be reasonable? 22 For industrial customers it might be reasonable. 23 It depends on the industrial customer. Some of them might

not be reasonable. It would depend upon the nature of the

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industrial customer, but I want to see what follows next. mm3 1 could be reasonable, yes. 10 million kilowatt hours is a pretty small 3 industrial customer, isn't it? 4 5 A Yes. And at 5000 hours that 10 million bilowatt hours 6 would give you a peak load of about 2000 kilowatts, wouldn't it? A Yas. 9 Which would be a 2 megawatt demand? 10 (Nodding affirmatively.) 11 It would be more empensive than that if it ware 12 an industrial customer, because the power factor would come 13 into account. And an industrial customer which is using a 14 lot of mechanical equipment for example, it would be more 15 expensive than, say, an industrial customer that was using 16 electricity in an electric furnace where it was a question of 17 generating heat. 18 MR. REYNOLDS: Could I have that andwer read back 19 please? 20 (Whereupon the reporter read from the record as 21 raquested.) 22

BY MR. REYNOLDS:

What do you mean by power factor?

Well, that is a fairly complicated thing. I am not

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sure I could explain it very well.

using electricity for driving large motors, for example, you get leads and lines in the alternating current which require more equipment. To adjust for that and actually the customers are taking more power than you actually charge for, and as a consequence you have an adjustment depending upon the nature of that particular power factor.

when I said a 2000 megawatt load would be more expensive for an industrial customer, I had in mind the alternative, say a 2000 megawatt load which was primarily going to residences and things of that sort where you didn't have large mechanical motors to turn. That is all I had in mind.

- Q 2 megawatt, not 2000?
- A 2 megawatts.
- Q Do you have any idea what the capacity of a 10-mile 69-kilovolt transmission line is?
  - A A 10-mile, 69?
  - Q Right.
  - A How many megawatts could it handle, do you mean?
- 22 !! Q Right.
  - A Well I guess it would depend on how that 69-line was tied into the rest of the system and what risks you wanted to take and things of that nature.

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Q Will you accept roughly 50 megawatts?

A Well it depends on -- again it could be 50 magawates, it could be higher, it could be lower. It would depend upon all the surrounding circumstances as to how it was tied into transmission, what the nature of the surrounding network was, what risks you wanted to take, things of that nature.

It could handle 50 megawatts. Under some conditions it might be dangerous to put 50 megawatts on.

Q Well would it surprise you that building 50 megawatts of transmission capacity to serve a 2 megawait load would seem relatively expensive?

MR. MELVIN BERGER: I am going to object to continued questioning on this. I think the reference to Dr. Wein's testimony, as indicated in that testimony is that this is only a very rough example of what he had in mind or what he wanted to illustrate. And I think continued questioning on the details of this is just a waste of time and serves no meaningful purpose.

CHAIRMAN RIGLER: I am inclined to agree with that objection.

Do you have some conclusory question as to where you think you would be at the end of the line?

MR. REYNOLDS: Well I guess I am trying to show
just how rough it is. The testimony is presented as I
understand it, to make some point that it would be tremendously

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expensive for self-generating municipalities to attempt to build a line of this distance and this capacity to serve a customer. It is based on, admittedly, rough figures.

What we are trying to demonstrate is exactly what, if we take those figures, we come out with.

CHAIRMAN RIGLER: Well frame it into a conclusion if you want, but I don't think it is profitable to continue to work on figures.

BY MR. REYNOLDS:

Q What, Dr. Wein, would be your view as to the cost of that line if -- strike that question.

Have you made any analysis as to what the costs of that line would look like relative to the revenue that could be obtained from a 50-megawatt customer at the end of the line?

A Well, you know, if there were a 50-megawatt customer --

CHAIRMAN RIGLER: Yes or no. Have you made the analysis?

THE WITNESS: No, that is not my example.

If it were 50 megawatts multiplied by 5000 hours it is going to be a heck of a lot more than 10 million. So why should I make an analysis.

BY MR. REYNOLDS:

Q Let me ask you, Dr. Wein, what is the source of

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the information on page 121 where you conclude it would require 500,000 investment in transmission to serve a 10 million kilowatt load 10 miles distance?

A The source is, as I have already stated in the testimony, I took something about what it cost for a mix of different transmission. As I say, this is very rough, but so is the other assumptions. I was going to make 3 mills against 12 mills, and things of that sort. It is equally rough.

All I am trying to show is that in general when you have such small loads like 10 million kilowatt hours, and you have to go out 10 miles, it raises a financial question as to whether it is worth doing it or not doing it.

Small SGMs are generally not that well heeled.

Let me ask you this:

Do you know if you can build a 12 kilovolt plant to serve that load profitably?

MR. MELVIN BERGER: Objection.

I think this is going into datails that are unnecessary.

chairman RIGLER: I am going to sustain the objection in that it far exceeds the scope of the direct.

He has indicated that he gave you a rough example; he has indicated how he arrived at that rough example and trying to convert that into a specific set of facts just is pointless.

So go on to something else, please.

BY MR. REYNOLDS:

Q You draw the conclusion from your example that it is illustrative of the financial difficulty of SGMs in attempting to capture private loads other than those on the fringes of the corporate limits.

Can you give us any example of SGMs in the CAPCO service area that have attempted to reach customers beyond the corporate limits, but have been frustrated by financial difficulty?

MR. MELVIN BERGER: Can I have that question read

probably the best example. They have been frustrated by financial difficulties in lots of ways.

CHAIRMAN RIGLER: Has one of those ways been the inability to extend their lines to capture new customers?

THE WITNESS: I think so. I think they have been frustrated in that way.

BY MR. REYNOLDS:

- Q And what is the basis for that answer?
- A I can't pin it down on a specific document. But that is my recollection. That is one of the things that was frustrating them was that they couldn't get a lot of the industrials which are in their corporate limits. They

didn't have either the power to get them or the transmission to serve them. And a great part of their difficulty is 2 financial. 3 Is that your understanding, because they couldn't 4 finance an extension of their transmission facilities? 5 A That, and other things. 6 Financial difficulties don't only go to transmission. 7 They go to many other things. 8 Let me ask you, Dr. Wein, what rate studies have 9 you made to determine that there is, as you indicate on 10 page 123, a classical price squeeze structure for the CAPCO 11 companies? 12 MR. MELVIN BERGHR: I think I will object to 13 that question. 14 I think that the answer clearly indicates 15 Dr. Wein didn't say that he made any studies. 16 MR. REYNOLDS: If that is the answer, he can 17 respond that way. 18 MR. HELVIN BERGER: Well your question was, what 19 rate studies did you make --20 MR. REYNOLDS: That is correct. 21 MR. MELVIN BERGER: -- rather than did you make 22 any. 23 THE WITNESS: Well, as my testimony points out, 24 I am relying on Mr. Kampmeier's examination.

mmil0 ;

Secondly, it is not necessary to make a study to say that a classical price squeeze structure exists. All you have to know is that a supplier is also your competitor at a particular level. And if you get your rates from him at wholesale and attempt to compete with him for some part of the retail market, you have got a classical price squeeze structure particularly if the competitor, in this case the entity buying power at wholesale, has no other alternatives.

That doesn't require a study. That simply requires knowing the facts that says that is a classical price squeeze structure. Kampmeier says he thinks it is taking place by his study of the rates.

Q And you are relying solely on Mr. Kampmeyer's --

A As to the actual conduct. Not as to the effect that it is a classical price squeeze structure.

The important point of that is seeing they have got the power on the basis of the market structure.

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Q Is the existance of that structure inconsistent with the antitrust laws in your view?

MR. MELVIN BERGER: Objection, I think that calls for a legal conclusion.

CHAIRMAN RIGLER: Overruled.

to have a price squeeze structure. I would say that if you had a price squeeze structure you then have certain power in a particular market area. If that power is substantial, substantial enough to be viewed as violative of the antitrust laws then even without the exercise of the power given in that structure perhaps it might be shown to be violative.

Now, if you have the structure you have the power, by hypothesis you have no other alternatives and if in fact you use it then I'm certainly absolutely certain about that being violative and I'm not at all sure that even if you didn't use it, but in the surrounding situation this was one ingredient of a large problem of monopoly. In other words, it wasn't only this particular situation but in a particular market area you had 95 percent of the production and generation -- I mean its transmission and distribution and in addition you also had this kind of market structure, I think that would simply be another fact involved.

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So to summarize, if you use it, yes, it violates the antitrust laws. If you don't use it but it exists, then you would have mark. power and then you would have to go to the extent or the degree of markst power.

