

DEPOSITIONS OF ALAN J. BAX

Exhibit No. 14
Date 7/10/02 Case No. EC-2002-1
Reporter Kem

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

THE STAFF OF THE MISSOURI	)	
PUBLIC SERVICE COMMISSION,	)	
	)	
Complainant,	)	Case No. EC-2002-1
	)	
vs.	)	
	)	
UNION ELECTRIC COMPANY d/b/a	)	
AMERENUE,	)	
	)	April 24, 2002
Respondent.	)	Jefferson City, Mo.

DEPOSITION OF ALAN BAX

COPY

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

THE STAFF OF THE MISSOURI)
PUBLIC SERVICE COMMISSION,)
Complainant,) Case No. EC-2002-1
vs.)
UNION ELECTRIC COMPANY d/b/a)
AMERENUE,)
Respondent.) April 24, 2002
Jefferson City, Mo.

DEPOSITION OF ALAN BAX,

a witness, sworn and examined on the 24th day of April,
2002, between the hours of 8:00 a.m. and 6:00 p.m. of that
day at the offices of the Public Service Commission, in the
City of Jefferson, County of Cole, State of Missouri, before

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Certified Shorthand Reporter
ASSOCIATED COURT REPORTERS
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within and for the State of Missouri, in the above-entitled
cause, on the part of the Respondent, taken pursuant to
notice and agreement.

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18 ALSO PRESENT: Lena Mantle, Gary S. Weiss, Richard Kovach

19 SIGNATURE INSTRUCTIONS:

20 Presentment waived; signature requested.

21 EXHIBIT INSTRUCTIONS:

22 None marked.

23 I N D E X

24 Direct Examination by Mr. Wolski

3

1 . ALAN BAX, being first duly sworn, testified as follows:

2 DIRECT EXAMINATION BY MR. WOLSKI:

3 Q. Welcome, Mr. Bax.

4 A. Good morning.

5 Q. This is your second deposition with us. I'm
6 sure you remember all of the ground rules, but I'm going to
7 go over a few of them before we start just to make sure it's
8 clear on the record.

9 Is there any reason at all why you wouldn't be
10 able to give truthful and accurate testimony to the best of
11 your recollection at today's deposition?

12 A. No.

13 Q. And do you have any medical condition or
14 problems that might interfere with your ability to give
15 truthful and accurate testimony at today's deposition?

16 A. No.

17 Q. Okay. And are you currently taking any drugs
18 or other medication that might interfere with your ability
19 to give truthful and accurate testimony at today's
20 deposition?

21 A. No.

22 Q. And, again, as last time, if I ask a question
23 and you have a problem understanding it, please feel free to
24 ask for a clarification or ask the court reporter to read it
25 back. And if you don't ask for a clarification, I'll assume

1 that you understood the question as it was phrased.

2 And I think before we start, we probably
3 should go around the room just to get everyone's presence
4 noted for the record. So we can start with the man to your
5 left.

6 MR. DOTTHEIM: Steven Dottheim, I'm an
7 attorney with the Missouri Public Service Commission.

8 MS. MANTLE: Lena Mantle with the Commission
9 Staff.

10 MR. MOLTENI: Ronald Molteni, Attorney
11 General's Office.

12 MR. DANDINO: Michael Dandino, senior public
13 counsel.

14 MR. WEISS: Gary Weiss, supervisor, regulatory
15 accounting, Ameren.

16 MR. KOVACH: Richard Kovach, manager of rate
17 engineering, Ameren Services.

18 MR. WOLSKI: Victor Wolski, from Cooper and
19 Kirk representing AmerenUE.

20 MR. FREY: Dennis Frey, attorney with the
21 Staff with the Missouri Public Service Commission.

22 BY MR. WOLSKI:

23 Q. Mr. Bax, could you explain the steps you've
24 taken to prepare for today's deposition?

25 A. Yes. I reviewed the documentations that were

1 filed.

2 Q. And that would be your testimony from July and
3 the work papers and schedules and the testimony for March
4 and the work papers and the schedules?

5 A. As -- yes. As well as the previous
6 deposition.

7 Q. Okay. And did you speak with anyone on Staff
8 other than legal counsel to prepare for the deposition?

9 A. Yes.

10 Q. And who would that be?

11 A. Lena Mantle and Greg Meyer.

12 Q. Okay. And what were the nature of those
13 discussions?

14 A. Nature of the discussions were basically to
15 prepare for the deposition, go over some possible questions.

16 Q. Okay. At the end of the deposition will you
17 let me know if I got to all the questions they alluded to?

18 A. Okay.

19 Q. No, you don't have to do that.

20 Now, do you know how the numbers you're
21 proposing in your March testimony, the system energy loss
22 number and the jurisdictional allocator, compare to what the
23 numbers were in the previous testimony?

24 A. Yes, I do.

25 Q. And have they changed?

1 A. Yes, they have.

2 Q. Okay. And do you know what the total size of
3 the revenue reduction proposed by Staff in this case is?

4 A. Not exactly. In the neighborhood of
5 \$250 million.

6 Q. Okay. And do you know what that number would
7 be had the energy loss factor and the allocation factor that
8 you had calculated in your March -- in your July testimony,
9 rather, had been the factor that was used rather than the
10 updated numbers?

11 A. No.

12 Q. So just to clarify, so you don't know what
13 difference the change in your factors has on the overall
14 revenue reduction being proposed?

15 A. No, I don't.

16 Q. Okay. In preparing your testimony, had you
17 considered the impact of the revenue requirement reduction
18 proposed by the Staff on the ability of UE to invest in
19 infrastructure?

20 A. No.

21 Q. On the ability of UE to invest in generation?

22 A. No.

23 Q. On the stock price of Ameren?

24 A. No.

25 Q. On Ameren's attractiveness for possible

1 takeover by another company?

2 A. No.

3 Q. On economic development in the state of
4 Missouri?

5 A. No.

6 Q. Okay. Now, I realize that you're in the
7 engineering area and not the accounting area, but I want to
8 throw out a few terms that are used in connection with
9 revenues and expenses in a rate-making just to see if you
10 have a particular definition or understanding of those
11 terms.

12 Would the word "abnormality" mean anything to
13 you in the context of a rate-making concerning expenses or
14 revenues?

15 A. An abnormality I would consider a nonrecurring
16 event.

17 Q. And would that be determined based on whether
18 it has occurred at any other time?

19 A. Not necessarily, no.

20 Q. Is there a particular way to determine, that
21 you know of, whether something is an abnormality or not?

22 A. Nothing specific.

23 Q. And how about an extraordinary expense? Does
24 that have any particular definition as far as you know?

25 A. No.

1 Q. An usual item, would that mean anything that
2 you know of?

3 A. I -- an abnormality, but -- a nonrecurring
4 event.

5 Q. Okay. Now, there are some differences in your
6 testimony of March 1st, 2002 compared to the testimony that
7 you filed last July. And I wondered if you could give me an
8 overview, as you're sitting here, of what those differences
9 happen to be?

10 A. The loss -- the loss factor and the demand
11 allocation factor are different based on the different test
12 year --

13 Q. Okay.

14 A. -- associated with the corresponding testimony
15 on July 2nd and March 1. In addition, I calculated energy
16 allocation factor in my March 1st testimony.

17 Q. Did anyone on the Staff calculate one in the
18 July filings?

19 A. The energy allocation factor was included in
20 Staff Witness Jim Schwieterman's testimony.

21 Q. And do you know how he derived that number?

22 A. No.

23 Q. So this was something that was assigned to you
24 because Mr. Schwieterman is no longer with the Staff?

25 A. It was thought that I would be able to

1 figure -- calculate the factor.

2 Q. System energy losses were calculated based on
3 a 12-month period; is that correct?

4 A. Yes.

5 Q. And what would be the 12-month period of that?

6 A. Is this for the March 1st --

7 Q. I'm sorry. I should clarify. For the March
8 testimony.

9 A. Yes. As shown on Schedule 1, I calculated a
10 system energy loss factor for the period October 2000 to
11 September 2001.

12 Q. Okay. Now, would that factor, the system
13 energy loss factor that is, be a different number if you had
14 calculated it based on the 12 months ending June 30th, 2001?

15 A. Most likely, yes.

16 Q. Okay. Do you know how the system energy loss
17 factor that you've calculated is used by other Staff
18 witnesses in this case?

19 A. No, I don't. I provided it to Staff Witness
20 Lena Mantle.

21 Q. Do you know if Ms. Mantle applied that factor
22 to data that was derived by looking at 12 months ended
23 September 30th, 2001 --

24 A. No, I don't.

25 Q. -- or applied to earlier periods?

1 A. No, I don't.

2 Q. Okay. But the loss factor that's calculated
3 on the basis of a 12-month period ending September 2001
4 would be appropriate for use when looking at kilowatt hour
5 data that is also based on 12 months ending September 30th,
6 2001. Correct?

7 A. I'll have to have that repeated.

8 Q. Actually, I might be able to phrase it in a
9 more artful manner. You'd indicated that the system energy
10 loss factor would have been -- it would likely have been
11 different if you used the 12 months ending June 30th, 2001
12 rather than the 12 months ending September 30th, 2001 in
13 order to calculate it.

14 So, to your view, would it be inappropriate to
15 use a system energy loss factor that was calculated based on
16 12 months of data that ended September 30th, 2001 and apply
17 it to data that was for a different time period than the
18 12 months ending September 2001?

19 A. Not necessarily.

20 Q. And why would it not be inappropriate given
21 that the number would be different if you had calculated it
22 based on a different 12-month period?

23 A. This is an average -- this is an average
24 system loss factor. AmerenUE -- it was calculated using the
25 test year, so the other -- the other analyses done, if it

1 was -- if losses -- if this loss factor was used in it,
2 would be most appropriate used in the same time frame.

3 Q. Okay. And the test year in this case was the
4 12 months ended June 30th, 2001. Correct?

5 A. Yes. With an update through 12 months ending
6 September -- update period.

7 Q. Okay. Now, Schedule 5 of your testimony shows
8 the calculation for the demand allocation factor?

9 A. Schedule 5 of the March 1st testimony?

10 Q. Yes. March 1st testimony. Now, this appears
11 to also have been calculated based on the 12-month period
12 ended September 30th, 2001?

13 A. Yes.

14 Q. Do you know if this number would be different
15 if you calculated it based on the 12-month period ending
16 June 30th, 2001?

17 A. I don't know whether it would be different.

18 Q. Is it likely to be different?

19 A. It's likely to be, yes.

20 Q. And this number is different than the number
21 you calculated for the 12 months ending -- I believe it
22 was -- was it through December of 2000 in your July
23 testimony?

24 A. Yes. That's -- December -- December 2000.

25 Q. And the number you got for the Missouri

1 allocation factor would be a different number?

2 A. Yes.

3 Q. And do you know which members of the Staff
4 used the demand allocation factor that you derived in their
5 testimony?

6 A. For the current?

7 Q. Yes. The current testimony.

8 A. This -- yes. The demand allocation factor was
9 provided to Staff Witness Doyle Gibbs.

10 Q. Do you know if he used it to apply to data
11 from the same period upon which the allocation factor was
12 derived; namely, the 12 months ending September 30th, 2001?

13 A. I'm not sure. That would --

14 Q. Now, given that it's likely that there would
15 be a difference in this number when you calculated it for
16 the 12 months ending in June 2001 as compared to the
17 12 months ending September 2001, in your view would it be
18 inappropriate to apply that number to data that did not
19 reflect the 12 months ending September 30th, 2001?

20 A. The demand allocation factor shown on
21 Schedule 5 was derived from test -- from 12-month period
22 October 2000 to September 2001. So I'd say it would be most
23 accurately applied to analyses used from the same 12-month
24 period, yes.

25 Q. And Schedule 6 of your March testimony, the

1 energy allocation factor, it appears that -- appears to be
2 based on the 12 months ended June 30th, 2001. Is there any
3 reason why this did not also -- why you did not base this
4 number also on the 12 months ending September 30th, 2001?

5 A. The -- on Schedule 6 there -- I applied a --
6 an adjustment one, as indicated, for normalized weather.

7 Q. And did that convert the data to the data that
8 you would have expected if you used the 12 months ending
9 September 30th, 2001?

10 A. Most likely, yes, with a similar weather
11 normalization from data based on October through September
12 for that 12-month period.

13 Q. Is there any reason why each of these columns
14 on Schedule 6 stopped at June 2001 rather than continuing to
15 go through September of 2001?

16 A. Would you repeat that, please?

17 THE COURT REPORTER: "Question: Is there any
18 reason why each of these columns on Schedule 6 stopped at
19 June 2001 rather than continuing to go through September of
20 2001?"

