



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	§	
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HOUSTON LIGHTING & POWER	§	
COMPANY, THE CITY OF SAN	§	
ANTONIO, THE CITY OF	§	NRC DOCKET NOS. 50-498A
AUSTIN, and CENTRAL POWER	§	50-499A
AND LIGHT COMPANY	§	
(South Texas Project	§	
Unit Nos. 1 and 2)	§	
TEXAS UTILITIES	§	
GENERATING COMPANY,	§	
ET AL	§	NRC DOCKET NOS. 50-445A
(Comanche Peak Steam	§	50-446A
Electric Station,	§	
Unit Nos. 1 and 2)	§	

HOUSTON LIGHTING & POWER COMPANY'S  
ADDITIONAL RESPONSES TO  
THE DEPARTMENT OF JUSTICE'S  
FIRST SET OF INTERROGATORIES AND  
REQUEST FOR PRODUCTION OF DOCUMENTS

By virtue of orders entered by the Board on March 6, 1979, and March 12, 1979, Houston Lighting & Power Company (Houston) hereby provides fuller responses to Interrogatory Nos. 1, 2, 3, 4, 5(a), 6, 9, 10, 12(a) and (b), 13, 14, 15, 16, 18, 19, 20(a), 21, 23, 24 and 25, in accordance with the requests set forth by the Department of Justice in its Motion of the Department of Justice to Compel HL&P to Provide Fuller Responses to the Department's First Set of Interrogatories and Request for Production of Documents, and provide answers

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to the Department's Interrogatory Nos. 5(b), 12 and 19(a) as requested in the Response of the Department of Justice to Houston Lighting & Power Company's Objections and Motion for a Protective Order Regarding the Department's Discovery Request.

Interrogatory No. 1:

The history of operations of interconnections between Houston Lighting & Power Company and Gulf States Utilities (GSU) extends back to 1927. Houston terminated its 1927 contract with GSU upon passage of the Federal Power Act in 1935. Although Houston had such interconnections with GSU and other systems in Texas, it did not operate with its interconnections closed as a matter of normal operation until World War II, at which time it began operating continuously interconnected with Central Power and Light Company, the Lower Colorado River Authority, the City of Austin, and the City Public Service Board of San Antonio in order to help alleviate capacity shortages brought on by the war. (Tr. 231-32; 234-38).<sup>1/</sup> By letter dated July 17, 1943, the Federal Power Commission requested Houston and Gulf States Utilities Company to do studies to determine whether the two companies could operate in parallel. On August 16, 1943, Houston filed an application with the Federal Power Commission

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<sup>1/</sup> All such references are to the transcript and exhibits in the trial of West Texas Utilities Co., et al. v. Texas Electric Service Co., et al., No. CA-3-76-0633F.

(FPC) for approval of the establishment and maintenance of an interconnection with GSU at Huffman, Texas, as a permanent connection for emergency use, for war emergency purposes, and for exemption from jurisdiction of the FPC under Section 202(d) of the Federal Power Act. In its application to the FPC, Houston described the proposed interconnection as follows:

"(a) The proposed interconnection will consist of a 66 Kv tie at applicant's Huffman switchrack to Gulf States' 66 Kv 4/0 ACSR Dayton-Huffman line with switching and metering equipment located in Gulf States' Dayton Substation. This equipment was installed several years ago when the companies enjoyed a tie prior to change in Gulf States' operating circuit characteristics, and upon such a change the switch at Dayton was opened and the systems have not from that time been interconnected. It is the intention to re-establish temporarily this connection and conduct a series of tests to determine the interchangeability between the two systems.

"(b) The capacity of this interconnection is not known. As a result of new interconnections made to provide electric service to war industries applicant and Gulf States are now located at opposite ends of a very long transmission loop extending through Central and North Texas, Arkansas, and North Louisiana to the vicinity of the Mississippi River and thence across Southern Louisiana to South Texas. Until actual tests are performed, it will not be known whether regular parallel operation through the Huffman Interconnection can be maintained, what the capacity of the tie will be, or what additional equipment if any, will be required.

"(c) There is no agreement between Applicant and Gulf States at the present time covering interchange of power, but an agreement will be worked out between them when the tests have been made, following receipt of Commission approval, to determine possible operating conditions."