## BY MR. REYNOLDS:

- On. Wein, as I understand it, you have delineated five separate relevant wholesale markets, one corresponding precisely to the service territory of each CAPCO member, is that correct?
  - A Yes.
- Q And am I also correct that in the Alabama

  Power proceeding you defined the relevant wholesale

  market as being identical in scope with Alabama Power's

  service territory?

MR. MELVIN BERGER: Objection irrelevant.

CHAIRMAN RIGLER: I'm sorry, I didn't hear the question.

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

CHAIRMAN RIGLER: Irrelevant in which market?
MR. REYNOLDS: Wholesale market.

CHAIRMAN RIGLER: Overruled.

THE WITNESS: Yes.

BY MR. REYNOLDS:

Q And in the Consumers Power case did you also define the relevant wholesale market as having the same scope as Consumers territory?

A Yes.

MR. MELVIN BERGER: Same objection.

CHAIRMAN RIGLER: Overruled.

BY MR. REYNOLDS:

Q Dr. Wein, could you tell us what circumstances, if any, you would require in order to find the relevant wholesale market not coincident with the service territory of the major utility under study?

A Exactly the same circumstances that I delineated for the same question with respect to the retail market.

Q You'll have to refresh my recollection on that.

MR. MELVIN BERGER: Is that a question?

MR. REYNOLDS: Yes.

MR. MELVIN BERGER: I would object to the question as having been asked and answered.

MR. REYNOLDS: The question has not been asked and answered. The witness has said as much.

THE WITNESS: I gave you the answer. The answer was exactly the same circumstances as I delineated to the same question with respect to the retail market.

CHAIRMAN RIGLER: And then Mr. Reynolds asked

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to have his recollection refreshed and that will be helpful to the Board, too.

THE WITNESS: Well, the basic idea is the influence of wholesale prices set by one entity on the wholesale prices set by another entity.

CHAIRMAN RIGLER: Okay.

BY MR. REYNOLDS:

- Do you know if that takes place anythere in the United States in the electric utility industry?
  - What takes place?
- The influence of the wholesale prices of one on the wholesale prices of another?

A Yes, there was a lot of testimony by A.E.C. and by other municipals in Alabama that they certianly took into account what Alabama Power Company was charging at wholesale and there was also testimony that Alabama Power Company was quite concerned about the wholesale rates charged by A.E.C., for example.

- In terms of -- I'm sorry, I didn't follow you in terms of what the municipalities were going to charge at wholesala.
- What A.E.C. was going to charge at wholesale. MR. MELVIN BERGER: Maybe we could get Dr. Wein to define what A.E.C. is.

THE WITNESS: Alabama Electric Cooperative, a

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generating company which sells power at wholesale to cooperative distribution members.

BY MR. REYNOLDS:

o So then Buckeye would be a wholesale market in this proceeding, is that correct?

A Buckeye is a company. What do you mean Buckeye is a wholesale market?

Well, is it in a wholesale market, a separate wholesale market?

A As I tried to indicate in my testimony, it's very hard to know where, in terms of the data that I had, to know where to put the different rural electric cooperative distributors in the CAPCO area. Clearly, some of them are and some of them are not and to the extent that the rural electric cooperative distributors exist in CAPCO markets, they do. There are none in CEI, but there are certainly some in Toledo Edison's area and there are come in Ohio Edison's area.

Q Why wouldn't they constitute a separate wholesale market in the same way as A.E.C.?

MR. HJELJEFELT: Objection.

CHAIRMAN RIGLER: I don't believe he testified that A.B.C. constituted a separate wholesale market.

Did you?

THE WITNESS: No.

## BY MR. REYNOLDS:

Q All right, why wouldn't the cooperatives of Buckeye be a separate wholesale market in the same way as each of the CAPCO companies constitutes a separate wholesale market?

A For the same reasons I'm trying to explain again.

A distributor who is a member of Buckeye Pool is getning

wholesale power from a Company called Buckeye, which is

producing that wholesale power outside the CAPCO axea

and in Ohio Company's Cardinal Plant that power is being

wheeled to all these distributors over the lines of

independent or investor-owned utilities.

Now, some of these distributors exist in CAPCO, individual CAPCO Company territory and they are in the individual CAPCO Company territory and insofar as they are selling at retail they are in that particular rabail territory of that particular CAPCO Company. Insofar as they are buying wholesale power from Buckeye, which is in Ohio Power's territory, they are — they're not selling. Each of the distributors are not selling, Suckeye is selling and Suckeye is not in the CAPCO Company territory and Buckeye has very little influence over the prices at wholesale which either Ohio Edison is selling to anybody else at wholesale.

are buying wholesale, aren't they? Each of the distributors is buying wholesale and they are buying it in the some market that, for example, let's say Ohio Edison is buying

A The distributors are in the CAPCO territory if they happen to be in the CAPCO territory as retail sellers of electricity. Now the question is what is the wholesale market? They are buying at wholesale, aren't they?

- Q That's right.
- A And they are buying at wholesale from Buckeye, right?
  - a Right.

power at wholesale.

A And if a C.PCO distributor happens to be in a Buckeye territory -- I mean in Ohio Edison territory then the question we ask curselves is this:

are they influenced by the prices at which Ohio Edison can sell power and the answer is yes, I think Ohio Edison, that the prices at which they buy is influenced by the prices which Ohio Edison would sell wholesale power. Chio Edison is trying to detach some and in my tables I made some estimates of what I thought the Enchaye share of these markets are and I put them in the markets, if I recall

correctly.

MR. MELVIN BERGER: I believe in the beginning of Dr. Wein's answer he may have misspoke again when he referred to CAPCO distributors. Perhaps we can have

CHAIRMAN RIGLER: What did you mean by the CAPCO

THE WITNESS: Well, I'm not sure in the context

(Whereupon, the Reporter read from the record

THE WITNESS: That should be "if a Buckeye

CHAIRMAN RIGLER: We'll take a recess at this

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CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Let me ask you, Dr. Wein, if Buckeye distributors are not permitted to buy at wholesale from any other suppliers by the terms of their membership contracts with Buckeye, wouldn't that put them in a separate wholesale market for which other wholesale suppliers cannot compete?

No, it doesn't put them in a different geographical market and it doesn't put them in a different product market. The only question here is whether Ohio Edison can capture a Buckeye customer, a particular co-op in its area. It may not be possible for them to capture this company for a particular number of years, or this rural electric distributor.

- I can't hear a word you're saying.
- I say it may not be possible to capture this one because there is a long-term contract.

But the major consideration again is whether the price which Buckeye is charging that distributor reflects the competitive influence of Ohio Edison and if it does, then it is in that particular market.

- Do you know whether or not it does?
- Well, again it is my opinion that it does.
- Is Ohio Edison in its pricing of wholesale power influenced by the price that Ohio Power sells wholesale power?

Then, skipping down, I'm saying:

"Hence, at least 95 percent of the total

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wholesale market is not subject to competition of CAPCO companies with each other. For the same reasons, no captive wholesale market is subject to penetration by any other private utility such as Ohio Power, for example. The only competition that remains for wholesale for resale firm power is the non-captive component, i.a., about five percent of the total. The question which remains is whether even the most figorous competition by the whole set of possible competitors for these markets under present practices and structure of the electric industry could be of such importance that it would influence the rates in the total wholesale for resale market, forcing each CAPCO company to lower its implied rates to its distribution facilities. Given the present size of these markets, such an eventuality is remote.

"Suppose: (a) Ohio Power was determined to capture all of Ohio Edison's 20 shclesale for resale customers by rate competition and (b) was willing, in order to do so, to build transmission and subtransmission to reach them where necessary; (c) that the Ohio Power Siting Commission would give approval to these new transmission lines. The possibility of all these conditions

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obtaining is itself very low. But suppose they did obtain, and Chio Edison lowered its rates to all its 20 wholesale customers to meet Ohio Power competition.

"Even if Chio Power gained no Ohio
Edison noncaptive wholesale customers, Ohio Power
would certainly be a company with adequate resources
on the edge of the noncaptive wholesale market.
But how could this influence Ohio Edison to change
implied wholesale rates in its vastly greater
wholesale market? It would only do this if the
subsequent retail rates at which these noncaptive
wholesale customers resold at retail would be so
low as to result in the towns, villages and cities
in which Ohio Edison holds franchises to protest
to PUCO the retail rates at which Ohio Edison sold
retail power in their areas.

on Ohio Edison to change its captive market wholesale rates depends on whether Ohio Power (the
largest utility in Ohio) has so great a cost
advantage over Ohio Edison that wholesale rates
which it offered and which Ohio Edison met would
permit such a large reduction by the municipalities
in their retail rates that yardstick competition

would compel Ohio Edison to lower its rates, or be compelled by PUCO to do so upon protest by Ohio Edison's franchisors."

