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In the

Supreme Court of the United States

FEDERAL POWER COMMISSION,

Petitioner

v.

FLORIDA POWER AND LIGHT COMPANY,

Respondent.

No. 70-38

Washington, D. C.
November 15, 1971

Pages 1 thru 36

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PROCEEDINGS

MR. CHIEF JUSTICE BURGER: We will hear arguments next in No. 38, Federal Power Commission against the Florida Power & Light.

You may proceed, Mr. Huntington.

ORAL ARGUMENT OF SAMUEL HUNTINGTON, ESQ.

ON BEHALF OF THE PETITIONER

MR. HUNTINGTON: Mr. Chief Justice, may it please the Court:

The question in this case, here on writ of certiorari to the Fifth Circuit is whether Respondent owns and operates facilities for the transmission of electric energy in interstate commerce.

If Respondent does, then it is a "public utility subject to the Commission's jurisdiction under Section 201 of the Federal Power Act."

Under Section 201, electric energy is deemed to be transmitted in interstate commerce if "transmitted from a state and consumed at any point outside thereof." On the basis of an extensive record, the Commission concluded that electric energy was indeed transmitted from Respondent's facilities in Florida and consumed out of state. This conclusion was based independently (1) on an analysis of the independence of Respondent and out of state utilities; and (2) on studies introduced by the Commission staff showing

that electric power flows could be traced from Respondent's facilities to an out-of-state utility.

Before turning to the facts of this case, I'd like to note just briefly the consequences of Commission jurisdiction. The only immediate consequence in this case, if the Commission's order is upheld by this Court, would be to require Respondent to comply with the Commission's uniform system of accounts. The establishment of jurisdiction, however, would also subject Respondent's future wholesale sales of electric energy to Commission jurisdiction. It also would enable the Commission under certain circumstances to interconnect and sell electric energy to other utilities.

The pertinent facts in this case are as follows. Respondent is a major electric utility. It is the largest utility in Florida, and in 1965 ranked ninth in the nation in terms of revenue. Its facilities are located wholly within the State of Florida and serve over 900,000 customers, six of whom are wholesale customers. Although none of its facilities extend to the state line, Respondent is interconnected with the Florida Power Corporation, and the Florida Power Corporation in turn is interconnected with the Georgia Power Company, as well as other utilities across the state line.

In addition to its interconnection with the Florida Power Corporation, Respondent is interconnected with three

other Florida utilities, and these five Florida utilities make up the Florida Operating Committee. Through the Committee these utilities coordinate the issuance and maintenance of generating equipment, they share generating reserves, and they exchange information on a daily basis to better coordinate their operations. By these activities, therefore, each member is able to provide his customers with more reliable service.

As I mentioned before, the Florida Power Corporation has interconnections across the state line with the Georgia Power Company, and these two companies exchange substantial amounts of electric energy from year to year.

All of the utilities that I have referred to thus far are members of the 140-member interconnected systems group, a group of interconnected utilities spanning the Southeast and the Central portion of the United States.

The first ground of the Commission's finding of jurisdiction in this case was based on an analysis of Respondent's operations as part of this vast interconnected system. As the Commission staff expert witness testified, all 140 members of the interconnected systems group and indeed all interconnected systems operate in synchronism; that is, they all operate at precisely the same frequency. On modern systems, current is supplied at alternating current, alternating at 60 cycles per second.

Q Well, I suppose--I don't know if this record shows--is this to say that there is hardly a generating electric system that is not somehow interconnected with others in this grid pattern?

MR. HUNTINGTON: Well, there are some isolated municipal --

Q They're quite isolated, aren't they?

MR. HUNTINGTON: At this point, most of the nation's facilities are interconnected yes,

Q Well, is the government's argument in this case going to take us so far as to say that this means the Federal Power Commission now has regulatory authority over virtually every utility that is interconnected?

MR. HUNTINGTON: Our argument doesn't go quite that far because we depend upon an analysis of the operations by reason of interconnection. I think --

Q What I am trying to get at, necessarily won't your argument, that analysis bring us to that result?

MR. HUNTINGTON: Well, I don't think necessarily because I think it depends to some extent on the extent to which the operations are coordinated.

Q I am not suggesting that it is a wrong result.

