Exhibit No.:
Issues: Termination Issues
Witness/Type of Exhibit: Haskamp, 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

KEITH A. HASKAMP

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 KEITH A. HASKAMP

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Keith A. Haskamp, of lawful age, on his oath states: That he has participated in the preparation of the attached written rebuttal testimony and attached appendices/schedules in question and answer form, consisting of 11 pages of rebuttal testimony to be presented in the above case, that the answers in the attached written rebuttal 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.

Keith A. Haskamp

Subscribed and sworn to before me this 7th day of April, 1987.

Judy Frisch Notary Public

JUDY FRISCH
NOTARY PUBLIC STATE OF MISSOURI
COLE CO.
MY COMMISSION EXP. JULY 31,1989
ISSUED THRU MISSOURI NOTARY ASSOC.

My Commission expires _____

REBUTTAL TESTIMONY

OF

KEITH A. HASKAMP

KANSAS CITY POWER AND LIGHT COMPANY

CASE NO. HO-86-139

Q. Please state your name for the record.

A. Keith A. Haskamp.

Q. Are you the same Keith A. Haskamp who has previously filed direct testimony in Kansas City Power and Light Company's (KCPL or Company) Case No. HO-86-139?

A. Yes, I am.

Q. What is the purpose of this rebuttal testimony?

A. The purpose of this rebuttal testimony is to address statements made by Company witnesses Robert H. Graham and Bernard J. Beaudoin in their prefiled direct testimony.

Q. What statements were made which you will be addressing in this rebuttal testimony?

A. Mr. Robert Graham states on page 4 of his prefiled direct testimony that:

> KCPL is proposing to offer these equipment options to alleviate to some extent the financial burden of our steam customers in converting from central station steam service.

Furthermore, Mr. Bernard Beaudoin states on page 15 of his prefiled direct testimony that:

> KCPL also recognizes that the transition from steam utility service to ownership of on-site facilities presents an inconvenience and hardship to its remaining downtown steam customers. Therefore, in addition to providing the up-front capital investment for the conversion equipment, KCPL is willing to accept some operating and return losses by phasing-in the requisite rate increase in order to further mitigate the impact on its valued steam customers.

Q. Why are you rebutting these particular statements?

A. It is Staff's belief that KCPL's "Downtown Steam System Conversion Study" (Conversion Plan) contains self-serving proposals offering certain promotional "equipment options" to its steam customers that, if approved, would eventually enhance the earnings position of the Company by converting current KCPL steam customers to future KCPL electric customers. By providing the up-front capital investment for the electric equipment necessary to convert steam customers to electric service customers, the Company's plan promotes the use of electric energy, thereby ultimately benefitting the Company and its electric operations. The main thrust of the Conversion Plan is not to mitigate or alleviate the adverse impact on the customers that would result from the Company abandoning its steam system. Instead, the goal of the Conversion Plan is to retain current steam customers and their related revenues as electric customers along with their associated revenues.

Q. Why has Staff taken the position that the Conversion Plan was not developed with altruistic intentions?

A. Staff has taken this position for two reasons. First, the Company's Conversion Plan is in reality an investment strategy. This is indicated by the Company's August 28, 1984 Steam Committee report which is included as Schedule 26 to my prefiled direct testimony. This report states:

> The cost of installing electric boilers and the related wiring on the customer's property is in the order of $6.35 million. The expansion of the electrical distribution system to carry this new load is in the order of $3 million, making a total of $9.35 million. This assumes that the company is willing, and could obtain commission approval, to pay for the installation of the customer utilization equipment. For this investment, the company can pick up a maximum of 100 MW of winter load and annual KWH sales of 177,000,000 KWH. The winter consumption would be 160,000,000 KWH. At the newly filed price of 3.25¢ per

> KWH, the winter revenue would be $5,200,000. The summer consumption would be 16,000,000 KWH and at the filed water heating rate for 1985 of 5.91¢/KWH the revenue would be $945,000. The steam distribution maintenance cost would also be eliminated. In 1983, this cost was $720,000, and $433,000 the first seven months of 1984.
>
> [Emphasis added.]

(Schedule 26-3)

Thus, under the guise of the plan described in the August 28, 1984 Steam Committee report, the Company would make an initial investment of approximately $9.35 million in electrical equipment and electrical distribution system upgrades to yield approximately $6.145 million in annual electric revenue. Therefore, the Company appears prepared to, at its own expense, invest current dollars with the anticipation of receiving future returns on this investment. As explained on page 12 of Mr. Beaudoin's prefiled direct testimony, the Company under its Conversion Plan currently estimates its investment in capital expenditures to fall between $10.472 million and $23.271 million with an additional $3 million of downtown electric distribution investment.

Q. Was Staff able to further refine the amount of the electric revenues that the Company expects to receive in return for its investment undertaken as a part of the Conversion Plan?

A. Yes. Included as Schedule 1 to this rebuttal testimony is the Company's response to Staff Data Information Request No. 656. As can be seen on Rebuttal Schedule 1-5, the response indicates that if KCPL successfully completes a conversion of all steam customers to electric customers, the resultant increase in electric revenue would be $6,701,667. Staff witness Edward A. Tooey further quantifies Company's expected revenue gains as a result of the conversion of steam customers to electric service in his rebuttal testimony.

Q. What is the second factor underlying Staff's position that the Conversion Plan is not entirely altruistic in nature?

A. It is Staff's belief that the intent of the Conversion Plan is also promotional in nature. Included in Rebuttal Schedule 2 is a copy of a handout from the steam customer meeting held on March 13, 1986. The following statements are contained in the document:

> KCPL will install a steam boiler AT NO COST TO THE CUSTOMER, own and operate the boiler, and continue to charge the steam rate.
>
> . . .
>
> [Original emphasis.]

(Rebuttal Schedule 2-2)

> KCPL will install and own the electric heat equipment AT NO COST TO THE CUSTOMER.
>
> . . .
>
> The individual steam boilers and electric equipment will be fully depreciated by 1995 at which time the customer will assume ownership of all the equipment AT NO COST and be billed on the electric heat rate.
>
> [Original emphasis.]

(Rebuttal Schedule 2-3)

Certainly with this document being circulated among the customers highlighting the words AT NO COST and AT NO COST TO THE CUSTOMER the Company was clearly promoting the electric alternative. The provision of purportedly "no cost" electrical equipment to the customer in order to influence the decision making process of the customer promotes electric service over gas. Furthermore, as stated in Staff witness James L. Ketter's prefiled direct testimony, the Staff believes that the Company's Conversion Plan violates the Promotional Practices Rule.

Q. Why does the Company need to promote electric conversion over gas?

A. The August 28, 1984 Steam Committee report included as Schedule 26 in my prefiled direct testimony states that:

> The average price of steam on the KCPL downtown system is now about $12/Mlb. At the present gas price, steam can be produced with a gas-fired boiler at a cost of under $10/Mlb. The removal of electric generation from the Grand Avenue plant, and the necessary related increase, would drive the cost of steam even further above the competitive price. These facts make it apparent that we must find an alternate method of selling heat to these customers, or lose this business to the Gas Service Company over the long run.
>
> [Emphasis added.]

(Schedule 26-2)

It is apparent from this report that the Company does not believe that they can be competitive with the Gas Service Company (KPL-Gas Service) by supplying steam from Grand Avenue.

Company performed further analysis looking at the alternative energy costs related to conversion from centrally supplied steam service to on-site steam service. This can be seen on Schedule 26-2 of my prefiled direct testimony.