21 THE WITNESS: No.

22 BY MR. WOLSKI:

23 Q. You could have calculated the energy
24 allocation factor based on the same 12 months of data as you
25 did the demand allocation factor, couldn't you, which would

1 be again the 12-month period ending September 30 of 2001?

2 A. Yes.

3 Q. Is there a particular reason why you didn't?

4 A. Only that I was going to weath-- I intended to
5 weather normalize the data.

6 Q. Did you weather normalize the data for the
7 demand allocation factor? Does that make a difference?

8 A. Those are actual peaks reported by the --
9 that's actual data reported by the company.

10 Q. Would you happen to know which Staff witnesses
11 used the energy allocation factor that you calculated?

12 A. Yes. On page 9 of my Direct Testimony, line
13 12, I have provided these factors to Staff Witness Doyle
14 Gibbs.

15 Q. Okay. And would you happen to know which time
16 period of data he would have applied these factors to?

17 A. No, I don't.

18 Q. Now, do I understand correctly that by weather
19 normal-- by making your normalized weather adjustment to the
20 data ended June 30th, 2001, the factor that resulted is one
21 that is consistent with data that would end September 30th,
22 2001?

23 A. Yes.

24 Q. Okay. Is there a way to have done an
25 independent check on that, say, by actually -- looking at

1 the actual numbers through September of 2001 to see if they
2 coincided with your --

3 A. I would have to make a -- a similar weather
4 normalization adjustment -- I would have to make an updated
5 adjustment on weather normalization.

6 Q. Okay. Maybe I don't understand this exactly.
7 Would this number be different if instead of using the
8 12 months from July of 2000 to June of 2001 you used the
9 12 months of October 2000 through September 2001?

10 A. I'm sorry?

11 Q. Would the energy allocation factor that you
12 derived, is it likely to have been different had you based
13 it on 12 months from October 2000 through September 2001
14 instead of July 2000 through June 2001?

15 A. It's libel to be not exactly the same, but --

16 Q. Okay. Now, in Schedule 6 you almost seem to
17 have made another adjustment, adjustment No. 2 on the
18 schedule for the City of Rolla?

19 A. Yes.

20 Q. And that was to reflect the loss of Rolla as a
21 wholesale customer. Correct?

22 A. Yes.

23 Q. Okay. Now, did you make the same adjustment
24 in doing your demand allocator calculation?

25 A. The actual -- the actual data used provided by

1 the company did not include -- no, I did not make that
2 adjustment.

3 Q. Is there any reason why the adjustment would
4 be appropriate for an energy allocation factor but not for a
5 demand allocation factor?

6 A. The energy provided to the City of Rolla was
7 energy supplied at -- at peak.

8 Q. So then if Rolla is no longer being serviced
9 by the Ameren system, as it's reflected in these schedules,
10 you know that there will be a reduction in peak based on the
11 loss of Rolla as a customer?

12 A. It was no longer a wholesale customer of
13 AmerenUE, but it was still provided power by Ameren.

14 Q. And how would that affect then the allocation
15 of power between retail and wholesale for Ameren?

16 A. Please repeat the question.

17 THE COURT REPORTER: "Question: And how would
18 that affect then the allocation of power between retail and
19 wholesale for Ameren?"

20 THE WITNESS: I'm -- I'm interested in
21 AmerenUE information.

22 BY MR. WOLSKI:

23 Q. Okay. So when you said that Rolla would still
24 be a customer of Ameren, you did not mean customer of
25 AmerenUE; is that --

1 A. Not a wholesale customer of AmerenUE.

2 Q. Would Rolla then still be receiving its energy
3 from AmerenUE?

4 A. The City of Rolla was -- was no longer -- the
5 contract -- existing contract expired December 2001 with
6 the -- AmerenUE did not -- AmerenUE did not renew that
7 contract.

8 Q. Okay. And do you know if this contract
9 expiration is used by -- or the fact of this contract being
10 expired is used by other Staff members in making adjustments
11 in their particular subject matters?

12 A. I don't know.

13 Q. Okay. Now, you said that the contract -- the
14 Rolla contract expired at the end of 2001; is that --

15 A. I'm sorry. If I said 2001, I was mistaken.
16 It was the end of 2000.

17 Q. Okay.

18 A. As I --

19 Q. But is the service provided -- the wholesale
20 energy provided to Rolla still reflected in the demand
21 allocation factor data that you used for Schedule 5?

22 A. It is not included in the AmerenUE
23 information.

24 Q. And that would be true even for the months
25 falling in the year 2000?

1 A. The existing contract ex-- was not renewed
2 through AmerenUE at the end of 2000.

3 Q. Okay. But would wholesale -- would energy at
4 wholesale be provided to the City of Rolla in October of
5 2000, to your knowledge?

6 A. In October of 2000, yes.

7 Q. Okay. Was there any adjustment made to the
8 October 2000 Missouri wholesale peak number in Schedule 5 to
9 reflect the known and measurable loss of the City of Rolla
10 as a wholesale customer of AmerenUE?

11 A. I would have to check my data.

12 Q. Okay. But sitting here, you don't --

13 A. I don't remember.

14 Q. -- you don't remember one way or the other?

15 A. I don't recall.

16 Q. Okay. If we can turn again to Schedule 6, the
17 energy allocation factor, I see you made an adjustment for
18 the City of Rolla. Did you make adjustments to reflect the
19 company's loss of any other customers either of Missouri or
20 Illinois?

21 A. No.

22 Q. Did you investigate into whether there were
23 any other customers in Missouri or Illinois who had been
24 lost?

25 A. No.

1 Q. Do you know if any other members of the Staff
2 had made determinations that there would be other customers
3 in Missouri or Illinois who may have been lost to AmerenUE?

4 A. No.

5 Q. Do you know whether or not Staff Witness
6 Janice Pyatte calculated kilowatt hour reductions in
7 Missouri based on rate switching and other changes in
8 customer usage?

9 A. No, I'm not aware.

10 Q. Okay. If she were to make kilowatt hour
11 reductions based on rate switching and other changes in
12 customer usage, should those reductions also have been
13 reflected in your energy allocation factor calculations?

14 A. I don't know. I don't know what she did.

15 Q. If she were to make those reductions, would it
16 be important, in your mind, for you to be consistent in
17 making the same kilowatt hour adjustments to your
18 calculations?

19 A. I don't know.

20 Q. Okay. Do you know whether the Staff's
21 proposing other kilowatt hour adjustments for 365 days?

22 A. No, I don't know.

23 Q. Do you know if the Staff's proposing other
24 kilowatt hour adjustments for customer growth?

25 A. No.

1 Q. If the Staff were to make kilowatt hour
2 adjustments for customer growth in revenue calculations,
3 should those kilowatt hour adjustments also be made for
4 purposes of your calculations?

5 A. I don't know.

6 Q. When you were assigned the task of doing the
7 energy allocation factor in this case, what steps did you
8 take to learn how one does an energy allocation factor
9 calculation?

10 A. I had filed testimony in the recent Missouri
11 Public Service Rate Case ER-2001-277.

12 Q. And that was testimony concerning energy
13 allocation factor?

14 A. In part.

15 Q. Was that the first time you had testified on
16 energy allocation factor?

17 A. Yes.

18 Q. Had you been trained in calculating the energy
19 allocation factor in your studies as an engineering student?

20 A. In theory.

21 Q. So when you were asked to do this for the
22 Missouri Public Service case, you knew exactly how to do an
23 energy allocation factor, or did you have to consult some
24 textbooks or treatises to determine how to do it?

25 A. Well, I had also provided calculations that

1 was used in the -- Dr. Ullisick's (phonetic spelling)
2 testimony in the Empire Rate Case ER-2001-299.

3 Q. And would that have been the time that you
4 became acquainted with energy allocation factor
5 calculations, how to do them?

6 A. Yes. As per -- yes.

7 Q. Was there any particular -- was there any
8 formal course of training at the Public Service Commission
9 to teach you how to do these calculations?

10 A. Well, how would you describe "formal"?

11 Q. For instance, was there a Public Service
12 Commission Staff-sponsored workshop on how to do energy
13 allocation factor?

14 A. There was not a workshop, no.

15 Q. Is there a Public Service Commission Staff
16 manual that says, This is how you do energy allocation
17 factor?

18 A. Not to my knowledge.

19 Q. Okay. Did you review a manual provided by
20 someone else, maybe a NARUC manual, on how to do cost
21 allocations in order to learn how to do an energy allocation
22 factor calculation?

23 A. I have -- I have seen a NARUC manual.

24 Q. Okay. And did you review that to learn how to
25 make these calculations?

1 A. I did re-- I did peruse the information that
2 was in that manual.

3 Q. But upon what did you base your approach to
4 calculating the energy allocation factor?

5 A. On page -- on page 8, the lines -- line 10 I
6 said, The energy allocation factor is the ratio of the
7 normalized annual kilowatt hour usage in a particular
8 jurisdiction to the total normalized UE kilowatt hour usage.

9 Q. And is that something that's common knowledge?
10 Where did you derive that explanation?

11 A. In part, that was in the information
12 contained -- derived from the NARUC manual.

13 Q. Now, you said in the Missouri Public Service
14 case in part your testimony was on energy allocation factor.
15 What were the other areas that you covered in that testimony
16 that you sponsored?

17 A. I also sponsored a demand factor and a system
18 energy loss factor.

19 Q. And do you recall in doing your demand
20 allocation factor calculations in that case what form of
21 demand allocator factor you recommended, 1CP, 2CP, 12CP?

22 A. Yes. I recommended a use of a 12CP.

23 Q. In that case?

24 A. Yes.

25 Q. Okay. When doing an energy allocation factor

1 calculation, if the Staff's testimony to the Public Service
2 Commission is that Missouri retail kilowatt hour usage is
3 going to increase, shouldn't that be reflected in your
4 calculation of the energy allocation factor?

5 A. I did not consider that, no.

6 Q. Okay. And when kilowatt hours change, would
7 it be likely that there would also be changes in kilowatt
8 demands?

9 A. Not necessarily, no.

10 Q. Okay. Did you consider whether there would be
11 any changes in kilowatt demands based on the assumptions
12 made by other members of the Staff in this case?

13 A. No.

14 Q. Okay. So that on Schedule 5, your calculation
15 of the demand allocation factor wouldn't have adjustments
16 then for kilowatt hour changes that were anticipated?

17 A. No.

18 Q. Now, you said you had perused -- I believe was
19 the word -- the NARUC manual. And do you know if the NARUC
20 manual recommends using kilowatt hour sales adjusted for
21 losses in calculating the energy factor?

22 A. I don't recall that, no.

23 Q. On page 6 of your March testimony --

24 A. Page 6?

25 Q. Page 6, yes. Line 21 you use the term

1 "marginal variations." I was wondering if you could provide
2 us a definition of what you mean by marginal variations?

3 A. There is no -- there is no percentage
4 variation that would trigger necessarily a -- the use of a
5 method other than 12CP.

6 Q. But marginal variations, I imagine the
7 adjective "marginal" must connote, as opposed to something
8 else, that there are variations that are marginal and there
9 are variations that are not marginal. How would you
10 determine whether a variation is marginal or not?

11 A. On a case -- on a case-by-case basis.

12 Q. Okay. So there is no preconceived rule that
13 you would apply to determine whether or not a variation was
14 marginal?

15 A. There is no -- there is no trigger for --
16 necessarily for that.

17 Q. And I believe in your previous testimony you
18 used the phrase "slight percentage variations" in the same
19 context. To you, do slight percentage variations and
20 marginal variations mean the same thing?

21 A. Would you please --

22 Q. Yeah. That would be in your July testimony,
23 page 5, line 22 you use the phrase "slight percentage
24 variations." And my question is, does slight percentage
25 variations, as the term is used in the July testimony, mean

1 the same thing as marginal variations, as that phrase is
2 used in the March testimony?

3 A. Yes.

4 Q. If we could turn to Schedule 4 of your March
5 testimony and you also have your July testimony, I believe,
6 in front of you. If you could turn to the corresponding
7 schedule -- corresponding Schedule 4 of the July testimony.

8 I was wondering if you could explain why the
9 numbers for year 2000 load data seem to be different? For
10 instance, the January 2000 Missouri retail load on
11 Schedule 4 from the July testimony is 5,103 megawatts and
12 it's 5,063 on Schedule 4 of the current testimony.

13 A. Yes. I received updated information in a --
14 in a Company response to a Staff data request.

15 Q. And do you recall how the information -- why
16 these numbers changed as a consequence of that information?

17 A. Why these numbers changed as a consequence to
18 that information?

19 Q. Yes.

20 A. That was --

21 Q. Was it that you asked for -- was it that the
22 numbers supplied by Ameren for Missouri retail load changed?
23 Is that --

24 A. The information that I -- the updated
25 information received from the company in a response to a

1 Staff data request was updated.

2 Q. Looking at your March testimony on page 7 of
3 the testimony --

4 A. Page 7?

5 Q. -- of the current March testimony on line 13
6 you use the phrase "little variation." And --

7 A. Yes.

8 Q. -- I believe, if I'm not mistaken, that the
9 use of the words "slight variations" in the context of that
10 discussion in your previous testimony, that would be page 6,
11 line 14 in the July testimony, you said -- page 6, line 14,
12 "only slight variations"?