MR. HUNTINGTON: No. It's possible, for instance, to have an interconnection that will open in the event of any kind of disturbance. Now in that situation, we'd say that the

two utilities would not be coordinated so as to provide mutual assistance--

Q Are you talking of standby agreements there, standby service? You said a connection would open when needed, something like that.

MR. HUNTINGTON: Well, there might be such an interconnection so that if a utility wanted to purchase power from the other utility, it could at a certain rate, over a period of time; but the interconnection would not be strong enough to allow emergency service in the event that a very large, say, generating unit would go out on one side of the interconnection. In these circumstances, we would suggest that you have a minimal amount of coordination between utilities, and you certainly don't have this situation--

Q Well, again, I ask how often is that the case? Is it the usual situation the way these--

MR. HUNTINGTON: It's not the usual situation. I think at the time the Federal Power Act was enacted, there were situations where you had limited type interconnections. Most of the interconnections in this country today allow for the type of operation that we are describing here.

Q Well, that being true, if we agree with the government in this case, and I'm not saying this is wrong. That really is going to mean that the Federal Power Commission has regulatory authority over virtually every electrical--

MR. HUNTINGTON: Yes, that is right. There will be certain small utilities that will be subject to the Commission's jurisdiction.

Q Are there very many other than municipals?

MR. HUNTINGTON: Municipals are not covered; they are exempt.

Q The Power Act has no interest in them.

MR. HUNTINGTON: There are about 450 privately owned utilities in the country, I think. About 350 of them are public utilities subject to the Commission's jurisdiction at this point. There would be some additional ones which would become public utilities if our theory here is accepted by this Court.

I'd like to just point out--

Q Mr. Huntington, isn't part of this due to the geographical contours of the State of Florida? Here is Florida Power & Light in a peninsular state. I take it from what you've just said that most other large utilities in this country today are subject to FPC jurisdiction as a public utility?

MR. HUNTINGTON: Yes, with the exception of the State of Texas which is isolated, has no interconnections across the state line there, but virtually every other large utility--well, not every other--most large utilities are subject to the Commission's jurisdiction.

With respect to small utilities, I'd like just to point out that the consequences of jurisdiction may be very small for some utilities. Without reaching the question whether the Commission has discretion to decline to exercise jurisdiction in certain circumstances, the Commission does have the specific authority to classify utilities and to prescribe different rules, depending upon the class. Now this is done with respect to the Commission's accounting requirement. The Commission has established five different classes of utilities based on their revenues, with very specific requirements for the large utilities and very minimal requirements for the small utilities.

So in the event that a relatively small utility is interconnected to the interstate grid and is thus subject to the Commission's jurisdiction, the effect on that utility may be very small, the effect of the federal jurisdiction.

Well, because all systems operate in synchronism, this means that the generators connected to the interstate network all operate at precisely the same frequency, and that they speed up and slow down in unison, and all electric clocks, for instance, attached to the interstate network, whether it be St. Louis or Miami, will keep precisely the same time.

Now electric energy cannot be stored, so that the total generation of a network is constantly adjusting to meet

the network's total load. In order to ensure that each utility ultimately produces enough power to supply its customers and any obligations it might have to neighboring utilities, and in order to assure the frequency is maintained as closely as possible to 60 cycles per second, each system employs what is known as tie line control with frequency bias.

Now, the operation of tie line control with frequency bias is explained in some detail in our brief, and I do not plan to go into the mechanics of it here. What is important to note is that this control method, under this control method, each member of the interconnected systems group shares in the burden of maintaining network frequency as closely as possible to 60 cycles per second, and under the controlled method, each member will contribute increased generation to meet an emergency on another members' system.

The record contains a dramatic example of the response of systems comprising this interstate network to an emergency. On February 17, 1965, a mid-Western utility in the interconnected systems group suffered a generation loss of 580 megawatts. This loss caused a drop in frequency on the interconnected system. Each of the other systems, including Respondent, reacted automatically to make up the deficiency. Respondent's contribution as shown by exhibits in the record was to increase its generation by 8 megawatts.

Other benefits that also accrue from interconnected operations are as follows:

As a result of frequency bias, deviations in frequency are kept to a minimum. Clocks keep better time, precision industrial operations have benefitted, speedups and slowdowns of generating equipment are minimized, and as a result, an inadvertent exchange of energies between systems is also minimized.