> It is estimated that these steam customers utilize only about 1,000 BTU/lb. At the $12/Mlb price, it is equivalent to 4¢/KWH electricity. This is energy only, with no capital costs or maintenance costs. The cost to convert a building from KCPL steam to natural gas would be about the same or less than converting to an electric boiler if the stack were not a problem. It would be nearly impossible to get a stack up and out of some buildings. The energy cost at $4.80/MCF for natural gas at 80% efficiency is about $6/Mlb, equivalent to electric boilers utilizing 2¢/KWH electricity. It does not appear that we would be competitive in this market if the customer has to sustain any of the conversion costs and could overcome the stack problem.
>
> [Emphasis added.]

Q. Does the Company believe that the Conversion Plan violates the Promotional Practices Rule?

A. No. The Company, stated in response to Staff Data Information Request No. 172:

> [KCPL] does not consider its Plan a 'promotional' practice; KCPL considers it a 'transition cost' that must be incurred in order to phase out its steam business.

(Rebuttal Schedule 3-3)

Q. Did the Company indicate in this response, as it did in the prefiled direct testimony of Mr. Graham and Mr. Beaudoin, that the Conversion Plan was undertaken to alleviate the financial burden on the Company's valuable steam customers?

A. Yes. In the same response the Company states:

> KCPL's Plan was conceived to alleviate a serious financial problem that would face its steam customers - the ability of those customers to raise the capital necessary for a conversion to another steam supply system on a short time schedule.
>
> [Emphasis added.]

(Rebuttal Schedule 3-2)

Q. Is the Company willing to provide a gas steam supply system for its customers as well as an electric steam supply system to help alleviate the customers' financial burden?

A. In light of Company's statement that its Conversion Plan seeks to aid steam customers in converting to another steam supply system, the Staff asked the Company whether it would be willing to include the installation of a gas fired steam supply system as part of its plan.

Company response to Staff Data Information Request No. 619 indicates that the Company is not willing to install a gas fired steam supply system as part of any proposed plan to phase out steam service. The Company refuses to consider this option "because the burden of the transition costs of conversion to electric boilers falls on KCPL's shareholders." (Rebuttal Schedule 4-2) Company further stated:

> In the long run (over the life of the electric boiler equipment) KCPL shareholders will at least have an opportunity to earn a return through electric heat consumption and thus recoup some contribution to the up front investment in the electric boilers.
>
> [Emphasis added.]

(Rebuttal Schedule 4-2)

This statement provides further evidence that the Company's Conversion Plan is an investment strategy undertaken to "earn a return" and "recoup some contribution" from the Company's valued steam customers. If the Company was primarily concerned about the customer and the inconvenience and hardship they would face if the steam system were abandoned, it would be indifferent as to whether the customer utilized an electric or gas system to produce steam, and would favor whichever method was best for the customer. The Company is only compensating customers who choose the electric heat option. The Company is interested in helping its customers only insofar as the Company ultimately benefits from its compensation. Obviously, the steam customers are valuable to KCPL only if they can be retained as electric customers.

Q. Mr. Beaudoin states on page 15 of his prefiled direct testimony that:

> In addition to providing the up-front capital investment for the conversion equipment, KCPL is willing to accept some operating and return losses by phasing-in the requisite rate increase in order to further mitigate the impact on its valued steam customers.

Is this the only reason for the Company's willingness to accept some losses?

A. No. While it is true that a phase-in would lessen the impact of a rate increase on steam customers, it would also seek to ensure that these customers remain on the steam system until they would be converted to electric use. These steam customers then would eventually

become electric heating customers by virtue of the Company's proposed Conversion Plan.

The Company had earlier realized that a rate increase would drive the price of Grand Avenue supplied steam even further above the price at which steam could be produced from a gas-fired boiler. Therefore, the Company believed that an alternative method of supplying heat to the steam customers had to be developed to promote electric service or the Company would lose the remaining steam customers and the related revenue to KPL-Gas Service. This is further explained in my prefiled direct testimony on Schedule 26-3:

> Any increase in steam rates would make steam even less competitive with gas-fired boilers than it presently is. If we are to convert our present steam customers to the electric system, we must retain them as steam customers for the present time.
>
> [Emphasis added.]

Q. Isn't the test project, described on pages 8-15 of Mr. Michael Mandacina's prefiled direct testimony, similar to the Conversion Plan?

A. Yes. It appears to have fulfilled the role of predecessor to the present Conversion Plan.

Q. Does Staff believe that the test project was done for the same promotional and investment reasons as the Company's Conversion Plan?

A. Yes. A Review of Boiler Test Installations, apparently prepared by Mr. Robert Graham on September 15, 1986, appears as Rebuttal Schedule 5. It is stated that:

> Our overall objective in conducting this test was to determine the feasibility of going to on-site electric steam generation. The overall objective broke down into several segments.
>
> A. Customer Reaction

B. How to design or to use in-house engineering staff, a consultant, or a design build concept.

C. How to install, use a design build contractor, internal project management, or combination of consultant project management with internal project review.

D. Installation costs--determined by review of actual bids.

E. Operating experience gained from instrumentation and careful review of actual operating situations.

(Rebuttal Schedule 5-1)

Therefore, it is clear that this test project was for the benefit of the Company, not for the customer, in that it was used to determine the feasibility of implemeting the Conversion Plan. The Company used the test project as a way of gaining information as to the potential success or failure of the Conversion Plan.

Q. Mr. Graham states on page 3 of his prefiled direct testimony that:

> [a] commitment was made to audit the premises of each steam heat customer. The audit would review the customers' billings and present steam heating system, provide preliminary design and cost as to how the system could be converted, and list conservation measures that would improve the buildings energy systems. The audit would focus on the heating system itself and any improved energy management systems that might be implemented.
>
> [Emphasis added.]

Were these energy audits performed to provide "conservation measures" and to focus on "improved energy management systems" for the benefit of the customer?

A. No. These "energy audits" appear self-serving and promotional in nature. In Schedule 25 of my prefiled direct testimony, Mr. Graham states in response to Staff Data Information Request No. 622:

> The intent of the Steam Conversion Plan was to retain all steam customers as heat customers. This could not be

accomplished by furnishing gas boilers. Energy Masters was instructed to study electric alternatives only.

[Emphasis added]

By giving the customer a free energy audit, which recommended electric energy applications only, the Company promoted electrical energy applications to replace centrally supplied steam service. Thus, the term "energy audit" is clearly misleading. The studies evaluated only the feasibility of using electricity and did not consider other energy alternatives, thereby furthering the goal of converting all steam customers to electric service. The audits were attractive to the customer since they did not have to pay for them. Their primary goal, however, was to promote KCPL electric alternatives over natural gas and steam.

Q. Did the customers request these "energy audits"?

A. No.

Q. What was the cost of these "energy audits"?

A. Under the Company's response to Staff Data Information Request No. 495, the total cost of the "energy audits" to date has been $413,940. This can be seen on Rebuttal Schedule 6-2. On a cost per Mlb basis, the $413,940 would be divided by Staff's annualized Mlb steam sales of 455,930 (Rebuttal Schedule 7-1) to arrive at a cost of $.91 per Mlb. of steam sold.

Q. Did the Company pay for these "energy audits"?

A. Yes.

Q. Does the Company believe that the costs of these "energy audits" are transitional costs similar to other costs of the Conversion Plan and incurred for the convenience of their steam customers?

