

**STATE OF MISSOURI**  
**PUBLIC SERVICE COMMISSION**

**TRANSCRIPT**

PUBLIC HEARING IN KANSAS CITY, MISSOURI

CASE NO. : H0-86-139

In the matter of the investigation of steam  
service rendered by KANSAS CITY POWER & LIGHT  
COMPANY.

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At a Public Hearing of the Public  
Service Commission, held at Kansas City,  
Missouri, on the 30th day of  
March, . . . . . 1987.

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

WILLIAM D. STEINMEIER, Chairman, Presiding,  
CHARLOTTE MUSGRAVE,  
ALLAN G. MUELLER,  
JAMES M. FISCHER,  
COMMISSIONERS.

DEBBIE J. TWEEDY, RPR

*Missouri Public Service Commission*

1 APPEARANCES:

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9 FOR: THE KANSAS POWER AND LIGHT COMPANY.

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19 FOR: CITY OF KANSAS CITY, MISSOURI.

20 JEREMIAH D. FINNEGAN, Attorney at Law  
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24 FOR: COUNTY OF JACKSON, MISSOURI.

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FOR: STAFF OF THE MISSOURI PUBLIC  
SERVICE COMMISSION.

*Missouri Public Service Commission*

P R O C E E D I N G S

(Written Entries of Appearance filed.)

(Witnesses sworn.)

CHAIRMAN STEINMEIER: The local public hearing in Case No. HO-86-139, in re Kansas City Power & Light Company steam service, will hereby come to order.

The Commission calls Mr. Dan DeCarlo.

DAN DeCARLO testified as follows:

STATEMENT BY MR. DeCARLO:

THE WITNESS: Members of the Commission, my name is Dan DeCarlo; and I'm here testifying before the Commission as the new program director for the Kansas City office of the Coalition for the Environment.

The coalition is opposed to closing the downtown steam loop for several reasons. First, the Kansas City study on solid waste alternatives that was done by the task force on Waste Management is very straightforward in its recommendation that the city pursue waste to energy technologies which has proven elsewhere to be extremely successful.

An integral part of that decision to move in the direction of incineration of solid waste in Kansas City is the downtown steam loop. Closing the steam loop could

*Missouri Public Service Commission*

1 send the wrong signal to all the parties involved in looking  
2 at alternatives to landfilling of waste materials in the  
3 Kansas City metropolitan area.

4 Second, from a technical standpoint in  
5 regards to the boilers at the Grand Avenue power plant, it  
6 is my understanding that the task force mentioned above has  
7 toured the plant and was told that KCP&L--by KCP&L that its  
8 four boilers were operating at over 90 percent efficiency,  
9 which indicates that the current setup is working fine.

10 Also taken into consideration should be the  
11 previous testimony of Mr. Dayland stating that KCP&L not be  
12 permitted to abandon the steam system under the plan as they  
13 have now proposed to do.

14 If the Commission allows KCP&L to abandon,  
15 they should be required to file a plan to discontinue the  
16 operation of the steam system which does permit a hardship  
17 for customers currently on the loop.

18 We would hope that you would follow the PSC  
19 Staff's recommendation that the Commission reject the  
20 company's proposal to phase out the steam system and that no  
21 steam rate increase would be allowed at this time.

22 Finally, it seems obvious that the power  
23 company is simply looking for a means to increase revenue at  
24 the expense of the customers in the area and in the downtown  
25 in general. The coalition would strongly encourage the

*Missouri Public Service Commission*

1 Public Service Commission not to close the steam loop.

2 Thank you. I would attempt to answer any  
3 questions that you may have.

4 CHAIRMAN STEINMEIER: Questions for  
5 Mr. DeCarlo?

6 Commissioner Musgrave.

7 QUESTIONS BY COMMISSIONER MUSGRAVE:

8 Q. Mr. DeCarlo, you say that there are several  
9 places that have had the incineration, which has been a  
10 viable operation. Can you give me any locales where that  
11 has been a viable operation?

12 A. I do know--and this is really based more on  
13 Springfield, and we have been looking at the incinerator  
14 issue there for the last couple of years. And I know  
15 locally there are several incinerators in the state of  
16 New York and, I believe, in Connecticut and generally back  
17 east that I know of that have been looked at.

18 And I think one of the real questions  
19 regarding the incinerator issue is naturally with float  
20 control; and, in a metropolitan area, the ability to service  
21 large clients in a relatively small area, which the steam  
22 loop would provide. And it creates the environment for an  
23 incinerator to be functional and work.

24 I don't know that that answered your  
25 question, Charlotte; but I do know of some--I do know of

*Missouri Public Service Commission*

1 incinerators that--

2 Q. But you don't have names that you can tell  
3 me?

4 A. As far as names, in naming some, I could go  
5 back to my notes and come back here and recite them for you;  
6 but right off the top of my head, I wouldn't be able to give  
7 you that information.

8 COMMISSIONER MUSGRAVE: Thank you.

9 QUESTIONS BY COMMISSIONER FISCHER:

10 Q. Mr. DeCarlo, you mentioned the task force  
11 that toured the plant. And I think we're told the current  
12 boilers are operated at 90 percent. I was wondering if you  
13 could give me a little bit more background on that task  
14 force, what their role was and if it's currently operating?

15 A. I have the study. I can refer to it.

16 Q. Just tell me about the task force, if you  
17 would, first of all.

18 A. I do believe the chairman of that task force  
19 is here and could answer that much better than I could. And  
20 I know they would want to refer to that because the  
21 recommendations that that task force have provided to the  
22 city, I think, are very well put and should be of record to  
23 this Commission. And I understand the chairman of that task  
24 force is present. And even though they didn't put their  
25 name to the list, they should be encouraged to come forward.

*Missouri Public Service Commission*

1 COMMISSIONER FISCHER: Thank you very much.

2 CHAIRMAN STEINMEIER: Other questions for  
3 Mr. DeCarlo?

4 MS. YOUNG: Yes, Mr. Chairman.

5 CHAIRMAN STEINMEIER: Ms. Young.

6 QUESTIONS BY MS. YOUNG:

7 Q. Mr. DeCarlo, this is kind of along the same  
8 line; but can you tell me approximately what time frame this  
9 tour of the task force was in the course of its study?

