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 3                  STATE OF MISSOURI

 4              PUBLIC SERVICE COMMISSION

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 6              TRANSCRIPT OF PROCEEDINGS

 7

 8                  Evidentiary Hearing

 9                    May 11, 2018

10              Jefferson City, Missouri

11                      Volume 7

12

13   In the Matter of the       )
     Application of The Empire   )
14   District Electric Company   ) File No. EO-2018-0092
     for Approval of Its         )
15   Customer Savings Plan       )

16

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                        MICHAEL BUSHMANN, Presiding
18                         REGULATORY LAW JUDGE

19                      DANIEL Y. HALL, Chairman,
                        MAIDA J. COLEMAN,
20                          COMMISSIONERS

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24   REPORTED BY:
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25   ALARIS LITIGATION SERVICES
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 1                P R O C E E D I N G S
 2              (The hearing commenced at 8:30 a.m.)
 3              JUDGE BUSHMANN:  Let's go back on the
 4    record.
 5              Good morning.  Couple of -- well, first
 6    of all, does Staff have any -- or Staff or any other
 7    party have any preliminary matters that need to be
 8    brought up first?
 9              MS. FORCK:  Your Honor, I just handed
10    out to all the parties the public version of Staff's
11    affidavit in support with page numbers.  Before the
12    hearing had started, I handed out the confidential
13    version that had been marked with page numbers.
14    That's the only difference, but when we go to submit
15    the -- well, did we offer that yesterday?
16              JUDGE BUSHMANN:  It's in the record now.
17              MS. FORCK:  Okay.  So, I would just ask
18    that that page-numbered public version get switched
19    out with the previously filed public version that
20    doesn't have page numbers.
21              JUDGE BUSHMANN:  That's no problem.
22              Anybody else have anything?
23              MR. WILLIAMS:  Judge, the other day
24    there was a case that was brought up regarding
25    Empire's regulatory plan associated with Iatan 2.
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1   OPC asks that the Commission take notice of the

2   order approving stipulation and agreement and the

3   stipulation and agreement in Case No. EO-2005-0263,

4   which is the case where that regulatory plan was

5   addressed.

6   JUDGE BUSHMANN: EO-2005-0263?

7   MR. WILLIAMS: Yes.

8   JUDGE BUSHMANN: And what were the two

9   orders? There were two orders you mentioned?

10   MR. WILLIAMS: No. There was an order

11   approving the stipulation and agreement, and then

12   attached with it is the stipulation and agreement

13   itself, including several appendices.

14   JUDGE BUSHMANN: Any party have an

15   objection to taking official notice of that order?

16   Hearing none. The Commission will take

17   official notice of it.

18   MR. WILLIAMS: Also Staff -- or Public

19   Counsel's going to have a couple of corrections to

20   some schedules of Mr. Riley. I've distributed those

21   to most of the parties and will -- I think I've just

22   completed that distribution. I just want to make

23   the Commission aware of that at this time.

24   JUDGE BUSHMANN: Thank you.

25   Anybody else?

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 1            MS. KNOWLTON:  Your Honor, Mr. Williams

 2   did notify the Company this morning a few minutes

 3   ago that Mr. Riley would like to present a corrected

 4   JSR-1, and I just would like to indicate that the

 5   Company would like to recall Mr. Holmes, if that's

 6   going to be the case, after Mr. Riley's testified.

 7            JUDGE BUSHMANN:  And the reason for

 8   that?

 9            MS. KNOWLTON:  Because Mr. Holmes had

10   identified a number of errors in that document, and

11   we believe that there are still further errors.  So,

12   we would like to make sure that the Commission has

13   information about that on the record.

14            JUDGE BUSHMANN:  Okay.  I think that

15   sounds reasonable.

16            Anybody else?

17            I was also notified that the City of

18   Joplin and OPC filed a motion to provide additional

19   evidence.  There's some confusion about that motion.