Then I give you a table.

"It further indicates that there are significant. . . "

And so on.

"Another reason militating against Ohio
Power offering extremely low rates is that Ohio
Power could not engage in such rigorous competition
which would cause Ohio Edison to lower its retail
rates as well as its wholesale rates without having
the same dire consequences of yardstick competition prehounding on it. This consideration, in
addition to possible ideological views (public
versus private power) helps to explain the agreements, understandings or policies not to serve
wholesale customers in each other's service areas
involving Ohio Edison and Ohio Power, Ohio Edison
and CEI, Ohio Power and Toledo Edison, and
Toledo Edison and Consumers Power.

"In short, under present conditions, no competition from private companies outside a CAPCO company service area for noncaptive wholesale customers exists; or if it does, it is not of sufficient

intensity to influence a CAPCO company to revise its captive wholesale rates and thus extend the relevant geographic market beyond the limits of the retail geographic market.

That's my answer to that question, and it involved Ohio Power explicitly and Ohio Edison, and % don't think I can improve on it.

## BY MR. REYNOLDS:

- Q Let me ask you, Dr. Wein, you make reference to captive market wholesale rates. What is a captive market wholesale rate?
  - A I said an implied wholesale rate.
  - Q I believe you say at the top of 134:

\*In short, the leverage of Chic Power on Ohio Edison to change its captive market whole-sale rates. . . . "

A Well, if you read the distinction before that, the wholesale rates are implied rates as I distinguished and explained. A company such as Ohio Edison must perform the wholesale function anyway, just as any other company must, and it has a cost for so doing. And it is that implied rate.

If you go to the answers to the Attorney General's report you will see that they give different levels of costs at the bus bar and down in effect to the wholesale level

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at which they defined it, and that is a cost. So they have a cost which is taken into consideration in setting the retail rates which they themselves control. That is in effect the wholesale, the captive wholesale rate.

- Q And is the cost the same as the rate?
- A Is the cost the same as the rate? No, but the rate is some function of the cost I suppose.
  - Q Are these implied wholesale rates filed?
- A I've already told you that implied wholesale rates are not filed, but whather they're filed or not makes no difference to the argument.
- Q Let's remove the captive wholesale sales from the wholesale market for a minute. In those circumstances can you tell me what percentage of the wholesale market of Ohio Edison and Toledo Edison would constitute municipal systems and what percentage would constitute cooperatives?

MR. MELVIN BERGER: Could I have that quastion read back, please?

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

BY MR. REYNOLDS:

- Q Let me clarify. What percentage would constitute sales by investor-owned utilities to municipals and what percentage would constitute sales by Buckeye to cooperatives?
  - A Well, I tried to make a rough estimate of that.

If you look at Table 4 on page 76, I guess, I couldn't-When I made this table, though I tried, I couldn't get the
total amount that each of the co-op distributors had in each
of the CAPCO areas.

Now the co-op distributors would only be in Ohio Edison and in Toledo Edison. They would not be in CEI or Duquesne or Ohio Power. But I couldn't put them down by the total amounts so I combined them and I made a rough estimate just on the basis of looking to see where the headquarters of the co-op distribution company was, and putting the sales in -- putting that co-op in that particular CAPCO company's territory.

Now the co-op may have had its headquarters in Ohio Edison but sort of wandered over maybe into Toledo Edison. I had no way of knowing. But in any case I've made a rough estimate that they had 790 million kwh and the muni's who are very small-- I'm trying to look at these numbers.

- Q That figure is municipalities selling to other municipalities, isn't it?
  - A Yes. I'm trying to look at-- You mean the 790?
  - Q No, the 3.5.
  - A No, that's not the right figure.

I have to go back to the other and look.

They're roughly about equal on my guess. They're both very small.

What's roughly equal?

The CAPCO's and the muni's, if I understand your question.

- You mean the co-ops and the muni's?
- I mean the co-ops and the muni's.
- So you're saying the sales to the CAPCO muni's is approximately equal to the sales by Buckeye to its co-ops?

Well, I'm not sure I'm saying that. I have to puzzle out these numbers and see what they do mean.

What I was saying I thought was that Buckeye's co-ops who happen to be in Ohio Edison or Toledo Edison's territory, that amount of power which is sold is somewhere in the same order of magnitude as the amount which is sold by Ohio Edison and Toledo to all its muni's.

Now I sort of have to puzzle through these numbers to see whether that's reasonably close.

- I'm sorry, I didn't hear that.
- I say I have to puzzle through those numbers to see if it's reasonably close.
- But if the numbers bore it cut what you're suggesting is that Toledo Edison and Chio Edison have about one-half of the noncaptive wholesale sales market?
- Yes. Those figures would be about right if they're noncaptive but they're so small, a difference either way could make a big shift in the percentage.

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Q So Buckeye would have a significant percentage of the noncaptive wholesale market?

A I think that would be right. Cartainly Buckeye has a significant percentage.

Q So if we were just to look at the noncaptive wholesale market, Ohio Power then might be able to influence the prices, the wholesale prices in that market that were charged by Ohio Edison or Toledo Edison. Is that not right?

MR. MELVIN BERGER: Objection. I don't believe he testified the noncaptive is a market -- noncaptive wholesale is a market.

BY MR. REYNOLDS:

Q Well, let me ask you, Dr. Weir, would you suggest that the noncaptive wholesale sales would not constitute a separate market?

A Yes, indeed. The whole nature of my testimeny is that it doesn't. It surprises me very much that you do not understand that.

Q Well, let's assume that that was a separate market.

Let's assume that this Board were to find that the noncaptive wholesale sales constituted a separate market. Would not, in those circumstances, the wholesale prices of Ohio Power influence the price that Toledo Edison or Ohio Edison would charge in that market, or would you not expect that to be the case?

would certainly be a company with adequate resources

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on the edge of the noncaptive wholesale market." What do you mean by that?

Exactly what I --

Doesn't that indicate it would be an influence on the noncaptive wholesale market, on the prices that Ohio Power -- I mean Ohio Edison would charge?

Well, yes. What it's saying is that if they did all the things which I said they were going to do, a, h, and c, and they really wanted to and they lowered their rates in the noncaptive, then they would be you see.

But whether this Board found that they were separate markets or not is irrelevant to the question of whether they would really influence it.

CHAIRMAN RIGLER: Would they have to do a, b, and

THE WITNESS: Yes.

CHAIRMAN RIGLER: -- in order to influence that market?

THE WITNESS: Yes. It seems to me that all those ---CHAIRMAN RIGLER: But you testified on other aspects that the mere presence of a potential competitor with the ability to do a, b, or c would have an influence within that market.

THE WITNESS: (A) says they wish to capture the markets, and they would under certain conditions.

- (B) says they are willing to build transmission and subtransmission to do that.
- (C) says the Ohio Power Siting Commission would give them all this.

Now if the Ohio Power Siting Commission will not give them this then it doesn't matter what they would like to do, that is the first condition.

Secondly, they might stand there, but if the cost of transmission and subtransmission to reach all these were too expensive, they wouldn't do it.

So it gets down to saying in this particular state, in this particular situation, a substantial competitor standing on the edge of the market would have to meet these three conditions.

CHAIRMAN RIGLER: And you are saying the only reason why it is not regarded as a potential competitor is because of the improbability of being able to meet those conditions in the State of Ohio?

THE WITNESS: Yes, the improbability.

But now I go on, because you see, this discussion is in the light of the whole wholesale market, not solely that part of it which is known as the noncaptive.

Now if that were the case and we were to forget

about the captive wholesale market, if these three conditions were met, it would seem to me that they would be an influence on the prices of the wholesale. But then --

CHAIRMAN RIGLER: And wouldn't that in turn influence the competition for the captive wholesale customers?

THE WITNESS: Precisely.

Then I go back and say, well even if this happened it would seem like it was a substantial competitor on the edge of the market. But then when you take the rebound of that, namely if Ohio Edison did it, they would then be stuck in their own retail market and in their own wholesale markets.

And given all these considerations and given the size of it, the likelihood of this ever coming to pass is remote. That is essentially my argument, that it just doesn't pay for Ohio Edison or Ohio Power to go and known off five of Ohio Edison's wholesale customers if, in doing that, it leads them to have serious problems in a much vaster structure, which they are concerned with.