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Tests were conducted in August, 1943, and it was determined that it would not be feasible to operate GSU and Houston in parallel with the facility and load conditions that existed at that time. When the wartime emergency expired the Huffman interconnection was certificated in 1951 as a permanent facility for emergency use only in FPC Docket No. E-6820.

In 1957 Houston again began experiencing war related capacity shortages and sought a special exemption from the Federal Power Commission to enable it to make an exhaustive test of parallel operation with GSU at the Huffman tie in an effort to obtain higher reserve margins during the summer peak. On June 13, 1957, HL&P and GSU executed an operating agreement to cover this operation, which agreement was renewed in May, 1958. The original 66 Kv tie was converted to a 138 Kv tie for this purpose. As described in the testimony of Mr. P. H. Robinson, the experiment proved to be infeasible and was terminated due to complaints by companies interconnected to the east of GSU. (Tr. 277-282). Documents in Houston's files show that the following problems were encountered: (1) regulation of power flow was difficult; (2) there was a tendency for surges and swings to ripple through the GSU system, thus tripping out transmission lines; (3) difficulty in controlling frequency; and (4) necessity of maintaining capacity for tie line control purposes. Mr. Robinson further

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testified that HL&P did block load some of its load over to GSU during this period of time; however, as soon as both HL&P and GSU built up their generating capacities and interconnections within their own interconnected systems this mode of operation was no longer required. (Tr. 277-282). This extensive test was preceded by a limited test of parallel operation conducted in 1951.

On May 11, 1967, GSU suffered a major blackout and portions of GSU's system were transferred by block load to HL&P. The blackout lead to an investigation by the FPC, and the FPC concluded that GSU, HL&P and Texas Power & Light should undertake a study regarding the desirability of synchronous ties between those three systems. The study was undertaken and a report was published in January, 1968, wherein it was concluded that such an interconnection would not be feasible for the following reasons:

"4. The Texas Interconnected System, of which Houston Lighting & Power Company and Texas Power & Light Company are a part, has developed an optimum interconnected group operation with an exceptionally high degree of bulk power supply reliability. Installation of inter-ties and synchronous parallel operation with Gulf States Utilities Company and the other systems in the large interconnected group of systems would degrade the reliability of bulk power supply of the Texas Interconnected System.

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"5. After 1970, at which time Gulf States Utilities Company will have completed scheduled extension of its 500 KV system, substantial increases in tie line capacity with other members of the South Central Electric Companies group will be provided. Installation of inter-ties and synchronous parallel operation with the Texas systems would not improve reliability to Gulf States Utilities Company bulk power supply, but would impose added exposure to the high capacity South Central Electric Company 500 KV system and reduce reliability associated with the South West Power Pool.

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"7. The costs required to build interconnections sufficiently strong to permit synchronous parallel operation of the Texas Interconnected System with Gulf States Utilities Company and the other systems in the Southwest Power Pool would place an excessively expensive burden on the consumers of both the Texas Interconnected System and Gulf States Utilities Company without bringing any commensurate values in return."

Following this study, the FPC did its own report and took the position that an interconnection was desirable notwithstanding the results of the study between HL&P, GSU and TP&L. All three companies reviewed the FPC report and advised the FPC that nothing in their report changed the conclusions they had reached.

On June 17, 1970, Mr. Simmons of HL&P requested of Mr. Mary of GSU that block load transfers be made available in the case of emergencies on HL&P's system during the summer of 1970. GSU agreed to do so, however, Mr. Simmons recalls that no actual transfers were made.

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In 1972 the Federal Power Commission published a study regarding the potential interconnection of the Texas Interconnected Systems (TIS) and the Southwest Power Pool (SWPP), wherein they concluded that there would be potential benefits from interconnection of the two groups. The report was reviewed by the Technical Advisory Committee of the Electric Reliability Council (ERCOT) and the committee advised the FPC that interconnection of the two regions would be detrimental from the standpoint of both reliability and economics. The report was likewise reviewed and rejected by GSU.