13 A. Yes.

14 Q. And now you say "little variation." Are those
15 synonymous? Is there a difference between little variation
16 and slight?

17 A. There's no -- nothing intended.

18 Q. Okay. Now, if we could look at your July
19 testimony for a moment, page 6.

20 A. July testimony?

21 Q. Yes.

22 A. Page 6?

23 Q. Yes. Where we were just looking at the
24 "slight variations," the use of that phrase. The sentence
25 that begins at the end of line 15 in your July testimony was

1 collectively, These attached schedules do not indicate a
2 distinct extraordinary megawatt peak in any particular
3 monthly CP hour; therefore, the Staff advocates use of the
4 12CP method.

5 Had there been a distinct extraordinary
6 megawatt peak hour in any particular monthly CP hour, would
7 the Staff have not advocated use of the 12CP method?

8 A. Perhaps.

9 Q. Okay. Now, in your current testimony, March
10 testimony, on page 7 after you discuss Schedule 4, there's
11 no longer a reference to the attached schedules not
12 indicating a distinct extraordinary megawatt peak in any
13 particular monthly CP hour. Do you happen to know why that
14 sentence was removed from the March testimony? Is it
15 because there is now a distinct extraordinary megawatt
16 peak --

17 A. No.

18 Q. -- indicated?

19 A. No.

20 Q. Okay. So is there any particular reason why
21 that was taken out, the sentence that I cited from the July
22 testimony?

23 A. Line -- excuse me. Page 7 in the March
24 testimony, line 15, These attached schedules provide
25 evidence to support Staff's use of the 12CP method.

1 Q. So it's still your contention then that the
2 attached schedules do not indicate a distinct extraordinary
3 megawatt peak in any particular monthly CP hour?

4 A. Yes.

5 Q. Earlier I believe you stated that adding
6 kilowatt hours wouldn't necessarily add to the company's
7 system peak demands. Am I recalling that correctly?

8 A. As I recall the question.

9 Q. Well, could you explain how UE would be able
10 to add customers without adding additional kilowatt peak
11 demands?

12 A. Well, you'd -- you did not say earlier
13 additional customers.

14 Q. So if they were -- if it were assumed that I
15 were to be adding additional customers, then that would add
16 to the company's system peak demands?

17 A. All else being equal.

18 Q. Okay. Do you know if there are any Missouri
19 utilities that are considered 4CP by the Commission for
20 purposes of determining the allocation factor?

21 A. No, I don't.

22 Q. Okay. Are you aware of the way that other
23 Public Service Commission Staffs in other states would
24 calculate the allocation factors?

25 A. No.

1 Q. Now, again, in your March testimony on page 7
2 you reference the first sentence -- first line on page 7, A
3 relatively high system peak also occurs during the winter
4 months, December and/or January.

5 I was wondering if you had a definition of
6 "relatively high"?

7 A. No -- no particular trigger.

8 Q. Okay. So if you arrayed a range of 12 numbers
9 from the lowest to the highest and you were looking at one
10 and it was below the mid-point, would that be relatively
11 high? Could that be relatively high below the mid-point
12 that is between the lowest and the highest of the
13 12 numbers?

14 A. I'd have to see the particular analysis.

15 Q. Okay. How about if there were -- if you
16 arrayed numbers from lowest to highest and a particular
17 number was a third of the way from the bottom, would it be
18 possible that that would be relatively high?

19 A. That's not in the context of the testimony
20 here. I'd have to -- I'd have to see the particular
21 analysis.

22 Q. Okay. Well, when you say "relatively high,"
23 that means relative to what?

24 A. I've -- I've compared -- I've compared
25 monthly -- monthly peaks to the annual -- particular annual

1 peak.

2 Q. The "annual peak" meaning the highest peak
3 hour of the year?

4 A. The highest monthly peak of the year, yes.

5 Q. Now, since your deposition in November, have
6 you had a chance to acquaint yourself with the tests that
7 FERC uses to decide whether a company is 12CP or 4CP or
8 however number of CP a company happens to be?

9 A. Acquaint my -- acquaint myself?

10 Q. Yeah. Have you at all looked at the tests
11 that FERC uses to determine the CP for allocation factors?

12 A. No.

13 Q. Have you looked at FERC's on and off peak
14 tests?

15 A. I've not looked at FERC's on and off peak
16 tests.

17 Q. Have you considered the load annual peak test
18 that FERC uses that compares a ratio of the low month to the
19 high month?

20 A. I have not looked at that test.

21 Q. And how about the low to annual peak test that
22 FERC uses which uses a ratio of the 12CP figure to the 1CP
23 figure?

24 A. I haven't looked at that test.

25 Q. So you wouldn't know what a CP determination

1 FERC would make under the FERC tests for AmerenUE?

2 A. I wouldn't know what FERC would do?

3 Q. Well, you wouldn't -- would you know what
4 results you would reach if you used the tests that FERC
5 applies to determine the CP for the company?

6 A. I have not looked at the -- at these FERC
7 tests that you refer to.

8 Q. Do you know if the system energy loss factor
9 is the same for all of the jurisdictions that AmerenUE
10 serves?

11 A. Do I know if the system energy loss factor is
12 the same for all jurisdictions?

13 Q. Yes.

14 A. The system energy loss factor is a -- as -- is
15 an average of the AmerenUE system.

16 Q. Does that include wholesale sales?

17 A. On page 3 of my March 1st testimony on line 2
18 I have -- I have said that total sales is included in the
19 determination.

20 Q. Okay. But would you guess that there would be
21 a different system ener-- because you said it was an average
22 number. So would you suppose that there would be a
23 different system energy loss number for the Illinois
24 jurisdiction compared to the Missouri retail jurisdiction
25 compared to the wholesale jurisdiction for AmerenUE?

1 A. Potentially.

2 Q. Okay. Do you think it would be a more
3 accurate method of determining the Missouri demand
4 allocation factor if you were to determine the system energy
5 loss factors associated with each of the jurisdictions and
6 apply that to the load, to the data that you're using for
7 the allocation factor in order to adjust for differing
8 system energy losses?

9 A. I'm sorry. I'll have to have that repeated.

10 Q. Okay. Maybe I can say it more accurately. If
11 you were to -- if you could determine -- and I suppose that
12 one can determine a system energy loss factor for the
13 Illinois jurisdiction compared to the Missouri retail
14 jurisdiction compared to the wholesale jurisdiction. And I
15 assume that that sort of calculation can be done, I guess,
16 can it not?

17 A. In theory.

18 Q. Okay. Well, if you were to calculate a
19 different energy -- the energy loss factor for each of those
20 jurisdictions and then apply that to the retail usage
21 kilowatt hours, wholesale usage kilowatt hours and Illinois
22 usage kilowatt hours data that you used to determine the
23 energy allocation factor, would that give you a more
24 accurate energy allocation factor than the approach that you
25 used?

1 A. I didn't -- I did not consider that in my
2 analysis.

3 Q. Well, sitting here today, do you think that
4 that would result in a more accurate factor if one takes
5 into account the differing energy losses?

6 A. I would have -- I would have to do -- perform
7 an analysis on that.

8 Q. And to perform that analysis, what would you
9 do? Would you consult any textbooks or treatises?

10 A. Perhaps.

11 Q. Have you consulted any prior to doing the
12 allocation calculations for this case?

13 A. Did I consult --

14 Q. Any textbooks or treatises?

15 A. Well, I said earlier we -- I had looked at a
16 NARUC manual.

17 Q. Now, I think on page 3 of your testimony, you
18 had said that the net system input -- rather, the system
19 energy losses number was calculated based on total sales.
20 If you look at Schedule 1 of your testimony, your system
21 energy loss calculation --

22 A. Schedule 1?

23 Q. Yes.

24 A. Of the March?

25 Q. Of the March, yes. Is the loss factor that

1 you calculated based as a percentage of net system input; is
2 that --

3 A. Well, in part, yes.

4 Q. And would that factor be the same if it were
5 calculated as a percent of the total sales?

6 A. I don't know. I did not perform that
7 calculation. I have --

8 Q. Do you know if that's another acceptable
9 method of making the calculation using the total sales
10 numbers?

11 A. I have chosen to calculate system energy
12 losses as defined on page 3.

13 Q. Okay. As a percentage of net system input?

14 A. Yes.

15 Q. Okay. Now, if you did it -- if you made the
16 calculation as a percent of the total sales, that would give
17 you the number that you would have to add to kilowatt hours
18 at the meter in order to obtain the kilowatt hours at the
19 net system input level for UE. Right?

20 A. I'd have -- I'd have -- I did not perform that
21 calculation.

22 Q. Okay. So are you familiar with calculations
23 of energy loss based as a percentage of total sales kilowatt
24 hours?

25 A. Not for the purpose of this testimony.

1 Q. For purposes of other energy loss
2 calculations?

3 A. I've chosen to calculate system energy losses
4 as a percentage of net system input.

5 Q. In schedule -- if we move to -- let me move to
6 Schedule 3. And Schedule 3 is an updated version, I
7 imagine, of the Schedule 3 that accompanied your original
8 testimony from last July; is that -- by "updated" I mean I
9 guess you added the year 2001 load analysis data?

10 A. Yes. I've included 2001 in -- on Schedule 3
11 of the March testimony.

12 Q. Okay. Now, the current Schedule 3 to the
13 human eye looks a bit different than the Schedule 3 that you
14 had included with the July testimony. I was wondering if
15 you could explain -- I guess the main difference appears to
16 be that the vertical scale of the chart's changed from going
17 to 0.5 to 1, to 0 to 1.2. Is there any particular reason
18 why you changed the scale?

19 A. This scale, in retrospect, better reflected
20 the -- my testimony, my -- the argument in my testimony, my
21 recommendation and testimony.

22 Q. Okay. Do you recall the reason that you used
23 the 0.5 to 1 scale when you did this schedule for the July
24 testimony?

25 A. No, I don't.

1 Q. Do you recall how you determined that changing
2 the scale would better support your testimony? Was this a
3 decision you made or did somebody else suggest it to you?

4 A. I had discussed -- discussed this with Greg
5 Meyer.

6 Q. Okay. Why do you think the change in the
7 vertical scale makes a difference in terms of your argument
8 or in terms of the position you're taking in your testimony?

9 A. The -- the only change is that the scale is
10 different and the additional calendar year and test year
11 data; otherwise, the data is the same.

12 Q. And in this Schedule 3, the top data point
13 can't exceed 1, can it?

14 A. Right.

15 Q. Is there any reason why you went up to 1.2 on
16 the chart?

17 A. No.

18 Q. 1.6 probably would have served your purposes
19 any better. Did you consider other numbers you would go up
20 to?

21 A. No.

22 Q. Okay. If we could look at your July testimony
23 and turn to Schedule 5. Is Schedule 5 presented to the
24 Public Service Commission for the purposes of their decision
25 here as a comparison of the different -- I suppose it is the

1 different demand allocator numbers one would come up with
2 using 1CP, 2CP, 3CP, every CP method you can use from 1 to
3 12. Why was this included in the July testimony?

4 A. No particular reason. Collectively these
5 were -- these indicate the -- my recommendation for 12CP.

6 Q. But would you have included this schedule even
7 if you thought it was not important in the Commission's
8 determination of the proper CP in this case?

9 A. Would you please repeat that?

10 THE COURT REPORTER: "Question: But would you
11 have included this schedule even if you thought it was not
12 important in the Commission's determination of the proper CP
13 in this case?"

14 THE WITNESS: No.

15 BY MR. WOLSKI:

16 Q. Do you recall if this type of schedule with
17 the comparison of the various CP methodologies had been used
18 in previous Staff testimony on a demand factor -- demand
19 allocation factors?

20 A. I believe I added a similar -- a similar
21 schedule in the Missouri Public Service Rate Case
22 ER-2001-277.

23 Q. Now, did you include this schedule in your
24 current testimony of March 2002?

25 A. No, I did not.

1 Q. Is there any particular reason why it was not
2 included in your second testimony? It was just an
3 oversight?

4 A. I -- I have no -- no idea.

5 Q. Did you do, in the course of preparing your
6 work papers, a similar listing of the different
7 methodologies under the different CP methods and the
8 different allocation factors for the current test year?

