

TERA



DOCUMENT ROOM

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	§	
	§	
HOUSTON LIGHTING & POWER	§	NRC Docket Nos. 50-498A
COMPANY, PUBLIC SERVICE	§	50-499A
BOARD OF SAN ANTONIO, CITY OF	§	
AUSTIN, CENTRAL POWER AND	§	
LIGHT COMPANY	§	
(South Texas Project, Unit Nos.	§	
1 and 2)	§	
	§	
TEXAS UTILITIES GENERATING	§	NRC Docket Nos. 50-445A
COMPANY, et al.	§	50-446A
(Comanche Peak Steam Electric	§	
Station, Units 1 and 2)	§	

ANSWER OF TEXAS UTILITIES COMPANY AND ITS SUBSIDIARIES
TO THE
NRC STAFF'S INITIAL INTERROGATORIES AND REQUESTS FOR
PRODUCTION OF DOCUMENTS PROPOUNDED TO HOUSTON LIGHTING
& POWER COMPANY AND TEXAS UTILITIES GENERATING COMPANY

COME NOW TEXAS UTILITIES COMPANY ("TU"), TEXAS UTILITIES GENERATING COMPANY ("TUGCO"), DALLAS POWER & LIGHT COMPANY ("DPL"), TEXAS ELECTRIC SERVICE COMPANY ("TESCO"), AND TEXAS POWER & LIGHT COMPANY ("TPL"), all collectively referred to as "TU Companies," in compliance with Section 2.740b and 2.741 of the Rules of Practice of the Nuclear Regulatory Commission ("NRC"), and make the following answers to the NRC Staff's Initial Interrogatories and Requests for Production of Documents Propounded to Houston Lighting & Power Company and Texas Utilities Generating Company.

Most of the interrogatories request information with respect to both the TU Companies and Houston Lighting & Power Company ("HLP"). The answers filed herewith are for and on behalf of the TU Companies only. The TU Companies informally agreed to cooperate with the NRC Staff by providing a response to Interrogatories 1-35 and 37-39 on March 1, 1979. The response to Interrogatory No. 38 is amended herein. Reference is made to the Objections and Motion for Protective Order filed contemporaneously herewith.

Interrogatory 36. Provide data with respect to each interconnection at 110 kv or above that HL&P/TU has or plans to have with another company or with each other by 1987, as follows:

7904060033

- a. name of the interconnected electric utility;
- b. length of the portion of the interconnection owned by HL&P/TU and length of the portion of the interconnection owned by the other electric utility;
- c. date that the interconnection was first committed;
- d. date that the interconnection was or will be energized;
- e. kv rating and MVA or ampere normal and emergency ratings as used by the HL&P/TU operators;
- f. relay loadability in amperes;
- g. method of determining the value specified in (f);
- h. cost of the right-of-way;
- i. cost of the transmission line;
- j. cost of the terminal facilities at each end of the line;
- k. any documents suggesting that the interconnection has had or may have an adverse impact on any other electric utility other than those directly interconnected by the interconnection line;
- l. compensation paid or to be paid to any electric utility other than those directly interconnected by the line, because of the impact of the interconnection on the other electric systems;
- m. identify by title, date, etc. each load flow case, each transient stability case, each cost or economic feasibility study, and each engineering report conducted or prepared in connection with the planning of the interconnection;
- n. designate each electric utility that contributed monetarily to the planning studies made in connection with the interconnection;

- o. for existing interconnections, dates of each instance since 1965 when the interconnection was manually or automatically opened because of an overload condition; and
- p. for existing interconnections, dates of each instance since 1965 when the interconnection was manually opened or automatically opened for more than 60 seconds for reasons other than overload, and discussion of the reasons.

Answer.

- a. The TU companies are interconnected directly or indirectly with the member systems of ERCOT.
- b. See answer to Interrogatory 37.
- c-d. No such records are kept.
- e-g. See answer to Interrogatory 37.
- h-k. No such records are kept.
- l. None.
- m-p. No such records are kept.

Interrogatory 38. Provide dates for each instance since 1965 that load has been manually or automatically shed by TU/HL&P, and discuss the approximate amount of load shed, the length of time, the method used, and the cause.