In short, the evidence before the Commission showed that Respondent, the other Florida utilities, and the other members of the interconnected systems group all operate interdependently. All the components of their respective systems are bonded together electromagnetically; that is, as an engineering fact, the components are tied together electrically and magnetically. As a result, the occurrence of an event on one system will have a necessary and measurable effect in other systems.

In a thorough and clear opinion, the Hearing Examiner concluded that the cause and effect relationship among Respondent and the out-of-state utilities constituted the interstate transmission of electric energy. This conclusion was approved by the Commission, and we believe it is fully supported by the evidence just summarized and furthermore, it is consistent with the scheme of regulation adopted by Congress in enacting the Federal Power Act.

Q Now, that's your big jump, isn't it?

MR. HUNTINGTON: Well, I'd like to turn to that now. The legislative history of the Act reveals that dual concern on the part of Congress. On the one hand, Congress recognized the increasing tendency to interconnect utilities, and recognized that there was a need for federal leadership in coordinating the interconnection of these utilities and coordinating the nation's power facilities. On the other hand, Congress made clear its intention not to unduly interfere with the authority of state regulatory commissions.

As this Court recognized in the Connecticut Light and Power case, Congress resolved these competing concerns first by defining the terms of grant of federal jurisdiction broadly and precisely, employing in the words of this Court, an engineering or scientific test. Second, the grant of jurisdiction was then limited by exempting certain facilities and most importantly by limiting the Commission's rate jurisdiction to sales of interstate energy at wholesale.

Now since the enactment of the Federal Power Act, vast interconnective systems have replaced relatively modest networks and the interstate nature of the electric industry has steadily risen. What happens on one part of a network can have a dramatic and sometimes catastrophic effect on the other parts of the network, as has happened in various power failures in the last few years. The Hearing Examiner noted

the 1965 Northeast power failure.

We are not talking here about some remote effect on commerce, such as you might be discussing in terms of other regulatory statutes; what we're talking about here is an electrical effect throughout a common network. We are talking about an engineering fact, that when you have a disturbance on one system, it causes a reaction on other systems.

In short, we submit that the jurisdictional test adopted by Congress was designed to and is capable of taking into account the complex and interdependent nature of interconnected electric systems.

Q To what extent do you rely on this proposition that disturbance in one system has some spillover effect and is reflected in another system? How much --

MR. HUNTINGTON: We place a great deal of reliance on this, your Honor.

Q It's quite a bit away from the language of the statutes, isn't it?

MR. HUNTINGTON: No, we don't believe so. The language of the statute is "transmitted in interstate commerce, electric energy moving from one state to another." Now if there's a disturbance in one state, such as loss of generating equipment, and if the other states contribute by a planned controlled mechanism, this tie line bias with frequency control,

this is a system developed in the last 10 or 15 years, which wasn't in effect when the Power Act was first enacted. It is through this common control mechanism signals are sent out to the other systems, supply extra power until this disturbance is cleared up. We submit that this is transmission of electric energy, that the cause and effect relationship here, disturbance plus contribution in neighboring systems, to increase generation in response to a very sophisticated control mechanism, we claim that this does constitute the jurisdictional standard and engineering fact which is what Congress had in mind in setting forth the bounds of jurisdiction.

Well, I'd like to turn to the alternate basis for Commission jurisdiction, which is completely independent from the basis which I have been discussing thus far.

At the hearing before the Examiner, the Commission staff introduced studies based on data from commercial meters which showed that at times during 1964, electric energy flowed from the Georgia Power Company to the Respondent over the facilities of the Florida Power Corporation, and at other times flowed the other way. Respondent's attack on these studies focuses on the staff's treatment of the conductive bars used to join together transmission lines. These bars or junction points are known as buses. What the staff did was to assume that energy flowing into a bus on

two or more transmission lines becomes mixed together or comingled, thus energy flowing out of the bus on other transmission lines would be comingled energy; that is, would include energy from all the lines entering the bus.

To understand the basis for this assumption, some background is necessary. Electric energy on all commercial systems in use today is transmitted from generator to point of distribution, not as a unit on a single transmission line, but on three physically separate lines: in other words, from generator to point of distribution point, you have three lines, not one. If you observe power lines crisscrossing the country, you'll notice they come in sets of three. That is because there are three separate lines coming out of the generator.