20   I did not see it in the EFIS docket, but I do have a

21   copy of it here, and counsel have represented that

22   they sent out service copies to everybody.  Has

23   everybody received that motion?

24            Is there anybody who has not received

25   it, I guess I should say?
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 1               Okay.  It looks like everybody has
 2   received it.  So, what I would like, then, would be
 3   any party that wants to object or respond to that
 4   motion should do so no later by Tuesday, May 15th,
 5   and then I will make a ruling on that next week.
 6               As far as scheduling for today, in order
 7   to accommodate the Commissioner's schedules, we will
 8   have to take kind of a later lunch.  So, I would
 9   expect that we would be breaking for lunch,
10   depending upon where the natural break would be in
11   the hearing, somewhere around 12:30 or 12:45 to
12   accommodate that schedule.
13               That's all the preliminary matters that
14   I have.  I guess we're ready for our next witness,
15   and it looks like Mr. Meyer is ready to go.
16                         GREG MEYER,
17   having been called as a witness herein, having been
18     first duly sworn, was examined and testified as
19                          follows:
20            JUDGE BUSHMANN:  You may be seated.
21            You may proceed.
22                    DIRECT EXAMINATION
23    BY MR. WOODSMALL
24        Q.   Good morning, sir.  Would you state your
25   name for the record.
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1   A.   Greg Meyer, M-E-Y-E-R.

2   **Q.   And who are you employed by?**

3   A.   I'm a principal with Brubaker &

4 Associates, Inc., BAI.

5   **Q.   And did you cause to be filed in this**

6 **case what has been marked Exhibit 350, rebuttal**

7 **testimony; and 351, an affidavit in support of the**

8 **nonunanimous stipulation?**

9   A.   Yes.

10   **Q.   Do you have any corrections to make to**

11 **that document?**

12   A.   I do not.

13   **Q.   If I were to ask you the same questions**

14 **contained therein, would your answers be the same?**

15   A.   Yes, they would.

16   **Q.   And are those true and correct to the**

17 **best of your knowledge, information, and belief?**

18   A.   Yes, they are.

19   MR. WOODSMALL: With that, Your Honor,

20 I'd move for the admission of Exhibit 350 and 351

21 and tender the witness for cross-examination.

22   (MECG's Exhibits 350 and 351 were

23 offered into evidence.)

24   JUDGE BUSHMANN: Any objections to the

25 receipt of those two exhibits?

1   Hearing none. They're admitted.

2   (MECG's Exhibits 350 and 351 were

3   admitted into evidence.)

4   JUDGE BUSHMANN: First cross would be by

5   Staff.

6   MS. FORCK: Thank you.

7   CROSS-EXAMINATION

8   BY MS. FORCK

9   Q.   Good morning, Mr. Meyer.

10   A.   Good morning.

11   Q.   Are you familiar with OPC witness Lena

12   Mantle's surrebuttal testimony?

13   A.   I believe I've read it, yes.

14   Q.   Do you recall her discussion about the

15   Southwest Power Pool changing its structure in order

16   to give SPP the ability to tell a wind generator

17   that it would not take the energy from the wind

18   generators, wind turbines?

19   A.   I do recall that argument in her

20   testimony.

21   Q.   Wouldn't such a change be covered by the

22   customer protection mechanism described in the

23   stipulation?

24   A.   Could you rephrase that, please?

25   Q.   If there was a change in the ability for

1   the SPP to, for example, decide to not take the

2   energy from wind generators, wind turbines, would

3   that type of scenario be covered by the customer

4   protection mechanism from the stipulation?

5   A.   To the extent that the SPP market rules

6   would restrict or dictate the generation from the

7   wind, if that lessened, the wind, it would be

8   reflected, it would be covered in customer

9   protection mechanism.

10   Q.   Did you read OPC witness Lena Mantle's

11   affidavit in opposition of the stipulation?

12   A.   I did.

13   Q.   Do you have a copy of it in front of

14   you?