Amended Answer. The TU Companies are not aware of any such instances, except that the underfrequency relays on the TU System have malfunctioned on a small number of occasions and that on a few occasions the load to Alcoa Aluminum has been interrupted by agreement of the parties. No records are kept with respect thereto.

Interrogatory 40. Provide a listing of each load flow case and each transient stability case used in the analysis of the transmission requirements for the South Texas and Comanche Peak units, including:

- a. the case number;
- b. the date when the case was run;
- c. the case title;
- d. description of the condition studied if not indicated by the case title;
- e. any summary discussions of the case that were prepared; and
- f. for the stability studies, designation of any unstable cases.

Answer. The most recent study of the Comanche Peak area is attached. No prior studies are kept.

Interrogatory 41. Describe the organizational and administrative structure used for conducting the load flow and transient stability studies for the transmission planning for the South Texas Units or Comanche Peak Units including, but not necessarily limited to:

- a. listing of each electric utility involved in the studies, and description of how each was represented, including names and titles of those senior professional and managerial persons who actively participated in the studies;
- b. methods and formulae used in allocating costs of the studies among the electric utility participants;
- c. methods and formulae used in allocating the decision making rights among the electric utility participants;
- d. description of any committees or similar study groups with oversight responsibilities with respect to the preparation or analysis of the studies;

- e. description of the computer facilities used and the method of interfacing with the study group;
- f. names and affiliations of those senior personnel responsible for collecting, coordinating and checking or otherwise preparing the input data;
- g. names and affiliations of those senior personnel responsible for the final determination of the system configurations and conditions that were studied; and
- h. names and affiliations of those responsible for the analysis of the results.

Answer.

- a. The electric utilities involved are the TU Companies and TMPA. Each senior planning engineer therefrom, who changes from time to time, is the person responsible therefor. At present the chief engineers for DPL, TESCO and TPL are Messrs. R. K. Payne, Willie Keel and T. L. Hatcher, respectively.
- b. Third party studies are paid for on a pro rata basis. Each company pays its own costs on work it performs.
- c-d. See the Comanche Peak operating agreement.
- e. Various computer facilities are used from time to time.
- f-h. See a. and d. above.

Interrogatory 42.

- a. Provide a computer printout, including input data and area interchange summaries, of the latest normal peak load system condition load flows for the time that the South Texas Units or Comanche Peak Units will first be in com-

mercial operation. If the actual system configurations have not been determined as yet, and several system configurations are being considered, provide the computer printouts for each configuration and describe the considerations or factors which will determine the final configuration.

- b. Provide a transmission map suitable for identifying the location of each bus used in the load flow analysis in terms of X-Y coordinates, and so identify each bus location. If not clearly indicated by the computer printout, provide the following:
1. nominal bus voltages;
 2. summary of area interchanges; and
 3. the control area in which each bus is located.

Answer.

- a. See printout attached.
b. See printout attached.

Interrogatory 43.

- a. Provide all documents discussing or describing the impacts of the transmission for the South Texas Units and/or Comanche Peak Units on the underlying voltage transmission systems.
- b. Provide all documents recommending changes to the underlying transmission as required to integrate the South Texas and/or Comanche Peak Units into the overall and respective systems.
- c. HL&P: provide all documents discussing compensation to non-participants in the South Texas Project due to the impact of the South Texas Project on non-participant systems.

Answer.

a-b. See answer to Interrogatory 42 above.

c. Not applicable.

Interrogatory 44. Provide all documents pertaining to cost estimates and cost allocations for the transmission additions and related connections chargeable to the South Texas and/or Comanche Peak Units, including any changes or additions required to the underlying lower voltage networks.