9 A. I don't recall.

10 Q. Okay. Had you prepared this similar -- had
11 you prepared anything similar to Schedule 5 of your July
12 testimony in the course of doing your March testimony? Did
13 you prepare any document that was similar to Schedule 5 from
14 the July testimony?

15 A. I don't recall.

16 Q. Also, in your July testimony there was a
17 Schedule 6 that you included that was a variety of kilowatt
18 hour demand information. Was there any reason why a similar
19 schedule wasn't included in the March testimony?

20 A. Not in particular.

21 Q. Had you made a conscious decision to not
22 include the information that was in your Schedule 6 of the
23 July testimony with the March testimony?

24 A. It wasn't a conscious decision.

25 Q. Did anyone suggest that you leave it out?

1 A. No.

2 MR. WOLSKI: Would this be a convenient time
3 to take a break and we can see how much more we need to do?

4 MR. DOTTHEIM: Yeah.

5 (A RECESS WAS TAKEN.)

6 BY MR. WOLSKI:

7 Q. Mr. Bax, just one follow-up question. We were
8 discussing earlier the Schedule 5 that was attached to your
9 July 2001 testimony that had the comparison of the
10 methodologies 1CP through 12CP.

11 A. Schedule 5?

12 Q. Yeah, Schedule 5. And my question is, did
13 anyone suggest to you, you not include this schedule with
14 your current filing, with the March filing?

15 A. No one suggested that.

16 Q. Okay. And I believe you had a couple of minor
17 corrections to your testimony that you wanted to get on the
18 record?

19 A. Yes. Thank you. On page 7 --

20 Q. Page 7 of the March testimony?

21 A. Of the March testimony. Line 12, that should
22 read, Staff Data Request 2906 and 2923 instead of 2106 and
23 2123.

24 Q. Okay. Thank you.

25 A. And on Schedule 6 the term "percentage used"

1 near the bottom left corner should instead be "allocation
2 factor."

3 Q. Okay. Thank you.

4 MR. WOLSKI: I have no further questions,
5 unless anyone else has questions for you here.

6 THE COURT REPORTER: Signature?

7 MR. DOTTHEIM: Yes.

8 MR. WOLSKI: How about presentment?

9 MR. DOTTHEIM: Why not?

10 MR. WOLSKI: I would urge you to waive that.

11 MR. DOTTHEIM: Yeah. We will submit
12 correction sheets.

13 MR. WOLSKI: Very good.

14 (PRESENTMENT WAIVED; SIGNATURE REQUESTED.)
15
16
17
18
19

20 ALAN BAX

21 subscribed and sworn to before me this day of
22 , 2002.

23 _____
24 Notary Public in and
25 for County
State of Missouri

C E R T I F I C A T E

STATE OF MISSOURI)
) ss.
COUNTY OF BOONE)

I, Tracy L. Cave, Certified Shorthand Reporter with the firm of Associated Court Reporters, do hereby certify that pursuant to notice and agreement there came before me,

ALAN BAX,

at the law offices of the Public Service Commission, in the City of Jefferson, County of Cole, State of Missouri, on the 24th day of April, 2002, who was first duly sworn to testify to the whole truth of his knowledge concerning the matter in controversy aforesaid; that he was examined and his examination was then and there written in machine shorthand by me and afterwards typed under my supervision, and is fully and correctly set forth in the foregoing 40 pages; and the witness and counsel waived presentment of this deposition to the witness, by me, and that the signature may be acknowledged by another notary public, and the deposition is now herewith returned.

I further certify that I am neither attorney or counsel for, nor related to, nor employed by, any of the parties to this action in which this deposition is taken; and further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in this action.

Given at my office in the City of Columbia, State of Missouri, this 24th day of April, 2002.


TRACY L. CAVE
Certified Shorthand Reporter

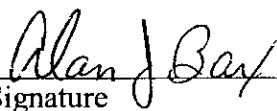
ERRATA SHEET

Deposition of: Alan Bax

Case Caption: EC-2002-1

Date Taken: November 28, 2001

Page	Line	Correction	Reason
11	6	Remove comma after "distribution".	Clarification
12	18	Should read, "...invest in new generation".	Transcript error
14	3	Should read, "What do you understand...".	Clarification
14	5	Add comma after "considered".	Clarification
14	7	Should read, "...mentality, a neutral position".	Typo
20	19	Delete the word "was".	Clarification
20	21	Add "generator unit ratings" following the word "those".	Clarification
21	20	Add "the unit maintenance history information contained in" following the word "discussed".	Clarification
22	6	Remove the word "there".	Clarification
23	1	Change the answer to: "Yes, I prepared the calculations used in the Direct Testimony of Dr. Eve Lissik in the Empire District Electric Company rate case ER-2001-299".	Correction
26	23-24	Should read, "On Page 2 of my direct testimony, line 15, I have defined...".	Clarification
27	14	Add a period after "In part".	Clarification


Signature

ERRATA SHEET

Deposition of: Alan Bax

Case Caption: EC-2002-1

Date Taken: November 28, 2001

Page	Line	Correction	Reason
27	16-17	Should read, "...being the difference between what is net generation plus what is the net interchange, and what is company use and what is total sales". (System energy losses = net generation + net interchange - company use - total sales)	Completion of Partial Answer / Clarification
28	2	Change "Ameren" to "AmerenUE".	Clarification
29	7	Should read, "Most likely yes."	Clarification
31	24	Should read, "Most likely yes".	Clarification
32	8	Should read, "Most likely yes".	Clarification
32	18	Should read, "...customer, most likely yes."	Clarification
33	2	Should read, "...so thus, most likely yes..."	Clarification
33	13	Should read, "Theoretically, yes".	Clarificaton
34	8	Should read, "I have taken a number of graduate-level courses, but have not received any advanced degrees".	Clarification
35	2-3	Should read, "...load? One of the factors in losses is the square of the current."	Clarification
37	17	Should read "...generation and transmission assets..."	Clarification
37	24	Place a colon following "testimony" instead of period.	Typo

Alan J Bax
Signature

ERRATA SHEET

Deposition of: Alan Bax

Case Caption: EC-2002-1

Date Taken: November 28, 2001

Page	Line	Correction	Reason
45	2	Remove the word "points".	Clarification
45	7-8	Should read, "...individual months' coincident peaks...".	Clarification
46	2-3	Should read "The ratio of August's peak to December's peak? The difference...".	Typo
48	15	Should read, "No, a little greater than 40".	Clarification
50	6	Add "roughly a" before "2 1/2".	Clarification
60-61	25-1	Should read "...witnesses Lena Mantle and Greg Meyer, and I provided what they thought was support for it".	Clarification
61	11	Change "file" to "filed".	Typo
61	12	Add "and" following the word "methodology".	Clarification

Alan J Bax
Signature

(This is the signature page to the deposition of Alan J. Bax taken on November 28, 2001.)

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

I, Alan J. Bax, do hereby certify:

That I have read the foregoing deposition;

That I have made such changes in form and/or substance on the attached errata sheet(s),
as might be necessary to render the same true and correct;

That having made such changes thereon, I hereby subscribe my name to the deposition.

Executed this 29TH day of MARCH, 2002,
at Jefferson City, Missouri

ROSEMARIE RIEDL
Notary Public - Notary Seal
STATE OF MISSOURI
COLE COUNTY
MY COMMISSION EXPIRES June 8, 2005

Alan J. Bax
(Name)

My Commission Expires:

Notary Public:

Rosemarie Riedl

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A P P E A R A N C E S

FOR THE COMPLAINANT:

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202-220-9644

ALSO PRESENT:

Richard J. Kovach
Lena Mantle
Greg Meyer
Ryan Kind

SIGNATURE INSTRUCTIONS:

Presentment waived; signature requested.

EXHIBIT INSTRUCTIONS:

None marked.

I N D E X

Direct Examination by Mr. Wolski

3

1 ALAN J. BAX, being first duly sworn, testified as
2 follows:

3 DIRECT EXAMINATION BY MR. WOLSKI:

4 Q. Welcome, Mr. Bax. I think what we should
5 first do is go around the room to get everyone's
6 name who is in attendance on the record, and if you
7 could state your full name and address?

8 A. It's Alan John Bax, Missouri Public
9 Service Commission, P.O. Box 360, Jefferson City,
10 Missouri 65102.

11 Q. Okay. And give the names of everybody
12 else.

13 MR. DOTTHEIM: Steven Dottheim, Staff of
14 the Missouri Public Service Commission, Post Office
15 Box 360 --

16 MR. WOLSKI: We don't need that. We know
17 where to find you.

18 MR. DOTTHEIM: All right.

19 MS. MANTLE: I'm Lena Mantle, with the PSC
20 Staff.

21 MR. MEYER: Greg Meyer, with the PSC
22 Staff.

23 MR. KIND: Ryan Kind, with the Office of
24 Public Counsel.

25 MR. KOVACH: Richard Kovach, with Ameren

1 Services.

2 MR. WOLSKI: And I'm Victor Wolski, with
3 Cooper and Kirk. We represent Ameren.

4 BY MR. WOLSKI:

5 Q. Now, I take it Mr. Dottheim is
6 representing you today? He's your counsel today?

7 A. Uh-huh.

8 Q. Have you ever been deposed before?

9 A. No.

10 Q. Well, then just to make sure that there's
11 no misunderstanding on what we're doing, I'll go
12 through and explain a little bit of the ground
13 rules for what we're doing here, just to make sure
14 that you understand since this is your first
15 deposition.

16 The deposition is a procedure for taking
17 your testimony under oath in connection with a
18 pending legal action. And even though we're here
19 today in an informal setting here in the conference
20 room in your offices, your testimony is being given
21 under penalty of perjury just as if you were
22 testifying in a court of law. Do you understand
23 that?

24 A. Yes.

25 Q. As you can see, the court reporter is

1 taking down everything that's being said during the
2 course of the deposition. And after the
3 deposition, she will prepare a written transcript
4 of the deposition, which you can read and sign and
5 that will be testimony in this case. Do you
6 understand that?

7 A. Yes.

8 Q. And I will be asking you questions in this
9 deposition, and your counsel, Mr. Dottheim,
10 occasionally might or frequently, depending on the
11 case, might object to the form of the question that
12 I pose just for the purposes of getting an
13 objection on the record, but you are still to
14 answer the question that I ask unless Mr. Dottheim
15 instructs you not to answer that. Do you
16 understand that?

17 A. Yes.

18 Q. Okay. And please feel free if you don't
19 understand my question, to ask for a
20 clarification. You can also ask, if you want, the
21 court reporter to read back the question. If you
22 don't ask for a clarification, I'll assume that you
23 understand the question as it was phrased. Do you
24 understand that?

25 A. Yes.

1 Q. Mr. Bax, there may be times when you don't
2 know an exact answer to one of my questions, but
3 you have some information on the subject where you
4 can make some reasonable approximation or estimate,
5 and if that's the case, please provide the
6 information that you do have; is that clear?

7 A. Yes.

8 Q. And a few mechanical issues before we
9 start the real questions, the court reporter can't
10 transcribe two people talking at the same time, so
11 it's important that you wait until I finish my
12 question before you attempt to answer it. And I'll
13 also endeavor to not interrupt your answer with the
14 next question until you're finished, so we should
15 work to try to avoid talking over each other.

16 Also the court reporter can't transcribe
17 non-verbal responses, such as a nod or shake of the
18 head, so that it's important that you give a verbal
19 response to all of my questions. Do you understand
20 those instructions?

21 A. Yes.

22 Q. That's when you're suppose to just nod.

23 A. Oh, I'm supposed to just nod. Okay.

24 Q. Okay. Now, a few questions that we ask
25 all witnesses, so don't be offended. Is there any

1 reason at all why you would not be able to give
2 truthful and accurate testimony to the best of your
3 recollection at today's deposition?

4 A. No.

5 Q. Do you have any medical condition or
6 problems that might interfere with your ability to
7 give truthful and accurate testimony at today's
8 deposition?

9 A. No.

10 Q. Are you currently taking any drugs or
11 other medication that might interfere with your
12 ability to give truthful and accurate testimony at
13 today's deposition?

14 A. No.

15 Q. What steps have you taken to prepare for
16 today's deposition? Could you explain what you did
17 in preparation?

18 A. In preparation for today's deposition, I
19 reviewed the documents in the case --

20 Q. And that would be?

21 A. -- for my testimony.

22 Q. And which documents do you recall
23 reviewing?

24 A. My review -- my direct testimony and a
25 number of the data requests that I sought.

1 Q. Those are the ones that you requested?
2 A. Yes.
3 Q. Did you review any other documents?
4 A. Did I review any other documents?
5 Q. In addition to your prefiled testimony and
6 the data requests that you had submitted, and I
7 presume the responses to the data requests?
8 A. I reviewed other testimony I had written.
9 Q. Okay. And that was for other cases or --
10 A. Yes.
11 Q. Which cases do you recall the testimony
12 was for?
13 A. I reviewed my testimony on the rate case
14 for the Empire District Electric Company.
15 Q. What were the subjects of that particular
16 testimony? What subjects did you cover? Was that
17 a jurisdictional allocator and system energy
18 losses?
19 A. Yes.
20 Q. And was there any other testimony that you
21 reviewed prior to the deposition?
22 A. No.
23 Q. And did you confer with anyone to prepare
24 for the deposition?
25 A. Yes. I conferred with general counsel.