Houston has had discussions with GSU within the last year regarding interconnection; however, these discussions have been in the context of settlement of the controversy with the Central and South West Corporation and Houston objects to disclosure of the substance of those discussions in accordance with the provisions of the Board's order in this proceeding dated April 16, 1979, wherein the Board noted that it encouraged settlement negotiations and would protect efforts of the parties toward that end. Houston does note that on March 28, 1979, GSU filed a petition to intervene in the FERC proceedings initiated by CSW and in their petition to intervene stated as follows:

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"Petitioner has developed its system on the basis of no interconnection with ERCOT and does not presently need an interconnection with HL&P nor does it believe that a single interconnection between Petitioner and HL&P would be operationally feasible. However, based on current system planning, which includes proposed construction by Petitioner of additional generation in the western portion of its system, interconnection with HL&P during the mid-1980's would appear to be the best economic alternative for Petitioner."

Subsequent to this filing by GSU Mr. D. E. Simmons of HL&P has advised Mr. Al Naylor of GSU that HL&P would be willing to study an interconnection with GSU in the mid-1980's so long as such study included consideration of both synchronous and asynchronous ties. Mr. Simmons made a similar representation to Messrs. Jim Atkins and Milton Smith of GSU in a meeting on July 26, 1977.

Interrogatory No. 2:

Houston is aware that TESCO and WTU maintain or have maintained power flow relays at locations that connect WTU's northern and southern systems. See Houston's answer to Interrogatory Nos. 15 and 16 of Plaintiffs' First Set of Interrogatories in West Texas Utilities Co., et al. v. Texas Electric Service Company, et al., No. CA-3-76-0633F (hereinafter "WTU v. TESCO"). Houston understands that these relays have been installed in accordance with a contract between WTU and TESCO executed in 1938. (TESCO Exh. 4).

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Houston has had no contract or agreement or understanding with any other electric utility relating to the use of mechanical devices to prevent the interstate flow of electricity. Power exchanges with GSU have always been done under an exemption from the FPC or by block load transfers which did not involve interstate operations.

Houston is unaware of any documents that explicitly embody the common understanding inquired about in this Interrogatory. Houston's knowledge as to this understanding is derived from the testimony of Mr. P. H. Robinson (Tr. 246-55), who was Chief Executive Officer of HL&P at the time of the formation of TIS. Houston also has reference to the testimony of Messrs. Jordan (Tr. 2763-5; 2807-10), Austin (Tr. 1188-91), and Hulsey (Tr. 1269-70; 1370-72), all of whom testified that the interstate contract provision in the interconnection contracts between individual members of TIS allowed the parties to each of the contracts to go into interstate operation upon giving notice and opportunity to the other party to decide whether it too would go into interstate operation.

Interrogatory No. 3:

In summary, Mr. Jordan testified that the reason for ordering the disconnection on May 4, 1976, was to be able to preserve Houston's option of beginning interstate operation based upon Houston's own business judgment.

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Houston disconnected from CP&L and WTU because their parent, C&SW, had perpetrated the so-called "midnight wiring," pursuant to the threat by C&SW's Chief Executive Officer, Mr. S. B. Phillips, to bring Houston and the rest of TIS into interstate operations by force as part of a plan to save the CSW holding company. When the midnight wiring occurred Houston judged from the circumstances in which they occurred, and from the legal proceedings that were initiated by CSW, that CSW had taken the first steps to carry out the threats of coercion. As of May 4, 1976, Houston had evaluated synchronous interconnections with the SWPP on several occasions extending back to 1943 and had always concluded that such an interconnection was not economically and electrically desirable. Moreover, Houston's analysis of CSW's plans and studies convinced Houston that CSW's plans for interconnection of ERCOT and SWPP were motivated by CSW's holding company problems, not valid economic or reliability considerations. Houston chose to resist CSW's plan of coercion by disconnecting so that it would not voluntarily give up the right to make its own decision as to the merits or demerits of interstate operation. Houston disconnected from the other members of TIS because it had no idea how the other utilities might react to the midnight wiring. (See, Tr. 2726-2753; 2927-2956; HLP Exh. Nos. 88, 89, 202, 302).