Now the power in each line is not steady, but pulses back and forth. Now the pulses in the three separate lines are not in phase. By that I mean on the first line the power may be pulsing forward; on the second line, the power is changing in direction; and on the third line, the power is pulsing backwards. A reference to Exhibit 59 at page 241 of the appendix gives diagrams of the actual power curves, and by studying those diagrams, you can see graphically what I am describing here.

In short, modern systems use what is called three-phase power, each phase being transmitted separately from

generation all the way to the distribution point. Thus buses, which I discussed before as the junction device for joining transmission lines, really don't consist of one conductive bar but they consist of three conductive bars, one bar for each phase of the three-phase power.

Now the problem that persons attempting to trace power flows have is this: Commercial meters do not measure what actually takes place from instance to instance in each phase. Instead, they merely record the average power flow in all three phases considered together. But this is not a fact because the power flows are separated. If you were to join together the three phases, you'd have a short circuit. Thus reliance solely on meters, solely on commercial meter readings would lead you to conclude that over a given period of time, power on any part of a system is constant in direction and magnitude. Well, this is not the fact. The engineering fact is that power is transmitted in three phases, and that in each phase the power pulses back and forth.

Staff witness Dr. Jessel testified at some length that in using the meter readings for tracing purposes, the treatment of a bus as a point to allow for commingling it was appropriate to take into account the physical reality of what happens in each phase of a three-phase bus.

Now the references to his testimony have to be

studied carefully in relation to the exhibits on this matter, because it's fairly technical, but the references to his testimony here are listed in our brief at page 13. I would particularly like to draw the court's attention to his testimony at pages 142-145 and 149 to 153 of the appendix and Exhibit I which is at page 243 of the appendix. I think a study of these exhibits show that Dr. Jessel was able to demonstrate that power entering a bus on a single phase would at times, power entering a bus on one line, would at times contribute to the power flowing out of the bus on all other lines, flowing out from that phase.

Q Is that because it's unavoidable, or is that because it is by design, or what's the explanation scientifically?

MR. HUNTINGTON: Well, the explanation scientifically, your Honor, is that it is unavoidable. This is an effect which can be measured by using scientific instruments, by using an oscillograph, attaching it to the various parts of a phase you can show that the power coming in on a given line will at times be greater--well, if you would turn to page 5 of Respondent's brief, I think I can explain on this diagram here. If you consider A-B there to be a single phase of a bus, in other words a conductive bar joining let's say all the Phase A's of various transmission lines, now Respondent claims that power from G3, the generator at the extreme right, could never serve L1 because L2 being a

10-kilowatt load is greater than the 5 kilowatt generating power coming out of G3. Now I think reference to Dr. Jessel's testimony shows that his testimony is that if you compare the power curves of G3, L2 and L1, or just G3 and L2, you can show that at instants during each cycle, there will be an instant or more than one instant when the power coming out of G3 will be greater than the power being consumed by L2. Exhibit 61, which I will not go into now, but Exhibit 61 keyed into Dr. Jessel's testimony does show how this can be shown graphically.

Furthermore, the Respondent introduced an exhibit in which he attempted to show the converse, and Dr. Jessel testified with respect to that exhibit that you could verify experimentally that power did in fact in each phase go over an intervening line so that it might flow out on other lines.

Now Dr. Jessel was questioned extensively on these exhibits, in his testimony, by the Hearing Examiner, and we submit the Hearing Examiner was in a very good position to probe the validity of his assumptions underlying these tracing methods. The Examiner's conclusion that the treatment of a bus as a point did indeed appropriately reflect the actual dynamics, the physical reality of the three-phase power transmission, in our view is completely sound.

In conclusion, we urge that the judgment of the

Court of Appeals should be reversed.

I would like to reserve the remaining portion of my time.

MR. CHIEF JUSTICE BURGER: Very well.

Q Mr. Huntington, this has a very definite parallel to hydrodynamics, doesn't it? The permeation of water into water? And yet can it be actually proved? I take it you feel that Dr. Jessel did?

MR. HUNTINGTON: He did, yes. This is no theory. This was by attaching an oscillograph which measures the power curve, and can show which direction at any given instant power is flowing in a line, he said by hooking these up to the various parts of a single phase of a bus, you could show the power coming in on one line at instances which was contributing to the power flowing out on other lines.