15   A.   I believe I do.

16   I have the public version.

17   Q.   I don't think I'll be referring to

18   anything confidential, so I think that's fine.

19   Could you refer to paragraph 20.

20   A.   I'm there.

21   Q.   Did the model used in determining the

22   market protection mechanism in the stipulation

23   include revenue from the SPP for wind energy sales?

24   A.   Was your question does the customer

25   protection plan include off-system sales?

1   Q.   Yes, the revenue.

2   A.   Yes.

3   Q.   And should it?

4   A.   Absolutely.

5   Q.   And why is that?

6   A.   The addition of the wind will generate

7   more off-system sales into the SPP from Empire, and

8   to measure the, either the detriment or the benefit

9   of those assets, the customer protection plan -- in

10 the customer protection plan, the off-system sales

11 revenues must be considered.

12   Q.   Do you agree with Ms. Mantle's

13 characterization of the impacts of not including

14 revenue from the SPP for wind energy sales?

15   A.   As it relates to paragraph 20?

16   Q.   Yes.

17   A.   No. It doesn't make -- it's not a

18 reasonable assumption, let's put it that way, that

19 you would build the wind and that you would get no

20 output from that generator.

21   Q.   Can you explain that a little bit

22 further?

23   A.   Well, currently there's a lot of wind

24 projects in Oklahoma and Kansas and Iowa, and

25 they're all predicated on the wind blowing, and I

1   don't know that anyone has, has constructed a

2   generator with the anticipation that all the sudden

3   the wind will stop blowing.

4   **Q.   Please refer to Ms. Mantle's affidavit,**

5   **paragraph 16.**

6   A.   I'm there.

7   **Q.   And do you see where she discusses a**

8   **12 percent rate increase and points to your**

9   **affidavit?**

10   A.   Yes.

11   **Q.   Does she compare this impact of the wind**

12   **with Asbury to the current IRP?**

13   A.   Could you repeat that again?

14   **Q.   Does she compare the impact of the wind**

15   **with Asbury to the current IRP --**

16   A.   What's the --

17   **Q.   -- as far as it relates to this rate**

18   **increase?**

19   A.   Well, she relied on my calculation. So,

20   that's the basis is that the revenue requirement

21   identified in the IRP for 2018 versus the revenue

22   requirement in 2021 after the wind is put in.

23   **Q.   So, can you explain the chart on page 8**

24   **of your affidavit and what that 12 percent really**

25   **means?**

1   A.   Can you show me on page 8 where I talk

2   about that?

3   **Q.   Well, I guess you discuss the rate**

4   **impact of 12 percent on page 7 starting on paragraph**

5   **19.**

6   A.   Okay.

7   **Q.   And then you go in and you use this**

8   **chart or table to show the annual revenue**

9   **requirements from the IRP plan and the addition of**

10   **wind.**

11   A.   I guess my clarification is do you want

12   me to talk about the table or do you want me to talk

13   about how I calculated the 12 percent?

14   **Q.   Well, I guess let's start with how you**

15   **calculated 12 percent.**

16   A.   Okay. There is a worksheet that I

17   believe that MECG provided in response to a data

18   request called rate impacts worksheet. That

19   worksheet had the revenue requirements by year from

20   2018, and I don't know when it ended, but it had it

21   for three scenarios, the IRP, and then the one I

22   used was the 600 megawatts of wind. I looked at the

23   difference between 2018's IRP revenue requirement

24   total, which was 570 million, and that's the --

25   that's imputing back the taxes from tax reform, and

1   then in 2021 when the wind investments are placed in

2   rate base, that was a $637 million revenue

3   requirement. 67 divided by 570 equals 11.75 or

4   12 percent.

5   Now, that -- the testimony and the

6   affidavit suggest that all of that increase is

7   attributable to the wind and that's not -- that's

8   not accurate. Any operational changes between 2018

9   and 2021 when that wind investment is placed in

10   service is also included in those, in that total.