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Interrogatory No. 4:

As evidenced by the answer to Interrogatory No. 1, Houston has continuously evaluated interconnections with Gulf States Utilities Company since 1943. GSU is the only company in interstate operation that is in sufficient proximity for an interconnection with HL&P, and all prior tests and studies conducted by GSU and HL&P have shown that an interconnection between them was not desirable. Notwithstanding this fact, the record in WTU v. TESCO demonstrates quite clearly that the Federal Power Commission began an effort in the 1960's to assert jurisdiction over the companies in TIS. (Tr. 269-272; 1363-1367). This effort to assert jurisdiction was followed up by continuing effort through the early 1970's to bring about interconnection of TIS and SWPP notwithstanding objections by everyone within TIS. Throughout the late 1960's and early 1970's Houston believed that if the FPC could get jurisdiction over HL&P and other companies in TIS they would force the interconnection of TIS and SWPP notwithstanding the fact that all of the members of TIS believed that this was not in their best interests from either an economic or a reliability standpoint.

As described in the testimony of Mr. Jordan in WTU v. TESCO, when he became President of Houston he undertook a reexamination of the entire issue of interstate

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vs. intrastate operation and was still in the process of making such an evaluation when CSW undertook the midnight wiring on May 4, 1976. (Tr. 2725-2746). On September 20, 1977, Mr. Jordan testified before the United States Senate that if circumstances developed in which interstate operation would provide overall benefits for its customers, HL&P was prepared to abandon its historic intrastate mode of operation. (United States Senate, Part E, S.1469, Subcommittee on Energy Conservation Regulation, Committee on Energy and Natural Resources, p. 554.) Furthermore, in his testimony in WTU v. TESCO Mr. Jordan summarized Houston's position on interstate vs. intrastate operations as follows:

"...You know, I've said that so many times in so many forums and I can't seem to make some people in the country at least understand that the Federal Power Commission doesn't make a lot of difference to me. If I'm in a position of having to live under it or not live under it I would just as soon not live under it simply because there's no offsetting advantage that I can see to go under the Federal Power Commission. But really, it's not going to have an impact on Houston Lighting & Power Company to a great deal if we simply have to live under the jurisdiction of the Federal Power Commission. Most of the regulations from an accounting standpoint at least we already comply with. From the standpoint of resale, we only have one resale customer so that's not a big problem. From a standpoint of having to get approval from the Securities and Exchange Commission, that sort of thing, that's simple enough. We can live under the Federal Power Commission probably easier than most companies in this country. That's not the critical judgment

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as to whether or not we want to go into interstate commerce. It's a question of whether or not the money that has been expended to do that can be justified and whether or not the service to the customer is going to be improved." (Tr. 2776-77).

It is Houston's belief that there has never to date been a study demonstrating that it would be in Houston's best interest to change its present mode of intrastate operation. In this connection, Mr. D. E. Simmons of Houston Lighting & Power Company wrote a letter to the Public Utility Commission of Texas on October 3, 1978, requesting that the PUC conduct an overall study of the maximum coordination of planning and operation that could be achieved within the ERCOT system. (See HL&P Exh. 206). Mr. Simmons further testified that in his view this study would provide a good base case for studying the question of whether it would be beneficial to interconnect ERCOT and SWPP. (Tr. 2949-51). Finally, in response to the application for interconnection filed by CSW at the FERC, Houston set forth its recommendation as to the type of study it believes needs to be done in advance of determining whether it would be desirable to interconnect ERCOT and SWPP:

"Should this proceeding continue, HL&P trusts that the broader question of interconnecting ERCOT and SWPP will be the subject of inquiry rather than the interconnection of the operating subsidiaries of the C&SW holding company. It is the practice of the utility industry to install interconnections between regional reliability groups only when the incremental benefits exceed the incremental cost.

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Regional reliability groups in the United States have not and should not be interconnected merely to accommodate the exclusive and unique interest of a single corporate entity.

"In our judgment, only after the economic reliability benefits are realized by improved coordination among the utilities within ERCOT and within the adjacent area-wide coordination groups in the SWPP is it constructive to seek the incremental benefits, if any, of interconnecting ERCOT and the SWPP. This sequential approach assures continued viability of existing coordinating groups which are large enough to take full advantage of the large-scale generation and transmission facilities made available by modern technology. Such an approach also facilitates the strengthening of the ability of existing organizational mechanisms, such as ERCOT and the South Central Electric Companies, to allocate equitably the cost and benefits of the coordinated efforts.