Q Well, what I gather, anyway, is that your legal position is that was sufficient evidence to support the Federal Power Commission's assumption of jurisdiction?

MR. HUNTINGTON: Yes, certainly.

Q Whether or not it can be proved or was proved or anything else, I think in Colton we said that that kind of evidence--

MR. HUNTINGTON: We're saying it is substantial basis for the conclusion that the commingling method is a

way of tracing--

Q Remembering Colton, I don't know what you prove.

MR. HUNTINGTON: Well, I think in looking at this testimony, it shows that he did do this; there was expert testimony the other way, but of course that is to be resolved by the Commission.

Q Incidentally, is Florida Power Corporation subject to the jurisdiction of the FPC?

MR. HUNTINGTON: Yes, the Florida Power Corporation is a public utility. The Florida Power Corporation was before this Court in the Gainesville case at 402 U.S. just last term, in an interconnection matter.

Q Has the Florida Power & Light Company paid the Florida Power Corporation something for the interconnection? Has that been subject to the FPC jurisdiction?

MR. HUNTINGTON: Well, no, the interconnection was effected--actually the interconnection, the history of the interconnection, it was ordered by the Commission back in the War as an emergency interconnection; and then after the emergency terminated, the utilities found it was in their mutual interest to maintain it.

Now, they do pay --

Q Does Florida Power Corporation need any consent of the Federal Power Commission to interconnect?

MR. HUNTINGTON: Oh, no. No, utilities can

interconnect voluntarily. The Power Commission can order them to interconnect under certain circumstances, but there is nothing to stop them from interconnecting.

Q I suppose you are saying the Federal Power Commission could order this interconnection?

MR. HUNTINGTON: Well, it can only do it on the application of the State, on the application of the authority.

Q But upon proper application, you think--

MR. HUNTINGTON: Oh, yes, on proper application they could, but it is unlikely that the Florida Power & Light Company would apply for such an interconnection, and -- But to get back to the question of the terms of compensation, they do pay for energy which flows across that interconnection.

Q What if Florida Power Corporation terminated them, said, "Let's disconnect"?

MR. HUNTINGTON: Respondent and Florida Power Corporation disconnected?

Q What if Florida Power Corporation said, "We don't want to be connected with you anymore"? I suppose that Florida Power & Light Company, it's to their benefit to have these interconnections.

MR. HUNTINGTON: It certainly is to their benefit. The reserve situation in Southern Florida is very critical these days. It certainly is--these interconnections and the interconnections of other Florida utilities are essential.

Now if they were to break all these interconnections, then of course Commission jurisdiction would _____?

MR CHIEF JUSTICE BURGER: Mr. Giller.

ORAL ARGUMENT OF JEFFERSON D. GILLER, ESQ.

ON BEHALF OF RESPONDENT

MR. GILLER: Mr. Chief Justice, may it please the Court:

I would first like to answer two or three statements made by the FPC. With respect to the Colton case, FPL, Florida Power & Light Company, used the tracing used in the Colton case. The FPC used a different method. In this present situation here, we, FPL, used the Colton method of tracing. Please do not confuse the terms "power" and "electric energy." They are not synonymous: this is a play on words. It was brought out in the record before the Examiner. Now, I'll go into that in a little more detail later on.

Electric energy never reverses, it always goes from generator to load. Your house bulb does not supply electric energy back to the generator. There is something call reactive power which during part of a cycle does reverse, but that by definition is not energy, and the Commission witnesses were very careful to speak about power and not about electric energy.

Next, getting back to their first and primary

basis, cooperation between utilities does not determine jurisdiction. Interstate transmission does. Neither does clock speed determine jurisdiction. And further, we have been unable to find in the record any testimony of any witness that the cause and effect theory is actual transmission of electric energy in interstate commerce. Dr. Jessel and the others did not so testify, that we can find--we've looked for it.

This was a three to two decision by the Commission with a strong dissent. To review for a moment the jurisdictional requirements, the statute says jurisdiction depends upon transmission of electric energy in interstate commerce, and it specifically excludes jurisdiction over a facility used for transmission of electric energy only in intrastate commerce. The statute also says that electric energy shall be held to be transmitted in interstate commerce if transmitted from a state and consumed at any point outside thereof.