Answer. Preliminary cost estimates for transmission by the TU Company which will connect Comanche Peak to load centers are as follows:

	<u>\$ x 1,000</u>
DeCordova Substation-Comanche Peak 138 kv line	625
DeCordova SES-Comanche Peak 345 kv line	2,689
Comanche Peak-Parker 345 kv line	9,318
Comanche Peak-Cleburne Junction 345 kv line	6,099
Cleburne Junction-Everman 345 kv line	6,522
DeCordova-Benbrook 345 kv (50% of right-of-way and towers)	1,458
Comanche Peak-DeCordova-Benbrook (conductor only)	3,138
Everman-Sherry Tap (conductor only)	636
Sherry Tap-Century (conductor for 1 circuit and associated tower and right-of-way)	463
Cleburne Junction-Line connections change	150
DeCordova Substation-DeCordova 138 kv line	807
DeCordova - 1-138 kv CB and 1-345 kv CB	873
Parker Switching Station - 3-345 kv CB's	1,684
Sherry - 1-345 kv CB	414
Benbrook - 1-345 kv CB	616

Interrogatory 45. Provide the latest cost estimates for the transmission additions and related connections, including any additions required to the underlying lower voltage networks, for the South Texas or Comanche Peak Units. Provide separate cost estimates for:

- a. Right-of-way;
- b. Extra High Voltage (EHV) transmission lines;
- c. EVH terminal facilities;
- d. Lower voltage (LV) additions and connections;
- e. Allocation of costs to each participant; and
- f. Compensation to non-participants due to the impact of South Texas transmission.

Answer.

- a. \$4,414,000
- b. \$26,147,000
- c. \$3,330,000
- d. \$1,601,000
- e. See answer to Interrogatory 44 above.
- f. Not applicable

Interrogatory 46. List and describe all instances that TU/HLP has paid or plans to pay compensation to another electric utility due to the impact that its transmission additions has had or will have on other electric systems.

Answer. None.

Interrogatory 47. List and describe all instances of which TU/HLP is aware in which any electric utility has paid compensation to

another electric utility due to the impact that the transmission additions of the one utility had or may have had on the system of another.

Answer. The TU Companies are not aware of a proposed forced interconnection which would have the severe impact on another utility that implementation of Mode 4 would have on the TU System. The TU Companies are not aware of, and have not inquired as to, the details and specific arrangements made in other forced interconnection situations.

Interrogatory 48. Identify and provide each operating guide, each written set of instructions, directions, tabulations or other means used by the system operators to monitor maximum transmission line loadings.

Answer. The TIS operating guide has been previously provided.

Interrogatory 49.

- a. Does HLP/TU employ any different system design criteria for developing bulk transmission and generation than is required by TIS?
- b. If so, please explain such different criteria.

Answer.

- a-b. Criteria employed by each system are not different from TIS criteria, but are additional to TIS criteria where TIS criteria are not comprehensive or are silent.

Interrogatory 50.

- a. TU: Describe in detail the assignment of Chas. T. Main, Inc.

relating to a review of the PTI Study.

- b. List the date of the assignment(s) with a brief description thereof.
- c. List the professional and managerial personnel of TU and of Chas. T. Main, Inc. involved in the assignment(s).
- d. Summarize the results and conclusions reached by Chas. T. Main, Inc.
- e. Provide all documents which relate to this interrogatory.

Answer.

a-b. Chas. T. Main, Inc. were employed from April, 1976 - July, 1977, to review the PTI Study.

c. From Chas. T. Main, Inc. Southeast Tower Prudential Center Boston, Massachusetts 02199	Robert C. Ender Caleb H. Didriksen, Jr. Harry E. Smith Robert A. Mills Arthur E. Fitzgerald
--	---

From Texas Utilities Services Inc. 2001 Bryan Tower Dallas, Texas 75201	Perry G. Brittain Roy R. Parks Edward L. Busby L. W. Hart, Jr.
--	---

From Texas Electric Service Co. P. O. Box 970 Ft. Worth, Texas 76101	E. D. Scarth Lee Westbrook
---	-------------------------------

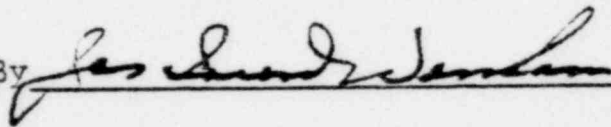
d. The PTI report was biased and therefore its conclusions are not reliable.

e. See answer to Interrogatory 1d-e.