"If and when the interconnection of ERCOT and the SWPP is shown to be beneficial, asynchronous tie(s), which would permit ERCOT to retain its present advantageous operational characteristics, should be considered. ERCOT utilities have been designed to perform as a system, declining in frequency together and, if necessary, shedding load as a unit in response to a large loss of generation or similar disturbance in a member system. An asynchronous interconnection of ERCOT and SWPP would preserve beneficial ERCOT operating characteristics, protect ERCOT from disruptive power flows which would result from synchronous ties with the electrically larger SWPP and eastern United States network, and would still permit the realization of any beneficial interregional energy interchange and emergency support."

To paraphrase Mr. Jordan's testimony, until such a study is done, there is no way to answer the question of whether or not the money required to make the interconnection can be justified and whether or not the service to the customer is going to be improved.

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Interrogatory No. 5(a):

The South Texas Project nuclear plant is the outgrowth of efforts begun in the early 1970's by members of the South Texas Interconnected Systems to develop joint nuclear plants in an effort to alleviate the natural gas shortage that had begun during that time. (Tr. 298-301). Once the project was formulated, offers of participation were extended to all of the municipal and cooperative systems within service areas of each of the participants to the project. (See Houston's answer to Interrogatory No. 15 of PUB's First Set of Interrogatories to HL&P). STP was not a unilateral effort on behalf of any one of the Participants and no single Participant was free to make requirements of any other Participant; however, each Participant in the project was obligated to sign and abide by the STP Participation Agreement. There are no "base line" requirements for participation beyond the willingness to agree to the obligations in the Participation Agreement.

Interrogatory No. 5(b):

As described in the testimony of Mr. Robinson (Tr. 297-301), all of the initiators of STP operated in intra-state commerce at the time the project began. Mr. Wayne G. Siegelin, CP&L's representative in negotiating the Participation Agreement, testified on deposition (pp. 106-108) that the subject of interstate operation never even came up because it was not anticipated that any Participant would go

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into interstate operation. Clearly, each of the parties to the agreement placed reliance on this historical mode of operation in deciding to join in the Project and in designing its system of interconnections to take power out of the Project. Having once made such plans no member was free to make unilateral changes in its mode of operation without violating Section 8.2 of the Participation Agreement, if those changes would unreasonably effect the operations of the other Participants, and Judge Robert Porter has so ruled in WTU v. TESCO.

Interrogatory No. 6:

As described in answer to Interrogatory No. 4, Houston does not believe that there has been a study which fully addresses the costs and benefits of interconnecting ERCOT and SWPP. As described in the testimony of Mr. Simmons, as of May 4, 1976, Houston had reviewed the PTI report and had determined that the PTI Report did not even purport to measure the costs imposed on TIS utilities for the interconnection proposed by CSW. (Tr. 2937-40). Thus, in making its evaluation Houston saw nothing to change the conclusions that it had reached on many prior occasions that there was no benefit to Houston from interconnecting with the SWPP (see answer to Interrogatory No. 1). Mr. Simmons did note in his review that PTI had understated the costs of interconnection of

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ERCOT and SWPP because it had failed to account for the increased power transfers that would flow over ERCOT transmission lines in the event of an outage. Houston is now approximately one-third the size of ERCOT, so that during an emergency, about 35% of a generation loss would be made up by Houston on its own system and about 65% of the loss will come from other ERCOT systems over Houston's transmission lines. If ERCOT and SWPP were interconnected, Houston's generation would be less than 5% of the system, and thus about 95% of any generation loss to Houston would flow over interconnected lines to Houston. The interconnection with SWPP would cause an increase of 50% in the flows on the interconnected lines to Houston, thus causing Houston's bulk power system to be utilized 50% more, which would preempt existing capacity and could require the addition of new lines if there is not enough capacity in the existing lines. Furthermore, the reliability of ERCOT would be degraded if ERCOT and SWPP were synchronously interconnected, because ERCOT would lose its present ability to hold together as a single unit. (Tr. 2933-2936; HL&P Exh. Nos. 88, 207).

In September, 1977, Mr. Simmons applied these assumptions to data on transmission line replacement costs provided to him by Glenn Stagg and concluded that it would cost \$1,080,000,000 through 1996 to compensate Houston and

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TU for the loss of governing action resulting from inter-connection of ERCOT and SWPP. (Tr. 2940-2949; HL&P Exh. 204).