11   So, to the extent that people are solely relying on

12   the 12 percent as the, quote, impact from the wind

13   is probably not as accurate as it should be.

14   **Q.   So, if you were to look at your table**

15   **and compare that 637 for the 600 megawatts of wind**

16   **in Asbury to the current IRP 618 value, that is not**

17   **a 12 percent increase; is that what you're saying?**

18   A.   No, it isn't. And that might -- most

19   likely would be a more accurate impact of the wind.

20   **Q.   So, just to clarify one more time just**

21   **so that I'm clear. So, that 12 percent is comparing**

22   **the addition of wind and keeping Asbury to the**

23   **current rates, not to the current plan, if the plan**

24   **were to go forward without it adding any wind?**

25   A.   Yes. It's, it's a snapshot. It's a

1   snapshot of what you're currently paying in rates

2   versus a snapshot of what the revenue requirement

3   would be after you add the wind. Now, there's

4   components in between those two snapshots that

5   aren't related to the wind -- to the wind

6   investments being placed in service, but I didn't...

7   **Q.   And do those components get wrapped up**

8   **in that value for the 600 megawatts of wind?**

9   A.   It's in both of them. If you're

10 referring to --

11   **Q.   Of the table? On the table it's in both**

12 **then?**

13   A.   Correct.

14   **Q.   All right. I think that's all I have on**

15 **that piece.**

16   **Are you familiar with OPC witness John**

17 **Riley's affidavit in opposition of the stipulation?**

18   A.   Yes.

19   **Q.   And do you have a copy of that in front**

20 **of you?**

21   A.   I do.

22   **Q.   Could you, please, refer to paragraph 12**

23 **on page 6.**

24   A.   I'm there.

25   **Q.   About halfway down that paragraph he**

1   says, "Yet my analysis is that this wind project

2   will lose money every year. In fact, my projections

3   show the Wind Project Co(s). will lose nearly

4   61 million in the first 1.25 years." And then it

5   goes on on page 7 to state, "Based on my

6   calculations, this S&A will cause the ratepayers of

7   Empire District Electric Company approximately

8    $380 million in the first 11 years less the

9   35 million that the S&A market price protection

10   requires Empire to share."

11   Do you agree with this assertion?

12   A.   The very last one?

13   Q.   I guess -- I guess that is a two-part

14   question. So, do you agree that the Wind Project

15   Co(s). will lose nearly 61 million in the first 1.25

16   years?

17   A.   If you could just give me a minute.

18   Q.   Sure.

19   A.   Well, the first answer to your question

20   is that the losses that would be identified is

21   dependent upon the market prices that you assume and

22   the probability of generation.

23   In the analysis that was performed by

24   the Company for 600 megawatts there was four

25   probability curves, probability analysis, P50, P75,

1   P90 and P95, and what that -- what those represent

2   is, in my understanding, is like a P95 would suggest

3   that the generation from the wind, that 95 percent

4   of the time it will exceed the level of P95. So,

5   obviously, as the, the percentages go down, the

6   generation will go up. So, P95 is the lowest set of

7   generation assumptions. P75 would be a higher

8   level. So, that's dependent on whether you lose

9   money in the first years or not.

10   On the analysis that I looked at, which

11   I looked at the -- to develop the -- to have input

12   into the customer savings plan, I looked at a P75

13   low price and in that instance the -- in the first

14   two years of the analysis the wind farm does not

15   make money. No, it does lose money. Now, it's just

16   the magnitude that we talk about, but the concept, I

17   don't know that I agree with 61 million, but there

18   is a loss of money.