Respectfully submitted

Jos. Irion Worsham, Esq.
M. D. Sampels, Esq.
Spencer C. Relyea, Esq.
WORSHAM, FORSYTHE & SAMPELS
2001 Bryan Tower, Suite 2500
Dallas, Texas 75201

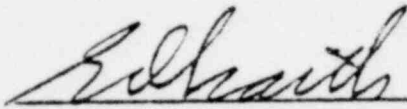
Joseph B. Knotts, Jr., Esq.
Nicholas S. Reynolds, Esq.
DEBEVOISE & LIBERMAN
1200 Seventeenth Street, N.W.
Washington, D.C. 20036

By  _____

ATTORNEYS FOR TEXAS UTILITIES COMPANY,
TEXAS UTILITIES GENERATING COMPANY,
DALLAS POWER & LIGHT COMPANY,
TEXAS ELECTRIC SERVICE COMPANY AND
TEXAS POWER & LIGHT COMPANY


THE STATE OF TEXAS)
 :
COUNTY OF TARRANT)

BEFORE ME, the undersigned authority, a Notary Public in and for Tarrant County, Texas, on this day personally appeared E. D. SCARTH, well known to me to be a credible person, who after being by me first duly sworn, did depose and say that he is duly authorized to respond to the NRC Staff's Initial Interrogatories and Requests for Production of Documents Propounded to Houston Lighting & Power Company and Texas Utilities Generating Company on behalf of the TU Companies, has read the above and foregoing Answers of the TU Companies to Interrogatories 36 and 40-50 from the NRC Staff, and the same are true and correct, to the best of his knowledge and belief.



E. D. Scarth

SUBSCRIBED AND SWORN TO before me this 5th day of March, 1979, to certify which witness my hand and seal of office.



Paula Hewatt, Notary Public,
Tarrant County, Texas

My Commission Expires
December 27, 1980

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	:	
	:	
HOUSTON LIGHTING & POWER	:	NRC Docket Nos. 50-498A
COMPANY, PUBLIC SERVICE	:	50-499A
BOARD OF SAN ANTONIO, CITY OF	:	
AUSTIN, CENTRAL POWER AND	:	
LIGHT COMPANY	:	
(South Texas Project, Unit Nos.	:	
1 and 2)	:	
	:	
TEXAS UTILITIES GENERATING	:	
COMPANY, <i>et al.</i>	:	NRC Docket Nos. 50-445A
(Comanche Peak Steam Electric	:	50-446A
Station, Units 1 and 2)	:	

CERTIFICATE OF SERVICE

I hereby certify that service of the foregoing ANSWER OF TEXAS UTILITIES COMPANY AND ITS SUBSIDIARIES TO THE NRC STAFF'S INITIAL INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS PROPOUNDED TO HOUSTON LIGHTING & POWER COMPANY AND TEXAS UTILITIES GENERATING COMPANY has been made on the following parties listed hereto this 5th day of March, 1979, by depositing copies thereof in the United States mail, first class, postage prepaid:

Marshall E. Miller, Esq. (2 copies)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Michael L. Glaser, Esq. (2 copies)
1150 17th Street, N. W.
Washington, D. C. 20036

Sheldon J. Wolfe, Esq. (2 copies)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Samuel J. Chilk, Secretary
Office of the Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Atomic Safety & Licensing Appeal
Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Richard S. Salzman, Esq.
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Jerome E. Sharfman, Esq.
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Chase R. Stephens, Secretary (20 copies)
Docketing and Service Branch
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Jerome Saltzman
Chief, Antitrust and Indemnity Group
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Roff Hardy
Chairman and Chief Executive Officer
Central Power & Light Company
P. O. Box 2121
Corpus Christi, Texas 78403

Michael I. Miller, Esq.
Richard E. Powell, Esq.
David M. Stahl, Esq.
Thomas G. Ryan, Esq.
Isham, Lincoln & Beale
One First National Plaza
Chicago, Illinois 60603

Roy P. Lessey, Esq.
Michael Blume, Esq.
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