10 A. It's my understanding that it's been at  
11 least over a year ago. But I could not respond to that as  
12 well as the chairman who did tour. I mean, for me to speak  
13 about him touring the site doesn't make as much sense as the  
14 folks who did tour it to speak to that question.

15 MR. BRAD MAX: I'll sign up.

16 THE WITNESS: Thank you very much.

17 MS. YOUNG: Thank you.

18 CHAIRMAN STEINMEIER: No further questions?  
19 (No response.)

20 CHAIRMAN STEINMEIER: Mr. DeCarlo, I failed  
21 to ask for your address for the record.

22 THE WITNESS: My address is 1300 Locust  
23 Street. That's the office of the Coalition for the  
24 Environment.

25 CHAIRMAN STEINMEIER: And would you spell

*Missouri Public Service Commission*

1 your name for the reporter?

2 THE WITNESS: D-e-C-a-r-l-o.

3 MS. YOUNG: Could I ask one more question,  
4 sir?

5 CHAIRMAN STEINMEIER: Yes.

6 BY MS. YOUNG:

7 Q. Is the coalition a customer of the steam  
8 system?

9 A. No, we are not.

10 MS. YOUNG: Okay.

11 CHAIRMAN STEINMEIER: Thank you,  
12 Mr. DeCarlo.

13 (Witness excused.)

14  
15 CHAIRMAN STEINMEIER: Mr. Peter Dreyfuss.

16 PETER DREYFUSS testified as follows:

17 STATEMENT BY MR. DREYFUSS:

18 THE WITNESS: Mr. Chairman, members of the  
19 Commission, my name is Peter Dreyfuss. I live at 3712  
20 Washington, Kansas City, Missouri.

21 I'm here on behalf of Kansas City Energy  
22 Commission of which I am Vice-Chairman which is a citizens  
23 commission appointed by the mayor of the city of Kansas City  
24 to investigate and make recommendations on energy policy for  
25 the city of Kansas City.

*Missouri Public Service Commission*

1 I am not here today to discuss the rate  
2 case, with regard to rates with regard to steam  
3 distribution, but rather the steam distribution system and  
4 what the city of Kansas City is doing at the present time.

5 Mr. DeCarlo spoke about the study that was  
6 under way, and I'd like to expand on that a little bit and  
7 tell you exactly what the city of Kansas City is doing to  
8 look at district heating in downtown Kansas City.

9 The city received a \$45,000 grant from the  
10 Department of Energy which coupled with approximately 80,000  
11 more dollars from the Department of Energy and \$95,000 from  
12 the city's own revenue for a total of about \$220,000 to look  
13 at three things.

14 One was to do an entire study of the solid  
15 waste system in Kansas City.

16 The second was to look at the opportunities  
17 for waste to energy plants in the area, and that is a direct  
18 reaction to the Shoal Creek landfill request and the  
19 interest of the council to find alternatives to that.

20 And the third area was to look at district  
21 heating and cooling, particularly for the downtown area of  
22 Kansas City. The Energy Commission was very involved in  
23 helping the city obtain those grants and getting support on  
24 the council for the staff's efforts.

25 Quite frankly, the technology exists today

*Missouri Public Service Commission*

1 that you may have district heating and cooling and waste to  
2 energy plants as a possible option for Kansas City and the  
3 rest of the country.

4 I was handed a note; and I will say,  
5 Commissioner Musgrave, in response to your question that  
6 Nashville and Baltimore both have downtown steam loops that  
7 are supplied from waste to energy plants.

8 And I also know that the city of New York  
9 City is considering installing five waste to energy plants  
10 as an alternative to the continued dumping of trash in the  
11 ocean. There are some technical problems right now; but  
12 that was one of the orders, I believe, of the Public Service  
13 Commission--Public Utilities Commission in the state of New  
14 York.

15 We believe that the city's study will  
16 provide us good information on what are the options that can  
17 exist in Kansas City. It's interesting to note that at the  
18 same time city is undertaking these studies, the state of  
19 Missouri, be it by action of the legislature, is also  
20 undertaking a study of waste to energy plants in every  
21 county in the state of Missouri. There's a requirement by  
22 the end this year that the Department of Natural Resources  
23 provide a report on the opportunities for waste to energy  
24 looked at individually county by county.

25 I know that the state and the city are going

*Missouri Public Service Commission*

1 to be working together on the local area study. It seems  
2 that at this time with all this money being expended for the  
3 opportunity to look at waste to energy and to look at  
4 district heating and cooling, that it would be wrong to  
5 stop--to make an order at this point about phasing out the  
6 plant until that information came in.

7 I don't think anybody is saying that the  
8 current distribution system is in anywhere near good shape;  
9 "good" being very low on a scale of one to ten; but rather  
10 that it probably would need to be replaced. But in any case  
11 we believe that the studies will take a look at that and  
12 provide solid valuable information for you in your  
13 deliberations.

14 Other groups that have been involved--I note  
15 that Jackson County is an intervenor in this case and has  
16 been very interested in the possibility of district heating.  
17 Part of the reason for that is that the government  
18 buildings, particularly this building right here, are some  
19 of the largest users of the steam loop. And so it has a  
20 direct effect on this building, on the county building, on  
21 the federal building, and on the state building. And these  
22 things--this makes it sort of an opportunity in this area to  
23 perhaps create alternatives for supplemental systems.

24 The Mid-America Regional Council also has a  
25 committee that has been looking at district heating and

*Missouri Public Service Commission*

1 waste to energy plants; and, in fact, the comments made at  
2 the last committee meeting were if someone would build the  
3 waste to energy plant, they would probably see them  
4 proliferate throughout the area once the first one was in.

5 I know other groups are also interested. As  
6 I said before, our interest is simply seeing that you have  
7 all the information available before you make a decision  
8 about phasing out the system or looking at alternatives to  
9 replace the system. And we believe that the studies that  
10 the city is now undertaking and the state is now undertaking  
11 will help provide some of that information.

12 I'll answer any questions if you have any.

13 QUESTIONS BY CHAIRMAN STEINMEIER:

14 Q. Peter, what all do you know about Nashville  
15 and Baltimore? You say they both have steam systems  
16 downtown that are fuel or trash--

17 A. Powered by waste to energy plants. I know  
18 from the Nashville system--I've seen the slide show on that,  
19 and I know they've had a pretty successful plant. I believe  
20 Brad Max, who was the person who signed up after me, has  
21 been actually at the plant and probably can provide you more  
22 specific information.

23 The technology in terms of waste to energy  
24 is pretty accepted anymore, and it usually--anymore it's not  
25 steam, but rather hot and cold water running through pipes.

*Missouri Public Service Commission*

1 They can use it for both air conditioner--cooling and  
2 heating because it makes a lot more sense. When you look at  
3 the new buildings, for example, that are being built in  
4 downtown Kansas City, the heating load is minimal compared  
5 to the air conditioning load, so some sort of district  
6 heating and cooling system is really the opportune system.

7 Q. If the technology is so well established,  
8 why aren't we seeing more of it? For example, what's the  
9 hangup in St. Louis? Do you have any information on that?

10 A. I know that they have a private ownership  
11 system there, and I'm not--I don't know the details. I  
12 would say that part of it is that we're very slow to change  
13 in our habits and our behaviors in all areas of energy use  
14 and energy conservation or efficient use of energy, that  
15 it's considered relatively new technology although--I went  
16 to school at the University of Iowa. And 20 years ago, I  
17 think it was, or 15 years ago Ames, Iowa, put in a waste to  
18 energy plant. It's not that new, but it's taken a long time  
19 to catch on.

20 People--it's easy for engineers to consider  
21 landfilling and simply dumping the waste and covering it up  
22 and managing with that. But a higher technology of waste to  
23 energy is probably not some of things that--not in the  
24 experience range of a lot of the planners. And so it's  
25 something that has not caught on.

*Missouri Public Service Commission*

1                   It's also an expensive proposition up front,  
2 and financing it has been some concern. I think that there  
3 are adequate funds available perhaps through private  
4 enterprise and through state financing authorities and  
5 bonding authorities. But for a local government that's  
6 concerned about whether or not it's going to have enough to  
7 plow its streets in the wintertime, building a very  
8 expensive waste to energy plant scared them. So that's  
9 another reason in my mind why it hasn't caught on as much.

10                   CHAIRMAN STEINMEIER: Thank you.

11                   Other questions for Mr. Dreyfuss?

12                   Commissioner Fischer.

13 QUESTIONS BY COMMISSIONER FISCHER:

14                   Q.     Mr. Dreyfuss, could you elaborate a little  
15 bit on what would be involved in converting the current  
16 system to a district heating and cooling system that you're  
17 talking about?

18                   A.     Well, most likely you would be talking about  
19 changing out the whole system. I am not an engineer, so I  
20 don't want to try to speak as one; but from the information  
21 I have, we would be talking about installing all new piping  
22 in the downtown system to make it a district heating and  
23 cooling system and probably coupling it to a different  
24 plant.

25                   I know that the Grand Avenue plant was

*Missouri Public Service Commission*

1 originally designed to produce steam and electricity and  
2 that it's just used for steam now. The opportunities  
3 probably in terms of the efficiencies of systems would be  
4 that you would start from scratch with the new system.

5 I'm not here today--I don't want to say that  
6 I'm here today to save the downtown district heating system  
7 as it is because I think that the inefficiencies of that  
8 system probably overwhelm its being retrofitted into a  
9 modern and efficient system. We'd much rather see something  
10 tied to a waste to entry plant along with it.

11 So it would be all new piping downtown. It  
12 would be, probably be plant--it could be located at the  
13 Grand Avenue plant. It could be located elsewhere. It  
14 could be something that only dealt with part of the area.  
15 One suggestion, for example, is a waste to energy plant that  
16 powers a group of the government buildings on this side of  
17 downtown.

18 Q. Would a plan like that likely require a  
19 change of ownership of some of the distribution systems  
20 itself or--

21 A. It would most likely--I think that there's  
22 an opportunity for private enterprise, which has been done  
23 in a number of other areas, to own and operate that sort of  
24 a system, or the government could. There is a bill that was  
25 passed by the legislature last year regarding electrical

*Missouri Public Service Commission*

1 generation which is a byproduct of a waste to energy or  
2 steam generating plant which requires the local utility to  
3 purchase back any surplus electricity at the reasonable  
4 rate. There is a calculation there, but it's a fairly good  
5 rate. I think that makes it more advantageous to private  
6 ownership of a system like that. But it would entail some  
7 change of ownership on the system.

8 Q. How would the district cooling work? I  
9 understand how the district heating would work, but would  
10 this be--

11 A. Through chillers that they would pump cold  
12 water through in the same way that a lot of buildings are  
13 heated and cooled now. Like I say, I'm not the engineer, so  
14 I can't give you the technical answer to that, but it's in a  
15 similar fashion. If you insulate pipes, you can pump both  
16 hot and cold water through there and use it for both air  
17 conditioning and your heating needs.

18 Q. One of the proposals that's, I think,  
19 currently before the Commission is the electric conversion  
20 plan KCPL has suggested. Are you familiar with that?

21 A. No, I'm not sure I am.

22 COMMISSIONER FISCHER: Thank you very much.

23 CHAIRMAN STEINMEIER: Commissioner Musgrave.

24 QUESTIONS BY COMMISSIONER MUSGRAVE:

25 Q. Mr. Dreyfuss, do you know why the federal

*Missouri Public Service Commission*

1 government is not involved in this case?

2           A.     Why they're not involved in this case? No,  
3 I'm not certain. We sponsored a meeting, the Kansas City  
4 Energy Commission, way back when this was first proposed;  
5 and there was someone who attended from the GSA at that  
6 meeting. It was a meeting of all--of interested parties,  
7 governments and building users and so forth, and GSA. I've  
8 heard rumor that they're thinking of converting to their own  
9 power plant; but other than that, I have no facts in that.

10           Q.     Is that beyond a rumor?

11           A.     I don't know myself, Commissioner. I don't  
12 know that for a fact myself.

13                   COMMISSIONER MUSGRAVE: Thank you very much.

14                   MR. FINNEGAN: I have a question.

15                   CHAIRMAN STEINMEIER: Mr. Finnegan.

16 QUESTIONS BY MR. FINNEGAN:

17           Q.     Mr. Dreyfuss, you indicate that possibly the  
18 future would not be in the present steam system but would be  
19 chilled water and hot water system. Under any scenario  
20 continuation of a steam system or the chilled water and hot  
21 water system, would it not be essential to keep the present  
22 customer base of steam customers?

23           A.     You would need--if you eliminated all the  
24 present customers, you would have no demand for a district  
25 heating and cooling system. I think that's answering your

*Missouri Public Service Commission*

1 question.

2 MR. FINNEGAN: That's all the questions I  
3 have.

4 CHAIRMAN STEINMEIER: Any further questions  
5 for Mr. Dreyfuss?

6 (No response.)

7 CHAIRMAN STEINMEIER: Thank you very much.

8 (Witness excused.)

9  
10 CHAIRMAN STEINMEIER: And now by popular  
11 demand the Commission calls Brad Max.

12 I will need to swear you in, please.

13 (Witness sworn.)

14  
15 BRAD MAX testified as follows:

16 QUESTIONS BY CHAIRMAN STEINMEIER:

17 Q. Please state your name and address for the  
18 record.

19 A. Brad Max, 20 East 69th Street, Kansas City,  
20 Missouri.

21 If you'd like, I can give you some  
22 background on the task force; or you're welcome to go ahead  
23 and ask--I'll go ahead and give you some background.

24 Q. If you would, please, that would be very  
25 helpful.

*Missouri Public Service Commission*

1           A.     The Kansas City Area Task Force on Waste  
2 Management was organized in January of '85 mainly in  
3 response to some steps that were taken to make improvements  
4 on the Shoal Creek landfill site north of the river. There  
5 was an attempt to bring in other alternatives to disposal of  
6 the city's solid waste, alternatives to opening a landfill  
7 within the limits on the Shoal Creek site.

8                     The task force represented the city with six  
9 members, actually seven members; two members from each of  
10 Clay County, Platte County, and Jackson County. They met  
11 for the first time in August of '85.

12                    The task force was given the broad charge by  
13 the City Council and the mayor to look at the city's  
14 existing plan for waste disposal and recommend an  
15 alternative--I'm sorry. It was to look at the city's  
16 present plan and alternatives and recommend a method for  
17 disposal.

18                    Given that very broad charge, we first had  
19 to define in a little more specific manner what we wanted to  
20 end up with and how we were going to get there. That took a  
21 while. But ultimately we decided to do an in-depth study of  
22 landfilling and of various processes that are generally  
23 taken in the category of resource recovery which include  
24 recycling activities and waste production activities and  
25 waste to energy activities.

*Missouri Public Service Commission*

1                   We also spent quite a bit of time looking at  
2 the Shoal Creek landfill site as the city's next proposed  
3 landfill. And to make a long story short--and it was a long  
4 story because it was a lot of work put in by members of the  
5 task force on a volunteer basis. We also hired a consultant  
6 with a little bit of money. The end result was this report  
7 which Dan and Peter referred to, and I'd be glad to supply  
8 you copies of the report. That had three recommendations  
9 mainly.

10                   First of all, that the Shoal Creek site not  
11 be developed as a landfill for the city. Mainly, we looked  
12 at the geological and the hydrogeological aspects of that  
13 site, the development around the site, and took into account  
14 the fact that this site was picked 10 or 12 years ago by the  
15 city. A lot of changes had taken place in development  
16 around the area and in what was considered state-of-the-art  
17 waste disposal technology. We said the site was no longer  
18 acceptable in our opinion.

19                   Secondly, we recommended that waste to  
20 energy be pursued actively by the city and implemented.  
21 It's more than just another feasibility study. We felt the  
22 hardware was there, the economics of the system, and we  
23 included in our report some economic analysis, some cost  
24 analysis over the long term project that even though it may  
25 be more expensive to build and operate a disposal of waste

*Missouri Public Service Commission*

1 and waste to energy plant today, it would be cheaper in the  
2 long run.

3 Thirdly, we recommended regional efforts in  
4 the whole area of solving this management.

5 This report was presented to the council in  
6 May of '86, and since then we have, the task force has been  
7 relatively dormant although we meet occasionally.

8 And so far as some of the statements that  
9 have been made today are concerned, I think one particular  
10 item we included in our report is important. I'm not here  
11 to discuss rates, and I don't want to step forward as an  
12 expert on costs of all the projects, but we included in our  
13 report a hypothetical waste to energy facility supplying  
14 steam to some energy customers. In order to determine what  
15 the disposal cost would be, we assumed certain rates for  
16 steam that would be sold to the steam customer; and that  
17 allowed us to come out with what a disposal fee would be,  
18 which is the main thing the city is concerned about.

19 In our number runs that we put together, we  
20 assumed a charge for steam of \$3 per thousand pounds of  
21 steam. I think that's fairly low, and I think it would be  
22 important for us to factor in what may be more the actual  
23 cost for steam and what may be more the projected cost for  
24 steam. But that \$3 is the figure we used. And I would be  
25 interested to know how far that is off from what customers

*Missouri Public Service Commission*

1 are presently paying and what they will be paying in the  
2 future because it was represented to us that that's what  
3 they were paying at the time. That's why we used the \$3  
4 figure.

5 I think that what has been lacking in the  
6 whole process regarding the steam loop is some in-depth  
7 analysis of what this system can do either as a fossil fuel  
8 system supplying steam to energy customers or as a trash  
9 fueled system. I think that what the city is doing right  
10 now, at least what I hope the city is doing right now with  
11 the study that is being funded partly by DOE is that kind of  
12 process. And I would urge on behalf of the task force that  
13 whatever steps you can take to maintain the status quo so  
14 that customers are not lost and a potential opportunity  
15 isn't lost, that you do that because we took a look at the  
16 system and felt like it was one of the best three, if not  
17 the best market for energy from a waste to energy facility.

18 And finally, I'd be glad to answer questions  
19 about the Nashville system which I've seen. And I've been  
20 to St. Louis. They're working on a project. They haven't  
21 got one operating right now. They do have an operating  
22 steam loop, as you know; but they don't have waste to energy  
23 plants supplying energy to it. Baltimore--and there are  
24 various other steam loops around the country, quite a few,  
25 but I don't remember that any of those are at this point

*Missouri Public Service Commission*

1 powered with trash.

2 I'm open to questions.

3 Q. In St. Louis do you perceive the problem to  
4 be primarily technological or financing?

5 A. There it's not technological, and I really  
6 don't think that it's technological anywhere. I think that  
7 the hardware is available; and it's operating right now  
8 around the country to burn trash, produce energy, and sell  
9 it.

10 The question is one of economics and whether  
11 enough can be received in energy revenues to bring what's  
12 called the tipping fee, the cost for disposal, down to a  
13 level that's competitive with landfills. Part of the  
14 determination of that question is going to be how high  
15 landfilling costs go. They are--landfill costs are  
16 beginning to go up; and as they go up, the waste to energy  
17 plants become more economic.

18 I've heard varying figures about St. Louis  
19 in terms of what the break-even tipping fee is that they  
20 need given the energy revenues that they are going to be  
21 receiving. What I did hear about their energy revenues was  
22 they're planning to charge \$9 to \$13 per thousand pounds  
23 based on some various considerations. But those kind of  
24 rates, if we could have factored those into our report,  
25 would have brought down our tipping fee substantially. It

*Missouri Public Service Commission*

1 would have brought it down below where the--below what we  
2 saw as tipping fees at a new landfill.

3 Q. And when you say that trash to energy  
4 facilities are operating all over the country, where do you  
5 mean in addition to Nashville and Baltimore?

6 A. Okay. There are over 50 waste to energy  
7 plants operated throughout the country. We included in our  
8 report a copy of a survey on operated plants, plants under  
9 construction. It's about a year old, but its there anyway.  
10 It's a start.

11 Right now there are over 50 operating there.  
12 There is a plant in Tulsa that's operating. There's  
13 actually a plant that is operating at Fort Leonard Wood.  
14 It's a small plant with about ten or--it's about 50 tons per  
15 day of waste. It's a small plant, but it does supply steam  
16 to a steam loop on the base. They've got more capacity to  
17 burn waste than they do have a need for steam, but that's a  
18 plant that's operating in our own state.

19 There is one in Ames. There is at least one  
20 in Chicago. There are several in Arkansas, the small plants  
21 in Arkansas. And that's just in this part of the country.

22 On the east coast and on the west coast and  
23 also in Florida there are the bulk of the rest of the  
24 plants. Where you find plants mainly is where you find high  
25 tipping fees. Where they have a water table that's two or

*Missouri Public Service Commission*

1 three feet down, they just can't afford to site landfills  
2 very easily and inexpensively.

3 CHAIRMAN STEINMEIER: Any questions for  
4 Mr. Max?

5 QUESTIONS BY COMMISSIONER MUSGRAVE:

6 Q. Mr. Max, somebody inferred that you had  
7 toured the Grand Avenue plant yourself and also, I guess,  
8 looked at some of the distribution lines. In your opinion,  
9 are the present distribution lines that are out here under  
10 our streets adequate, or will they survive another 25 or 50  
11 years of steam service in Kansas City, or do you see that  
12 they'll have to be totally redone?

13 A. I would love to be able to answer that  
14 question, but I was absent on the day of the tour. Some  
15 members of the task force did tour the plant.

16 As to the condition of the steam lines,  
17 that's an open question that the task force got varying bits  
18 of information on. We were told that in some places these  
19 lines are 40 feet down and it would be too expensive to  
20 refurbish them, so they couldn't do anything with the system,  
21 ignoring the fact that we could just put new lines in. I  
22 have to--I can't answer really the question about the plant  
23 or the condition of the steam lines.

24 Q. To your knowledge, has anybody besides the  
25 company inspected the steam distribution system?

*Missouri Public Service Commission*

1 A. The lines themselves?

2 Q. Yes.

3 A. I don't know of anybody that has. I would  
4 have to agree with Peter that if a waste to energy plant  
5 were located, I think the preferable thing to do would be to  
6 put in new lines that could accommodate both hot water or  
7 steam and chilled water because the chilled water is  
8 important since it provides an offset in the summer when the  
9 steam or hot water isn't in such great demand.

10 Q. Do you envision that the chilled water would  
11 be going through the same lines that the steam does in the  
12 wintertime?

13 A. I don't think so, no.

14 Q. I wouldn't think so either.

15 A. I've been accused of being an engineer; but  
16 I'm not, and I won't pretend to be.

17 Q. Several of the new structures that have been  
18 built in downtown Kansas City have not gone on the present  
19 steam loop as I understand it, and they are being heated and  
20 cooled by other sources of energy. Do you know for--I guess  
21 the AT&T pavillion is not on the steam loop; is that  
22 correct?

23 A. That's my understanding.

24 Q. What is their method of heating and cooling?  
25 Do you know?

*Missouri Public Service Commission*

1           A.     I don't know. I think it would be important  
2 if it were some sort of boiler system that used steam as  
3 opposed to an all electric type system. If it were a system  
4 that generated steam with electric boilers, I think there  
5 would be potential for getting on the steam loop if that  
6 were economical for the building.

7                     City Hall is on the loop, and it's my  
8 understanding that it would be difficult for the city to  
9 locate boilers on site. There just isn't a lot of room in  
10 City Hall to put the boilers that would be necessary. The  
11 city's lack of interest that we saw as a task force--in  
12 fact, the question was a little bit curious to us.

13                    COMMISSIONER MUSGRAVE: Well, it wasn't air  
14 conditioned for so many years, maybe they don't need air  
15 conditioning.

16                    Thank you.

17                    CHAIRMAN STEINMEIER: Commissioner Fischer.

18                    QUESTIONS BY COMMISSIONER FISCHER:

19                    Q.     Mr. Max, going back to the task force, is it  
20 correct that the six members of the task force were  
21 designates of the county commissions?

22                    A.     I'll go over that again. I'm sorry I didn't  
23 make it clear. There were seven members--six members and a  
24 chairman appointed as city representatives. Then in  
25 addition to that there were two members each from Clay

*Missouri Public Service Commission*

1 County, Platte County, and Jackson County.

2 Q. I understand. Thank you. You mentioned the  
3 disposal problem that Kansas City has. Do you have a  
4 perception of what kind of time frame the city has for  
5 solving the problem, when the next landfill would have to be  
6 initiated?

7 A. That was a subject of quite a bit of debate  
8 and research on our part. We found--we actually did  
9 research. We had the landfills surveyed to determine how  
10 much capacity they had, all the landfills in the area.

11 And what makes the problem difficult is the  
12 city's waste doesn't go to one landfill all the time. It  
13 doesn't go to one landfill. It goes to many. And sometimes  
14 those change. The waste is kind of fungible and is moving  
15 around and across state lines, and so it's difficult to  
16 determine.

17 What we had to do was look at the whole area  
18 and say all of the waste produced in this whole area is  
19 "X" amount. There's this much space left in the landfills.  
20 We didn't see that there was going to be a shortage of  
21 landfill space in the next two years, nor did we see that  
22 there was 20 years of landfill life left for the whole area.

23 We did come up with some numbers; and I'd  
24 have to look, but I think they were around ten years of  
25 life in area landfills for all of the waste. That's

*Missouri Public Service Commission*

1 probably good. It would give us time to site a waste to  
2 energy facility from that standpoint. Those facilities are  
3 complex. It would take a long time to site and build and  
4 begin operation. But we didn't see an immediate crisis, and  
5 yet we didn't see landfill space as far as the eye can see  
6 either.

7 Q. Speaking of the siting issue, was your task  
8 force focusing in on the Grand Avenue site as a possible  
9 site for this hypothetical waste to energy, or are you  
10 looking at other sites as well?

11 A. I'll tell you quite frankly what we decided  
12 to do as far as focusing on any particular site for waste--  
13 any particular market for energy from a waste to energy  
14 facility.

15 We saw several markets, and we described  
16 them in our report under the markets section, maybe half a  
17 dozen that we felt were good markets. We didn't want to  
18 pick the one that we thought was the best, and we didn't  
19 want to research the one that we thought was the best. And  
20 I think we say--I know we say it because we were afraid  
21 that there would be other energy suppliers that would come  
22 in and take the customer. And so we just--we wanted to do a  
23 basic level of research and a basic level of disclosure and  
24 leave it at that.

25 Q. You mentioned the tipping fee is an obstacle

*Missouri Public Service Commission*

1 to overcome for a waste to energy project. Are there other  
2 major obstacles that you'd have to overcome in your opinion?

3 A. Yes. The environmental permitting is  
4 another obstacle. That relates somewhat to the site  
5 permitting. It may be easier in some areas than in a  
6 nonattainment area. There--that the recent tax legislation  
7 has made tax exempt financing a little more difficult in  
8 some ways and a little easier in other ways for these kinds  
9 of facilities has made equity financing--it's made debt  
10 financing a little more difficult, and it's made equity  
11 financing quite a bit more difficult. So overall it's  
12 definitely made financing of projects like this more  
13 complicated, although they are being financed and  
14 construction started.

15 Getting the parties together is probably the  
16 most difficult part of the whole thing. A lot of these  
17 projects die for lack of leadership of some kind because it  
18 does take someone believing that this can happen and then  
19 finding a way to make it happen. Since you're talking about  
20 often many jurisdictions supplying waste, you're talking  
21 about finding a market that may not be in all cases a  
22 willing market, you may need a backup utility market for  
23 electricity to back up, say, a large steam user. There are  
24 a lot of pieces to the project, and it takes quite a while  
25 to get it put together.

*Missouri Public Service Commission*

1           Q.     During the late 1970s or early '80s Union  
2 Electric Company in St. Louis was involved in, I think,  
3 looking at the possibility of waste to energy. And it's my  
4 understanding that one of the problems they found was there  
5 was a collection problem. They had to bring the waste  
6 together at various distribution points before it was  
7 eventually brought in to the waste to energy site. There  
8 seemed to be political problems with establishing these  
9 centers.

10                     Did your task force note any kind of problem  
11 in that area, in collecting the waste before it would be  
12 brought to the waste to energy site?

13           A.     Well, we stated in our report that we did  
14 not favor one large facility. The city of Detroit is  
15 looking at a 4,000 ton per day plant, 4,000 tons of waste  
16 coming to the plant per day. I'll try to give you a little  
17 perspective. The amount of waste that's generated per day  
18 by residential--by residents in the city of Kansas City,  
19 Missouri is about 600 tons per day. It's a big plant. It  
20 would be the biggest plant.

21                     And we really don't favor that because it  
22 magnifies all the difficulties with these kinds of plants.  
23 It does require that waste come in, be collected and brought  
24 in from various areas. And since transportation is really  
25 one the highest costs as far as waste disposal goes, that

*Missouri Public Service Commission*

1 makes it a little less economical.

2           One of the other problems is just getting  
3 jurisdiction signed up to participate to supply waste to  
4 build to that high a level of waste supply. We didn't  
5 really focus too much though on collection.

6           What we did was say the city collects--the  
7 city or parties of the contracts will collect about 600, 650  
8 tons per day. There is also commercial waste of, I think,  
9 about that much, plus there is other residential waste  
10 that's collected in Raytown, Independence, and areas that  
11 are close by; and we could probably contract for some of  
12 that.

13           We assumed a 1,000 ton per day plant just  
14 because we felt like that much waste could be obtained.  
15 That may be a little high though in terms of anything that  
16 the city would go after itself.

17           Q.    So was your task force focusing then not so  
18 much on the steam part of the service but perhaps small  
19 decentralized cogenerators of some sort, maybe waste to  
20 electricity or--

21           A.    No. As far as the steam loop as a customer  
22 goes, we assumed that there would be one plant supplying  
23 steam to the downtown steam loop. We didn't assume that  
24 the east side of downtown would have a plant and the west  
25 side of downtown would have a plant. We assumed one plant.

*Missouri Public Service Commission*

1                   And the task force did take a tour of the  
2 Nashville facility and found a lot of parallels between  
3 Nashville and Kansas City. The city of Nashville is roughly  
4 the same size as Kansas City, Missouri. Both have the  
5 downtown steam loop, both have some--well, Nashville has  
6 river front development that's already taken place. They  
7 have an amphitheater and parks along the river front.  
8 There's a bridge that's--I don't know if it's to the east of  
9 downtown, but it's in much the same position as the Paseo  
10 Bridge is; and there is the waste to energy plant there.  
11 It's located just on the other side of that bridge.  
12 Condominium developments are around there and other office  
13 development is around there, and that plant supplies energy  
14 to the downtown steam loop.

15               Q.     So that would be one of several waste to  
16 energy plants?

17               A.     Right.

18               Q.     You also mentioned the DOE study. Was that  
19 the same study that Peter Dreyfuss mentioned?

20               A.     Yes.

21               Q.     Do you know when that study is due to be  
22 completed?

23               A.     I think it will be done sometime the end of  
24 '87.

25                   COMMISSIONER FISCHER: Thank you very much.

*Missouri Public Service Commission*

1 CHAIRMAN STEINMEIER: Other questions?

2 Ms. Young.

3 QUESTIONS BY MS. YOUNG:

4 Q. Mr. Max, you indicated that you were not  
5 present on the tour of Grand Avenue Station, correct?

6 A. Right.

7 Q. Can you tell me approximately what time  
8 frame the tour took place?

9 A. One of the task force members says it's in  
10 the book somewhere. I think it was real cold, so January or  
11 February of '86.

12 Q. But it would have been sometime between when  
13 the task force first met in August of '85 and when your  
14 report came out in May of '86?

15 A. Yes.

16 Q. Also Mr. Carlo mentioned that at that time  
17 there were four boilers operated at 90 percent efficiency  
18 that was represented. Is that reflected in the report?

19 A. I don't think so. I don't think that's in  
20 it.

21 Q. The assumed steam rate that you used, the  
22 source of that was Kansas City Power & Light Company?

23 A. I think so.

24 Q. And you had asked for information on the  
25 current rates. I don't have the precise rates, but I

*Missouri Public Service Commission*

1 believe that they're approximately \$10 for every 1,000  
2 pounds at this time. And even though the rates charged  
3 fluctuate with the cost of the fuel utilized to generate the  
4 steam, the basic rate has been set since I believe it's  
5 1983. I don't think it's been changed since then. But the  
6 company can correct me if I'm wrong on the current rate.

7                   Mr. Chairman, I'm wondering since we've had  
8 several references to the report and it's been discussed at  
9 length this afternoon, it might be appropriate to request a  
10 copy of that report be provided to the Commission and  
11 entered as the Public Hearing Exhibit No. 1 just for  
12 purposes of reference in case there would be any future  
13 questions.

14                   Would it be possible for you to provide for  
15 us to get a source for a copy of the document?

16                   THE WITNESS: Sure.

17                   CHAIRMAN STEINMEIER: Mr. Bregman, did you  
18 want to address that, or do you have other questions?

19                   MR. BREGMAN: I have some questions.

20                   MS. YOUNG: I have no further questions.

21 Thank you, Mr. Max.

22                   CHAIRMAN STEINMEIER: We will reserve Local  
23 Hearing Exhibit No. 1 for a copy of the task force report.

24                   THE WITNESS: Okay.

25 QUESTIONS BY MR. BREGMAN:

*Missouri Public Service Commission*

1 Q. Mr. Max, just so I'm clear, you quoted this  
2 \$3 per thousand pounds. Was that cost provided to you about  
3 the time that the tour of Grand Avenue plant took place.

4 A. No. It was after that time. And it was  
5 at--it was later when we were putting together the numbers  
6 for our projections.

7 Q. So that would have been the first part of  
8 this year?

9 A. No. We completed our report in May of '86,  
10 so it was February, March--

11 Q. Of '86?

12 A. --April of '86. Yes.

13 Q. What's the tipping fee for a current  
14 landfill?

15 A. That's a good question. The city at the  
16 time we completed this had a contract to dispose of this  
17 waste at the southeast landfill for \$6.66, I believe. It's  
18 in that neighborhood. That will probably increase, but I  
19 think it's misleading to take that as the disposal cost for  
20 waste and compare that now to the cost of building a waste  
21 to energy facility.

22 We also included in our report a projection  
23 for what disposal cost would be at a new landfill. This was  
24 put together by the consultants that we hired who design  
25 landfills. And they projected a disposal fee for a new

*Missouri Public Service Commission*

1 landfill opened in 1990 that would be able to take 1,000  
2 tons per day of \$26.50. That increased because of  
3 additional precautionary measures that would need to be  
4 taken in a new landfill to comply with new and expected  
5 regulations at the time they were expected because we were  
6 looking at what the Missouri legislature would pass last  
7 year. So I think you have to also consider the \$26 even  
8 though right now the city is paying \$6 to \$10 to dispose the  
9 waste.

10 Q. Well, I think you indicated that based on  
11 being able to sell the product of this plant at \$3 per  
12 thousand pounds, that you generated a tipping fee at which  
13 construction of the plant would be feasible; is that right?

14 A. Right.

15 Q. What was that tipping fee?

16 A. What we found was that assuming a \$3 per  
17 thousand pounds of steam, the tipping fee in that for a  
18 waste to energy plant in 1990 would be \$38.70. That would  
19 increase to \$50.20 in 2010. For a new landfill, the cost  
20 would begin at \$26.25 in 1990 and would increase to \$63 in  
21 2010 for the new landfill.

22 Q. Did you make any calculations of alternative  
23 prices for the steam?

24 A. No, we didn't.

25 Q. But the higher that you are able to sell--

*Missouri Public Service Commission*

1 the higher price you have to command for the product,  
2 whether it be steam or the chilled water or both, would  
3 lower the tipping fee; is that correct?

4 A. That's right.

5 MR. BREGMAN: Thank you. No further  
6 questions.

7 CHAIRMAN STEINMEIER: Mr. Sands.

8 MR. FINNEGAN: I have one question.

9 QUESTIONS BY MR. FINNEGAN:

10 Q. With respect to the St. Louis plant, you are  
11 aware that they have a site location in St. Louis, do they  
12 not?

13 A. Yes.

14 Q. And it's adjacent to the Ashley Steam  
15 Plant?

16 A. Yes.

17 Q. Isn't one of the problems been the delay  
18 caused by their waiting a Supreme Court decision which  
19 recently was handed down, or do you know?

20 A. That was on the two taxes that were  
21 invalidated?

22 Q. Right.

23 A. Well, they were waiting for that Supreme  
24 Court decision; and they got it, and it was negative. And I  
25 think last week or the week before there was a vote, and the

*Missouri Public Service Commission*

1 two taxes were reinstated. So as far as--that was holding  
2 up the whole budget, \$25 million bite in the budget. And  
3 the taxes were reinstated, and so now they can contract with  
4 consultants to do the additional work that's needed; and  
5 it's full steam ahead.

6 Q. Is it presently operating as a steam plant  
7 or is the steam system out of the Ashley plant without the  
8 solid waste added to it at this point?

9 A. Right.

10 Q. Do you know if they've added new customers  
11 since--

12 A. Yes, they have. They added 17 new customers  
13 in '86. And they're looking at--I think there is a letter  
14 of intent from the Housing Authority there to bring the  
15 Housing Authority facilities on. That would add 32 percent  
16 to their steam load. And they're also looking at the  
17 possibility of adding chilled water as a byproduct or as a  
18 product of the plant.

19 MR. FINNEGAN: Thank you.

20 CHAIRMAN STEINMEIER: Mr. Sands.

21 QUESTIONS BY MR. SANDS:

22 Q. Just one question, Brad. Does the report  
23 indicate or have information as to any comparison of the  
24 cost of a waste generated energy system versus  
25 electric, gas, sewer?

*Missouri Public Service Commission*

1           A.    No. No, it doesn't. We did do some cost  
2 comparisons of what a plant--the economics of a plant that  
3 supplied electricity instead of steam, but we didn't look at  
4 what the cost would be to the end user of the steam for that  
5 product versus a natural gas boiler or electric boiler.

6                   CHAIRMAN STEINMEIER: Commissioner Mueller.

7 QUESTIONS BY COMMISSIONER MUELLER:

8           Q.    Mr. Max, in your study did you find that  
9 there was a significant difference in the amount of  
10 disposable trash in the winter months when you needed the  
11 steam versus the summer months?

12           A.    We took that into account, and we didn't  
13 assume that it would all be saved up from the summer and  
14 used in the winter. We geared the production of the steam  
15 to whatever amount of waste would be available in the  
16 winter.

17           Q.    You aren't stockpiling?

18           A.    No

19                   CHAIRMAN STEINMEIER: Further questions for  
20 the witness?

21                   (No response.)

22                   CHAIRMAN STEINMEIER: Thank you very much,  
23 Mr. Max. We appreciate your testimony.

24                   THE WITNESS: I appreciate the opportunity,  
25 and I will get you a report. I again feel this needs to be

*Missouri Public Service Commission*

1 done publicly to commend the members of the task force  
2 because they put in a lot of work.

3 I would also urge you again to take what  
4 steps you can to keep this steam system as an option for a  
5 waste to energy plant at least until sufficient study can be  
6 done. Thank you.

7 CHAIRMAN STEINMEIER: Thank you, sir.

8 (Witness excused.)

9  
10 CHAIRMAN STEINMEIER: Are there any further  
11 public witnesses?

12 (No response.)

13 CHAIRMAN STEINMEIER: If not, we appreciate  
14 your attendance and participation at this hearing this  
15 afternoon. One point I would mention as I sit and think  
16 about the gentleman's question about the timing of the  
17 Report and Order, and as I calculate transcript turnaround  
18 and a normal briefing schedule, July is a more likely target  
19 than June.

20 Mr. English.

21 MR. ENGLISH: Your Honor, KCPL customarily  
22 brings personnel in order to answer rate questions and/or  
23 problems you have on the service. People that the company  
24 has here today are Chris Giles, manager of rate services and  
25 two engineers, Hubert Kent and Dianne Bechmann. So if there

*Missouri Public Service Commission*

1 are any questions that you may have that you didn't address  
2 to the Commission, feel free to chat with these three people  
3 after the hearing. I request they stand so they can be  
4 identified.

5 Thank you, your Honor.

6 CHAIRMAN STEINMEIER: Thank you. The  
7 hearing is adjourned.

8 WHEREUPON, the local public hearing at  
9 Kansas City, Missouri, was concluded; and this case was  
10 continued to 10 a.m., Monday, April 6, 1987, at  
11 Jefferson City, Missouri.

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*Missouri Public Service Commission*

I N D E X

Page

PUBLIC'S EVIDENCE:

**DAN DeCARLO**

Statement by Mr. DeCarlo	9
Questions by Commissioner Musgrave	11
Questions by Commissioner Fischer	12
Questions by Ms. Young	13

**PETER DREYFUSS**

Statement by Mr. Dreyfuss	14
Questions by Chairman Steinmeier	18
Questions by Commissioner Fischer	20
Questions by Commissioner Musgrave	22
Questions by Mr. Finnegan	23

**BRAD MAX**

Questions by Chairman Steinmeier	24
Questions by Commissioner Musgrave	31
Questions by Commissioner Fischer	33
Questions by Ms. Young	40
Questions by Mr. Bregman	41
Questions by Mr. Finnegan	44
Questions by Mr. Sands	45
Questions by Commissioner Mueller	46

*Missouri Public Service Commission*

EXHIBITS

Marked

Rec'd

PUBLIC EXHIBIT NO. 1  
Task Force Report

\*41

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\* Late-Filed Exhibit