A. Yes. Company response to Staff Data Information Request No. 621 states that:

> The major portion of the cost of the energy audits was incurred in 1986 and is not included in the 1985 test year cost of service supporting KCPL's request for an increase in steam rates. If the MPSC approves the Steam Conversion Plan and accepts KCPL's phase-in of the proposed rate increase, then the major portion of the cost of the energy audits would not be collected in the approved steam rates. KCPL recognizes that the cost of the energy audits is part of the transition cost of implementing its Steam Conversion Plan for the convenience of its existing steam customers.
>
> [Emphasis added.]

(Rebuttal Schedule 8-2)

As stated previously, Staff does not believe that the "energy audits" were done for the benefit or convenience of the customer but for the Company.

Q. Would you further describe how the "energy audits" were conducted for the benefit or convenience of the Company and not the customers?

A. Not only did these energy audits, by design, promote electric service exclusively, they also provided KCPL with preliminary design information for the sizing of electric boilers and electric heating equipment. This information was essential for the successful completion of the Conversion Plan because the Company was able to gain valuable information from Energy Masters concerning the configuration and use of the steam customer's heating system. This allowed for a more precise estimate to be made regarding the size and cost of the electric boiler or space heating equipment that was to be installed under the Company's Conversion Plan. It also enabled the Company to estimate the amount of potential increased electric sales revenue that would result from installation of electric equipment. Thus, it appears as though these "energy audits" were more valuable to KCPL than to the customers.

Q. Does Staff have an example of a situation that would further illustrate the point that the "energy audits" appear to be more valuable to the Company than the customer?

A. Yes. Rebuttal Schedule 9 is a copy of a December 16, 1985 letter sent by Mr. Graham to Mr. Bob Smith of Energy Masters Corporation. Mr. Graham requested an "energy audit" of the American Formalwear building. Mr. Graham also states that:

> [w]e have installed a boiler at this location, however, we are concerned that the boiler may be undersized. We will be particularly interested, if we find the boiler is indeed undersized what modifications we may be able to make to the building to cut down on the heat loss rather than increase the size of the boiler.
>
> [Emphasis added.]

(Rebuttal Schedule 9)

Q. Wasn't American Formalwear one of the customers who participated in the test project?

A. Yes. A copy of minutes from a December 20, 1985 meeting concerning the status of the boiler test project is contained in Rebuttal Schedule 10. In this meeting it was stated that:

> [t]he American Formalwear boiler appears to be undersized for the location. The boiler does not maintain normal operating pressure. Due to this problem, Energy Masters was requested to perform an energy audit at this location.
>
> [Emphasis added]

(Rebuttal Schedule 10)

Thus, as a means to correct the Company's undersizing of a test boiler, Energy Masters is asked to perform an "energy audit" at American Formalwear.

Q. Didn't the energy audits provide some "conservation measures" and information for "improved energy management systems"?

A. Yes, however, this information was very limited. This can be seen by looking at Schedule 1 of Mr. Graham's prefiled direct testimony which contains a copy of the "energy audit" performed on the Home Savings Building, another test project customer. Only one and one quarter pages of this 28 page study are devoted to "conservation measures." The remainder is dedicated to information valuable to the Company's planned conversion from central steam service to on-site electric boilers.

Q. Did Staff ask any KCPL steam customers whether they had performed their own energy audits to evaluate and compare their energy alternatives in the event of termination of centrally supplied steam service?

A. Yes. As explained on pages 15 and 16 of Staff witness Cary G. Featherstone's prefiled direct testimony, numerous steam customers were interviewed. Several of these customers indicated that they had performed energy audits evaluating their alternatives to centrally supplied steam service.

Q. Can you provide a specific example of such an instance?

A. Yes. Included in my Rebuttal Schedule 11 are Staff meeting notes from an interview with Gailoyd Enterprises personnel. It was stated that "another (independent) company did an energy audit on that question (electric versus gas) in 1986" (Rebuttal Schedule 11). It was stated that:

> On January 16, 1987 Gailoyd provided Staff a copy of a study (attached). The study was conducted by Barnes & Phillips Engineering, Inc. and is entitled "Heating Systems Study for Kansas City Power & Light Building" dated November, 1986. Barnes & Phillips Engineering recommended that the 'heating and domestic hot water requirements for the KCP&L building be provided by gas fired low pressure steam boilers.'
>
> [Emphasis added.]

(Rebuttal Schedule 11-1)

In terms of economics, the study showed that there would be a $94,136 savings per year in operating and maintenance cost using gas as compared to electric energy for heating and hot water requirements. In addition, the initial installation costs for a gas system would be $111,378 less than the electric system. To Staff, this is an example of a true "energy audit".

Q. What conclusions can be drawn about KCPL's Conversion Plan?

A. The Company's Conversion Plan was primarily intended to retain as many KCPL steam customers as possible as electric customers and the Company's promotional activities were undertaken to ensure this outcome. Instead of being concerned primarily about the "valued steam customer" and the "financial burden" being placed on them by the Company's abandonment of the steam system, KCPL designed a plan to promote electric service as a convenient means for the Company to retain these customers and the related revenues. If electric alternatives to steam were truly advantageous and would "mitigate" or "alleviate" any "financial burden" for the Company's "valued steam customers", there would not be a need to offer no-cost equipment and no-cost energy audits to the customers as well as a phase-in of a rate increase. Furthermore, if the Company were truly concerned about mitigating the adverse effect of abandonment on its steam customers, it would have pursued the sale of the system to another party, enabling the continuation of central district steam heating service in downtown Kansas City.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

HASKAMP-REBUTTAL

FEB 3 1987

No. 656

Class

Data Information Request
Kansas City Power & Light Company
Case No. HO-86-139

Requested From: Steve Cattron

Date Requested: 2/2/87

Information Requested: Has KCPL determined the amount of electric revenues it expects to receive from steam customers who convert to electric space heat?

1. If so, please provide all documentation including assumptions.
2. If not, why not?
3. How much electric revenues would KCPL receive if National Starch used electricity instead of steam for its energy requirements? Please provide all assumptions.

Requested By: Ed Tooey

Information Provided:

Attached is the conversion formula for steam to kilowatt hours, a table applying the formula to the steam customers and to National Starch's 1986 steam usage.

The attached information provided to the Missouri Public Service Commission Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the Missouri Public Service Commission Staff if, during the pendency of Case No. HO-86-139 before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information.

If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the KCP&L Kansas City, Missouri office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g., book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title, number, author, date of publication and publisher, addressee, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to Kansas City Power & Light Company and its employees, contractors, agents or others employed by or acting in its behalf.

Signed By: A. A. Graham

Date Received: 2/24/87

SCHEDULE 1-1

HASKAMP-REBUTTAL

SCENARIO I

STEAM BOILER CONVERSION LIST

PHASE 1:

Name	Address	M# Peak (1)	KWD Peak (1)	M#/ Year (1)	KWH/ Year(1)	Elec. $/Year (2)
American Formal Wear	1329 Main	.21	62	496	145,328	5,364
Missouri Employment Sec.	1411 Main	.65	190	1696	496,928	18,342
Upsher Labs	1336 Walnut	.53	156	664	194,552	7,181
McWhirter Printers	909 Wyandotte	1.0	293	1020	298,860	11,030
Faultless Starch	114 W. 9th St.	1.06	312	1423	416,939	15,389
Nelkin Trust	807 Wyandotte	.76	223	1154	338,122	12,480
Home Savings Building	1006 Grand	7.5	2200	3458	1,013,194	37,397
Stanley Sargent	1406 Walnut	.17	51			
					TOTAL	107,183

PHASE 2:

Rodeway Inn	601 Main	1.0	293			
Rodeway Inn	701 Main	.93	272	15258	4,470,594	165,010
Executive Plaza	122 W. 8th	2.1	615	2648	775,864	28,637
Downtown Redevelopment	811 Main	5.45	1596	10207	2,990,651	110,385
Waltower Building	823 Main	2.58	757	3382	990,926	36,575
R. K. Powell	810 Baltimore	.25	73	363	106,359	3,926
John A. Marshall	110 W. 9th St.	.55	161	697	204,221	7,538
Baltimore Inn	109 W. 9th	.042	7	125	36,625	1,352
					TOTAL	353,423

PHASE 3:

K.C. MO Library	311 E. 12th	4.64	1360	6487	1,900,691	70,155
MO Court of Appeals	1300 Oak	.38	111	462	135,366	4,996
Union Natl. Bank	405 E. 13th	.97	284	1104	323,472	11,940
Wm H. Pickett	407 E. 13th	.96	281	1087	318,491	11,755
					TOTAL	98,846

PHASE 4:

Goldsmith Properties	817 Broadway	.21	62	1227	359,511	13,270
Mark Twain Bank	819 Broadway	.25	73	401	117,493	4,337
Wm. Ashley	909 Broadway	.72	211	1122	328,746	12,134
Anjor Corporation	915 Broadway	.70	205	800	234,400	8,652
National Equipment Corp.	923 Broadway	.01	29	150	43,950	1,620
Sieden Furs	935 Broadway	.066	19	90	26,370	973
Rothenburg Tobacco	930 Broadway	.91	267	2051	600,943	22,181
Naval Jelly	412 W. 10th	.46	135	507	148,551	5,483
Lee-Hilt Company	908 Central	.53	155	578	169,354	6,250
Letter Carriers Union	304 W. 10th	.27	79	705	206,565	7,624
Whimann Company	219 W. 10th	.66	193	873	255,789	9,441
Downtown Investors	222 W. 10th	4.3	1260	10737	3,145,941	116,117
					TOTAL	208,082

(1) 1984 Usage Data
(2) Current electric rate of 3.691c/KWH was used.

PHASE 5:

Name	Address	MW Peak (1)	KWD Peak (1)	MW/ Year (1)	KWH/ Year (1)	Elec. $/Year (
Landmark Mtg. Company	1020 Central	.65	190	805	235,865	8,706
Financial Assurance	300 W. 11th	.63	185	1029	301,497	11,128
K.C. Southern Indust.	301 W. 11th	3.47	1017	3443	1,008,799	369,425
Folly Theater	300 W. 12th	1.0	293	1411	413,423	15,259
K.C. St. Joe Diocese		.36	106	971	284,503	10,501
K.C. St. Joe Diocese	416 W. 12th	1.2	352	1901	556,993	20,559
Cathedral Sq. Twr.	444 W. 12th	2.8	820	4355	1,276,015	47,098
Carpenter Vulquarz	427 W. 12th	.71	208	2268	664,524	24,528
First Development	1235 Washington	.71	208	1454	426,022	15,724
					TOTAL	522,928

PHASE 6:

Graphix Plus	1005 McGee	.24	70	406	118,958	4,391
Moore & Kessinger	1009 McGee	.35	103	463	135,659	5,007
Continental Tower Bldg.	1021 McGee	1.99	583	2356	690,308	25,479
Jeannie Spini	1000 McGee	.086	25	78	22,854	843
Club Midwest	1012 McGee	.43	126	713	208,909	7,710
Downtown Properties	10 0 McGee	.65	190	972	284,796	10,512
SWBT	1101 McGee	1.49	437	1849	541,757	19,996
Royal Blue Print	1118 McGee	.78	229	640	187,520	6,921
Orgyle Bldg.	306 E. 12th	2.07	607	2036	596,548	22,019
Lathrop Bldg.	1001 Grand	2.8	820	2701	791,393	29,210
Farm & Home Building	1021 Grand	1.05	308	946	277,178	10,231
Kansas-New York Bldg.	1101 Grand	3.76	1102	3786	1,109,298	40,944
Bryant Building	1100 Grand	5.15	1509	5349	1,567,257	57,847
Gate City Building	1109 Grand	1.16	340	917	268,681	9,917
Traders Bank	1125 Grand	4.73	1386	4475	1,311,175	48,395
Steve Scruby	1207 Grand	2.5	733	1286	376,798	13,907
Denison Optical	1217 Grand	.12	36	33	9,669	357
12th & Walnut Bldg.	25 E. 12th	5.72	1676	5849	1,713,757	63,255
Schmeltzer Building	1001 Walnut	1.02	299	1038	304,134	11,226
					TOTAL	388,167

PHASE 7:

DST	21 W. 10th	2.44	715	4752	1,392,336	51,391
Kroh Bros.	1007 Baltimore	.73	214	1375	402,875	14,870
Church's Chicken	10 8 Main	.07	21	980	287,140	10,598
ur Kings	10 Main	.06	18	52	15,236	562
acy's	1030 Main	5.18	1518	6749	1,977,457	72,988
Metropolitan Savings	1012 Walnut	1.14	334	1526	447,118	16,503
Woolf Bros.	1022 Walnut	4.3	1319	3506	1,027,258	37,916

PHASE 7: (cont'd)

Name	Address	MØ Peak (1)	KWD Peak (1)	MØ/ Year (1)	KWH/ Year (1)	Elec. $/Year
First National Bank	14 W. 10th	3.17	929	5945	1,741,885	64,293
CSC Investors	930 Main	14.3	4190	16208	4,748,944	175,284
University Club	914 Baltimore	1.1	322	2917	854,681	31,546
Lane Blue Print	906 Baltimore	.45	132			
					TOTAL	475,951

PHASE 8:

Centerre Bank	900 Walnut	1.92	563	3201	937,893	34,618
Demaree Stationary	908 Walnut	.055	16	77	22,561	833
Quick-Print	910 Walnut	.09	25	59	17,287	638
MO Bank & Trust	920 Walnut	.03	88	500	146,500	5,407
GSA	901 Walnut	7.28	2133	15741	4,612,113	170,233
First Federal Savings	915 Walnut	.05	147	810	237,330	8,760
United Missouri Bank	925 Walnut	.147	43	350	102,550	3,785
United Missouri Bank	112 W. 10th St.	2.53	741	2444	716,092	26,431
Osco	925 Main	.36	105	813	238,209	8,792
Safety Federal Savings	908 Grand	.45	130	1058	309,994	11,442
United Missouri Bank	918 Grand	3.3	967	863	252,859	9,333
United Missouri Bank	922 Grand	4.13	1210	2715	795,495	29,361
Grand Ave. Temple	205 E. 9th	0.1	29			
Federal Reserve	903 Grand	.78	229	292	85,556	3,158
Federal Reserve	915 Grand	1.44	422	975	285,675	10,544
Federal Reserve	921 Grand	5.17	1515	3364	985,652	36,380
Federal Reserve	916 McGee	1.39	407	3937	1,153,541	42,577
					TOTAL	402,292

PHASE 9:

Downtown Investors	1001 Wyandotte	29.85	8667	20788	6,090,884	224,815
K.C. Southern	114 W. 11th	3.7	1084	1709	500,737	18,482
Phillips House	104 W. 12th	4.3	1260	9459	2,771,487	102,296
Trans Am. Investment	1205 Wyandotte	3.4	996	5269	1,543,817	56,982
Municipal Auditorium	1300 Baltimore	9.9	2895	20508	6,008,844	221,786
TWA	1305 Baltimore	2.55	747	1933	566,369	20,905
Gaylord Prop.	1330 Baltimore	4.94	1447	2133	624,969	23,068
Empire Theater	1402 Main	2.55	747	3030	887,790	32,768
					TOTAL	701,102

BAK
9/24/85

PHASE 10: HIGH PRESSURE

Name	Address	M# Peak (1)	KWD Peak (1)	M#/ Year (1)	KWH/ Year (1)	Elec. $/Year (2)
Kansas City Club	1230 Baltimore	6.66	2220	8468	2,481,124	91,578
Jackson County CtHs.	405 E. 12th	13.3	4440	15880	4,652,840	171,736
Jackson County Justice Center	1305 Locust	9.09	3030	17453	511,373	188,745
Jackson County Jail	1307 Locust					
Federal Office Bldg.	601 E. 12th	36	12000	32386	9,489,098	350,243
MO State Office Building	615 E. 13th	5.58	1860	5316	1,557,588	57,977
KCPL	1400 Baltimore	.43	143			
Greyhound	700 E. 12th	5.3	1763	5505	1,612,965	59,535
Bartle Hall	1220 Central	21.6	7200	24841	7,278,413	268,646
					TOTAL	1,188,460

PHASE 11: HIGH PRESSURE

Vista Hotel	200 W. 12th	21.6	7200	42065	12,325,045	454,917
Burd & Fletcher	321 W. 7th	3.75	1251	6600	1,933,800	71,377
SWBT	500 W. 8th	11.96	3989	14715	4,311,495	1,323,240
K.C. MO City Hall	415 E. 11th	13.32	4440	5307	1,554,951	57,393
K.C. MO Courts	1101 Locust	3.11	1036	2249	658,957	24,322
K.C. MO Police	1129 Locust	3.99	1332	4589	1,344,577	49,628
Fed. Court House	811 Grand	8.5	2820	11011	3,226,223	119,080
Heritage House	1016 Locust	22.2	740	3194	935,842	34,542
Old Townley	16 E. 3rd	2.5	850	348	101,964	3,763
Market Area Dev. Co.	20 E. 5th	.085	283	2000	586,000	21,629
Folgers Coffee	330 W. 8th	9.6	1251	8816	2,583,088	95,342
					TOTAL	2,255,233
					GRAND TOTAL	6,701,667

HAK

NATIONAL STARCH ENERGY REQUIREMENTS

Steam used in 1986 = 547,164 Mlbs.

Using 293 Kwh per Mlb, the electric equivalent is:

547,164 X 293 = 160,319,050 Kwh

Cost of steam for 1986 = $5,389,145

Equivalent electric cost @ the heat rate
@ 3.691 cents/Kwh = $5,917,376

Method of Calculating Estimated Electric Usage from Measured Steam Data

1 Mlb = 1,000,000 BTU (assumed)

$$\frac{1{,}000{,}000 \text{ BTU}}{3{,}413 \text{ BTU/Kwh}} = 293 \text{ Kwh/Mlb}$$

Measured Mlbs/mo X 293 = Kwh/mo

Example:

Customer usage = 250 Mlbs

Estimated electric usage = 250 X 292 = 73,000 Kwh/mo

Electric cost = 73,000 Kwh X $.03691/Kwh = $2,693.70

$0.03691/Kwh is current electric heat rate

HASKAMP–REBUTTAL

No. 190

Class

Data Information Request
Kansas City Power & Light Company
Case No. HO-86-139

Requested From: Steve Cattron

Date Requested: 2/4/87

Information Requested:

Per attached document, taken from the files of J.R. Miller:

1) Please provide all correspondence between KCPL and Mr. Theis Davis and/or associates of Mr. Davis' law firm, from Jan. 1986 to current.

2) Please provide any updates or ~~further~~ further documentation concerning KCPL 'strategies' for customer involvement or customer intervention in the current rate case.

Requested By: Mark Oligschlaeger as referred to in the above question

Information Provided:

1) & 2) The only documents regarding the steam system are attached - these are copies of the information passed out to the customers attending the informational meeting with the steam customers. (Since not all customers could attend, the information was mailed also.)

2/9/87

The attached information provided to the Missouri Public Service Commission Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the Missouri Public Service Commission Staff if, during the pendency of Case No. HO-86-139 before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information.

If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the KCP&L Kansas City, Missouri office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g., book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title, number, author, date of publication and publisher, addresses, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to Kansas City Power & Light Company and its employees, contractors, agents or others employed by or acting in its behalf.

Signed By:

Date Received: 2/20/87

SCHEDULE 2-1

KCPL DOWNTOWN DISTRICT STEAM SYSTEM

Steam Customer Meeting - Thursday, March 13, 1986
4th Floor, Power & Light Building, 1330 Baltimore

Situation

In 1985, two events occurred which directly affect the economics of central station steam production: the old electric production facilities of Grand Avenue Station were retired from service, and CPC International sold its Corn Products plant to National Starch and Chemical Corporation resulting in a reduction in base load steam to about one-fourth the original amount.

The downtown steam customers have continued to steadily decrease from 400 in 1950 to about 130 today. The extremely old underground distribution system is continuously developing leaks, and repair costs have increased to over $400/ft for new pipe installation.

An on-site electric steam boiler test project at selected customer locations begun in 1985 has proven successful. Building energy analyses of about 30% of the steam customers have been completed, with the rest scheduled for completion in 1986. Due to the boiler test project and the development time for the Steam Plan, KCPL committed to no increase in steam rates that would be effective in 1986. Steam rates have not been increased since 1982. KCPL plans to operate Grand Avenue Station for steam production through 1990, commensurate with the five year term of the National Starch Steam Agreement.

Solution - The Steam Plan

An in-depth study to determine the best alternative for our steam customers in the face of significantly increasing steam production costs has been developed. After engineering and financial examination of all possible alternatives for the almost century old plant and 80 year old distribution system, it became obvious that it is not economically feasible to continue central station production and underground steam distribution. The test project has shown that one solution is on-site electric boilers for steam production.

- KCPL will install a steam boiler AT NO COST TO THE CUSTOMER, own and operate the boiler, and continue to charge the steam rate.

The boiler would be located in the customer's building and connected directly to the building steam system. The steam service pipe from the underground system will be permanently disconnected and capped off.

The building energy analyses have shown that some steam customer buildings would be better served by heat pumps or electric units on several floors. This zoned approach offers the customer much more controlled and efficient operating characteristics than the old steam system.

- KCPL will install and own the electric heat equipment AT NO COST TO THE CUSTOMER.

The operation of the electric equipment and cost of electricity will be the responsibility of the customer, who will be billed on the electric space heating rate. Some customers still need "live" steam for cooking, dish-washing, laundry, etc., so a combination of a small steam boiler and other electric space heating equipment may be appropriate.

There will be no cost to the customer for the installation of the steam boiler, or electric equipment up to the cost of the steam boiler. Since KCPL is presently supplying the energy to the customer, the investment in the production facilities on the customer premises is in lieu of an investment in a central plant or underground distribution system.

- The individual steam boilers and electric equipment will be fully depreciated by 1995 at which time the customer will assume ownership of all the equipment AT NO COST and be billed on the electric heat rate.

KCPL has agreed to accept some operating losses during the implementation of this plan, and maintain the reliable operation of the underground steam system during the conversion period.

- The plan incorporates a systematic phasing for all customer conversion by December 31, 1990, at which time Grand Avenue Station and the underground steam system will be retired from service.

As customers are converted to on-site production of heat, they will be permanently disconnected from the old distribution system. Each phase area will then be disconnected from the steam mains so that remaining customers can still receive steam until they are converted.

A representative will contact all steam customers by April 30, 1986, to answer any questions and advise the customer of the phase when their building will be converted. If a building energy analysis has not been completed, a schedule will be set up at that time.

Should you have any questions, please contact Michael C. Mandacina, Director Internal Services and Steam Operations, on 556-2328. In order to schedule a meeting or building energy analysis, please contact Hubert Kent on 556-2157 or Diane Bechmann on 556-2172.

HASKAMP-REBUTTAL 1986

DC1

No. 172

Class

Data Information Request
Kansas City Power & Light Company
Case No. HO-86-139

Requested From: STEVE CATTRON

Date Requested: OCTOBER 31 1986

Information Requested: RE CENDANYS DOWNTOWN STEAM SYSTEM CONVERSION STUDY REVISED MARCH 1, 1986. PAGE 2 IT IS STATED THAT 'KCPL WILL INSTALL, AT NO COST TO THE CUSTOMER, THE ELECTRIC DRIVEN STEAM PRODUCTION EQUIPMENT OR ALTERNATIVE ELECTRIC HEAT EQUIPMENT AS THE CASE MAY BE. THE AGREEMENT SHOULD MAKE AVAILABLE TO THE CUSTOMER THE OPTION OF PURCHASING STEAM BOILER EQUIPMENT AT ORIGINAL COST LESS DEPRECIATION ANY TIME BETWEEN THE DATE OF INSTALLATION AND 12/31/95. IN THE CASE OF ALTERNATIVE ELECTRIC HEAT EQUIPMENT, THE CUSTOMER WOULD UPON INSTALLATION BE CONSIDERED AN ELECTRIC HEAT CUSTOMER. IN ANY EVENT THE CUSTOMER WOULD OWN AND ASSUME OPERATIONAL RESPONSIBILITY FOR THE EQUIPMENT AT A DATE NOT LATER THAN 12/31/95." DOES THE COMPANY BELIEVE THIS VIOLATES THE PROMOTIONAL PRACTICES RULE? (2) WHY OR WHY NOT?

Requested By: Keith Haskamp

Information Provided:

The answer is on the attached memo.

The attached information provided to the Missouri Public Service Commission Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the Missouri Public Service Commission Staff if, during the pendency of Case No. HO-86-139 before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information.

If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the KCP&L Kansas City, Missouri office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g., book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title, number, author, date of publication and publisher, addressee, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to Kansas City Power & Light Company and its employees, contractors, agents or others employed by or acting in its behalf.

Signed By:

Date Received: 11/12/86 mo.

SCHEDULE 3-1

November 7, 1986

TO: Steven W. Cattron

FROM: R. H. Graham

RE: Data Request #172, Steam Rate Case No. HO-86-139

KCPL believes that the Utility Promotional Practices regulations, applying to gas and electric utilities, do not cover KCPL's steam business. KCPL's Plan addresses a unique situation - the phase out of central station steam service.

KCPL's Plan is offered only to KCPL's existing steam customers - not to new steam customers nor to the customers of other companies with competing forms of energy. KCPL's Plan is not an inducement to select, use or add steam service. It is a means for existing steam customers to maintain their current service albeit that steam would be produced on-site rather than remotely from a central production and distribution system.

KCPL's Plan was conceived to alleviate a serious financial problem that would face its steam customers - the ability of those customers to raise the capital necessary for a conversion to another steam supply system on a short time schedule.

Under KCPL's Plan the customer would still be charged the steam rate as long as KCPL continues to own the steam boiler. If the customer wishes to buy out the boiler at unamortized cost, then the customer would become an electric customer. KCPL believes that the period 1986 to 1995 is a reasonable time period to make this option available after which KCPL should fully amortized the capital investment and turn the equipment over to the customers.

KCPL's Steam Conversion Plan does offer the option of electric heat equipment rather than an electric boiler. This option is a matter of economics rather than promotional incentive. If an electric heat system or some combination electric boiler and electric heat system is less costly (i.e., less capital investment), then from both the Company and the customer's view it makes sense to install the more economic system.

No other party (including KCPL's own electric customers) or competing energy company is burdened by the Steam Conversion Plan since only existing steam customers are eligible for the Plan. The costs and expenses of the Plan are chargeable only to steam operations, and not to electric operations. KCPL is not attempting to attract additional electric customers or the existing or new customers of competing energy companies.

KCPL thus does not consider its Plan a "promotional" practice; KCPL considers it a "transition cost" that must be incurred in order to phase out its steam business.

Robert H. Graham

R. H. Graham

RHG:gp

HASKAMP-REBUTTAL

No. 619

Class

JAN 21 1987

Data Information Request
Kansas City Power & Light Company
Case No. HO-86-139

Requested From: Steve Catron

Date Requested: January 20, 1987

Information Requested: Respecting KCPL's response to MPSC Staff Data Request No. 172 that KCPL's Plan "addressed a unique situation - the phase out of central station steam service" "that" KCPL is not attempting to attract additional electric customers" and that KCPL "does not consider its Plan a 'promotional practice'; KCPL considers it a 'transition cost' that must be incurred in order to phase out its steam business," would KCPL be willing to include as part of its plan the installation of "competing forms of energy" e.g. natural gas fired boilers? If not, please give complete explanation why this option would not and/or should not be apart of any proposed plan to phase out steam service during a transitional period.

(2) If the "option is a matter of economics" in that if a natural gas heat system is less costly (ie. less capital investment and energy costs) then wouldn't it make sense to install the more economic system from the steam customers view? Please explain.

Requested By: C. Catherton

Information Provided:

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Signed By: L. Rawlins 1/29/87

Date Received: 2/3/87

SCHEDULE 4-1

KANSAS CITY POWER & LIGHT COMPANY

Data Information Request No. 619
Case No. HO-86-139

Information Requested:

Respecting KCPL's response to MPSC Staff Data Request No. 172 that KCPL's Plan "addresses a unique situation - the phase out of central station steam service, "that" KCPL is not attempting to attract additional electric customers" and that KCPL "does not consider its Plan a 'promotional' practice; KCPL considers it a 'transition cost' that must be incurred in order to phase out its steam business," 1) Would KCPL be willing to include as part of its plant the installation of "competing forms of energy" e.g. natural gas fired boilers? If not, please give complete explanation why this option would not and/or should not be part of any proposed plan to phase out steam service during a transitional period. 2) If the "option is a matter of economics" in that if a natural gas heat system is less costly (i.e. less capital investment and energy costs) then wouldn't it make sense to install the more economic system from the steam customers view? Please explain.

Information Provided:

1) No, because the burden of the transition costs of conversion to electric boilers falls on KCPL's shareholders. See the projected losses during the phase-in cited in my testimony. In the long run (over the life of the electric boiler equipment) KCPL shareholders will at least have an opportunity to earn a return through electric heat consumption and thus recoup some contribution to the up front investment in the electric boilers. If KCPL shareholders are asked to provide the up front cost of gas-fired equipment, then the installation costs are a pure loss - a gift to the customer as well as the shareholders of the gas supplier. In addition the electric ratepayers derive some indirect benefit to the extent that off-peak usage of electric boilers improves electric system load factor.

2) I question the premise that the capital investment in gas-fired boilers is less costly than electric boilers; gas at today's cost may well be less costly but the future is uncertain. However, if the steam customer views the economics such that he believes that gas boilers will be cheaper in the long run, then he should make his choice on the basis of each alternative open to him. He should not expect KCPL shareholders to subsidize the installation of gas-fired equipment. Also it should be made clear that KCPL's offer of electric boilers is not made at the expense of its electric ratepayers. KCPL is not asking that the cost of electric boiler equipment be subsidized by its electric ratepayers, nor is KCPL offering this Plan to its other electric customers or to gas customers.

RHG
9/15/86

REVIEW OF BOILER TEST INSTALLATIONS

Our overall objective in conducting this test was to determine the feasibility of going to on-site electric steam generation. The overall objective broke down into several segments.

A. Customer Reaction.

B. How to design or to use in-house engineering staff, a consultant, or a design build concept.

C. How to install, use a design build contractor, internal project management, or combination of consultant project management with internal project review.

D. Installation costs - determined by review of actual bids.

E. Operating experience gained from instrumentation and careful review of actual operating situations.

Ten or twelve potential conversion projects were reviewed. The buildings were checked for availability of space for the boiler and the test project was carefully reviewed with the owners and operators of the buildings. The owners were ask to sign an agreement primarily giving us an easement and egress to the boiler location. The test locations were selected based on the Company's ability to cut off distribution line once the on-site boiler was in operation. Most customers reacted favorably to the idea of an on-site boiler. Some did not feel they could participate do to impending changes in ownership of the building, or the inability of the local operators of the building to secure permission from the owners who live outside the city. Our original objective was to secure up to eight test sites and we were able to secure five. It was felt that these five were sufficiently varied in size and complexity to give us valid test results.

Two different methods were used to design the jobs. In the first method, Kansas City Power and Light Company engineers developed an outline specification and plan and submitted it to contractors to provide a "not to exceed price" and provide the detailed drawings. In the second method, a consultant was used to develop complete plans and specifications and to provide project management. Under both methods Kansas City Power and Light Company purchased the main pieces of equipment.

Three different local mechanical contractors were the successful bidders on these jobs. The contractors were Ratkin and Company, U.S. Engineering, and the Fagan Company.

BOILER INSTALLATIONS

Address	Load	Boiler	Material	Labor	Total	Sq. Foot.
Stanley Sargent 1406 Walnut	74 KW	$ 6,410	$ 9,170	$10,948	$26,465	12,000
McWhirter Printers 909-911 Wyandotte	296 KW	$11,045	$ 8,243	$20,192	$39,480	15,000
Upsher Labs 1336 Walnut	222 KW	$10,080	$15,642	$22,590	$48,312	18,750
Amer. Formal Wear 1331 Main	93 KW	$ 7,050	$ 6,150	$12,174	$25,384	22,272
Home Savings 1006 Grand	2220 KW	$59,476	$52,043	$67,907	$179,446	187,994
TOTAL	2,905 KW	$94,061	$91,185	$133,811	$319,087	256,016

The test installations varied from 74 KW to 2,220 KW. The size of the buildings varied from 12,000 square feet to 188,000 square feet. (The costs varied from just over $2.00 a square foot to just over $1.00 a square foot.)

The boiler installations were designed to occupy the least possible building space. The boiler themselves vary in space from 3 feet high, 3 feet wide and 5 feet long to 5 feet wide, 5 feet high and 10 feet long. In larger installations, two boilers were used due to design restrictions of the boilers themselves and to improve operating efficiencies. Three of the boilers were installed last fall and provided heat for the building throughout the winter. One installation was completed and found that the building was operated different than what we had anticipated resulting in an undersized boiler. The boiler operated fine, but would not carry the whole load of the building under expanded usage. The building was returned to central steam service. One project was not completed until March due to conflicts with other construction outside the building which delayed the installation of the transformer vault. This boiler has been tested and will go into service in the next couple of weeks.

The test project is considered a success because it gave us the information that we were looking for. It has established the fact that this is a viable alternative to central steam service and it has been accepted by our customers. A survey of the customers, who have had their boilers in service, indicate that they are well pleased with the performance. We have found that we can install these boilers in occupied buildings with minimal interference with occupants of the building. We

have found that the operation is simple enough that our personnel conducting the test do not have to interfere with the owner or the occupants and that the owner should have no trouble in operating the system themselves.

Probably the best way for you to gain appreciate for how small and simple these installations are would be to visit a test site. If you interested in looking at a test installation, you should contact Diane Bechmann, whose number is in the letter. She or Hubert Kent can make arrangements for you to visit a test project that would be similar in size to what would be used in your building. We would be more than happy to take any of you on an inspection, however, bear in mind that these are not our facilities and we would have to coordinate with the owners.

Now, if there are any questions on the test project, I would be happy to attempt to answer them and in addition, we have our engineers present here who have been conducting the tests, such as Joe Gawron and Dick Decker. Are there any questions?

No. 495

Class

Data Information Request
Kansas City Power & Light Company
Case No. HO-86-139

Requested From: Steve Cattron

Date Requested: December 22, 1986

Information Requested: In regards to work done for KCPL by Energy Masters please answer the following?
1. The amount paid to Energy Masters to date.
2. Is the estimated payments to Energy Masters through 1990 still $60,000? If not, what is the amount.
3. Please provide what accounts these dollars are booked to, and when they were booked.

Requested By: Sharon K White

Information Provided:

Please see the attached memo for the answer.

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Signed By: G K Latam

Date Received: 1/5/87

January 2, 1987

TO: Steven W. Cattron

FROM: R. H. Graham

RE: Data Request #495, Steam Rate Case No. HO-86-139

Question #1:

The amount paid to Energy Masters to date for energy audits is $406,537.

Question #2:

The amount remaining to be paid to Energy Masters for energy audits is $7,403. This amount is scheduled for payment on January 5, 1987.

Question #3:

Energy audits are charged to Function #33011. Dollars are booked as energy audit work progresses to completion. Dollars have been booked on a monthly basis from October 1985 through January 1987.

R. H. Graham

RHG:gp

KANSAS CITY POWER AND LIGHT COMPANY
CASE NO. HO-86-139

STEAM SALES AND REVENUES
(Including GRT)

	Year	Mlbs	Revenues	Dollars per Mlb.	% Increase (Decrease)
Downtown					
	1980	633,682	$ 3,620,436	$ 5.71	---
	1981	502,779	3,848,474	7.65	33.98
	1982	616,285	6,301,121	10.22	33.59
	1983	618,053	7,072,824	11.44	11.94
	1984	537,898	5,805,331	10.79	(5.68)
	1985	545,222	4,888,649(1)	8.97	(16.87)
	1986	431,432	4,544,388(1)	10.53	17.39
	Staff's Annualized	455,930	5,742,526(2)	12.60	19.66
CPC/National Starch					
	1983		108,000(3)	N/A	---
	1984	1,062,679	6,761,393(4)	6.36	---
	1985	1,310,786	8,563,931	6.53	2.67
	1986	547,164	5,897,940	10.78	65.08
	Staff's Annualized	425,634	4,557,287	10.71	(.65)
Total	1980	633,682	3,620,436	5.71	---
	1981	502,779	3,848,474	7.65	33.98
	1982	616,285	6,301,121	10.22	33.59
	1983	618,053	7,072,824	11.44	11.94
	1984	1,600,577	12,566,724	7.85	(31.38)
	1985	1,856,008	13,452,580	7.25	(7.64)
	1986	978,596	10,442,328	10.67	47.17
	Staff's Annualized	881,564	10,299,813(2)	11.68	9.47
	Proforma	881,564	13,537,541(2)	15.36	43.96

(1) Include test project electric on-site boilers: 1985 - $9,782 1986 - $38,970

(2) Staff's annualized revenues factored-up for 10% GRT for Downtown sales only. The additional revenues above Staff's annualized level have not been factored-up for 10% GRT.

(3) Penalty for not taking service on Operative Date.

(4) Does not include $164,148 of revenue paid to KCPL as minimum payments for the first three months of 1984 as they were not yet taking service.

HASKAMP-REBUTTAL

No. 621

Class

JAN 2 2 1987

Data Information Request
Kansas City Power & Light Company
Case No. HO-86-139

Requested From: Steve Catron

Date Requested: January 21, 1987

Information Requested: How does the Company intend recovering all the costs of the Energy Audits?

Requested By: Sharon K White

Information Provided: See attached response.

The attached information provided to the Missouri Public Service Commission Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the Missouri Public Service Commission Staff if, during the pendency of Case No. HO-86-139 before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information.

If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the KCP&L Kansas City, Missouri office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g., book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title, number, author, date of publication and publisher, addressee, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to Kansas City Power & Light Company and its employees, contractors, agents or others employed by or acting in its behalf.

Signed By: Robert Berger 1/29/87

Date Received: 2/5/87

SCHEDULE 6-1

KANSAS CITY POWER & LIGHT COMPANY

Data Information Request No. 621
Case No. HO-86-139

Information Requested:

How does the Company intend recovering all the costs of the Energy Audits?

Information Provided:

The major portion of the cost of the energy audits was incurred in 1986 and is not included in the 1985 test year cost of service supporting KCPL's request for an increase in steam rates. If the MPSC approves the Steam Conversion Plan and accepts KCPL's phase-in of the proposed rate increase, then the major portion of the cost of the energy audits would not be collected in the approved steam rates. KCPL recognizes that the cost of the energy audits is part of the transition cost of implementing its Steam Conversion Plan for the convenience of its existing steam customers.

If the MPSC decides otherwise and a future steam rate case is required, then the issue of recovery of energy audits would be reconsidered at that time.

Rc

KANSAS CITY POWER & LIGHT COMPANY
1330 BALTIMORE AVENUE
P.O. BOX 679
KANSAS CITY, MISSOURI 64141

December 16, 1985

Mr. Bob Smith
Energy Masters Corporation
11880 College Boulevard
Overland Park, KS 66210

RE: STUDY OF ENERGY REQUIREMENTS OF STEAM HEAT CUSTOMERS

Dear Bob:

Please proceed with a study according to Paragraph III, Items 1 thru 10 of our agreement dated August 15, 1985, on:

American Formal Wear 1331 Main Street	Ben Pennea 221-7971
Missouri Ct. of Appeals 1300 Oak Street	Pat Hoover 474-5511

We do not think there are any plans for American Formal Wear. It is a small building approximately 50 X 120 with three floors. We have installed a boiler at this location, however, we are concerned that the boiler may be undersized. We will be particularly interested, if we find the boiler is indeed undersized, what modifications we may be able to make to the building to cut down on the heat loss rather than increase the size of the boiler. Since this boiler is already in place, we would appreciate your giving this particular building some priority. Please have your people notify Mike Schockey (556-2804) when they are going to start the on site work so one of our engineers can be assigned from that department.

The drawings for the Missouri Court of Appeals Building are available on site. Miss Howard has indicated that she will make them available to you, but she must be notified prior to starting the work.

Sincerely,

R. H. Graham

RHG:gp
cc: M. C. Mandacina
H. A. Kent
E. M. Schockey

December 26, 1985

FILE: District Steam
REF.: Steam System Loss Reduction, QA-06

TO: File

FROM: Jim Jaksetic

SUBJECT: Meeting Minutes, December 20, 1985

1. The boiler feedwater meter was installed at the Stanley Sargent boiler location. From all reports, the boiler at this location is operating satisfactorily.

2. A request was submitted to U.S. Engineering to have a Lattner Boiler representative to correct the control problems at McWhirter Printer and Upsher Lab. A reply to our request has not been received yet. The boilers at these two locations are operating.

3. A decision to have U.S. Engineering install a cap on the floor of the elevator shaft was made. This work will be done on a time and material basis.

4. The American Formalwear boiler appears to be undersized for the location. The boiler does not maintain normal operating pressure. Due to this problem, Energy Masters was requested to perform an energy audit at this location. When the audit has been completed and its results reviewed, recommendations will be made to solve this problem.

5. The Faultless boiler location has been placed on hold due to customer unwillingness to sign the Right of Way documents.

6. A decision on the Nelkins boiler installation will not be made until the first of the year.

7. The mechanical contractor portion of the work at 1006 Grand is almost complete. The electrical contractor portion of the work will be completed by the end of the year. The KCPL power wiring, transformer vault and conduit work will not start until mid to late January due to the agreement with the Missouri Bank. See accompanying letter. The City inspectors have been periodically visiting the site.

8. The next Status Meeting is scheduled for 9:00 AM, January 10, 1986 in Conference Room B.

Jim Jaksetic

JJJ/tg

DIST COML OPERATIONS
DEC 30 1985
R. H. GRAHAM

cc: H. Kent, D. Decker, J. Horn, M. Sellers, J. Foley, D. Bechmann, E. M. Schockey, D. McKee, A. Carr, D. Rucker, J. Gaston, M. Mandacina, C. Martin, T. Doyle - Energy Masters, R. H. Graham

MEETING NOTES FROM INTERVIEW WITH GAILOYD ENTERPRISES
15TH FLOOR, 1330 BALTIMORE BUILDING (KCPL)
DECEMBER 12, 1986, 10:00-10:55 A.M.

PARTICIPANTS:

Bob Carroll, Building Superintendent, Gailoyd
Jan Redding, Building Manager, Gailoyd--816-842-1334
Gene Sands, Attorney for Ilus Davis Group
R. Miller, HDR (MPSC Staff)
K. Haskamp, MPSC Staff
M. Oligschlaeger, MPSC Staff

Opinion of KCPL Plan: They feel it is fair and generous, particularly the offer of the free energy audit and the payment of up-front costs of the boiler. The on-site people in Kansas City won't make the final decision, however; that will be made by the Gailoyd people in New York. They have been funnelling information to New York as requested.

Projected Electric Heat Rates: KCPL has not given them any data on this. They have no idea what they will be.

KPL-Gas Service: KPL-Gas Service has been in contact with them. First time--summer, 1986. They have explored the possibility of using natural gas as a heat source--another (independent) company did an energy audit on that question (electric versus gas) in 1986. Their recommendations differed slightly from Energy Masters Corporation (EMC)--number of boilers necessary, etc. The numbers looked like natural gas was a little more economical than electric heat. Study was forwarded to New York. Mr. Sands will see about getting a copy of the study to Staff/HDR.

Note: On January 16, 1987 Gailoyd provided Staff a copy of a study (attached). The study was conducted by Barnes & Phillips Engineering, Inc. and is entitled "Heating Systems Study for Kansas City Power & Light Building" dated November, 1986. Barnes & Phillips Engineering recommended that "the heating and domestic hot water requirements for the KCP&L building be provided by gas fired low pressure steam boilers." The study indicated there was a $94,136 savings per year in operating and maintenance cost not including amortization costs with natural gas compared to electric alternative. Also, the study found the initial installation was $111,378 less for natural gas than the alternate electric steam generation system.

KPL-Gas Service Sales Pitch: They provided copies of their rate schedules, and assured us of no interruptions (except in extreme emergency). There were no "Wolf Creek" sales pitches. Neither KCPL or KPL has cut the other down.

KPL-Gas Service Incentives: If one company has the right to offer incentives, their competitors should have that right also.

Natural Gas Conversion: Gailoyd would not anticipate a problem if they decided to convert to natural gas in the 1330 Baltimore building. But they are sure KCPL would not be happy about it.

Customer Attitude: Gailoyd does not feel ill-treated by KCPL in any way.