And the same thing, of course, would hold for Ohio Edison.

Now I have seen some documents which were given to me which I just saw, just a week, or a couple of weeks ago when they were sent to me, which seemed to me just to indicate this sort of thing taking place between Ohio Power and

Ohio Edison.

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Now I wish I had had the documents when I wrote the testimony, but I did not have those documents.

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BY MR. REYNOLDS:

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Are you indicating that competition between Ohio Power and Ohio Edison is not a practical thing?

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Is that what you are stating?

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That is not what I am stating.

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It may be a very practical thing if they would

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do it.

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Do you know if Ohio Power has transmission lines

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across Ohio Edison's service territory?

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Yes, it does. A

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What about across Toledo Edison's termitory?

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It has some there, too. A

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Do you know how Ohio Power's wholesale rates

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compare with Ohio Edison's wholesale rates?

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Well I gave a little table, and of course these are not really the comparisons of the rate structures because

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I really don't know whether they are exactly the same

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customers.

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But Table 5 will show you what they are in terms of the average revenue per kwh. It is a very rough indication of rates which you would have to get by examining contractby-contract and things of that nature.

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But all in all it seems that Chio Power is roughly about 10 percent in the last year -- in '73 which was the last data I had, roughly about 10 percent higher than Chio Power.

of difficulty understanding why Duquesne is a potential competitor and influences the market in Pitcairn, where it has no franchise to serve customers. But on the other hand Ohio Power is not regarded in the same light in the area where its lines criss-cross with those of Ohio Edison.

THE WITNESS: Well, let me put it to you this way.

Duquesne has --

CHAIRMAN RIGLER: That is the way I read your testimony. Is that right?

THE WITNESS: Yes.

Duquesne must be able to influence in Pitcalrn because --

CHAIRMAN RIGLER: Because you said at some point the voters will react, and despite the fact they have a franchise that exists right now, that that franchise is going to be sensitive to the rates being charged and the competitive pressures being offered by Duquesne.

THE WITNESS: Yes.

CHAIRMAN RIGLER: Now you tell me that Ohio Edison on the other hand does not respond to those same pressures,

when your Table 5 indicates that there is a rate differential of almost 10 percent.

that is that in the first place, Ohio Power and Ohio Edison do not, simply because they refuse to angage in competition with each other, do not capture each other's dustomers.

And therefore Ohio Edison doesn't have to respond to the lower rates of Ohio Power. It is in effect Condition (A).

MR. SMITH: What was that you said?

THE WITNESS: That that was in effect Condition (A).

BY MR. REYNOLDS:

Q Why is it that Ohio Edison and Ohio Power would not engage in competition with each other?

A I think you would have to ask them, but I think they don't wish to, as it were, spoil the market. This is a common reason.

Why should they, that is the point. They each have their territories, they don't want to engage in rate wars. The only consequence of that is that their rates would go down for all of them, so why should they do it?

Monopolists are very happy to come to amicable agreements with respect to markets and shares.

CHAIRMAN RIGLER: If Ohio Edison and Ohio Power were being aggressive competitors would they influence the wholesale rate schedules of each other?

THE WITNESS: Yes. I think if they were aggrassive competitors they would influence their wholesale rate schedules and also influence their retail rate schedules which is a heck of a lot more important.

## BY MR. REYNOLDS:

Q Looking at Table 5 for a minute on 134, do you say that the prices of Ohio Edison, Ohio Power and Toledo Edison do or do not tend toward equality as you use that term on page ollo f your testimony?

A Well if you look at 1969, the differential is 4 percent; in 1970 it is no different at all; in 1971 Ohio Power goes up by roughly 6; in 1972 Ohio Power is 4 percent higher; in 1973 Ohio Edison is 10 percent higher than Ohio Power, so you get a swing between those two companies.

If you look at Toledo Edison there doesn't seem to be any tendency to equality at all, they are always higher.

If you look at Dayton Power & Light you see quite a difference.

If you look at Columbus and Southern, they are lower than everybody, and yet they are operating right next to Ohio Power.

If you look at Cincinnatti Gas and Electric, they are higher than everybody, and yet they are not far from --

Q What about Toledo Edison and Ohio Edison?

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Toledo Edison and Ohio Edison? A

Q Yes.

Well, Toledo Edison in 1969 is about

7 percent higher; in 1970 it is about 9 percent; in 1971 it is 11 percent higher; and in 1972 it is about 10 percent higher; and in 1973 it is about 9 percent higher or 8 percent. NOw that does not seem to me to be much tendency.

I think this really shows -- you must bear in mind the caveat that I have that these are just average revenues per kwh of wholesale municipal total requirement custo mers and you would have to look at the mite structure to see really whether they were tending to equality.

But I think this shows they don't tend to equality. There are differences between the two companies which persist, particularly between Toledo and Ohio Edison; between Toledo and Ohio Power and for the others there. There just seems nothing of this nature. You couldn't get Columbus and Southern to be charging those rates if the other fellows were responding to Columbus and Southern.

You couldn't get Dayton and Cincinnati. as high as they are and yet they abut on the territories of some of the companies there. Columbus and Southern.

- Q Did you look at the rates of these companies?
- A Which companies?
- The wholesale rates. Q

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- A Of which ones?
- Q The ones that ward set forth on 3.

A I look dat some of the Toledo and I looked at some of the Ohi a son. I did not look at anybody else's.

That is all I had, actually.

And there are, you know, within Toledo Edison
you get a municipal wholesale rate which will look pretty
uniform within Toledo's territory. But even within Toledo
there are slight differences and they are somewhat different
than Ohio.

- Q You say there are differences in the wholesale rate within Toledo Edison's territory?
- A Yes. If you look at the individual wholesale contracts you will find some slight differences from municipal to municipal.
- Q Are you talking about differences between partial requirements and full requirements?
  - A That is one of the differences, yes.
  - Q Are there any other differences?
- A Well I would have to go through the contracts and look at them.
  - Q Well you indicated there were other differences.

    Do you know of any?
- A I said -- I just said with respect to the partial, there certainly are differences.

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Now you are asking me with respect to those, where they are full requirements and I said I would have to go through and look. I don't memorize rate schedules in my head.

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In your view, Dr. Wein, in defining relevant wholesale market does the fact that Euchave is outside -that the Buckeye generation is outside the CAFCO area have any bearing on whether the co-ops who receive power are included or excluded from the market?

Really it doesn't matter where the generation is. It could be in Timbuktu if you had transmission that was capable of transporting power there.

And would that be true of any other generating source that transmitted power into the CAPCO area, wholesale power?

- Would what be true?
- That they would be included in the market notwithstanding the fact that the generation was outside the market?

What is being included in the wholesale market are the wholesale distributors who happen to be in the CAPCO territory's markets. That's what's being included.

And they could receive their power from anywhere?

Yes, insofar as its relevance on whether to take a particular area for a wholesale market. Obviously, practically they couldn't receive power from anywhere.

Why do you not include in your analysis, Dr. Wein, a captive retail market?

	A.	A	captive rec	ail market	? It wo	mala samm to me
chat	is	not	approprieta	given the	nature	of the crossil
Balos	3.					

- Q. What is it about the nature of the retail sales that makes it inappropriate to characteries them as captive?
- They are all captive. There are no non-captive wholesale markets. They are all captive. They are enther captive by a municipal or they are captive by an inventor or semathing of that nature, but the captivity there is not the essence of the distinction. It's the better and of this integration.
  - bulk power supplied to the cocystatives in this?
    - A Is there a captive ---
    - Q Wholesale market?
    - A For the cooperatives?
    - Q Yos.
  - isn't. I misepoke. There is no captive in the same sense. There are long term contracts between English and the distributors, but it is not the same company as it would be in the case of Ohio Edison or Yolado.
  - Q Is there a captive wholssale musket for the bulk power supplied to DEEP's oustoners?

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A Yes, I think so insofar as MELP is a generating company and performs a wholesale function and a retail function.

And would that also be true of the wholesale market in Pitcairn?

A I'm not so sure about Pitcairn, it's so small that I'm not sure that I would say that Pitcairn is anything but a small distribution system of a very small amount when it had generation. Pitcairn is much too small for this distinction to have much sense.

Q Do you consider the retail area served by the Applicant to be subject to active on going wholesale competition?

A Do I consider the retail areas --

A Served by the Applicants to be subject to active ongoing wholesale competition?

A I'm not sure that I get that question.

Do you mean if the CEI sells to, say, Lorain, if it does sell to Lorain, are you asking me whether Lorain is subject to all the reail cities in which CEE is enfranchised is subject to wholesale competition?