Interrogatory No. 9:

In December of 1975, Don Jordan, John Reese and George Oprea met with S. B. Phillips of C&SW and Roff Hardy of CP&L, at Mr. Phillips' request. Mr. Phillips told the Houston representatives that C&SW was under considerable pressure from the SEC to integrate its operating companies, and that as a result, C&SW had commissioned a study by PTI to evaluate the savings to C&SW through integrating its operating companies. Mr. Phillips said that the C&SW Board of Directors had decided to begin complete interstate operations and wanted Houston to join them. Houston agreed to review the PTI study to determine if what C&SW was proposing was in Houston's best interest. Mr. Phillips indicated that C&SW had to commence integrated operations, and that if Houston did not join C&SW, C&SW would use every means available to force Houston into interstate commerce, regardless of the effect on Houston's customers. (Tr. 2726-30).

On December 31, 1975, Mr. Phillips sent John Reese a letter in which he reiterated the pressure on C&SW from the SEC and thanked Houston for its willingness to study the C&SW proposal for interstate operations. (Tr. 2730-31; HL&P Exh. No. 202).

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Houston was still studying C&SW's proposal when C&SW perpetrated the midnight wiring. Since December, 1975, communications between Houston and CP&L and/or WTU concerning interstate operations have occurred only indirectly as part of settlement negotiations between CSW and Houston. Houston objects to disclosing the nature of such discussions in that they were considered confidential and would be kept secret by the participants.

Interrogatory No. 10:

In the exemption application filed by Houston at the FPC in 1943 (see answer to Interrogatory No. 1), Houston stated that:

"Applicant does not transmit or sell at wholesale electric energy in interstate commerce, or own or operate facilities used for such interstate transmission or sale, and is not a public utility as defined in Part II of the Federal Power Act."

Houston's files indicate that the question of intrastate operation was not a particular topic of conversation until the mid-1960's when the FPC began efforts to exert jurisdiction over the present members of TIS. In 1963 and 1964, representatives of TU and Houston met to discuss what action needed to be taken to protect their jurisdictional status. (Tr. 258-63; Plaintiffs' Exh. Nos. 132, 133). Mr. P. H. Robinson testified that throughout his tenure with Houston, it was dedicated to intrastate operations,

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and that he had from time to time expressed Houston's position to George McGregor, C. A. Tatum and Louis Austin of TU.

(Tr. 257-58). Mr. Robinson also testified that in connection with the planning of a 345 KV line between Houston and TU he was asked by George McGregor whether Houston's plans were to remain in intrastate operation, and his answer was affirmative. (Tr. 305).

Mr. Don D. Jordan testified that in a speech to security analysts on March 11, 1976, that Houston was operating in the intrastate TIS system but was considering C&SW's proposal of synchronous interstate operation. (Tr. 2741-46; HL&P Exh. No. 203).

Interrogatory No. 12(a) and (b):

Houston believes that the FERC regional office's study understated the cost necessary to interconnect ERCOT and SWPP because it failed to account for the loss of governing action and the resultant value of transmission capacity that would be preempted by the increased power flows over TIS transmission lines under emergency conditions. The conclusion in Houston's August 11, 1978, letter to Mr. Plumb was based on the conclusion that it would cost approximately one billion dollars to interconnect TIS and SWPP and the TIS would be less reliable after the interconnection because of the loss of governor response in TIS. (See answer to Interrogatory No. 6).

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Houston's view of the FERC study is influenced by the long history of studying a HL&P-GSU interconnection, as described in answer to Interrogatory No. 1. Houston and GSU tested their Dayton interconnection in 1943 and 1951 and found that the two systems could not operate synchronously without adverse effects. In June of 1957, Houston and GSU again established an interconnection for test purposes; these tests were discontinued because the operation was unsatisfactory. In January of 1968, the engineering staff of GSU, TP&L and Houston issued a joint report that concluded that synchronous operations between TIS and the eastern grid would degrade service by the utilities, would not improve reliability and would require too much money. In October of 1969, the FPC proposed the interconnection of SWPP with TIS but received negative reactions from members of both TIS and SWPP. Again in 1972 the FPC recommended interconnection of TIS and SWPP but the study was not endorsed by either TIS or SWPP. HL&P believes that the FERC's 1978 study was not instigated as a result of reliability or economic concerns but was instigated as a result of a petition filed at the FPC by CSW on May 4, 1976. After this study was completed Houston concluded that there was no need to undertake a comparable analysis since nothing in the 1978 study changed Houston's conclusions based on experience