1 Q. Okay. Anybody else?

2 A. And with Lena Mantle and Greg Meyer.

3 Q. Okay. And putting aside discussions you
4 would have had with counsel, were your discussions
5 with Ms. Mantle pertaining to the substance of your
6 testimony?

7 A. Yes.

8 Q. And would the same thing be true with
9 Mr. Meyer?

10 A. Yes.

11 Q. And did they have any substantive comments
12 concerning the items in your testimony concerning
13 your preparation for this deposition?

14 A. Substantive comments?

15 Q. Yes. Did they make any -- in preparing
16 you for the deposition, did they suggest there was
17 anything wrong in your testimony?

18 A. No.

19 Q. And did they provide you guidance for this
20 deposition?

21 A. Guidance?

22 Q. Yes.

23 A. Yes.

24 Q. What precisely did you confer with
25 Ms. Mantle about?

1 A. Since I had never been deposed before,
2 they offered some -- they offered some advice from
3 their experience on

4 Q. Okay. So it basically dealt with what
5 it's like to be deposed and what sort of questions
6 to expect, things like that?

7 A. Yes.

8 Q. Did you expect that question?

9 And have you done anything else to prepare
10 for the deposition today other than reviewing the
11 documents that you mentioned and conferring with
12 counsel and conferring with Mr. Meyer and
13 Ms. Mantle?

14 A. No.

15 Q. And your current position with the Public
16 Service Commission Staff is?

17 A. Utility Engineering Specialist III, Energy
18 Department.

19 Q. And how long have you been in that
20 position?

21 A. Two and a half years.

22 Q. What other jobs have you held since
23 college graduation?

24 A. I was a Staff Engineer for the Empire
25 District Electric Company.

1 Q. And how long were you working for Empire
2 District Electric Company?

3 A. I worked there for three years.

4 Q. Three years. What type of work did you do
5 there?

6 A. I developed distribution, construction
7 standards for the most part.

8 Q. And what other responsibilities did you
9 have?

10 A. Worked on acquiring a mapping system.

11 Q. Any other responsibilities you can recall?

12 A. Those were the main ones.

13 Q. And the mapping system, can you explain
14 what that was?

15 A. A geographical information system. It was
16 a method of premise location.

17 Q. Did any of your work at Empire District
18 concern system losses?

19 A. No.

20 Q. And did any of your work at Empire
21 District involve jurisdictional allocation factors?

22 A. No.

23 Q. Are you aware of the total size of the
24 revenue reduction as proposed by the Staff in this
25 case?

1 A. Not exactly.

2 Q. Do you have some rough understanding of
3 what it is?

4 A. Yes.

5 Q. What would that be?

6 A. Somewhere in the -- it was between a range
7 of 200 to \$245 million.

8 Q. And do you know what the impact of that
9 reduction would be if it were adopted on UE's
10 rates?

11 A. No.

12 Q. Have you considered what the impact of
13 this revenue reduction would be on UE's ability to
14 make needed investments in the future?

15 A. No.

16 Q. Have you considered what the impact of
17 that revenue reduction would be on UE's ability to
18 invest i a new generation?

19 A. No.

20 Q. Or to invest in infrastructure?

21 A. No.

22 Q. Had you considered the impact of that
23 revenue reduction on Ameren UE's stock price?

24 A. No.

25 Q. Are you aware of the mergers and

1 acquisitions involving American Utilities over the
2 last few years?

3 A. Yes.

4 Q. And you know that Louisville Gas and
5 Electric had been taken over by a British company?

6 A. No, I did not know that.

7 Q. Did you consider whether the revenue
8 reduction proposed by Staff in this case would make
9 Ameren UE more vulnerable to a takeover bid?

10 A. No.

11 Q. And had you considered the impact of the
12 revenue reduction proposed by Staff on economic
13 development in the State of Missouri?

14 A. No.

15 Q. Now, is it your understanding that the
16 Public Service Commission has an obligation to set
17 rates that are just and reasonable?

18 A. Yes.

19 Q. Is the Public Service Commission obligated
20 to balance the interests of ratepayers, investors
21 and shareholders in a company and the public?

22 A. That is my understanding.

23 Q. Okay. And one purpose of your job as a
24 member of the Staff is to develop a recommendation
25 to the Commission that will be used in determining

1 the revenue requirement for Ameren UE?

2 A. Yes.

3 Q. Well, do you understand the term just and
4 reasonable to mean in a rate context?

5 A. All factors considered just and reasonable
6 takes in all factors, sort of a third-party
7 mentality neutral position.

8 Q. So you're saying it is an objective
9 evaluator of the factors?

10 A. Yes.

11 Q. What would the relevant factors be in
12 determining just and reasonable rates?

13 A. I don't know what -- certainly don't know
14 what the Commission might say just -- the factors
15 may very well be different in different
16 individuals.

17 Q. And would you have a -- as part of your
18 obligation in making recommendations to the
19 Commission to consider all the factors that are
20 involved in determining just and reasonable rates?

21 A. I'm not involved in the official
22 rate-making process here.

23 Q. So your role would be confined just to the
24 particular technical issues of your testimony?

25 A. Yes.

1 Q. And you wouldn't concern yourself with any
2 of the revenue impact of that?

3 A. No.

4 Q. Now, do you have a copy of the Staff's
5 response to the interrogatories that were --

6 A. Interrogatories?

7 Q. Yes. UE's First Set of Interrogatories.
8 Steve made it a big, fat document. It looks
9 thinner double sided. In this you are identified
10 as answering interrogatories 4 through 6 which
11 would make sense, because if I remember correctly,
12 interrogatories 4 through 6 dealt with your
13 testimony, but that would be on page 22 of the
14 Staff's response.

15 A. Yes.

16 Q. And you identified three people who
17 reviewed a draft of your testimony, Lena Mantle,
18 Greg Meyer and Denny Frey or Frey. Frey is it?

19 A. Frey.

20 Q. Frey. And Mr. Frey is an attorney?

21 A. Yes.

22 Q. And his review was legal review
23 essentially?

24 A. Yes.

25 Q. Putting Mr. Frey aside, do you recall what

1 Ms. Mantle did in reviewing the draft of your
2 testimony?

3 A. Not exactly.

4 Q. Okay. She's also identified as
5 participating or contributing to the preparation of
6 the testimony. Do you recall what she did to
7 prepare or to participate or contribute to the
8 preparation of the testimony?

9 A. As I recall she provided words and phrases
10 to describe the ideas that were presented.

11 Q. Did she offer any substantive changes to
12 the testimony, changes to numbers or to the
13 methodology that was included?

14 A. No.

15 Q. And Greg Meyer, who also reviewed a draft
16 of the testimony and participated or contributed to
17 the preparation, do you recall what contribution he
18 made after reviewing the testimony?

19 A. It would have been similar.

20 Q. Word changes?

21 A. Yes.

22 Q. But no change to any of the methodology or
23 the numbers?

24 A. No.

25 Q. And John Cassidy is also listed as having

1 participated in or contributed to the preparation
2 of your testimony?

3 A. Yes.

4 Q. Was his participation limited to the
5 response in interrogatory No. 6, providing a copy
6 of the data request?

7 A. Yes.

8 Q. And he didn't do anything further than
9 that?

10 A. No.

11 Q. And you also identified in the response to
12 the interrogatories as having assisted Mr. Bender
13 in answering numbers 7, 8 and 9, which deal with
14 Mr. Bender's testimony and review and participation
15 in it. Do you recall how you may have assisted in
16 the response to No. 7?

17 MR. DOTTHEIM: Mr. Wolski, could you
18 specifically point out to Mr. Bax where it's
19 indicated that he assisted Mr. Bender on 7, 8 and
20 9?

21 MR. WOLSKI: Certainly.

22 MR. DOTTHEIM: Thank you.

23 BY MR. WOLSKI:

24 Q. On page 13 of the Staff's responses, in
25 response to No. 2, which is, Identify each person

1 making or assisting with your responses to these
2 interrogatories. If you go down the chart for
3 No. 7, 8 and 9, you were among the people that were
4 listed in the second column, which is assisting
5 response.

6 A. So would you repeat the --

7 Q. I guess I was just wondering how you
8 assisted the response to No. 7?

9 A. Mr. Bender and I discussed the information
10 that was available in the 240 20.080 data that
11 Ameren supplies on a monthly basis as a PSC
12 requirement.

13 Q. And for No. 8 and for No. 9, was that how
14 you assisted? Does the same answer hold true for
15 the response to No. 8 and No. 9?

16 A. Yes.

17 Q. And also if you turn back to the chart --
18 actually, we'll go to page 18 of the Staff
19 response, and you're listed in the second -- in the
20 column to the right, among the people who assisted
21 in the response to No. 89, 90, 91 and 92 that were
22 answered by Mr. Bender. So if we could turn first
23 to No. 89, your response to 89, which begins on
24 page 85.

25 Now, looking at the Staff's response to

1 interrogatory No. 89, do you recall how you
2 assisted in the answer to this -- or how you
3 assisted in making this response?

4 A. In this response the -- I did not make a
5 determination in how Mr. Bender responded there.

6 Q. So you might have discussed the real time
7 production cost model with him?

8 A. The real time production cost model has an
9 input information from the 20.080 data as
10 previously stated, and that would have been my
11 contribution if Mr. Bender had had questions about
12 that.

13 Q. So you supplied data that was used for
14 that?

15 A. Yes.

16 Q. And for No. 90, the response to No. 90,
17 which is on the next page, do you recall in what
18 way you might have assisted in that response? It
19 concerns the term net purchased power.

20 A. I do not recall discussing this term with
21 Mr. Bender.

22 Q. And the response to 91, which concerns the
23 term net power purchases, do you recall whether
24 you -- or do you recall now what you might have
25 done to assist this response?

1 A. No, I do not.

2 Q. And No. 92, the response concerning the
3 price of emergency purchased energy available from
4 the testimony of Mr. Bender, do you recall how you
5 might have assisted in this?

6 A. I do not know how he determined the use of
7 inputting the highest price plus 10 percent.

8 Q. Now, you were also listed as having
9 assisted Mr. Bender in the responses 103, 104, 105
10 and 106. If we could turn to response No. 103, and
11 this concerns how the generation unit specific data
12 was utilized in the real time production cost
13 model, and do you recall how you may have assisted
14 in the response to interrogatory 103?

15 A. I recall discussing with him specific data
16 of Ameren -- of Ameren UE's plants, but --

17 Q. Do you recall what category the data was
18 from or what the data concerned?

19 A. The data was referred to capacity of the
20 units, ratings. Nothing that would -- and, again,
21 those were, as I understand it, direct inputs to
22 the end of the model and that's . . .

23 Q. So you supplied data that was input
24 directly into this model?

25 A. That's my understanding.

1 Q. And for No. 104, the response to
2 interrogatory No. 104, which references the method
3 of utilizing the data referred to in interrogatory
4 No. 103 and what documents would be relied on, do
5 you recall assisting in No. 104?

6 A. No.

7 Q. And the response to No. 105, which
8 concerns the use of unit maintenance history data
9 in the real time production cost model, do you
10 recall how you assisted in the response to
11 interrogatory No. 105?

12 A. This information is also supplied in the
13 20.080 data that was before mentioned, and we
14 reviewed this, but I don't know how he set up the
15 model parameters. We reviewed the information that
16 was supplied in the 20.080 data.

17 Q. So you had supplied data to Mr. Bender for
18 use in the model, but you don't know exactly how
19 that was used in the model?

20 A. No. I mean, we discussed the 20.080 data
21 supplied by the Company.

22 Q. And you reviewed the data?

23 A. We discussed that data, but I do not know
24 how he used that in the model.

25 Q. No. 106 refers to documents relied upon

1 for the previous response, do you recall anything
2 to do with that or were you just pulled in as one
3 of the usual suspects in assisting this sort of
4 topic?

5 A. There's nothing further that I added
6 there, only that we reviewed that 20.080 data
7 again.

8 Q. And you said you don't know how the
9 parameter or the models were employed; is that --

10 A. No, I do not.

11 Q. So you wouldn't know why planned outage
12 hours were averaged over five years?

13 A. No, I don't.

14 Q. Now, is this the second time that you had
15 provided testimony or participated in testimony
16 that relates to jurisdictional allocation?