19   **Q.   So, then what about a little bit longer**

20   **term, the first 11 years. Mr. Riley asserts that**

21   **the stipulation and agreement would cost the**

22   **ratepayers approximately $380 million in the first**

23   **11 years less the 35 million of the market price**

24   **protection. Do you agree that the stipulation and**

25   **agreement will cost ratepayers -- well, I guess do**

1   **you agree that the stipulation will cost ratepayers**

2   **money in the first 11 years?**

3   A.   Again, it depends on what scenario you

4   look at. Mr. Riley's assumption was P75 I believe

5   low. Again, there's 12 scenarios out there, you

6   know, based low -- I'm mean, sorry, low prices, base

7   prices, and high prices, and then P95, P75, P50 and

8   P90. Mr. Riley's analysis assumed the third lowest

9   level of revenues out of all those 12 scenarios, and

10   then his revenue requirement is substantially higher

11   over the ten-year period than the analysis prepared

12   by the Company. And from my analysis of his table,

13   the fixed charges, the carrying charges were

14   different, but I think those can be explained. I

15   think Mr. Holmes raised some concerns the other day

16   about the interest rate, and then there's a property

17   tax issue that I'm not sure the Company -- or that

18   the parties agree with Mr. Riley on the assumption

19   there, but those can be -- those can be, I think,

20   identified. The real difference or one of the main

21   differences is what's been classified as the fixed

22   O&M, and that's approximately 80 to $90 million

23   difference. So, there is -- there is some

24   assumptions that are -- that are quite different in

25   these two -- these two models and that's what I was

1 able to do to reconcile those.

2   **Q.   Do you think that the assumptions that**

3 **Mr. Riley made in his model are unreasonable?**

4   A.   I haven't had a chance to actually look

5 through and, and look at all the things. I know

6 that we have substantial differences in them. I

7 understand that there's a new -- a new schedule out

8 there, but I haven't -- I've had just a real short

9 time to review that, but I do believe that at least

10 from the -- from the perspective of how we developed

11 our customer savings plan that Mr. Riley's numbers

12 are significantly more detrimental than what I

13 believe will occur.

14   **Q.   So, you haven't had a chance to really**

15 **look at the corrected schedules that have been**

16 **handed out this morning?**

17   A.   I got those at 8:15 to 8:20.

18   **Q.   Then I will not ask you questions about**

19 **those.**

20   MS. FORCK: I have nothing further.

21 Thank you.

22   JUDGE BUSHMANN: Cross by Empire.

23   MR. COOPER: Yes, Your Honor.

24

25

1   CROSS-EXAMINATION

2   BY MR. COOPER

3   Q.   Mr. Meyer, just to circle back around,

4   sum up what I think your conversation was with

5   Ms. Forck. You cite to a 12 percent increase,

6   correct, that's been also cited by other -- at least

7   one other party in this case and your affidavit,

8   correct?

9   A.   Correct.

10   Q.   In the absence of the stipulation plan,

11   would you expect the Company's rate increase to be

12   zero?

13   A.   No.

14   Q.   So, when you use 12 -- well, let me back

15   up.

16   So, whatever the increase would be

17   associated with the stipulation plan would be

18   something less than 12, correct?

19   A.   From the -- from the data that we looked

20   at, 12 would be the max. So, I would expect it to

21   be less.

22   Q.   In your affidavit -- and this is, I

23   guess, a follow-up to another conversation you were

24   just having. -- on I think page 4, paragraph nine

25   or at least it starts at paragraph nine, the very

1   end, you state that under the modeling conducted

2   with -- if the low price scenario and the low wind

3   production scenario occur simultaneously, then

4   customers may lose as much as 22 million over the

5   ten-year period; is that correct?

6   I'm sorry. Jumping ahead before you got

7   to it.

8   A.   No, that's fine.

9   That was based off of the analysis at

10 the time that I had on the work papers that were

11 provided. It also is -- I think if you look at on

12 the appendix A under P95 low, the number here is

13 identified as 21,822 -- $21,822,524 or 22 million.

14   Q.   And what you're referring to is the

15 attachment to the stipulation?

16   A.   Correct.

17   MR. COOPER: That's all the questions I

18 have, Your Honor.