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extending back to 1943. In point of fact, Houston believes that the report correctly concluded that cost savings forecast in the FPC's 1972 report would no longer be available (i.e., a reduction in reserves in reliance on interconnections) because on the fuel conversion program now ongoing in TIS. Further, Houston believes that any study regarding synchronous interconnection of TIS and SWPP should include the costs attributable to the loss of governing action (estimated by Mr. Simmons to be in the range of one billion dollars), and that these costs would not be compensated by offsetting benefits and that TIS would be less reliable after the synchronous mode of interconnection studied in the 1978 FERC study.

In this regard, Houston's view as to the reliability issue is not influenced by the conclusion of the load flow studies reported in the FERC study. As described in the testimony of Mr. Simmons (Tr. 2924), it is Houston's belief that TIS is large enough to achieve the benefits of interconnected operation but has not grown unmanageable like the large interconnected grid covering the eastern one-half of the United States. Furthermore, Mr. Simmons explained that interconnection through synchronous ties to the large eastern grid would destroy the present method of operation in TIS. (Tr. 2918-2924). When large amounts of generation are lost within an individual system in TIS, the TIS system is designed

to hold together and go down in frequency, as a unit, even into the levels where underfrequency load shedding is automatically initiated. Under this condition all of the TIS systems reduce load automatically until the frequency drop is arrested and the system stabilized. Then all of the companies can contribute to increased generation to compensate for that loss, and the system as a whole recovers together as a unit to the normal 60 cycle frequency operation. If TIS were to be interconnected with the large power grid which covers all of the United States east of Texas, the TIS generators simply could not respond to an emergency in the manner described above. If a large amount of generation were to be lost somewhere in Texas, then the eastern U.S. interconnected system will not respond as a whole but rather the tie line transient flows will be so great that separation will have to be effected before the frequency can reduce to the level required for underfrequency automatic load shedding. These separation points cannot be predicted or anticipated and may result in confusion about which lines are open to points which may be very remote from the generation disturbance. So-called "islands" may be formed, some of which may have excess generation and some of which may have excess loads. The rate of change in frequency of these islands may be too great for the automatic operation of load shedding and generation reduction control equipment to

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stabilize and maintain operation. Even if they do stabilize and maintain operation the restoration complexities are increased since remote lines must be synchronized and closed following the disturbance. The load flow studies conducted by the FERC do not address this problem nor the problem of system manageability.

Interrogatory No. 13:

Houston has not arrived at a dollar figure for the cost of regulation by the FERC, and thus is unable to compare FERC regulation with Texas PUC regulation as such. Houston's view as to the reasons for avoiding further regulation is stated in the excerpt from Mr. Jordan's testimony set forth in answer to Interrogatory No. 4. In short, Houston has no desire to subject itself to further layers of regulation where it can see no offsetting benefits.

Interrogatory No. 14:

(a) No.

(b) No.

Interrogatory No. 15:

As stated in response to Interrogatory No. 4, Houston's historic reason for avoiding FPC jurisdiction was the belief that the FPC wanted to force the interconnection of TIS and SWPP even though all of the members of TIS were opposed to the interconnection. Houston continues to believe

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that another layer of regulation could limit the flexibility of its management to act in the best interests of its customers in each instance, and Houston does not wish to subject itself to such regulation without receiving offsetting benefits. As described in answer to Interrogatory No. 4, Houston's position is that it would be in favor of interstate interconnections, notwithstanding any regulatory consequences that would follow, if it were convinced that such interconnections were justified from the standpoint of economics and reliability.

Interrogatory No. 16:

Community Public Service's address is:  
501 W. Sixth St.  
Fort Worth, Texas 76102

Wharton County Electric Coop's address is:  
P. O. Box 31  
El Campo, Texas 77437

Houston does not know who requested to purchase power on behalf of either CPS or Wharton, but neither utility was or has been engaged in interstate commerce that Houston knows about. Houston believes that the request for power occurred in the year that power was first supplied.

Houston is not aware of any other wholesale service requests.