17 A. Yes.

18 Q. And the previous one would have been the
19 Empire District case?

20 A. Yes.

21 Q. And the same thing is true for system
22 energy losses?

23 A. That I provided testimony for, yes.

24 Q. Had you worked on other people's testimony
25 involving jurisdictional allocation factors?

1 A. No.

2 Q. And prior to the Empire District case, did
3 you participate in anyone else's testimony dealing
4 with system energy losses?

5 A. Not with anyone's testimony.

6 Q. And, again, how long have you been at the
7 Commission Staff? How long have you been a member
8 of the Commission Staff?

9 A. Since 30 August '99.

10 Q. And so the Empire District case would have
11 been your first assignment concerning system energy
12 losses?

13 A. That I've supplied testimony for.

14 Q. What work had you done in the area of
15 system energy losses prior to that?

16 A. I had looked at St. Joseph Light and
17 Power.

18 Q. And when was that?

19 A. In the fall of '99. I don't recall
20 exactly.

21 Q. And do you recall who the Staff witness
22 was that -- was that a case in which -- was that
23 actually a rate case or --

24 A. No. I was not -- I don't recall. I was
25 asked to look at losses and there was -- it was

1 decided that there was no need for testimony.

2 Q. Was that your first introduction to the
3 concept of system energy losses?

4 A. Not to the concept, no.

5 Q. Had you studied that before as an
6 electrical engineer?

7 A. Yes.

8 Q. Jurisdictional allocation factors, what
9 was the first work you did concerning those while
10 you were employed with the Staff?

11 A. That would have been with the Empire rate
12 case.

13 Q. And had you been familiar with the
14 concepts involved in jurisdictional allocation
15 prior to that assignment?

16 A. The concept, yes.

17 Q. Was that something you would have studied
18 while you were doing your electrical engineer and
19 course work?

20 A. Yes.

21 Q. And who specifically gave you the
22 assignment in this case to do system energy losses
23 and the Missouri jurisdictional allocation factor,
24 do you recall?

25 A. As I recall Dr. Eve Lissik.

1 Q. Was the assignment outlined to you before
2 you performed it?

3 A. No.

4 Q. When you were first assigned the system
5 energy loss factor item for this case, what steps
6 did you take to prepare for your testimony?

7 A. The supply of -- to ask the company for
8 data, reviewed data that other Staff witnesses,
9 John Cassidy specifically, had received.

10 Q. So to perform the system energy loss
11 calculation then, you asked for all the data that
12 you needed that you didn't have from other sources
13 such as Mr. Cassidy?

14 A. Right.

15 Q. Did you consult any prior testimony of
16 Staff witnesses concerning the system energy losses
17 topic in order to learn how to perform this
18 calculation?

19 A. Since I had looked at losses on the
20 St. Joe Light and Power system, no, I had already
21 reviewed documents.

22 Q. And do you recall which documents you
23 reviewed when you first looked at the issue for the
24 St. Joe Power and Light matter?

25 A. No, I do not recall specifically.

1 Q. Now, what is your recommended system
2 energy loss factor for Ameren?

3 A. Well, that is a proprietary -- that has
4 been asked by the Company to be held proprietary.

5 Q. What we'll do in this matter is -- and the
6 other depositions is that the transcript will be
7 confidential subject to the protective order, and
8 we will -- I suppose we will review the transcript
9 when we receive it and release information that is
10 not proprietary and keep the proprietary
11 information sealed, so you may testify as to the
12 proprietary information.

13 MR. DOTTHEIM: Please proceed.

14 BY MR. WOLSKI:

15 Q. It's good of you to remember that.
16 Thanks.

17 A. On page 3 on my direct testimony, I
18 calculated -- in line 22, have calculated the
19 system energy loss percentage to be 7.016 percent.

20 Q. Okay. And could you explain for those of
21 us who aren't electrical engineers what this number
22 means?

23 A. Page 2 I have the direct testimony, line
24 15 have defined system energy losses as the energy
25 losses that occur in the electrical equipment

1 transmission and distribution lines, transformers,
2 et cetera, in the Company system between generating
3 sources and customers' meters.

4 Q. So you look at the amount of electricity
5 that's generated, then you look at the amount of
6 electricity that is registered in the meters and
7 the differences of what the system energy loss
8 would be?

9 THE WITNESS: Could you read that back for
10 me?

11 THE REPORTER: Sure.

12 (THE LAST QUESTION WAS READ BACK BY THE
13 REPORTER.)

14 THE WITNESS: In part I have defined
15 system energy losses on page 3 of the testimony as
16 being the difference between what is generated and
17 what is the net interchange.

18 BY MR. WOLSKI:

19 Q. So you also then factor in --

20 A. So I factor in --

21 Q. -- how much energy, whether there would be
22 energy that's sold off to the system or whether
23 there's energy that's acquired from outside to it?

24 A. Yes.

25 Q. Now, the number that you come up with here

1 for the system energy loss percentage, that number
2 is an Ameren system average energy loss factor,
3 correct?

4 A. Yes.

5 Q. Now, is this system loss factor the same
6 for every customer that would be served by Ameren?

7 A. This is a -- that wouldn't necessarily be
8 true, no.

9 Q. That's because system energy losses would
10 be different for various customer classes?

11 A. Potentially.

12 Q. What would be the factors that would
13 determine how much system energy loss would be
14 associated with a particular customer class?

15 A. There are primary customers.

16 Q. Primary customers being ones that are
17 receiving at higher voltage?

18 A. Yes.

19 Q. So there are fewer step-downs?

20 A. There are fewer, yes.

21 Q. So you wouldn't have the energy loss that
22 occurs because of the transformers and the
23 step-down of the voltage?

24 A. Yes.

25 Q. And you would have shorter lines to them,

1 so you wouldn't have the loss that comes off of the
2 line length as well?

3 A. Most likely.

4 Q. And so for the primary customers that
5 receive the electricity at the higher voltage, they
6 would have lower system energy losses?

7 A. Yes.

8 Q. So that then the cost of energy service
9 for them would be lower because of the lower
10 losses?

11 A. There are other factors involved in
12 determination of rates other than system energy
13 losses.

14 Q. But as far as system energy losses would
15 be a factor in the cost, there would be less cost
16 in providing the higher voltage customers energy?

17 A. I don't know. Not necessarily.

18 Q. Because of the lack of -- because there
19 are fewer step-downs and the other factors that you
20 had stated relating to the primary customers, the
21 energy losses in providing electricity to the
22 primary customers would be lower than the overall
23 average factor that you have calculated for Ameren
24 system as a whole, correct?

25 A. Please repeat that.

1 Q. I'm not sure that I could. Let me see if
2 I can rephrase it.

3 Because the primary customers would have
4 less energy -- system energy losses compared to
5 customers that have more step-downs and are
6 receiving lower voltage of electricity, that would
7 mean that the energy loss factor associated with
8 those customers would be lower than the average
9 number that you calculated, correct?

10 A. That may not necessarily be involved in
11 their rates, but I would anticipate that there
12 would be less losses to them, yes.

13 Q. And what are the other classes of
14 electricity customers other than primary?

15 A. There are what I would term secondary
16 customers.

17 Q. And secondary customers would be
18 medium-voltage recipients? They would be receiving
19 the electricity that's been stepped down some in
20 the process of distribution so that they would be
21 receiving it at a lower voltage than the primary
22 customers?

23 A. Well, you would have residential customers
24 or . . .

25 Q. And residential customers would be

1 receiving at the lowest voltage of all the
2 customers on the system?

3 A. Primarily.

4 Q. So that the residential customers then
5 would have the largest step-down in voltage from
6 the energy -- the voltage of the energy at the time
7 it was generated to the time that it's -- to the
8 point where it's received by the user?

9 A. I'm sorry. I --

10 Q. Of all the customers of electricity,
11 because the residential customers are receiving
12 electricity at the lowest voltage compared to other
13 classes, there would be the greatest number of
14 step-downs to bring the electricity voltage down
15 from the high point or the high voltage it was at
16 when it was generated to the low voltage that it's
17 at when it's received by the user, correct?

18 A. For the most part.

19 Q. So that there would be more system energy
20 losses associated with the residential users
21 because of the number of step-downs and
22 transformers that the energy has to go through on
23 its route to the user?

24 A. Yes.

25 Q. And also after it's stepped down, you also

1 have the losses that would be associated with the
2 lines bringing the electricity to the user's
3 location?

4 A. Yes.

5 Q. So one would expect then that the
6 residential users would have a higher energy loss
7 factor compared to the primary users?

8 A. Yes.

9 Q. And there would also then be a higher
10 energy loss factor for the residential users than
11 an average number that was calculated across all
12 classes, correct?

13 A. Not necessarily.

14 Q. But the average is calculated looking at
15 the losses for all classes of customers, correct?

16 A. You're asking if the -- you're asking if
17 the system energy loss is higher for a secondary
18 customer, yes.

19 Q. Okay. And would be higher than the
20 average system energy loss factor that you had
21 calculated using data for all customer classes? It
22 would be higher for the residential compared to
23 that number?

24 A. This 7.016 percent represents a number of
25 a loss that may -- well, the secondary customer

1 will have a -- there's more equipment going to the
2 customer, so thus, yes, the loss will be
3 necessarily higher.

4 Q. Okay. And if there were classes of
5 customers in between the high-voltage primary users
6 and the low-voltage residential users, say,
7 business establishments, shopping malls, stores, if
8 they were receiving their electricity at medium
9 voltage compared to the primary and compared to the
10 residential, there would be less equipment and less
11 step-downs for the medium-voltage users than there
12 would be for the low-voltage residential?

13 A. Yes.

14 Q. So that the losses of the middle-voltage
15 customers would be -- the system energy losses
16 associated with their service would be lower than
17 the losses for the residential class, correct?

18 A. I'm not in rate design, but I'd say --

19 Q. I mean, just dealing with the energy
20 losses.

21 A. Theoretically, yes.

22 Q. And the reason why the system energy
23 losses would be less for the medium-voltage
24 recipients that we've described compared to the
25 residential is because there are fewer step-downs

1 and thus there's -- you don't have the same amount
2 of loss associated with the extra equipment that is
3 used to bring the voltage down even further to the
4 residential?

5 A. Yes.

6 Q. Now, you did graduate work in electrical
7 engineering, correct, or not?

8 A. I did not.

9 Q. Did not. You studied electrical
10 engineering in school, and I think you said you had
11 studied system energy losses while in school?

12 A. Yes.

13 Q. And can the 7.016 percent number that
14 you've calculated for the annual average system
15 energy loss percentage in this case, can that
16 system energy loss factor be applied to adjust
17 hourly loads?

18 A. Can that be used to adjust hourly loads, I
19 don't know.

20 Q. Now, isn't it true that losses in any hour
21 will vary with the square of the hourly load?

22 A. Would you please repeat that?

23 THE REPORTER: Sure.

24 (THE LAST QUESTION WAS READ BACK BY THE
25 REPORTER.)

1 THE WITNESS: The square of the hourly
2 load, it's one of the factors in losses is the
3 square of current.

4 BY MR. WOLSKI:

5 Q. Well, doesn't it mean then that your
6 average loss factor that you calculated wouldn't be
7 an accurate estimate of the energy loss for every
8 hour in a year?

9 A. Well, the losses would vary.

10 Q. So sometimes the losses would be higher
11 than the 7 percent, the 7.016 percent number?

12 A. Potentially.

13 Q. And sometimes they would be lower?

14 A. Yes.

15 Q. And as the hourly load goes up, the
16 losses, the loss percentage would be higher,
17 correct?

18 A. You're asking if the loss factor
19 necessarily increases with an increase in load and
20 with the -- in most cases.

21 Q. Which Staff witnesses used the system
22 energy loss percentage that you recommended in this
23 case, do you recall?

24 A. On page 4, I provided the 7.016 percent to
25 Staff witness, Lena Mantle.

1 Q. Are there any other Staff witnesses that
2 would have used that number?

3 A. Not that I know of.

4 Q. And do you know how Ms. Mantle used the
5 loss factor that you provided?

6 A. No.

7 MR. DOTTHEIM: Mr. Wolski, whenever, in
8 the next minutes or so if there's an opportune time
9 to take a short break?

10 MR. WOLSKI: Maybe in a couple of minutes.

11 MR. DOTTHEIM: Okay. Fine.

12 BY MR. WOLSKI:

13 Q. Do you know if the system energy loss
14 factor that you provided was used in calculations
15 for the model to cover all hours of the year?

16 A. No, I do not know how she used it.

17 Q. Would you know if that loss factor was
18 used in calculations concerning every customer
19 class?

20 A. No.

21 MR. WOLSKI: Why don't we take a break
22 right now?

23 MR. DOTTHEIM: Thank you.

24 (A BREAK WAS TAKEN.)