The Commission's position seems to be that it should not be subject to these restrictions, for it takes the astonishing position, on page 36 of this brief, right in the middle of thatpage, that it should not have to abstain from asserting its jurisdiction, "until such time, if ever, as it can be proven as a fact in common law term that there is an actual transmission." That is tantamount to an admission that

they haven't been able to prove their case, and there is good reason that they couldn't prove it, because the facts just are not there.

Since we are talking about transmission of electric energy, I believe the term electric energy needs to be known. Electrical energy is defined by the Commission in its text by others as "that which does work and is normally measured in kilowatt hours." It is what we all as householders pay for each month when we pay our bill. So many kilowatt hours of electric energy measured by that electric meter sitting at the back of our house. We believe it is essential to an understanding of this case that certain facts of an undisputed nature about electric energy be understood. I realize there are some facts that are not agreed upon, but these facts at least are.

One, there is no storage or pooling of electric energy. It is generated and consumed instantly. A generator never puts out more electric energy than is consumed. The load tells how much is to be put out. For example, if a generator were running at full speed, no load on it, there is no electric energy being produced by that generator.

Next, there can be no flow of electric energy in opposite directions in a conduit simultaneously. The Commission fully agrees.

Third, you cannot get the electric energy flow from

a generator past the first load that is bigger than the generation is. That load is insatiable and instantaneous; it gobbles up all electric energy, and not one hit gets past it, and there is no disagreement in the record on that, on electric energy--I am not talking about reactive power. If it could get past it, then you'd have countercurrent flows of electric energy, and Commission expert witnesses agree that that cannot be done.

Now, if the FPC has jurisdiction over us, it has to prove this, electric energy from Florida for the 180 miles through the system of what we call Corp, Florida Power Corp., into our system or vice versa, went from us up through Corp into the State of Georgia, without meeting any barriers of a load being left to swallow or a countercurrent flow.

Q I take it then that if FPL had the same connection across the Georgia line that Florida Power had, you would concede the Commission had jurisdiction?

MR. GILLER: Yes, sir, because we cannot control the flow at that interphase.

Q So if you had a direct connection with some cooperating company across the line, there would be no question?

MR. GILLER: That's correct.

Q It is the intervention of Florida Power, a larger company with higher load?

MR. GILLER: It is a large company, not larger than ours. It is a large company and it has numerous sources of power within it, it has a bunch of buses that have to go through with flows going in different directions, so this electric current doesn't just travel a straight line from one system through the middle and up to Georgia.

Q So you are saying it just necessarily doesn't do FPL any good at all that Florida Power is connected to two other states?

MR. GILLER: No, sir, I'm not saying that it necessarily doesn't do FPL any good. We don't depend on it.

Q You don't depend on it, but could it ever happen that your capacity went out and you had to draw on Florida Power, that Florida Power would be giving you energy from across the state line?

MR. GILLER: We could only draw up to 100 megawatts from Georgia, from the State of Georgia, under the most favorable circumstances that could ever happen, but as far as can be determined, we would get all of our energy from Corp, the intervening company, in case we --

Q If they had it to give?

MR. GILLER: If they had it. Now the Commission does admit, Mr. Justice, that jurisdiction does not depend on what might possibly happen, but on what actually does happen.

Q You can conceive that even if you were really using energy from across the state lines through the intermediary of Florida Power, that you nevertheless are not subject to the jurisdiction of the Commission?

MR. GILLER: Maybe I didn't understand. If Georgia electric energy flows through Corp into our system, we are subject to the jurisdiction of the Commission.

Q Would that be true if it ever could happen?

MR. GILLER: Not if it ever could happen, because any system could be arranged to where such flows can take place, but even the Commission agrees it does not depend on what--some way you could arrange to make it happen, but on what actually does happen.

Q Well, are you arranged so it could happen? Could possibly happen? Are your engineering structural arrangements such that you are equipped to receive energy from Georgia?

MR. GILLER: Only if all the loads and flows in Corp are in one certain way.

Q And they're not? Has it ever happened?

MR. GILLER: There's no suggestion it ever happened. Now they tried on 22 different days over a period of months to trace such flows. By their theory, they said they did. By our theory, we say they did not. The Fifth Circuit says we don't necessarily follow FPL's theory, but we think the

one they have is too speculative, the one the Commission has is too speculative.

