Exhibit No.:
Issues: Termination Issues
Witness/Type of Exhibit: Miller, Rebuttal
Sponsoring Party: Missouri Public Service Commission
Company: Kansas City Power and Light Company
Case No.: HO-86-139

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY DIVISION

# REBUTTAL TESTIMONY

OF

ROBERT S. MILLER, P.E.

Jefferson City, Missouri
April, 1987

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the investigation) of steam service rendered by ) Kansas City Power & Light Company.)

Case No. HO-86-139

AFFIDAVIT OF ROBERT S. MILLER

STATE OF MINNESOTA )
) ss
COUNTY OF HENNEPIN )

Robert S. Miller, of lawful age, on his oath states: That he has participated in the preparation of the attached written testimony in question and answer form, consisting of 4 pages of testimony to be presented in the above case, that the answers in the attached written testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Robert S. Miller

Robert S. Miller

Subscribed and sworn to before me this 2 day of April, 1987.

[illegible] NOTARY PUBLIC MINNESOTA HENNEPIN COUNTY My Commission Expires May 23, 1987

Notary Public

My commission expires May 23, 1987

REBUTTAL TESTIMONY

OF

ROBERT S. MILLER, P.E.

Kansas City Power and Light Company

CASE NO. HO-86-139

Q. Please state your name.

A. My name is Robert S. Miller.

Q. Have you testified previously in this case?

A. Yes, I submitted prefiled direct testimony.

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony is submitted in response to the prefiled direct testimony of Kansas City Power and Light Company (KCPL) witness Beaudoin. Specifically there are three items in Schedule 1 (Conversion Study) of Mr. Beaudoin's testimony that I wish to address. They are:

- Staffing levels.
- Capital cost of replacing the steam distribution system.
- Unit cost to replace the steam pipeline.

Q. What does the Conversion Study conclude regarding staffing levels?

A. On page 5.4 of the Conversion Study, the Company claims approximately 72 employees are required for winter station operation and maintenance and 52 employees for summer operation when the station is on gas fuel. On page 5.8, the Company claims 52 people would be required to operate electrode boilers.

Q. Are these staffing levels consistent with your analysis?

A. No. The Company stated on page 5.7 that electrode boilers are simple to operate and maintain, yet they conclude 52 people are required. The gas/oil boilers considered in my analysis also are simple to operate and maintain and I estimate 16 people might be required.

The Company stated 52 employees are required to operate and maintain Grand Avenue Station in the summer when the station is on gas fuel. However, Grand Avenue currently burns only gas and the staff has been reduced to approximately 36 employees which is substantially below the 52 employees claimed by the Company. Furthermore, the Company claimed 52 people would be required to operate the simple electrode boiler plant. That number is substantially higher than the staffing level currently required to operate the more complex Grand Avenue Station. I believe this places in question the Company's estimating methods.

Q. What comments do you have on the Company's estimate of the cost to replace the steam distribution system?

A. The Company calculated the capital cost based on replacing all the high and low pressure piping even though evidence shows the high pressure system is in good condition. Using this approach resulted in the capital cost being estimated much higher than is justified by the condition of the system.

Q. What comments do you have on the Company's value of $400 per foot as the cost to replace steam pipeline in Kansas City?

A. The cost of pipe replacement was apparently taken from actual experience in constructing a segment of 16-inch pipeline near the AT&T Building. The unit cost for that work ($400 per foot) was applied across the board to 37,000 feet of pipeline ranging in size from 3-inch to 20-inch.

I am not aware of the details of the pipeline construction from which the unit cost was derived. From my review of the Company's work papers submitted in response to Data Request No. 15, I was unable to find any analyses that support the conclusion that $400 per foot is applicable to the average cost of the entire system. Consequently, it is difficult to say the Company's estimate is or is not an appropriate estimate.

In my analysis of the cost to install new pipe, I did not use a single unit cost but rather a builtup cost consisting of several components including pipe material, demolition and repair of street surface, excavation, installation of new expansion joints and manholes, allowance for potential relocation of other utilities, and allowances for contingencies, engineering and project administration by KCPL. The methodology I used resulted in costs that are much higher than the Company's, and reflects the conservatism in my approach.

For example, applying my methodology to the replacement of the existing low pressure system -- in its present configuration -- results in an average cost of $560 per foot if existing manholes are reused and $680 per foot if new manholes are required. These values are 40% and 70% higher than the Company's value of $400 per foot.

Part of the reason for the higher cost may be attributable to the type of pipeline design I based my analysis on, namely Class A, pipe-in-conduit versus the field insulated/encased method currently employed by KCPL. The decision of which method to use would be made during preliminary design and it is possible that actual construction costs could be lower than I estimated. Since my investigation is in the conceptual stage of the project I feel it is appropriate to use the higher estimate of cost.

Q. Does this conclude your rebuttal testimony?

A. Yes it does.