19   JUDGE BUSHMANN: Division of Energy.

20   MR. POSTON: No questions.

21   JUDGE BUSHMANN: Renew Missouri.

22   MR. OPITZ: No, thank you, Judge.

23   JUDGE BUSHMANN: City of Joplin.

24   MS. BELL: Yes.

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 1                    CROSS-EXAMINATION

 2    BY MS. BELL

 3         Q.    Good morning, Mr. Meyer.

 4         A.    Morning.

 5         Q.    Earlier Ms. Forck was talking about, I

 6    believe she -- you-all were discussing Ms. Mantle's

 7    affidavit.  Do you recall the questions about -- I

 8    don't think you're going to need to reference this,

 9    but do you recall questions about the SPP changes,

10    rule changes to SPP -- to the SPP?

11         A.    Correct.

12         Q.    And I believe you said that if the SPP

13    decides to make changes that that's covered by the

14    market protection provision; is that correct?

15         A.    Well, my statement was that if the -- if

16    the market rules limited the amount of generation

17    that could be dispatched into the SPP, that one of

18    them -- that the customer protection mechanism does

19    address lower production.

20         Q.    So, is that protection provision capped

21    at $35 million?

22         A.    For Missouri.

23         Q.    You were also just discussing the Riley

24    affidavit chart?

25         A.    Yes.
```

1   Q.   And you said the main difference is

2 fixed O&M; is that correct?

3   A.   I said that's one of the main

4 differences that I identified.

5   Q.   Do you know where Mr. Riley got those

6 numbers?

7   A.   It's my understanding that Mr. Riley

8 took a presentation from Empire at the beginning of

9 this process and took a 25 percent reduction to

10 reflect the reduced megawatts that are now in the

11 stipulation. I think subsequent to that, as I heard

12 when Mr. Holmes testified yesterday, there has been

13 some changes to those estimates based off of the RFP

14 responses and then other information that the

15 Company's gotten. So, I don't know that the data

16 relied upon by Mr. Riley at that time is applicable

17 today.

18   Q.   But the data that Mr. Riley was relying

19 on was provided by the Company, correct?

20   A.   Well, then the Company also provided a

21 subsequent calculation that showed it was reduced

22 significant from that level.

23   Q.   You stated that Mr. Riley used the third

24 lowest out of 12 possible scenarios; is that

25 correct?

```
 1          A.    That's correct.
 2          Q.    So, you wouldn't describe Mr. Riley's
 3    chart, then, as the worst case scenario, would you?
 4          A.    No.  We developed the cust -- at least
 5    from my perspective the customer protection plan was
 6    developed off of the worst case scenario.
 7          Q.    And Ms. Forck was asking you questions
 8    about the 12 percent rate increase and comparing
 9    that with the rate increase under the planned IRP,
10    correct?
11          A.    Correct.
12          Q.    But the IRP plan is not a guaranteed
13    increase in rates, is it?
14          A.    I'm sorry.  Could you repeat that?
15          Q.    The IRP plan isn't a guaranteed increase
16    in rates, correct?
17          A.    No, but -- it is not, but there are cost
18    changes every day.  So, I think that for us to sit
19    here today and think that the -- and I haven't done
20    this analysis, but there is a -- there is a
21    possibility that Empire's cost of service today is
22    not achieving its authorized return.  I just don't
23    know.  There are other -- there are other components
24    that are affecting the revenue requirement as we sit
25    here today that aren't related to the wind project.
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1   Q.   Right. And you don't know and that's

2   not in the evidence in this case, correct?

3   A.   That's correct.

4   Q.   You were present for Mr. McMahon's

5   testimony, correct?

6   A.   I believe so.

7   Q.   And I believe he testified that the GFSA

8   allowed Asbury to remain open only if it was

9   economical to do so. MECG's position is that Asbury

10   should remain open. Do you agree that it's

11   economical to continue to allow Asbury to remain

12   open?