R. L. Hancock, Director
City of Austin Electric Utility Department
P. O. Box 1088
Austin, Texas 78767

Robert C. McDiarmid, Esq.
Spiegel and McDiarmid
2600 Virginia Avenue, N. W.
Washington, D. C. 20036

Dan H. Davidson
City Manager
City of Austin
P. O. Box 1088
Austin, Texas 78767

Joseph Gallo, Esq.
Richard D. Cudahy, Esq.
Robert H. Loeffler, Esq.
Isham, Lincoln & Beale
Suite 701, 1050 17th Street, N. W.
Washington, D. C. 20036

Douglas F. John, Esq.
Akin, Gump, Hauer & Feld
1100 Madison Office Building
1155 15th Street, N. W.
Washington, D. C. 20024

Morgan Hunter, Esq.
McGinnis, Lochridge & Kilgore
5th Floor
Texas State Bank Building
900 Congress Avenue
Austin, Texas 78701

G. K. Spruce,
General Manager
City Public Service Board
P. O. Box 1771
San Antonio, Texas 78203

Jerry L. Harris, Esq.
City Attorney,
Richard C. Balough, Esq.
Assistant City Attorney
City of Austin
P. O. Box 1088
Austin, Texas 78767

G. W. Oprea, Jr.
Executive Vice President
Houston Lighting & Power Company
P. O. Box 1700
Houston, Texas 77001

Jon C. Wood, Esq.
W. Roger Wilson, Esq.
Matthews, Nowlin, Macfarlane & Barrett
1500 Alamo National Building
San Antonio, Texas 78205

Judith Harris, Esq.
Energy Section
Antitrust Division
U. S. Department of Justice
Washington, D. C. 20530

R. Gordon Gooch, Esq.
John P. Mathis, Esq.
Baker & Botts
1701 Pennsylvania Avenue, N. W.
Washington, D. C. 20006

Robert Lowenstein, Esq.
J. A. Bouknight, Esq.
William Franklin, Esq.
Lowenstein, Newman, Reis & Axelrad
1025 Connecticut Avenue, N. W.
Washington, D. C. 20036

Jay M. Galt, Esq.
Looney, Nichols, Johnson & Hayes
219 Couch Drive
Oklahoma City, Oklahoma 73101

Knoland J. Plucknett
Executive Director
Committee on Power for the
Southwest, Inc.
5541 East Skelly Drive
Tulsa, Oklahoma 74135

John W. Davidson, Esq.
Sawtelle, Goode, Davidson & Tioilo
1100 San Antonio Savings Building
San Antonio, Texas 78205

W. S. Robson
General Manager
South Texas Electric Cooperative, Inc.
Route 6, Building 102
Victoria Regional Airport
Victoria, Texas 77901

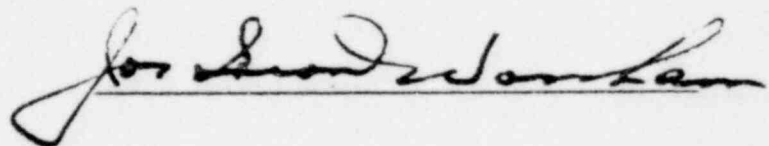
Joseph B. Knotts, Jr., Esq.
Nicholas S. Reynolds, Esq.
Debevoise & Liberman
1200 Seventeenth Street, N. W.
Washington, D. C. 20036

E. W. Barnett, Esq.
Charles G. Thrash, Jr., Esq.
J. Gregory Copeland, Esq.
Theodore F. Weiss, Jr., Esq.
Baker & Botts
3000 One Shell Plaza
Houston, Texas 77002

Linda L. Aaker, Esq.
Kevin B. Pratt, Esq.
Assistant Attorney General
P. O. Box 12548
Capitol Station
Austin, Texas 78711

Frederick H. Ritts, Esq.
Northcutt Ely
Watergate 600 Building
Washington, D. C. 20037

Don R. Butler, Esq.
1225 Southwest Tower
Austin, Texas 78701

A handwritten signature in black ink, appearing to read "Joseph B. Knotts, Jr.", written over a horizontal line.