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Interrogatory No. 18:

Requests for membership in TIS have been made by the City of Brownsville, South Texas Electric Coop, Medina Electric Coop, Texas Municipal Power Pool, and Texas Municipal Power Agency. Houston is not aware of any verbal requests regarding TIS membership.

Interrogatory No. 19:

Houston did not reconnect under the FPC's July 31 order because CP&L and WTU continued to play out CSW's game of coercion by insisting that HL&P should reconnect under the protection of the order, while at the same time appealing that portion of the order finding that Houston was not jurisdictional as a result of the midnight wiring of May 4, 1976. Houston's reluctance to interconnect with CP&L and WTU under these circumstances proved to be sagacious, because the July 31 order was remanded to FERC by the D.C. Circuit on April 10, 1978.

Interrogatory No. 20(a):

On August 8, 1969, Frank Austin of Houston wrote a letter to Dale Scarth of TESCO suggesting that membership in ERCOT be limited to intrastate systems. Houston is unaware of any response. This matter was also discussed in letters dated June 3, 1970 and July 6, 1970 from Mr. Sim Gideon (LCRA) to all of the other members of TIS.

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Interrogatory Nos. 21, 23:

Houston's files do not contain a dated, signed and sworn copy of its answers to CP&L's first set of written interrogatories in the District Court case. Nevertheless, Houston is furnishing the Department with a copy of the answers and exhibits thereto that is in its files.

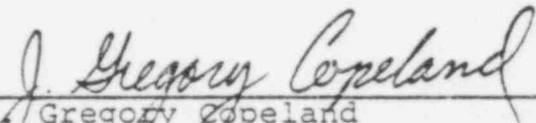
Interrogatory No. 24:

See answer to Interrogatory No. 1.

Interrogatory No. 25:

Houston's only connection to an interstate system is to GSU, the facts surrounding this interconnection are set forth in the answers to Interrogatory Nos. 12(b) and 24. Following passage of the Federal Power Act in 1935 the interconnection with GSU was always operated in a manner so as not to place HL&P into interstate operation. This was done by operating in parallel pursuant to exemptions from the Federal Power Commission or was done by block load transfers which involved no interstate flow of power.

Respectfully submitted,

  
\_\_\_\_\_  
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(713) 229-1234

OF COUNSEL:

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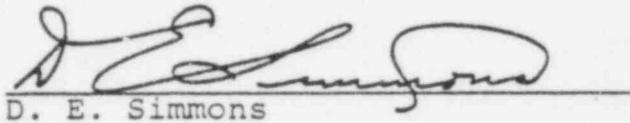
Attorney for  
Houston Lighting & Power Company

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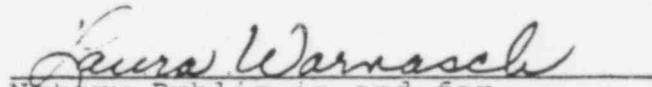
STATE OF TEXAS §

COUNTY OF HARRIS §

BEFORE ME, THE UNDERSIGNED AUTHORITY, on this day personally appeared Mr. D. E. Simmons, who being duly sworn stated that he is Vice President of Houston Lighting & Power Company, that he is charged with the responsibility of supervising the above litigation, and that the foregoing answers to interrogatories are to the best of his information and belief true and correct.

  
D. E. Simmons

SUBSCRIBED AND SWORN TO BEFORE ME by the said D. E. Simmons, on this 27th day of April, 1979.

  
Notary Public in and for  
Harris County, Texas

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	§	
	§	
HOUSTON LIGHTING & POWER	§	
COMPANY, THE CITY OF SAN	§	
ANTONIO, THE CITY OF	§	NRC DOCKET NOS. 50-498A
AUSTIN, and CENTRAL POWER	§	50-499A
AND LIGHT COMPANY	§	
(South Texas Project	§	
Unit Nos. 1 and 2)	§	
TEXAS UTILITIES	§	
GENERATING COMPANY,	§	
ET AL	§	NRC DOCKET NOS. 50-445A
(Comanche Peak Steam	§	50-446A
Electric Station,	§	
Unit Nos. 1 and 2)	§	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Houston Lighting & Power Company's Additional Responses to the Department of Justice's First Set of Interrogatories and Request for Production of Documents were served upon the following persons, by hand, or by deposit in the United States Mail, first class postage prepaid, this 27th day of April, 1979.

  
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2236 339

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