25 BY MR. WOLSKI:

1 Q. Now, on page 4 of your testimony, you
2 begin your analysis of the jurisdictional
3 allocations issue, correct?

4 A. Yes.

5 Q. And you identify in that page the FERC,
6 F-E-R-C, generation and transmission accounts?

7 A. Yes.

8 Q. Now, are jurisdictional allocators used to
9 apportion these accounts to jurisdiction?

10 A. Are jurisdiction allocations -- rephrase
11 that, please.

12 Q. Are jurisdictional allocators or
13 jurisdictional allocation numbers used to apportion
14 these FERC accounts that you've identified to
15 different jurisdictions?

16 A. Well, to apportion the cost of the
17 generation of transmission to assets that are in
18 part included in these generation and transmission
19 USOA accounts.

20 Q. And could you identify the Ameren
21 jurisdictions that are applicable to our particular
22 case?

23 A. Identified on page 7, top of page 7 of my
24 direct testimony. Missouri retail, Illinois retail
25 and Missouri wholesale.

1 Q. On page 5 of your prefiled testimony on
2 line 22, you use the phrase "slight percentage
3 variations", and could you explain what you mean by
4 a slight percentage variation?

5 A. In reference to line 22 of slight
6 percentage variations, in comparing it to a -- what
7 I term a needle peak, which is a rather -- which is
8 a rather large variation.

9 Q. Is there any particular number that you
10 would associate with the term slight to determine
11 how much of a variation would be slight and how
12 much would not be slight?

13 A. On a case-by-case basis, no, I don't have
14 any -- I don't have anything particularly on it,
15 no.

16 Q. In the course of your study in electrical
17 engineering when you were in school, could you --
18 you had said that you had received training that
19 related to the determination of jurisdictional
20 allocations; is that correct?

21 A. There was the discussion, yes.

22 Q. Was that in one class or in more than one
23 class, do you recall?

24 A. No.

25 Q. And do you recall whether a particular

1 methodology for determining jurisdictional
2 allocation factors was advocated or taught when you
3 were in school?

4 A. No.

5 Q. And if I understand correctly what you had
6 said in response to a question a few back, is it my
7 understanding that you don't have a rule of thumb
8 on how much of a variation is a slight variation
9 when you're considering monthly peaks, you have to
10 judge it by each particular case?

11 A. I take everything on a case-by-case basis,
12 yes.

13 Q. And in general terms, you have no sense of
14 what magnitude of variation in monthly peaks would
15 be considered a slight variation?

16 A. I'm looking for -- I'm looking for
17 something that is greater than 40 percent.

18 Q. So greater than 40 percent would be
19 slight -- less than 40 percent variation would be a
20 slight variation?

21 A. It all depends on the particular analysis.

22 Q. Is there any particular engineering
23 treatise that you're aware of that would define a
24 slight variation as one that was 40 percent or
25 smaller?

1 A. Not in particular.

2 Q. Where would the 40 percent range come
3 from? Where would the number 40 percent come from
4 in your mind in determining how much of a variation
5 is slight and how much of a variation would be
6 greater than slight?

7 A. There's no specific reference that I
8 recall, if I understand what you're asking.

9 Q. Would the 40 percent difference in
10 revenues of a utility be a slight variation?

11 A. There are other factors to consider.

12 Q. Would you consider a revenue reduction on
13 the magnitude of 40 percent of a utility's revenues
14 to be a slight reduction?

15 A. It would vary on -- I can't comment on
16 that without other -- without knowing other
17 parameters.

18 Q. So it's possible that a 40 percent
19 reduction in the revenues of a -- if an electric
20 utility could be a slight reduction in revenues?

21 A. Well, depending on what -- depending on
22 what we're discussing.

23 Q. And would a 40 percent increase in rates
24 charged to customers be a slight increase?

25 A. Depending on the discussion, it may not

1 amount to much.

2 Q. Okay. When you're looking at the monthly
3 peaks for a particular case, what determines the
4 percentage variation that you would consider to be
5 slight or not slight with reference to that
6 particular data, as you said you did it on a
7 case-by-case basis? So in a particular case, what
8 do you look for to determine how much variation
9 there could be between monthly peaks and still be
10 considered slight?

11 A. You're asking what factors I would
12 determine -- I would utilize to determine variation
13 in monthly peaks?

14 Q. No. What factors you would use to
15 determine if the magnitude of the variation in
16 monthly peaks was slight or not so slight?

17 A. I'm generally looking for as on line 20 on
18 page 5, that I'm looking for a -- what I would
19 consider a distinctive peak over a particular
20 month, which would cause me to consider using a --
21 possibly considering using a single-coincident
22 peak.

23 Q. Are the only two options a
24 single-coincident peak or one-CP method and a 12-CP
25 method?

1 A. Not necessarily.

2 Q. So that instead of a one-distinctive peak
3 that would recommend using a one-CP method, you
4 could have several months in a row that are at
5 peak, a high peak compared to the other peaks
6 throughout the year, that would then justify using,
7 say, three- or a four-CP method if there are three
8 or four peaks that are high relative to the others?

9 A. In the past it has been considered, yes.

10 Q. Are you familiar with the statistical
11 tests that FERC uses to determine which CP to use
12 for jurisdictional allocation purposes?

13 A. Not off the top of my head, no.

14 Q. Are you familiar with the on-and-off peak
15 test that FERC uses?

16 A. The on-and-off peak test --

17 Q. Yes.

18 A. -- that FERC uses? There are different
19 analyses used depending on whether you're on-peak
20 and off-peak purposes.

21 Q. Are you familiar with the low-to-annual
22 peak test that FERC uses which compares a ratio of
23 the low month to the high month?

24 A. No.

25 Q. Are you familiar with the low-to-annual

1 peak test that FERC uses in which they use a ratio
2 of the 12-CP figure to the one-CP figure?

3 A. I don't recall the name of that document,
4 no.

5 Q. Are you familiar with FERC decisions in
6 which the jurisdictional allocation number is
7 determined?

8 A. Could you repeat that, please?

9 Q. Are you familiar with FERC decisions in
10 which the jurisdictional allocation number is
11 determined for the utility being considered?

12 A. I'm not familiar with individual cases.

13 Q. Are you familiar with any of the
14 methodologies employed by FERC to determine the
15 jurisdictional allocation factor?

16 A. I haven't looked at any FERC cases.

17 Q. So you haven't consulted FERC methodology
18 or applied FERC's methodology for purposes of this
19 case?

20 A. I have not looked at FERC -- I have not
21 looked at FERC cases.

22 Q. Now, in your testimony, Schedule 3 of your
23 testimony is a graph that portrays UE's monthly
24 system peaks from 1996 through 2000?

25 A. Yes.

1 Q. And the data that is used for this graph
2 appears on Schedule 2?

3 A. Yes.

4 Q. On page 6 of your prefiled testimony --

5 A. Page 6.

6 Q. Page 6, yes. You acknowledge that the
7 highest system peak for Ameren UE is during the
8 summer months, correct?

9 A. Yes.

10 Q. But you also term the winter months as
11 having a relatively high-system peak?

12 A. Yes.

13 Q. Which turning to the Schedule 3, what are
14 the relatively high-system peaks that you are
15 describing for winter months? Could you identify
16 those?

17 A. Identify December 2000 and January of '97.

18 Q. Okay. And December 2000 is the one that
19 is slightly above .8 on the graph?

20 A. Yes.

21 Q. And .8 represents a ratio, I believe, of
22 the peak for that month compared to the peak for
23 the highest month; is that how you derived the Y
24 axis?

25 A. On page 6, line 6, Schedule 3 attached to

1 this direct testimony represents a load profile of
2 each month's points peak as a percentage of the
3 corresponding annual system peak.

4 Q. Does that mean that you're looking at the
5 peak for that month as a percentage of the peak for
6 the highest month?

7 A. I'm looking at the individual months
8 coincident peak as a percentage of the
9 corresponding system peak month.

10 Q. Looking at the 2000 line, if you can
11 actually call it a line. I'm not sure what you
12 call these things. A line is usually straight.
13 The graphic position of the data for the year 2000
14 on Schedule 3 for December of 2000 it's slightly
15 above .8, and the peak for that year appears to be
16 September and that's given a No. 1, correct?

17 A. Well, the peak in 2000 is August.

18 Q. I'm sorry. I'm corrected. The peak in
19 August is given a No. 1 on the Y axis and
20 December of 2000 is slightly above .8. I don't
21 know if that is about .81 or thereabouts. So the
22 difference between the December figure that you
23 have here and the highest peak for year 2000 is a
24 little less than .2, correct?

25 A. Between August --

1 Q. .19 or something?

2 A. The ratio of August peaks to December
3 peaks, the difference is slightly less than .2,
4 yes.

5 Q. And .2 as a percentage of .8, which is
6 roughly what the December number is or even .19 is
7 a percentage of .18 -- or .81. I'm sorry. .19 is
8 a percentage of .81 is about -- it's a little less
9 than a quarter, 24 percent or thereabouts?

10 The difference between the high peak
11 number and the December number as a percentage of
12 the December number would be about 24 percent or
13 thereabouts?

14 A. The difference between 81 percent and
15 effectively 100?

16 Q. No. The difference between -- well, the
17 difference between 181 percent expressed as a
18 percentage of 81 percent? Perhaps it would be
19 easier if you looked at Schedule 2. Now, the
20 December load for 2000 --

21 A. December load for 2000.

22 Q. -- is 6,348 megawatts? It's probably more
23 than that. 6,348 and August of 2000 was the
24 highest peak. That was 7,837, correct?

25 A. Yes.

1 Q. So the difference is about 1,472, I guess;
2 is that . . .

3 A. 1,489.

4 Q. 1,489. 1,489. So that the August number
5 is about 24 percent higher than the December
6 number, roughly?

7 A. No. The ratio December to August is
8 slightly less than 20 percent.

9 Q. But how much higher is August relative to
10 December?

11 A. The ratio of December to August 6,348 to
12 7,837 is .81 or slightly -- so the variation would
13 be slightly less than 20 percent.

14 Q. That's because you're using August as your
15 starting point for your calculation. What if you
16 use December as the starting point for your
17 calculation?

18 A. If I used December --

19 Q. If December's number is your baseline, how
20 much higher is the highest peak in August?

21 A. 23.49 percent.

22 Q. Okay. And if we used the lowest peak in
23 2000, which is April -- I believe April is the
24 lowest peak for 2000, correct?

25 A. That's correct.

1 Q. If we use that as the baseline, how much
2 higher is the August peak compared to the April
3 peak?

4 A. April is a little less than 60 percent of
5 August in the year 2000.

6 Q. And the difference between August and
7 April, expressed as a percentage of April would be
8 what?

9 A. This is roughly -- I can't tell exactly
10 from this graph, but it's slightly less than 60
11 percent.

12 Q. Looking at Schedule 2 then, using April
13 2000 figure as the baseline, the 4,488, how much of
14 an increase over that is the August peak of 7,837?

15 A. No greater than 40.

16 Q. So that the increase from 4,488 to 7,837
17 is less than 40 percent?

18 A. No. I said it was a little greater than
19 40.

20 Q. Greater than 40. Well, the difference is
21 about -- the difference between 7,837 and 4,488 is
22 3,449; is it not? Is it 3,349?

23 A. 3,349.

24 Q. And 3,349 is what as a percentage of
25 4,488?

1 A. 3,349 divided by 4,488 probably . . .

2 Q. And you can use the calculator if you
3 prefer. Well, if we lopped off --

4 A. 3,349 divided by 4,488 is 74.6, roughly.

5 Q. 74.6. So using April as a baseline, the
6 August peak would be 74.6 percent higher than the
7 peak in April?

8 A. Using April as a baseline.

9 Q. Just like when you did the calculation
10 using December as a baseline, we came up with an
11 increase of 23.49 percent. So that the increase
12 from the December peak to the August peak, the
13 difference would be 23.49 percent using December as
14 the baseline?

15 A. The way you're looking at it.

16 Q. On Schedule 4 to your testimony --
17 previously we were looking at Schedule 2 and
18 Schedule 3 of your prefiled testimony. I'll turn
19 to Schedule 4. This is a representation of total
20 Ameren UE and UE Missouri monthly peaks, correct?

21 A. Missouri retail and system peak, yes,
22 AmerenUE.

23 Q. And is the schedule the basis for your 12
24 CP recommendation for AmerenUE or for UE Missouri
25 for purposes of this case?

1 A. In part, yes.

2 Q. What would be the data on this particular
3 schedule that you would rely on to reach the 12-CP
4 conclusion?

5 A. If you look at the ratio of the Missouri
6 retail load to system peak load, there's 2 1/2
7 percent difference in the ratios.