Q Well, I gather the Commission's theory is all premised on expert evidence?

MR. GILLER: Are you talking about actual flow as distinguished from cause and effect?

Q I thought it was the actual. Well, let me put it to you: Did the Commission try to prove through expert testimony actual flow?

MR. GILLER: Yes.

Q And did they conclude they had, based on that expert testimony?

MR. GILLER: The Examiner was very honest in what he said. He said that based upon the Commission's theory, actual flows are proved; based upon FPL's theory the reverse is proved, no such flows, and I would be happy to discuss what went into those flows.

Q Well, what I am trying to get at, in what position are we, or was the Fifth Circuit for that matter? The Commission's conclusion, even though your experts' was contrary, the Commission's conclusions were not binding upon the Fifth Circuit? And upon us?

MR. GILLER: That is our position, that the Commission's conclusions are not binding upon the Fifth Circuit or upon this Court.

Q Where does the Examiner make the statement you just alluded to, in response to Mr. Justice Brennan? If you can't put your finger on it now, your colleague can perhaps give it to you a little later.

MR. GILLER: I think it's page 13 of our brief.
Top of page 13 of our brief:

"On the basis of the commingled method," that is FPC's, "it can be proved that electric energy is transmitted between Florida (FPL) and Georgia; on the basis of the systems study method"--the one we used--"the contrary follows."

Q I suppose that would be particularly relevant in case wholesale rates were in issue here?

MR. GILLER: Well, we have only six wholesale sales, and it would be required not that electric energy just get into our system, but that it gets there, to those wholesale sales, and it was held in the Colton case that--

Q This is the ultimate thrust of the Power Commission's decision, is it not, control over wholesale rates?

MR. GILLER: It is our belief that that is why we have the Federal Power Act; that is the principal concern.

Q Yes.

MR. GILLER: But here the Commission says, that's not what we're asking; we're asking you to keep your books--

Q No, they wouldn't in this case. I know that's all in this case, and they wouldn't in this case, but then the next

case would be wholesale rates?

MR. GILLER: I don't know whether they'd go that far.

Q Well, let me get it straight. Does the Commission claim that it would have jurisdiction or does the government claim that it would have jurisdiction, if the only time power might flow to FPL from across state lines is in an emergency when some of FPL's equipment was out?

Or is it on their theory that this flow back and forth is going on all the time?

MR. GILLER: Their theory is that quite a few days in 1964, electric energy flowed from Georgia into our system.

Q All the time?

MR. GILLER: Not all the time.

Q Was that an emergency?

MR. GILLER: No, it was not emergency, and our disagreement with them is this. The so-called commingling and bus theory they use, which treats a bus as a point which it is not, because it has a wire big as my thumb, 225 feet long, and the only excuse that they use for doing that, and by the way the difference in the treatment of a bus, is the difference between us and them--the only excuse they use, and they set it forth several times in their brief, is that there are reverse flows of power in each of the 120 power cycles per second in electric conduit. That is, while the power goes

in one direction most of the time, every 120th of a 31 second, there is a little reverse blip, and they say that because of that, we need to treat that as a point, because these reverse blips show on watt meters. Our answer to that is twofold:

One, that reverse blip is reactive power. They so admit it, page 174 of the transcript. By definition, reactive power is not electric energy. The real power which is the forward part of the transmission is by definition electric energy, and they agree on page 174 that the real power does not reverse; it always goes--

Q May I ask you, to understand what you're doing, you agree every 120th of the cycle, there is a reverse blip?

MR. GILLER: Of reactive power.

Q But you say that reverse blip is not electric energy, but something called reactive power?

MR. GILLER: Yes, sir.

Q And therefore it cannot be a measure of whether or not there is a transmission in interstate commerce of electric energy?

MR. GILLER: Yes, sir.

Q Again I have to come back to this. Has this been the fight between experts of each side on this, before the Commission?

MR. GILLER: The experts do not disagree that reactive power only reverses; they do not disagree that real

power goes only from generation to load, and by definition we have set forth in one of our footnotes, reactive power is not energy. Also the experts agree that reactive power is not measured by watt meters; watt meters only measure real power.

Q When you say the experts agree, are you speaking of all the experts who testified in this case?

MR. GILLER: There is not disagreement on this point, because the Commission expert very carefully used the word "power" in a broad sense; it was only when they were pinned down that they pointed out the distinction between real power and reactive power. The only time we know of that this business of reverse flows have been passed on in a jurisdictional case is in the Connecticut Power Case which came up to this Court, and in that case, the lawyer--or the expert for the Connecticut company tried to show lack of jurisdiction by saying, Look, there are some reverse flows that you've got to take into consideration that don't show up on watt meters, and the Commission way back then rejected that saying, Look, we go on what is shown on a watt meter; that's what the electric energy business is based on. The Court of Appeals agrees, quoting this Court's decision in the Jersey Central case, and this Court on appeal said there was no question about interstate flow.

So our position on the tracing is this: that

the experts, taking all expert evidence, there is still no reverse flow of electric energy, and that's what the statute says is required to have --

Q Are you suggesting, Mr. Giller, that the experts for the Commission's position did not say that reverse flow involved a flow of electric energy? Is that what you are telling us?

MR. GILLER: That's correct, they did not say that that which was reversing was electric energy, because they said on page 174 that the real power goes forward only, and that by definition is electric energy; and reverse flow by definition is not.

Q So far I guess we have just been talking about one position of the Commission, have we?

MR. GILLER: Yes. I'll be happy to talk about the other.

Q The reason is, time is running, and I'd like to hear you on the other.

MR. GILLER: We're going to run right through and let you finish today, Mr. Giller.

MR. GILLER: Thank you.

With respect to what the Commission says is its principal thrust, is the so-called cause and effect of electro-magnetic unity of response. There is nothing magic about that. This has existed ever since the first two alternating current generators were ever hooked up to the load. Ever

since then, which was long before the Federal Power Commission was ever heard of, and it means that any time two or more generators are supplying one or more loads, they inherently and unavoidable generate electricity at the same frequency. They can't help it, and as a result, when the load is changed on one, it has an effect on the other but it doesn't change the direction of the transmission.

For example, if you would look at page 11 of our brief, there is shown there a horizontal line CD, which is a transmission line. Below that line are letters "G" which shows generators, the letter "L" that shows loads. Now if the righthand load, L5, were increased, a little bit—what happens? The next generator, the one that is normally supplying it, will instantaneously pick up a little generation, and it will draw also perhaps a little bit of electric energy from L4. Well, that means then that G5, the next one to the left, is going to have to pick up a little to supply L4, and so on down the line. But the directions of flow of electric energy don't change, merely the magnitude. Now that is the cause and effect, that's the swapping that the Examiner talked about, and we say that is not the jurisdictional event. No expert testified, that we can find, that as a result of that there was inherently transmission across the state line. The tie line control with frequency bias is nothing magic. What that means is at the edge of each system

are tie lines to other systems, and each system senses what the frequency is and it just generates a little more electric energy. There is no signal that comes from some place way out.

We say this cause and effect is directly contrary to this Court's decision in the Jersey Central case where it specifically said interconnection does not mean everything; that actual transmission is required.

I believe that concludes my argument.

MR. CHIEF JUSTICE BURGER: Your time is consumed, Mr. Huntington, unless you have something very special and purely factual.

MR. HUNTINGTON: I do have one point, your Honor.

REBUTTAL ARGUMENT BY SAMUEL HUNTINGTON, ESQ.

ON BEHALF OF THE PETITIONER

MR. HUNTINGTON: With respect to reactive power, the Commission expert did not testify that the negative blip on power curve was reactive power. I refer the Court to--

Q Did he testify it was electric energy?

MR. HUNTINGTON: First of all, the negative blip does not account for the contribution across the bus to other lines. That is done in the positive power portion of the cycle. I refer to Exhibit 61 for that, and as for the difference between reactive power and apparent power, and I refer the Court to 151 to 152, and page 174, the power curves used

by Dr. Jessel did not have anything to do with reactive power, so it is completely erroneous to equate the negative blip on those curves with reactive power.

MR. CHIEF JUSTICE BURGER: Thank you, Mr. Huntington.
Thank you, Mr. Giller.

The case is submitted.

(Whereupon, at 3:00 o'clock, p.m. the case was submitted.)