Q I am asking whether there is competition for the bulk power supply to Lorain?

A No, there isn't any competition for it if Lorain happens to be a city in which say CEI is serving.

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Q Let me ask you this, Dr. Wein, I want to make sure I understand what you're saying:

Is it not true that in your captive wholesale markets you are counting the retail customers of the Applicants twice for assessing market power?

- A I'm not counting --
- Q The ones at the retail level and the ones at the wholesale level?

A I'm not counting the customers twice, what I'm simply saying is here you'll have retail sales. These retail sales had to have come through a wholesale function, an economic wholesale function and CEI performs it and I'm not counting the customers twice. CEI has got this amount of wholesale sales which it then salls at retail to a whole bunch of people, a whole bunch of customers.

So I don't know what there is in double counting.

Clearly, the amount of Kwh will obviously come very close except for such losses as may take placa in going from one to the other, but it is a separate organizational level which can be distinguished.

- Why is it that you are of the view there has to be a separate wholesale function in that situation?
- A Well, I don't think you can take, say, power off a generating plant which might go over a 345 line and then go down to a 138 line and then go down to a 69 line and

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down transformers which then go into the distribution system. At some point you've got to perform that function; that is essentially the wholesale function.

Now, it could have been done by Cleveland Electric Company, if they were minded not to have the retail function they would have then sold the power at the point where a particular city had its equipment to take that power and funnal it into its distribution. It has to be performed, the only question is whether it is performed by one company or whether it is performed by two entities. In the case where they are vertically integrated it's performed by one.

Q Doesn't Pennsylvania Power serve its customers directly from distribution at 41 -- its wholesale customers directly at 4160 volts?

- A 4160 volts?
- Q Yes.
- A What about it? Suppose it does?
- Q Well, what is the wholesale function of that situation?

A At some point it had to get that voltage, it wasn't coming in at 4160, was it? It was coming in at some very much higher voltage. What is considered transmission, subtransmission and so on is going to depend.

customer, they are both performing the wholesale function,

3 is that right?

A. It depends on what the customer is, it d pends on who the customer is. If it is a large industrial and Pennsylvania Power says, Okay, you take it at 4000 volts, you'll get paid less. The customer itself them says, Okay.

I'll put in my own equipment.

So both Pennsylvania Power and the wholesale

- Q Let's talk about a muni.
- A Okay.
- Q What about in that situation?

wanted to get the power delivered at 133, that meant that they would get a lower price and then they would perform part of that function, but the wholesale function is where ever. It's not determined by voltage particularly. That will vary, you'll have 138, you might have 69, you may have 37, you may have 12, depending on the size of the system, the size of the customer and so on, but when you get a delivery from high voltages, let's say coming off 345 down to 138 and an industrial customer or a main says, I want to buy it at that point, that's where that whole ale function starts. They could have said, I want to buy it at 69, they could have said, I want to buy it at 38. It all depends upon how much and how big that

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distribution entity is and what money it wants to put into this equipment to take the load coming in at high voltages and transform it down to its own distribution system.

function, there is no uniform varying voltage. Historically it has usually been when a company started out 138 was very big, that was considered the backbone transmission and then you build much larger and then it becomes subtransmission. Alternatively, 69 may be viewed by some systems as subtransmission.

Q Let me ask you, Dr. Wein, if an industrial customer takes that 69 kv and a municipal customer at 4160, which one is the wholesale customer?

A Neither is a wholesale customer. I just tried to explain to you that it doesn't depend upon the voltage. The muni is a wholesale customer and the industrial is a retail customer because that's how you classify them in your tariff and he's performing a great many functions on his own.

Q And those functions that the munies are performing are wholesale functions, aren't they?

A Yes.

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Q But that would be a different function than what the industrial performs. Is that correct in your view?

A Not necessarily. If the industrial were taking it at, say, 69 Kv, he happens to be a very large customer, as large, let's say, as a muni taking it at 59 Kv. He's taking that power and then doing with it what he has so do with it.

Maybe he steps it down to 2,000 volts. I don't kno?. It depends on the nature of his equipment and what purpose he's using it for, and so on. But he's got to use some equipment to take it at that load and use it for his equipment, whatever it happens to be.

He's performing those functions. He happens to be an industrial customer. Therefore he's classified at retail. He might be much larger than half the munits the company serves.

Q If you had a vertically integrated company that sold only at retail with no wholesale customers would you still define the sales of that company as being in the wholesale market as captive wholesale sales?

A Yes, I think I still would make the distinction of captive wholesale sales because it has to perform this type of wholesale function.

Q And that would be a separate wholesale market in that case?

eb2	1	A Separate from what?							
	2	Q From the retail market.							
	3	A Yes, I think it's separate from the retail market							
	4	Q All right.							
	5	Would you agree, Dr. Wein, with the proposition							
	6	that relevant product markets are defined by substitutability							
	7	that is, by two items to be placed within the same product market, they must be good economic substitutes for one							
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	9	another?							
	10	A Yes.							
	11	Q All right.							
	12	A I think I might accept that.							
	13	Go ahead.							
	14	Q Now you include reserve sharing, mutual emergency							
	15	support, maintenance support, economy energy, short-berm							
	16	capacity sales, unit power sales, joint capacity planning,							
	17	and joint ownership within the relevant product market you							
	18	have labeled as the regional power exchange market. Isn't							
	19	that correct?							
	20	A Yes.							
	21	Q Did you not testify in the Alabama proceeding							
	22	that the product in the regional power exchange market is							
	23	firm electric power?							
	24	MR. MELVIN BERGER: Objection. Irrelevant.							

THE WITNESS: What?

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I don't consider axles and engines in an automobile to be the same thing or substitutable for one another
but they are important inputs in making an automobile.

So you're concerned with the product which is tirm bulk power, firm bulk power which is what every generating company is trying to produce at lowest cost, or the particular ingredients, all the various options which go to make firm bulk power a part of that particular market.

Now that doesn't mean, for example, that coal is part of that market because onal is a separate market in and of itself, though coal is obviously a factor of production in a generating unit where you then make the level of aggregation to include the generating unit and not necessarily the coal.

forms of wholesale or other forms of bulk power transactions which are necessary and which are ingredients and
options are part of the same market. That doesn't mean each
one is substitutable for the other, any more than we define
a hardware store which consists of maybe 25,000 disferent
items and we're saying every item is substitutable in it.

But it's certainly reasonable in economics and in antitrust considerations to define that whole business of hardware stores as a line of commerce. Well, all these options are necessary and therefore the market which enables

you to get them is a regional power exchange market.

I'm saying very much what Mr. Hughes says.

- Q Would you include a partial purchase wholesale transaction in the regional power exchange market?
- A Well, I suppose one could if one wanted to do that. I don't see that that is the form of it.

Now if you look at, for example, -- Well, let me take it right here.

If you go through this study, for example, on power pooling rates--

- Q Which study are you referring to?
- A The one I referred to in my testimony which has been introduced in evidence. It's Power Pool Rates done by three people from the CEI Company.

If you look at the kinds of things which are in this document, the sorts of power transactions which take place, you're not going to find partial firm requirements, you're not going to find wholesale firm power. You'll find short-term power, you'll find spinning reserve service, you'll find emergency service, you'll find scheduled maintenance power, you'll find economy service, economy capacity, and o on. But you won't find wholesale firm power and you won't find whether it's partial or full. You will not find that as a typical ingredient of transactions in the regional power exchange market.

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Now you might— I mean some company might be so hard up and for so long a period of time that it might go to somebody else and say "sell me wholesale firm power of a certain amount," in which case it could be done. But if you are a generating entity, if you want to generate your power, you generally are not looking for that sort of thing. You're looking for capacity and these other power transactions.

So you would disagree ---

CHAIRMAN RIGLER: Let the record show that the witness is referring to Department of Justice Exhibit 388 in his last answer.

THE WITNESS: Yes.

BY MR. REYNOLDS:

Q Then you would disagree with Dr. Hughes on the matter of partial purchase wholesale transactions being included in the regional wholesale market?

A As I said, if it is ever included it's certainly an extremely infrequent thing, and this study which has studied— Let me see how many pools are studied here. I think there are 15 pools.

It's a study of 15 pools and you don't find wholesale firm power.

Now what Hughes was doing was saying I'm concerned with bulk. Well, bulk power -- Well, it's true that wholesale firm power, partial or full, is bulk power but that's not a

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good reason I think to put it in the power exchange market.

- Q What is limited term power?
- A Well, I could give you the definition if you want.

"The majority of the pool mesponding to the survey provided some arrangements for the delivery of limited term power. This class of power transaction is defined in the questionanire as capacity and energy reserved for periods normally covering a month or more."

- Q So you would consider limited term power transactions to be within the power exchange market?
  - A Yes.
- Q How long would a limited term purchase have to be before it becomes a partial purchase of wholesale power?
- A It's not the term which is the only whink; it is the degree of firmness which counts. And I will now read you what it says about that.

"The relative firmness for delivery of limited term power is equal to that of the supplier's firm customers for three pools, 8, 12 and 13."

Those are the names of the pools.

"In sharp contrast, this delivery would be the first firm load shed for two of the pools."

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Well, it is certainly not those, wholesale firm power.

"One pool based firmness of supply upon
the ratio of total forced cutages to capability
of the largest unit on the supplying system. . . ."
at cetera. The rest it doesn't say.

as the supplier's firm customers. The question there is whether we go on indefinitely, and the answer is No, it would not go on indefinitely because then the pools, the companies who are doing that can be quite annoyed because they're selling limited term power at a lower rate than they're selling wholesale firm power and they don't want, as they put it, systems to lean upon them, i.e., "Sell me wholesale firm power but charge me limited term power."

So there are both those things involved, the extent of the contract, the fact that the rate is lower, and the degree of firmness varies.

CHAIRMAN RIGLER: You're saying that the regional power exchange market is made up of a combination of eleme to that enable you to come out with the end produce?

THE WITNESS: Yes.

CHAIRMAN RIGLER: All right. Now go back to your hardware store example.

THE WITNESS: Yes.

Store where you stock a variety of items that these items in toto might make up a retail hardware store market.

THE WITNESS: Line of commerce, yes.

CHAIRMAN RIGLER: Line of commerce. All right.

Sut is it likely that each of these hardware stores would have the identical elements in that line?

THE WITNESS: No, they don't necessarily have to have them.

CHAIRMAN RIGLER: And is that the analogy you're drawing here?

THE WITNESS: Yes. They can have a variety of different things depending upon the specific nature of the firm involved.

CHAIRMAN RIGLER: But not every store would offer the identical product line with the other?

THE WITNESS: That's right.

CHAIRMAN RIGLER: So you could not so to a particular store and count its items and say "This defines the market"?

THE WITNESS: Right. It's the whole bundle and the bundle need not necessarily be the same.

CHAIRMAN RIGLER: We'll take a ten-minute break.
(Racess.)

CHAIRMAN RIGLER: On the record.

BY MR. REYNOLDS:

Q As I understand your testimony, Dr. Wein, you would include unit power purchase in the regional power exchange market, but you would not include partial purchase wholesale transactions.

Is that right?

MR. MELVIN BERGER: Can I ask what the reference is on that statement, Mr. Reynolds?

MR. REYNOLDS: I beliave he just tertified to that effect.

MR. MELVIN BERGER: Oh, I thought you were referring to his written testimony.

in the regional power exchange market. I say I would not necessarily exclude the other. I am just trying to say it seems to me a very infrequent thing to appear in that market.

As I went through the FPC forms I could not find any exchanges between the CAPCO utilities which were entitled firm. That is my recollection.

BY MR. REYNOLDS:

Q Well, are the two characteristics different so there is a reason to put one in the regional power exchange market and not to include the other in the regional power exchange exchange market?

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A Yes, I think there is difference.

For example, the price would be a wary major Millerence.

- Q I'm sorry, I can't hear what you are saying.
- A Price would be a wary major difference.
- And what is there bout the price that would indicate to you that the unit power purchase should be put in the regional power exchange market, whereas the partial wholesale purchase should not be?
- A Well it seems to me that the unit power purchase is the purchase of capacity of a particular generating unit, and presumably this capacity goes at the generating cost lus some charge for wheeling of this. And that is it.

Whereas if I were buying wholesale firm power from an invastor-cwned utility, there would, I think, be a higher price in general for that kind of transaction. In short, the wholesale firm product is the end product you sight come out with. It is not the kind of input that you put in. That is west you are trying to make is firm power that you can sell altimately at retail as firm power with a given degree of reliability.

With unit power you don't have any given degree of reliability. If the unit goes down you won't get it.

Q Well would you think unit power and the partial firm power are substitutable?

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You mean firm power, wholesale firm power?

2 Partial purchase power and unit power, are they substitutable?

- A Partial purchase power foecn't mean anything.

  Do you mean it is firm or not firm?
- Q It is firm.
- A Okay.

And it is sold under a wholesale schedule?

Q Right.

A I don't think they are substitutable for unit power.

Now if I am interested in coming out as a selfgenerating unit and making wholecale firm power, I would try to make it as ecommical as I could.

Q If the CAPCO companies jointly bought coal, would that be a transaction in your view that would be within the regional power exchange market?

A No.

Q Why is that?

A I thought I explained it in my provious answer.

CHAIRMAN REGLER: I did, too.

BY MR. REYNOLDS:

Q If they jointly bought uranium, would that he a transaction within the regional power exchange market?

A No.

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Suppose that electric utilities exchange combracts for uranium enrichment, would uranium enrichment be in the relevant -- in the regional power exchange market?

No.

Is it not the case, Dr. Wein, that the way you defined your product markets, unit power and economy power are more substitutable than unit power and wholesale power?

Will you state that again.

Is it not correct that the way you have defilned your regional power exchange market, unit power and economy power would be more substitutable than unit power and wholesale power?

A No, no.

It doesn't follow from what I am saying that they are more substitutable.

Well now, why is that if you put unit power and economy power in the same market but you won't put wholesale power in that market?

Because I thought I explained that numerous times.

If I am interested in getting the most economical firm power that I can produce, I have a wide variety of options depending upon my particular conditions and so on. ANd I would try to combine them in such a way that I get the lowest possible cost for firm power that I can sell as .

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firm power ultimately down to the retail level. That is the business I am in, in generating.

Now in doing that, the economy power happens to be one of the options which I can make use of if I need it. Of course, I always usually do need it, and unit power is another way. But I wouldn't buy wholesale firm power in order to be a seller of wholesale firm power. I want to be a producer of wholesale firm power.

And so therefore, economically, I would have to pay a higher price because it is firm and because it is dependable and because it is there for the length of time that I want.

If I were doing that I would not be making power,
I would not be generating. I would simply be a wholesale
customer buying wholesale firm power.

CHAIRMAN RIGLER: Suppose the wholesale firm power were public preference power?

THE WITNESS: Then that would be an option. If the wholesale firm power were public preference power and it were lower than what I could produce as a generator, I would not be in the generating business and say, okay, I am now just going to buy that and forget about all the others.

And if I could be completely satisfied in my requirements by public preference power which would be given to me wholesale and firm, then I would not go into the

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generating business if that were the option.

considering what should I do in order to get wholesale firm power which I wish to sell to retailers and he had before him the option of generating it or buying and generating it with all the implications of that, or buying it from a public preference system and every one of his generating options was inferior to wholesale firm power from the public preference company, if he were rational he would not go into generation, he would simply be --

CHAIRMAN RIGLER: Unless he couldn't get enough.

THE WITNESS: Unless he couldn't get enough. I
am assuming, of course, he could get what he needs.

BY MR. REYNOLDS:

- Q What if the wholesale rates from a private investor-owned utility were lower than what the purchaser could generate the power for?
  - A What about it?
- Q Then would the wholesale power be in the regional power exchange market?

A No, it wouldn't be in the regional power exchange market. It just would mean whether the wholesals customer has looked at this and said I can't really generate my power, or what I need as cheaply as I can get it by buying it wholesale firm, I then become a wholesale customer and I

am not in the regional power exchange market, I am not interested in economy energy, not interested in unit power, not interested in any of these particular types of power. I have made that decision.

- Q How do you distinguish the lower cost wholesale power purchased from an investor-owned utility and the preference power purchase?
  - A I did not distinguish them at all.
- Q So in neither case would that be in the regional power exchange market?
  - A No.
  - Q I 589.

mpbl 1	Q Is that because you would not consider that					
2	an available option that would be open?					
3	A. Available option for what purpose?					
5:00 4	C. For the firm power supply of well, the firm					
5	power supply to Southern Retail.					
6	A I thought I already explained that. I'll be					
7	glad to go over my ground, if you wish.					
8	Q Is it your testimony that would not be an					
9	available option?					
10	A No, that's not my testimony that it's not an					
11	available option. It's not an option in the regional					
12	power exchange market.					
13	Q It's an option but not one that's in the					
14	regional power exchange market?					
15	A. You know, I've got lots of options. One option					
16	I have is not to go into the power business at all. Lots					
17	of companies in the United States exercise that option.					
18	C But you did say that the end product for the					
19	regional power exchange market was firm power for matail?					
20	A And wholesals.					
21	Q Did you mean to say that before too?					
22	A Of course. You know, I have explained that					
23	nobody is in the wholesale market unless he's got a retail					
24	market which they are going down to other than, as I mentione					
25	before, some of the public power systems.					

Dr. Wein, let me ask you this:

Do you know whether or not bulk power supply studies aimed at evaluating alternative methods of obtaining firm bulk power supply in the future normally consider both firm wholesale alternatives and various means of obtaining dependable but non-firm capacity?

A I suppose it depends on who is commissioning such a study.

Q Do you know if the wholesale customers of Ohio Edison commissioned such a study?

A Whether they should go into their own generation or buy it wholesale?

As alternatives.

A I don't know.

MR. SMITH: Well, you testified that these are workable options several times.

MR. REYNOLDS: But he has also indicated they are not in the same market.

BY MR. REYMOLDS:

On page 99 of your prepared testimony you state that a pool is a market because energy flows to it from the members and it's paid for according to predetermined agreement between the members.

Does there have to be an interchange agreement, in your view, for there to be a regional power exchange

A I don't know as to the legal requirements.

All I'm saying is that pools do have prices that they assign to each of these things. They usually know what they are, they usually agree to it. They may not have a formal agreement.

Q Well, if there were not an interchange agreement would you define the market differently?

A No, I wouldn't define the market differently if there were not an interchange agreement. All I'm saying is that it's a market because energy flows to and from the members and is paid for according to a predetermined agreement between the members. Now, whether this agreement is oral or is in the form of an interchange contract, the details in the interchange contract and so on, the people know what they're buying and what they are paying for. They may pay for it in dollars, they may pay for it in kind. In other words, you send me some power and I'll send you back the same amount and type of power as reimbursement.

Q Well, do you know whether any of the CAPCO companies have an interchange agreement with Consumers Power?

I don't know whether they have an interchange agreement between Consumers Power or not, but I know that

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some Consumers Power power went over CAPCO transmission.

Q Do you know if any of them have an interchange agreement with Ohio Power?

A If you mean by an interchange agreement a contract for which they have filed either with themselves or with the Public Utility Commission of the state of Chio or with the FPC, no, I don't know whether they have that kind of legal document. I think insofar as the FPC rules are they have to file that sort of an agreement, or at least a rate or whatever.

Q Let's suppose that Toledo Edison interchanges more power with the Michigan Pool than it does with any other members of CAPCO or even all the other members of CAPCO combined.

In that situation, would you consider the Michigan Pool to be within the regional power exchange market?

- A No.
- Q Why not?
- A You mean within the geographic definition as I defined it where I am saying it is the entire extent of the CAPCO thing?
  - Q Right.
- A Wall I think there what one goes to, as far as the geography goes --
  - Q I can't hear you, Dr. Wein.
- A I say as far as the geographical extent of the market goes, you have to get the idea that what we have is an access made possible by transmission which is interconnected not only amongst the CAFCO pool, but of course there are interconnections with all the other entities adjoining them at the paripheries.

power exchange market as the locus of all those interconnections including the interconnection with adjoining systems or who are not members of the CAPCO pool.

Now obviously that is vary important, because it

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might be the case that Toledo Edison in some particular year, say, or some particular period of time, gats more power because of the particular situation from, say, the Michigan Pool, or from Consumers Power; they have themselves some agreement between Toledo Edison and Consumers and they are then, to that extent, adding of course to the value of this interconnected CAPCO transmission for each other.

If CAPCO, for example, had no connections with consumer and none with PJM and none with Ohio Power, its value would be much less — it would have much less value than it does by having it.

Now for the purpose of this particular case, you see, for the purposes of this particular case and this particular analysis, all the entities within CAPCO, before they can get out to Consumers Power or PUM or any other company they have got to go over the transmission of some CAPCO company they have got to get permission to do so, they have got to get charges which would be on a plane of equality.

That is why for this thing the CAPCO Pool, as it were -- which happens to be a formal arrangement -- is the relevant regional power exchange. It does not mean from that that MELP couldn't get power from PASNY, that is outside the CAPCO Pool. But the only way they can get it is go over -- they argue -- over CEI's lines.

Now there is some center of gravity in terms of

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flow of power transactions.

Now I have a study sent to me by the Staff of the NRC which did what I had suggested in Alabama for this particular case, which I, myself, didn't have any time to do.

What it shows is that roughly 65 percent of all the kwh flowing amongst the CAPCO members are entitled to the CAPCO Pool and approximately 35 percent are coming out.

While that is good enough on the LTFO-LOFT test if you want to take that, then it is an indication of a proper geographical market.

But the idea of trying to pin it down to one region is an inappropriate concept here because the espence of the thing is its interconnection with outside. So even if in a particular year Toledo gotmore stuff from Consumers than they got from CAPCO, it wouldn't put Consumers in the CAPCO Pool because Consumers is not in the CAPCO Pool, though they interchange energy to and from the CAPCO Pool.

4A	wbl 1	What is the study you're referring to, Dr. Wein?					
	2	A The Staff made a study based on the FPC.					
	3	Q Do you have a copy of it?					
	4	A Yes, I have a copy of it.					
	5	Q Could you please provide me with a copy of it?					
	6	A Sure, I'll be glad to.					
	7	Q Let me ask you this:					
	8	What CAPCO lines would Toledo Edison have to					
	9 use in order to bring in power from Consumers that it						
	10	chased?					
	11	A It wouldn't have to use the CAPCO lines other					
	12	than its own lines which it may own with other CAPCO					
	13	entities.					
	14	Q And what's the basis for saying that before					
	15	Toledo Edison use its lines to bring in, or to sell power					
	16	to Consumers, it would need permission of the other CAPCO					
	17	companies?					
	18	A Where did I say that?					
	19	Q I believe you indicated in your prior response					
	20	that before that could be done there would need to be					
	21	agreement of the other CAPCO members.					
	22	A I didn't say that.					
	23	O So it is not your impression that that's the					
	24	case?					
	25	A I said if Toledo Power wanted to get some power					

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from the Michigan Pool they themselves would have to agree as to what the terms of the price were.

Are you aware that in 1974 Toledo Edison also purchased more power from Chio Power than from any other member of the CAPCO Pool?

I don't have the FPC statistics from 1974, so I don't know. But, as your favorite question is, would it surprise me? No, it would not surprise me.

And would it surprise you to hear that Ohip Edison in 1974 purchased more power from Ohio Power than any other electric entity, including any of the other CAPCO members?

It would not surprise me at all. And I keep on insisting that that sort of consideration is irrelevent for this proceeding because the question is access. And if you happen to be an entity other than a CAPCO company in the CAPCO territory you can't get out to Ohio Power, you can't get out to Consumers Power, you can't get out to PJM. That is the particular problem that is involved here.

It would be interesting to know how much of that power was OVEC power. I suppose a great deal of it was.

Dr. Wein, let me ask youthis:

What are the criteria for measuring the geographical extent of the regional power exchange market? -- your criteria?

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A Well it's a meaningless question if you understand the concept. That's like asking me what are the geographical criteria for measuring the geographical entent of an interconnected network. The answer is, wherever it's interconnected is the geographical extent.

Now you happen to have close degrees of interconnection with some regions and less close with other regions.

MR. REYNOLDS: Let me have the question and answer read back, please?

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

BY MR. REYNOLDS:

Q Soyour geographical boundary is totally arbitrary?

A No, it isn't arbitrary. I defined it in this case. As I said before, it is the locus of the gateways of the CAPCO companies where they're interconnected. And all their interconnections in that particular geography is part of its geographic extent, plus the limit of that is where they then are connected with another system that's cutside of this particular geographic exchange market. — regional power market.

That doesn't mean that some power transactions won't flow. The CAPCO pool as an interconnected entity has

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got other things besides the interconnection which characterizes it. From the point of view of an entity within the CAPCO territory they cannot reach any other CAPCO company without the permission of the CAPCO company's territory that they are on.

Secondly, they cannot get to any outside power supplier without going over CAPCO's transmission.

For these reasons, for this case, that's the relevant geographic market.

Now, --

CHAIRMAN RIGLER: His question was, What are the criteria? And I gather from your answer up to this point, the criteria is access to transmission within the CAPCO system.

THE WITNESS: That's right.

CHAIRMAN RIGLER: All right.

THE WITNESS: I wish I could state it that quickly.
But I accept that.

BY MR. REYNOLDS:

Q And am I correct, then, in understanding that you have defined the wholesale market, for purposes of this proceeding, in terms of an investor owned utility and you have defined the regional power exchange market in this proceeding in terms of the municipalities and co-ops?

MR. MELVIN BERGER: Objection. I think Dr. Wein's

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direct written testimony and his testimony today have delineated the geographic boundaries for both the -- well, for all of the retail, the wholesals and the regional power exchange market.

CHAIRMAN RIGLER: Sustained.

BY MR. REYNOLDS:

Q Dr. Wein, are you defining the regional power exchange market from the point of view of the municipalities and co-ops within the CAPCO company area?

MR. MELVIN BERGER: Objection. I think Dr. Wein has defined it both by giving the criteria he used to define it and by defining the area that is involved, the geographic area that's involved.

CHAIRMAN RIGLER: Sustained.

Where is it you want to go, Mr. Reynolds? We've been over this. The objection is well taken. And I don't want to cut you off if there's a legitimate area of confusion.

But I don't want to just go up and down the same hill.

Now, where do you want to go?

MR. REYNOLDS: I'm trying not to; I'm trying to arrive at some understanding of how Dr. Wein got to where he got to. I don't really anticipate that this is going to take many more questions.

What I'm trying to ask him is from what perspective or what point of view he has approached his definition

or his defining of the respective markets. It seems to me that that's not a question that has asyst either been asked or answered. All I'm trying to see is whether he--

CHAIRMAN RIGLER: It has been asked and answered now with respect to the regional power exchange market. Because you just asked it.

MR. REYNOLDS: I asked what his criteria were and he answered that in terms of interconnection or access to interconnection. My question is whether it therefore is his basis for defining regional power exchange market by looking at the situation from the point of view of the municipalities and the co-ops within the CAPCO area.

CHAIRMAN RIGLER: Well, I'm going to sustain the objection, then. Because I think he elaborated at length on how he developed that definition.

MR. REYNOLDS: I'm trying to see if there's a relationship between the relevant wholesale market that he selected and the relevant regional power exchange market that he the the telected. And I was trying to ask questions which, it seems to me, could be answered on a yes or no basis.

CHAIRMAN RIGLER: Why don't you ask him the direct question, then of whether there is a relationship between the two markets? --if that's where you went to go.

MR. REYNOLDS: All right.

## BY MR. REYNOLDS:

Q	Let	me	ask	vou	this,	Dr.	Wein:
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Did you use the same criteria in arriving at your determination of the wholesale market as you did in arriving at your determination of the regional power exchange market?

MR. MELVIN BERGER: This is the product markets or the geographic?

MR. REYNOLDS: Geographic markets.

THE WITNESS: No, they're not the same. I think

if--

BY MR. REYNOLDS:

Q Will you--

A Just a minute.

I think if you'll turn to my discussion on page

141, starting with Question 64, and going on, I've stated

why, for example, I would not consider Chio Power, and so on.

Now I can't improve upon what I said.

CHAIRMAN RIGLER: Now this relates to the criteria you used in selecting your wholesale markets?

THE WITNESS: No; to the geographic regional power market. I said no, they're not the same.

If you ask me why they're not the same, then you must go on and read it. It starts actually with Question No. 62.

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"Is the geographic scope of the

'regional power exchange' market the same as the geographic scope of the two product

markets you have so far discussed?"

I can't improve it. You asked me Is it the same? and I said No. That's what I said in the testimony;

## BY MR. REYNOLDS:

Q What I'm trying to ascertain is: as an antitrust economist, what were the different general criteria that you used in determining or in ascertaining the relevant geographic market for the wholesale product market and for the regional power exchange product market?

You've indicated they were not the same criteria. What were the different criteria?

MR. MELVIN BERGER: Objection. I think that has been asked and answered. I think Dr. Wein has given the criteria he has used for each.

MR. REYNOLDS: I'm asking for a comparison to determine what the difference is in the criteria that he used, as an antitrust economist, in approaching this analysis.

CHAIRMAN RIGLER: Wait a minute.

Isn't the question you're asking identical to the question, although posed in different words, on page 140,

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Question 63?

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MR. REYNOLDS: I don't think that that addresses the question of criteria at all.

What I'm trying to find out from Dr. Wein is, as an antitrust economist, whether or not there are general criteria that are used in order to ascertain the extent of the geographic market of any product market. And he has indicated to me that there are general criteria but that they differ when you talk in terms of one product market as opposed to another product market. And I don't believe we have yet had an answer to the question of the difference as he see it between the general criteria an antitrust economist looks to in defining or delineating a geographic market for whatever happens to be the product market. And, in this case, it happens to be, on the one hand, the wholesale market and, on the other hand, the regional power exchange market.

believe Dr. Wein has gone into the criteria used for each of these at length. And the enswer will probably end up being a restatement of the two criteria and just a comparison.

I don't see why we have to go through this again.

CHAIRMAN RIGLER: I think the objection is well taken. Only because this is cross-examination of an expert I'm going to give more latitude than perhaps the rules

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warrant and I'm going to permit the answer to that one question.

CHAIRMAN RIGLER: Let me paraphrase it,

Mr. Reynolds, and see if we have it down.

He's inquiring about the criteria you used, the difference between the criteria you used in defining the geographic market for two different product marksus.

Is that right?

MR. REYNOLDS: Yes.

THE WITNESS: Well, let me first point out the difference.

The regional power exchange market consists of bundles of different items. The wholesale firm market is one particular product.

Two: the essence of the regional power exchange market is that a generating entity has access on terms of equality to achieve whatever in its view is the best combination of all these items in the regional power exchange market. All these items will have different prices because they're all different. But they all would be inputs, ingredients of putting together a firm power package at lowest cost.

Since the essence of it is access, you don't use the test, as I did in wholesale power, of the prices

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tending to equality in a different geographic market

because these particular things, though they have prices,

will vary all the time. And it's not that they are products

which are in competition with any other product; they

happen to be, as it were, an available byproduct of a

particular firm which you have an opportunity to get if you're

on the network.

As a consequence, then we try to define the geographic extent of that market. You must define it really in terms of all the access points which you have in order to get these things.

Now I don't think I can explain it any better than that. And I think if I have failed to explain it, I have just failed to explain it.

Let me just add this one thing:

There is no market where people go around and shop for surplus power in the sense that people are in the business of engaging in making surplus power for sale as surplus power, as they would be, for example, as scal: certainly that, or wholesale firm power. And, as a consequence, you don't particularly view that option in a strictly defined geographic area as you would in the case of the wholesale firm power.

Within the CAPCO territory most of the options, for most of the time, can be obtained from the CAPCO com-

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panies. And they have obligations in their contracts to so provide what is necessary: cutside that, they don't.

Ohio Power doesn't have to provide economy energy if some exists on its system to give to a CAPCO company: there's nothing which compels it to do so.

BY MR. REYNOLDS:

Q Let me ask you this:

What degree of coordination between Consumers and Toledo Edison would have to exist before Consumers would be in the regional power exchange market as you defined it?

A The way I defined it, Consumers would have to be a CAPCO company and sign that contract and oblige themselves to do everything that is done in that contract. They'd have to be a CAPCO company. That doesn't mean Consumers can't engage in some transactions with them.

Q And if they did everything that the other CAPCO companies could do with Toledo by virtue of a bilateral contract with Toledo, that would not be sufficient to--

A No. They could not do everything that Tolodo does with respect to the others. In the first place, they're not coordinating capacity; in the second place, Consumers and Toledo couldn't operate on top of the CAPCO company their own kind of economic dispatch, they would have to do it within the CAPCO contracts or else get permission from the

other parties. wb13 1 2 Are you suggesting there is aconomic dispatch 3 in the CAPCO area, joint economic dispatch in the CAPCO area? 4 5 Yes. A I see. 6 What's the basis for that? 7 My understanding of it. 8 A Where did you come to that understanding? 9 I can't remember now. 10 CHAIRMAN RIGLER: I think this might furnish 11 a good break point for the day. 12 Mr. Frysiak wants to bring you in at six-thirty 13 in the morning, but I think we'll go at nine-thirty, because 14 I think you can finish very easily tomorrow. 15 (Whereupon, at 6:40 p.m., the hearing in 16 the above-entitled matter was recessed, to recou-17 vene at 9:30 a.m., the following day.) 19 19 20 21 22 23 24

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