8 Q. Do you consider that to be a slight
9 variation?

10 A. I believe it would be in -- I do believe
11 that it is a -- fits into a definition of a slight
12 variation.

13 Q. And you said that was about a 2 percent
14 point difference or how much was the percentage
15 point difference you had said was the variation in
16 the ratios?

17 A. Roughly 2 1/2.

18 Q. 2 1/2.

19 A. 2 percent, 2 1/2 percent --

20 Q. So if your Missouri retail --

21 A. Difference --

22 Q. -- jurisdiction allocation of 89.61
23 percent were instead 91.21 percent, that would only
24 be a slight variation from the 89.61 percent
25 number?

1 A. If you're saying that if the monthly ratio
2 was -- if a monthly ratio of 91.6?

3 Q. Well, add the 25 to 89.6, so 92.1 percent
4 compared to 89.6 percent, the differences is only
5 2.5 percentage points, so that would be a slight
6 difference?

7 A. 89.61 is an average.

8 Q. Yes.

9 A. Looks like 89.61 is an average ratio of
10 the year 2000 of the given data, which had a --
11 with the range of values from 88.03 to 90.47.

12 Q. The highest ratio in this table for the
13 year 2000 in the last column the highest ratio is,
14 I believe, .9080? Or, no. I'm sorry. 9086 --

15 A. 9086.

16 Q. -- for July. And the lowest ratio looks
17 like it's the 8803 for March?

18 A. 8803.

19 Q. So that the difference between those are
20 2.-- or be .02 --

21 A. .0283.

22 Q. .0283 or 2.83 percent?

23 A. .0283.

24 Q. .0283.

25 Do you know how much of a difference a

1 spread of .0283 would mean for the revenue
2 requirement calculation --

3 A. No, I don't.

4 Q. -- in this case?

5 Would you think that's only a slight
6 difference?

7 A. I don't know as far as the revenue
8 requirement.

9 Q. If the ratio variation on Schedule 4 were
10 as high as 33 percent, would that still be a slight
11 variation? Well, I think earlier you said when we
12 were talking about variation and monthly peaks that
13 as high as 40 percent of a variation could still be
14 considered slight. I was wondering if a 40 percent
15 variation for this ratio would be considered
16 slight?

17 A. What would be the context of the . . .

18 Q. Well, if the ratio of Missouri retail load
19 to system peak load varied by as much as 40 percent
20 for the year 2000 and comparing different months
21 of, say, the month of July was 90 percent. It
22 was .90 and the month of February, it was .50, so
23 that would be a .40 difference. I'm wondering if
24 that's a slight variation since that would be a
25 slight variation -- 40 percent was a slight

1 variation for purposes of determining the --
2 comparing the high peak to other peaks?

3 A. Well, in one I was comparing -- in the
4 first case, I was comparing system peaks, and in
5 this case you're comparing -- you're doing a
6 different comparison, Missouri retail to system
7 peak.

8 Q. So there would be different magnitudes of
9 variation that would be considered slight because
10 of the different context?

11 A. Yes.

12 Q. And from the data on Schedule 4, you infer
13 that there were only slight monthly ratio
14 variations because the difference was -- I guess it
15 was .0283 between the highest and the lowest; is
16 that . . .

17 A. That's what it appears.

18 Q. And based on this data, you determine that
19 a 12-CP allocation methodology should be used for
20 determining the allocation factor?

21 A. In part, yes.

22 Q. But doesn't the data on Schedule 4 merely
23 indicate that Missouri loads tend to move with the
24 total UE system?

25 A. On page 6 I've said that Schedule 4

1 reflects -- on line 15 reflects the load attributed
2 to Missouri retail customers as a percentage of the
3 system peak load.

4 Q. So as the system peak moves the Missouri
5 load also moves? When it's higher, the Missouri
6 load is higher, and when it's lower, the Missouri
7 load is lower?

8 A. No. That's not -- as far as a percentage,
9 that's not necessarily true.

10 Q. Okay. And the ratios that are expressed
11 on Schedule 4, those are simply the monthly
12 Missouri allocators?

13 A. That is the ratio of the Missouri retail
14 load to the system peak load during the particular
15 month.

16 Q. Do you know if FERC uses monthly
17 allocators to determine appropriate allocation
18 methodology for any utility that it regulates?

19 A. I did not -- no, I don't know.

20 Q. On page 7 of your testimony, one of the
21 jurisdictions you identified is a FERC Customer
22 Group, isn't it?

23 A. Yes.

24 Q. That would be the Missouri wholesale?

25 A. Missouri wholesale.

1 Q. And did you consider how FERC would
2 allocate production and transmission costs to this
3 wholesale group for purposes of coming up with this
4 number?

5 A. No.

6 Q. You did not. Okay.

7 One of the documents that you produced in
8 response to a document request by Ameren was the
9 direct testimony of Eve Lissik that was filed in
10 the Empire District Electric Company case?

11 A. Yes.

12 Q. And you're familiar with that testimony?

13 Now, I believe you had said that you were
14 involved in the calculations that were embodied in
15 that testimony; is that accurate?

16 A. That's accurate.

17 Q. And are you familiar with the methodology
18 that was employed in that particular testimony to
19 determine the allocation factors?

20 A. Yes.

21 Q. And there's a statement on page 4 of this
22 testimony that -- the testimony of Eve Lissik in
23 the Empire District Electric Company case, Case No.
24 ER-2001-299. It says, FERC has historically
25 advocated utilizing either a one-CP or a 12-CP

1 methodology.

2 MR. DOTTHEIM: Mr. Wolski, could you
3 provide a copy of that document to Mr. Bax?

4 MR. WOLSKI: Certainly.

5 BY MR. WOLSKI:

6 Q. This was as it was printed out off of the
7 computer disk with a bates number added on the
8 bottom, but the document number on the bottom
9 wasn't on there, but everything else was printed
10 out of the file. And I was referring to lines 7
11 and 8 of page 4, FERC has historically advocated
12 utilizing either a one-CP or a 12-CP methodology.
13 Do you recall if you had anything to do with that
14 particular conclusion?

15 A. I don't recall, no.

16 Q. Do you know whether FERC has historically
17 advocated either a one-CP or a 12-CP methodology to
18 the exclusion of other CP methodologies?

19 A. Not to the exclusion of.

20 Q. So that it wouldn't be accurate to say
21 that FERC advocated utilizing either one or the
22 other, that there are additional CP methodologies
23 other than one CP or 12 CP that FERC has advocated
24 using?

25 A. Well, I don't recall this statement.

1 Q. But do you recall if FERC has advocated
2 using a methodology other than one CP or 12 CP?

3 A. Well, I haven't -- I did not review any
4 FERC documents, FERC cases for this proceeding.

5 MR. WOLSKI: Okay. Just take a one-minute
6 break.

7 MR. DOTTHEIM: Sure.

8 (OFF THE RECORD.)

9 BY MR. WOLSKI:

10 Q. Mr. Bax, did you consult any treatises or
11 textbooks or journal articles to determine what
12 methodology you would use to calculate the
13 jurisdictional allocation factor?

14 A. Any treatises?

15 Q. Or a textbook or journal article?

16 A. No.

17 Q. Where did you get the method that you
18 employed in this case to determine the
19 jurisdictional allocation factor?

20 A. In this proceeding where did I get the
21 methodology?

22 Q. Yes.

23 A. I obtained the data from information given
24 by AmerenUE and data requests and it was used in
25 the Empire case.

1 Q. So you used the methodology that was used
2 in the Empire case to determine how one would
3 calculate the jurisdiction allocation factor?

4 A. Well, I used that to support it.

5 Q. And in the Empire District case when you
6 were making the jurisdictional allocation
7 calculation, where did you get the methodology that
8 you used to calculate jurisdiction allocation for
9 that case?

10 A. When assigned the project, the -- when I
11 discussed this with Dr. Eve Lissik, as I recall,
12 that was in discussions with her that that was the
13 approach to take.

14 Q. So you used the approach that had been
15 employed by the Staff in the past?

16 A. Perhaps that was the -- that may have
17 entered into Dr. Eve Lissik's discussions.

18 Q. But all you're certain of is that you used
19 the approach that Dr. Lissik told you to follow?

20 A. In our discussions, that was the -- that
21 was the methodology that she recommended.

22 Q. And then you used that same methodology in
23 the AmerenUE case for your testimony?

24 A. Upon looking at the data that I received.

25 Q. And did you do any independent research to

1 verify that this methodology is the appropriate way
2 to determine the jurisdictional allocation factor
3 for a utility?

4 A. Did I do any research as to this was the
5 proper way of allocating?

6 Q. Correct.

7 A. Well, I had not reviewed any journals as
8 you had before mentioned. I would say that Dr. Eve
9 Lissik's recommendation was the main force behind
10 doing it in the Empire case. But given the
11 comparisons to the Empire case, I determined that
12 12 CP was plausible.

13 Q. And you based the decision to use 12 CP on
14 the methodology that had been recommended to you in
15 the Empire District case?

16 A. I used that as support. I based my
17 judgment on the -- I based my judgment on my
18 testimony on 4, 5 and 6.

19 Q. But how would you know, for instance, that
20 you had to compare the highest peak to another
21 relatively high peak to determine whether a 12 CP
22 would be the methodology to follow, 12 CP would be
23 the basis for your allocation?

24 A. Well, the jurisdictional allocation are
25 based on coincident -- or based on monthly

1 coincident peaks.

2 Q. And how did you know how to determine how
3 many coincident peaks to use to calculate the
4 jurisdictional allocation factor?

5 THE WITNESS: Would you please repeat
6 that?

7 THE REPORTER: Yes.

8 (THE LAST QUESTION WAS READ BACK BY THE
9 REPORTER.)

10 THE WITNESS: The number of coincident
11 peaks I used in this case, I thought I supported it
12 in my testimony.

13 BY MR. WOLSKI:

14 Q. But how did you know that the reasons
15 given in your testimony to support the use of 12 CP
16 are the reasons that one would employ to determine
17 the number of coincident peaks?

18 A. Well, that was the methodology -- that was
19 the procedure that was discussed with Dr. Eve
20 Lissik in the previous case.

21 Q. And were there any other influences upon
22 your decision to determine the number of coincident
23 peaks in the manner that you did?

24 A. The testimony was reviewed by Staff
25 witness, Lena Mantle and Greg Meyer, and that

1 provided what I thought was support for it.

2 Q. Did they make any substantive changes to
3 your methodology?

4 A. No.

5 Q. So there was no other basis for your
6 conclusion that the approach that you took in your
7 testimony to determine the number of coincident
8 peaks ~~y~~ used other than the discussions that you
9 had with Dr. Lissik in doing the Empire District
10 calculations?

11 A. Well, the case file by Empire District was
12 also based on the 12-CP methodology would seem to
13 support it.

14 Q. And other than that was there any other
15 source of your method to determine the number of
16 coincident peaks you would employ?

17 A. No.

18 MR. WOLSKI: Okay. I don't have anything
19 further.

20 Do you have anything?

21 MR. DOTTHEIM: No.

22 (PRESENTMENT WAIVED; SIGNATURE REQUESTED.)

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(THIS IS THE SIGNATURE PAGE TO THE DEPOSITION OF
ALAN J. ~~BAX~~ TAKEN ON NOVEMBER 28, 2001.)

ALAN J. BAX

subscribed and sworn to before me this ____ day of
_____, 2001.

Notary Public in and
for _____ County
State of Missouri

COPY

C E R T I F I C A T E

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

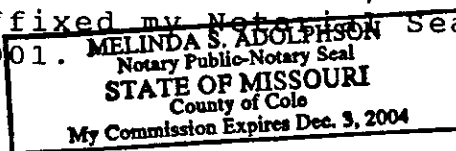
I, Melinda Adolphson, Certified Shorthand Reporter and Notary Public in and for the State of Missouri, with the firm of Associated Court Reporters, Inc., do hereby certify that there came before me,

ALAN J. BAX,

in the offices of Governor Office Building, Room 510, in the City of Jefferson, County of Cole, State of Missouri, on the 28th day of November, 2001, who was first duly sworn to testify to the whole truth of his knowledge concerning the matter in controversy aforesaid; that he was examined and his examination was then and there written in machine shorthand by me and afterwards typed under my supervision, and is fully and correctly set forth in the foregoing pages; and the witness and counsel waived presentment of this deposition to the witness, by me, and that the signature may be acknowledged by another notary public, and the deposition is now herewith returned.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action in which this deposition is taken; and furthermore, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notary Seal this 29th day of November, 2001.



Melinda Adolphson
MELINDA ADOLPHSON, CSR

COSTS: (Computation of court costs based on payment within 30 days.)

Pd by Attorney for Complainant:
Pd by Attorney for Respondent:

