

1 A One superseded the other. The final one was
2 withdrawn.

3 Q The final--I'm sorry?

4 A The final one was withdrawn.

5 Q The company withdrew all proposals made?

6 A Right, except for the sale of the facilities.

7 Q All proposals made to University City
8 previous to the stipulation have been withdrawn?

9 A Except the one that was outstanding was the
10 sale of the facilities for \$1.

11 Q Would you tell the Commission what kinds of
12 lights those previous proposals involved?

13 A They involved mercury installations. They
14 involved two separate types of luminaires.

15 Q Well, were they specific proposals relating
16 to the No. 231 posts?

17 A Yes, sir.

18 Q The only other question is: How do you define
19 reparable? In other words, you say there are nine reparable
20 poles. Could you tell us what would be involved in bringing
21 them into service?

22 A The ones in my analysis that I made--if the
23 unit had a bolt down lip in the base that was broken off,
24 one lip broken off, and it was available, that would be
25 reparable. I considered if it had more than one bolt down

1 lip missing, that that, from a structural standpoint, may
2 not be reparable. And I categorized that as not reparable.
3 Other types of defects such as tenon at the top that the arm
4 fits on, if it were broken off or a good part broken, I
5 considered that not reparable, also.

6 Q Are there presently poles in the yards of the
7 company that have all the bolt down tabs, and what you called
8 tenon and what I call pintle, intact?

9 A Yes.

10 Q How many?

11 A I don't know without digging through and
12 analyzing and tabulating. It would take a fair period of
13 time to do that.

14 Q I mean there are poles ready, except for
15 perhaps a coat of paint, to be installed?

16 A It would take more than a coat of paint on
17 any of them.

18 Q Forgive me for pressing you.

19 What would be required, then, other than a
20 coat of paint?

21 A Bolts broken off into holes that you've got
22 to drill them out and re-thread, that type of thing.

23 Q You're speaking of the handhold door at the
24 base of the posts?

25 A It could be the handhold doors. It could be--

1 well, yeah, on the pole that's the only thing there is.

2 Q In other words, there are two very small bolt
3 holes at the base of the posts through which hand access--in
4 other words, it requires two drillings and then they're
5 repaired.

6 Would you say it's just a fairly minor
7 operation to drill those out and refit them?

8 A I'll agree that there are two holes to be
9 drilled out and tapped.

10 MR. CARL: Thank you. I have no more questions.

11 EXAMINER CADIEUX: Any further questions of
12 this witness?

13 QUESTIONS BY CHAIRMAN SLAVIN:

14 Q With reference to the stipulation, Mr. Giliam,
15 I see that you're creating a committee to work with the
16 company on this matter and Union Electric.

17 Have you all agreed as to the composition of
18 the committee in terms of company, municipal, and consumer
19 representation?

20 A Not in total. The actual total formation of
21 the committee is yet to be totally resolved. There will be
22 representatives from University City and the company. What
23 others there might be, I'm not sure.

24 Q Is the purpose of this committee just to
25 serve through this transition period until the tariffs would
take effect?

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1 A No. The committee would be reviewing other
2 luminares that might be available and suggesting that we
3 include them in the luminares that would be offered to all
4 of our customers.

5 Q But I understand, if this is correct, that
6 the decision to convert or accept an option has to be done
7 whether it's by University City or any of the other
8 municipalities that might be offered the same option before
9 July, 1981?

10 A We're anticipating that the committee will
11 function before that time, and that we'll have the
12 recommendations and be able to act on those recommendations
13 prior to July 1, 1981.

14 Q Then your response is, in fact, affirmative
15 that the purpose of the committee is to work through this
16 transition period until '81?

17 A From that definition, yes.

18 Q Would you please describe in No. 4 what your
19 definition would be for a second line standard?

20 A These are the luminares that we normally
21 provide on our fiberglass post top, or whatever, at the
22 present time. They're the ones that we stock and are avail-
23 able to all our customers.

24 Q Would those be limited to the ones which are
25 in your present stock, or would it be extended to any

1 enlargement of your stock?

2 A It would be extended to any that would be
3 added as a result of the committee action.

4 Q Would a 100 watt high pressure sodium bulb
5 or light be considered a part of standard stock?

6 A It isn't at this time, but the committee
7 will be looking at high pressure sodium in addition to
8 mercury.

9 Q And this agreement is not limited to conver-
10 sion simply to mercury, but includes mercury and high
11 pressure sodium?

12 A Right. That is correct.

13 CHAIRMAN SLAVIN: Thank you.

14 EXAMINER CADIEUX: Mr. Gillum, one thing I'd
15 like some clarification on.

16 Reference has been made to the 231 University
17 post and reference, also, made to red granite and cast-iron
18 standards. Could you explain to me the relationship of the
19 University post? Does that include those two categories?
20 Could you explain their relationship?

21 WITNESS GILLUM: Well, I'm not sure I under-
22 stand exactly what your question is. Will you give it to me
23 again?

24 MR. BRADY: I think that we could stipulate,
25 if the company agrees, that a red granite post is a type of

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1 post that is used in University City and some other places
2 in Union Electric's territory. The cast-iron standards are
3 posts, really, which comprise two general types so far as
4 University City is concerned. One has an arm called a 231;
5 and the number of the other is 241, which does not have an
6 arm, but is cast with a luminaire on top of it.

7
8 EXAMINER CADIEUX: So the 231, then, is a
9 part of the cast-iron standards, some of which are present
10 in University City?

11 MR. BRADY: Yes.

12 EXAMINER CADIEUX: Will the parties all
13 stipulate to that?

14 WITNESS GILLUM: Yes.

15 MR. CARL: Just a tiny amplification,
16 Mr. Cadieux.

17 If you will visualize the cast-iron posts
18 around the capitol, the very nice string of those you have,
19 that is what they are talking about in addition to the 231,
20 the ones with the globes on top.

21 MR. BRADY: That's very similar, if not
22 exactly the same as the 241.

23 EXAMINER CADIEUX: If there is nothing
24 further of this witness, he is excused.

25 (Witness excused.)

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1 EXAMINER CADIEUX: Let's go off the record.

2 (Discussion off the record.)

3 EXAMINER CADIEUX: Back on the record.

4 Joint Exhibit 9, which is the stipulation
5 and agreement, will be received in this case, contingent
6 upon the Commission ultimately accepting the agreement.

7 (EXHIBIT NO. 9 WAS RECEIVED IN EVIDENCE AND
8 MADE A PART OF THIS RECORD.)

9 EXAMINER CADIEUX: Mr. Barnes, does that
10 conclude your case?

11 MR. BARNES: Yes, it does.

12 EXAMINER CADIEUX: Mr. Banks, do you wish to
13 proceed by calling your first witness?

14 MR. BANKS: Yes. I'd like to call Mr. Robert
15 Mitchell to the stand, please.

16 (Witness sworn.)

17
18 ROBERT MITCHELL testified as follows:

19 DIRECT EXAMINATION BY MR. BANKS:

20 Q Mr. Mitchell, would you please state your
21 name and business address for the record.

22 A Robert Frankie Mitchell, 100 East Capitol
23 Avenue, Jefferson City, Missouri.

24 Q And where are you employed, Mr. Mitchell?

25 A I am employed with the Missouri Public Service
Commission.

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1 Q And how long have you been employed there?

2 A Since February of this year, 1980.

3 Q What is your experience and background in
4 this area?

5 A I recently worked with a utility company in
6 the state of Missouri prior to my employment with the
7 Commission.

8 Q What is your educational background?

9 A I have a Bachelor of Science degree in
10 electrical engineering from the University of Missouri at
11 Rolla, Missouri.

12 Q What is your position at the Public Service
13 Commission?

14 A I perform investigations of technical
15 complaints and perform cost allocations.

16 Q What does this position require you to do?

17 A This investigation?

18 Q This position that you have with the Public
19 Service Commission. Could you go into just a little more
20 detail about that?

21 A Basically, as I said, the technical complaints
22 with the engineering background and cost allocations with
23 the electric power plants.

24 Q Have you been involved with the case that is
25 the subject of this hearing today, Case No. ER-80-190?

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1 A Yes, I have.

2 Q Did you attend a public hearing on Tuesday,
3 September 16, 1980, in Clayton, Missouri, involving this
4 case?

5 A Yes, I did.

6 Q At that time did you hear citizens ask the
7 Commission to make an independent investigation regarding
8 certain issues in that case?

9 A Yes, I did.

10 Q Briefly describe the type of issues that were
11 involved, that were asked to be investigated at the local
12 hearing?

13 A Cost effectiveness of maintaining the exist-
14 ing incandescent lighting systems, historical significance
15 of the existing incandescent lighting, problems associated
16 with compliance to the National Electrical Code, availability
17 of replacement parts, the cost of manufacturing replacement
18 parts, and a comparison of light intensity from the--
19 comparing incandescent with mercury vapor.

20 Q Did you take part in that investigation?

21 A Yes, I did.

22 Q Would you briefly summarize how that
23 investigation took place?

24 A An on-site inspection of street light
25 installations in University City, Hampton Park, University

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1 Heights II and III was made. An on-site inspection of
2 Union Electric Company's spare parts at their storage areas
3 at both the Dorset storeroom and the Page District storeroom
4 was made. And, also, a trip to Banner Iron Works facilities
5 in St. Louis, Missouri, where we looked at the availability
6 of the molds. And, at our request, we received a cost
7 estimate to make these molds and to produce these lights.

8 Q How many trips to St. Louis were involved?

9 A We made two trips. We made a trip in April
10 of this year, at which time we took several pictures and
11 made an inspection of the street light installations. Then
12 we made a trip in October.

13 Q Did you actually see the incandescent lights
14 operating?

15 A No, I did not. Excuse me. Yes, I did. The
16 reason I hesitated there is because we did not see them at
17 night. But, when we visited them in the daytime, they were
18 on.

19 Q Did the results of your audit agree with the
20 testimony that Mr. Gillum presented earlier?

21 A Yes, it did. We visually inspected the 18
22 posts at Dorset and the 3 at Page. And I can verify that
23 there will be significant repairs to--I mean, not significant
24 repairs, but some repairs to them other than just painting,
25 which was brought up by Mr. Gillum.

1 Q Have you studied the stipulation that was
2 signed by representatives of University City, Union Electric
3 and Mr. James Carl?

4 A Yes, I have.

5 Q What is your opinion regarding that stipulation?

6 A My opinion is that this is a fair and just
7 resolution of the issues for all parties.

8 Q Would it be fair to say that you agree that
9 the stipulation equitably addresses the primary concerns that
10 were expressed by the residents of University City and were
11 the subject of your investigation?

12 A Yes, I do.

13 Q Does the Staff recommend that the Commission
14 accept the stipulation?

15 A Yes, we do.

16 MR. BANKS: Thank you. Your Honor, I have no
17 further questions.

18 EXAMINER CADIEUX: Mr. Barnes.

19 MR. BARNES: We have no cross.

20 MR. BRADY: We have no questions.

21 EXAMINER CADIEUX: Mr. Carl.

22 MR. CARL: No questions.

23 EXAMINER CADIEUX: If there's nothing further,
24 the witness is excused. Thank you.

25 (Witness excused.)

1 EXAMINER CADIEUX: Mr. Banks, does that
2 conclude the Staff's presentation?

3 MR. BANKS: Yes, it does, your Honor.

4 EXAMINER CADIEUX: Mr. Brady, you may call
5 your first witness.

6 MR. BRADY: Will you stand and be sworn, sir.

7 (Witness sworn.)
8

9
10 ALLAN B. DIECKGRAEFE testified as follows:

11 DIRECT EXAMINATION BY MR. BRADY:

12 Q Will you state your name for the purposes of
13 the record, please.

14 A I'm Allan Dieckgraefe.

15 Q Are you a registered professional engineer?

16 A Yes, I am in the state of Missouri.

17 Q Where are you employed?

18 A The city of University City.

19 Q How long have you been employed there?

20 A A little over 20 years.

21 Q What is your title?

22 A I'm the director of public works and city
23 engineer.

24 Q And you've held that position how long?

25 A About 18 years.

Q During all that time, were you involved in

1 the street lighting arrangements in the city of University
2 City?

3 A During approximately 15 to 18 years of that,
4 yes.

5 Q When did University City begin lighting
6 conversion from incandescent to mercury vapor?

7 A I can't tie that down exactly, but it was
8 approximately 15 years ago.

9 Q What was the city lighting at that time?

10 A The city was essentially lit, but exclusively
11 with incandescent lighting. When I say essentially lit,
12 most neighborhoods had lighting of some sort. But this was
13 all incandescent.

14 Q Were you experiencing any problems with that
15 situation?

16 A Well, not so much problems as trying to keep
17 up with the economics and efficiency of new mercury vapor
18 lighting, which was then available.

19 Q Were there any problems concerning luminaires?

20 A The problems really concerned at that point
21 options as to what to do with some of the older lighting as
22 opposed to the new lighting that was available.

23 Q Is the inclusion of luminaires on post tops
24 in University City a matter of concern to the city?

25 A Yes.

1 (EXHIBIT NO. 10 WAS MARKED BY THE REPORTER
2 FOR IDENTIFICATION.)

3 BY MR. BRADY:

4 Q Mr. Dieckgraefe, I hand you what has been
5 marked University City Exhibit No. 10 and ask you if you
6 can identify that?

7 A Yes, I can.

8 Q What is it, please?

9 A This is a brochure provided to us by Union
10 Electric Company at that time. This is approximately 1968.

11 Q What does the brochure cover?

12 A The brochure covers two different types of
13 lighting, the bracket arm, which is shown on one side of it.
14 What we were more interested in was the post top luminaires,
15 of which there are four in this brochure.

16 Q For the purposes of the record, when you use
17 the term "luminaire," is that the enclosure in which
18 whatever lighting, be it mercury or incandescent, sits inside
19 and on top of the post or on the arm; is that what that is?

20 A That's my definition, yes, sir.

21 Q How many types are shown in that exhibit?

22 A There are four types of post top luminaires
23 shown here.

24 Q How many have been made available by Union
25 Electric to the city?

1 A All four were made available to the city and
2 Union Electric's other customers. These were essentially
3 determined jointly by University City, Union Electric, and
4 some other customers at that point in time.

5 Q Are all four of those presently available for
6 use in University City?

7 A No, they're not.

8 Q Why not?

9 A Well, of these--I guess the only way I can
10 answer that is to identify the four lights. One is called
11 the Powerglow, and this is a light which was originally
12 offered to University City; however, it has since been with-
13 drawn from Union Electric's lighting system.

14 A second one is titled the Promenade. This
15 is a light which I have never personally seen in a municipal
16 street lighting situation, although I understand it, or
17 something like it, is still offered.

18 We have principally used two lights identified
19 here as the PMC Colonial and a Colonial light in our
20 applications.

21 Q Will those fit on the post tops presently in
22 University City?

23 A I believe they would.

24 Q Has your conversion program been progressing?

25 A Our conversion has been a systematic program.

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1 It's been a long time in coming, but it's been a straight-
2 forward thing where we systemically, on a priority basis,
3 replace existing inadequate lighting with new mercury vapor
4 lighting. In so doing we principally are converting; however,
5 in some instances we're adding additional luminaires where
6 voids exist in the lighting system.

7 Q Have you made exceptions in some areas in
8 the city?

9 A We have excepted only those areas where we
10 have received opposition from the residents to the lighting
11 which is offered to us and through us to them by Union
12 Electric.

13 Q Have you received objections to these
14 luminaires in Exhibit 10?

15 A Yes. Specifically Ames Place and University
16 Hills subdivisions, over a period of time, had informally
17 indicated that they rejected these lights and preferred to
18 retain the lights that they had in place. In the Altadina
19 Subdivision, we had made preliminary arrangements to order
20 new lighting from these choices for that subdivision.

21 I met with the subdivision. They politely
22 voted it down and indicated that they wished to be bypassed
23 and not to have their existing lighting changed. West
24 Portland Place and University Heights III subdivisions
25 are areas where we had actually ordered the lighting through

1 Union Electric and without direct consultation with the
2 neighborhood. The neighborhood subsequently learned of this
3 and were responsible for having the project stopped,
4 indicating that they preferred to retain their lights.

5 Q Are you familiar with the luminaires that are
6 generally used in University City?

7 A Yes, sir.

8 Q Are any of the luminaires offered to you in
9 Exhibit 10 compatible, in your opinion, with those presently
10 in use?

11 A We, of course, have used some of these
12 luminaires in areas where, again, in our judgment, they were
13 suitable and there was not a strong objection from the
14 neighborhood. The remaining neighborhoods where we have
15 not converted to mercury are those areas where, in our
16 judgment and certainly emphasized or highlighted by the
17 opinion of the neighborhood, these would not be suitable.

18 Q Is there a slang term generally in force in
19 University City for the offering of PMC Colonial?

20 A Well, I guess you might term it slang. We
21 refer to this as a Chinese Colonial. That's no dispersion
22 on oriental, but simply that the two were not a compatible
23 design.

24 Q You mean that type of light is not compatible
25 with your poles and the design for lighting in University
City?

1 A Persons who have more design knowledge and
2 ability than I simply felt that the pagoda type light and
3 the fancy scrolls on it were not truly colonial in nature.

4 Q Mr. Dieckgraefe, let's talk about the type
5 of lights in the neighborhoods you mentioned.

6 Ames, what kind of light does it have?

7 A Ames Place has the cast-iron post.

8 If I may illustrate with the board?

9 Q Yes.

10 A This is what we're referring to as cast-iron
11 posts. It is just that, a cast-iron post with a luminaire
12 globe style on the top.

13 Q What does University Hills have?

14 A University Hills and Altadina Subdivision
15 has what we have been referring to as red granite. It's a
16 cast concrete pole, again, with a single globe type luminaire
17 on the top.

18 COMMISSIONER MCCARTNEY: Is it red?

19 WITNESS DIECKGRAEFE: It's a pinkish color.

20 BY MR. BRADY:

21 Q How about West Portland?

22 A West Portland Place and University Heights II
23 has what we have customarily been referring to as historic
24 lighting, which includes a slightly taller pole than the
25 other cast iron that we've referred to and, certainly, by

1 anyone's definition a rather decorative bracket arm with a
2 pendant type luminaire terminating in a bare bulb under a
3 radio wave reflector. It does have the decorative tops or
4 finials there, which were previously identified in Union
5 Electric testimony.

6 Q Mr. Dieckgraefe, tell us generally for the
7 record what's the problem with the UE standard lighting in
8 University City?

9 A Well, first of all, I guess there's the
10 consideration of post top versus ornamental and bracket arm.
11 In many instances the bracket arm is acceptable to us,
12 particularly in arterial and major street usage.

13 However, in most residential neighborhoods,
14 for several reasons we have opted for the post top. One of
15 the reasons is concerning tree cover where the bracket arm
16 posts, the bracket arm luminaires, are taller. They tend to
17 be lost in the tree cover. University City is a city that
18 is blessed or cursed, as you may consider it, with many
19 trees. Our concern is how to light the neighborhood despite
20 the trees.

21 In other instances it's simply that we didn't
22 feel that the appearance of the bracket arm was suitable for
23 quality residential neighborhoods and, again, particularly
24 where there were other obstructions in the way that could
25 influence the amount of light that we could achieve.

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1 Q Mr. Dieckgraefe, University City is concerned
2 with the maintenance of this type of pole or these types of
3 poles in residential areas; is that correct, where they are
4 now in place?

5 A Yes.

6 Q What we're concerned with here, also, is the
7 conversion of the incandescent lighting that may be
8 presently in those, or attached to those poles, to mercury
9 vapor?

10 A Yes.

11 Q A question was asked by the Commission
12 concerning high pressure sodium light.

13 Is that option available to University City?

14 A Not in a practical sense. The two high
15 pressure sodium lights that are offered by Union Electric
16 would not be appropriate in residential neighborhoods because
17 of the high intensity of the lighting. We did, however,
18 consider it in some parking lot applications. However,
19 prior to placing an order, we inquired about it and found
20 that we would be faced with a charge.

21 To the best of my recollection, it was in
22 the neighborhood of \$200 to convert from the mercury existing
23 light to the high pressure sodium. We did not feel as though
24 we could justify a one time charge of that sort in order to
25 convert to the high pressure sodium. We certainly would be

1 interested in its application where possible.

2 Q In UE's current rate filings, are you aware
3 of the lumen rating of the smallest high pressure sodium
4 light offered?

5 A Yes. I believe that's 25,500 lumens.

6 Q What's a typical residential lighting rating?

7 A 6,800.

8 Q Would you say that high pressure sodium
9 in that intensity would be available or desirable in
10 residential areas?

11 A Definitely not.

12 Q Now, you've heard testimony from the company
13 with regard to prospective and the availability of replace-
14 ments, both their availability and the prospective of getting
15 them if they become unavailable from present stock.

16 Have you made an investigation as to the
17 availability of standards?

18 A Well, we've done some preliminary investigation
19 particularly as we began negotiating or considering with
20 Union Electric a possibility of the city having to provide
21 standards once the Union Electric supply was exhausted.

22 Q Concerning the post top retrofits, are they
23 available?

24 A I believe we have one or more such fixtures
25 that would adapt to the existing post tops. You have a

1 brochure on that.

2 EXAMINER CADIEUX: Off the record.

3 (EXHIBITS NOS. 11 AND 12 WERE MARKED BY THE
4 REPORTER FOR IDENTIFICATION.

5 EXAMINER CADIEUX: Back on the record.

6 Let the record reflect that University City's
7 Exhibits 11 and 12 have been marked for identification while
8 off the record.

9 BY MR. BRADY:

10 Q I hand you what's been marked University
11 City Exhibit 11 and ask you if you can identify that?

12 A Yes, sir. This is a page from a Welsbach
13 electric catalog which shows a luminaire that would, in my
14 opinion, be suitable for retrofit on some of our existing
15 cast iron and, conceivably, red granite fixtures.

16 Q Now, that luminaire sits on the top; that's
17 not a bracket arm arrangement?

18 A That's correct. It sits on the top and is
19 very similar in appearance to the existing incandescent
20 luminaires that are now being used.

21 Q I hand you what has been marked University
22 City Exhibit 12 and ask if you can identify that?

23 A Yes, sir, I can. This is a catalog from
24 Spring City Electrical Manufacturing Company which provides
25 poles. And a number of these poles would be similar in