13   A.   Yes. I think -- and that's a point that

14   I think is somewhat missed is if Asbury remains open

15   and it covers all of its variable costs and it

16   contributes to the fixed costs of the asset, it

17   should remain open as long as that -- as that

18   continues, and the reason that is is because as you

19   heard from, I can't remember the man's name

20   yesterday, but if they retire Asbury, they have the

21   full intention of coming to this Commission and

22   asking for the recovery of the stranded cost. So,

23   to the extent that that unit while it's operating is

24   contributing to the fixed costs of the unit, if we

25   have to -- if the ultimate decision is we have to

```
 1    pay for the stranded costs, we'd be better to keep

 2    the unit on.

 3         Q.    Have you provided any testimony or are

 4    you aware of any evidence in this case that a REC

 5    provision similar to that found in the stipulation

 6    and agreement increases economic growth?

 7         A.    No.

 8         Q.    If you flip to your rebuttal testimony.

 9    Let me see.  We're going to start on page 2, line

10    20.

11         A.    I'm there.

12         Q.    You stated that the benefits generated

13    by the CSP in the first few years are relatively

14    small.  Which version of the CSP were you

15    referencing there?

16         A.    The IRP versus the 800.  I believe

17    it's --

18         Q.    Was that plan two or four?

19         A.    Plan one versus plan two.

20         Q.    Plan one versus plan two, okay.

21         A.    Plan one's the IRP.  Plan two's the 800

22    megawatts of low.

23         Q.    So, the plan two would benefit -- or

24    would have -- excuse me.  The benefits generated by

25    plan two in the first few years were relatively
```

1   small. That's your testimony?

2   A.   As compared to plan one.

3   Q.   You also indicated in your testimony you

4   had concerns about certain uncertainties. You

5   talked about that the tax equity partner was not

6   known. Has that changed?

7   A.   Do you mean do I know if there's a tax

8   equity partner?

9   Q.   Yes.

10   A.   It's my understanding there hasn't been

11   one.

12   Q.   And has the contractor for the projects

13   been identified to your knowledge?

14   A.   No.

15   Q.   Has the location of the wind projects

16   been identified to your knowledge?

17   MR. WOODSMALL: I just want to

18   interrupt. Be careful. There's confidential

19   information, so be careful how you handle that

20   question. If you need to go in camera.

21   A.   Do you want me to talk about specific

22   locations or do you...? I mean, there is a general

23   idea of how the wind generation will be distributed.

24   Q.   (By Ms. Bell) The location of the

25   projects will affect transmission costs; is that

```
 1    correct?

 2         A.    Potentially.

 3         Q.    If the location of the projects is

 4    uncertain, does that make the transition costs also

 5    uncertain?

 6         A.    I believe that there's an $81 million

 7    allowance for transmission in the case currently.  I

 8    have no reason to believe that that's an

 9    unreasonable assessment at this point given where I

10    think some of the wind's going to be located.

11         Q.    On page 10 immediately below the chart,

12    line seven and eight, I think you -- I think that's

13    just a summary of what you stated earlier.  You said

14    that the savings generated by plan two over the

15    first ten years are fairly small; is that correct?

16         A.    Thin I guess is what I used before or

17    small.  They're the same.

18         Q.    And plan two was the plan that allowed

19    Asbury to retire, correct?

20         A.    That's correct.

21         Q.    And so, since Asbury is not being

22    allowed to retire in the stipulation and agreement,

23    would the savings be even smaller?

24         A.    No.  And I think you're -- I think

25    that's documented by the Staff's,
```

1   Mr. Rogers' schedule on his -- I think in support of

2   the affidavit. Asbury, if I'm recalling correctly,

3   Asbury has a black line on that schedule and it's

4   lower than the rest of them for the -- for the

5   duration of the ten-year period. So, that would

6   suggest that with Asbury on that the revenue

7   requirements are actually less, and that goes back

8   to the fact that Asbury is still contributing to the

9   fixed costs of the unit.

10   **Q.   You also did an analysis and I think you**

11   **were critical of the original plan because it**

12   **assumed a rate change every year, and you pointed**

13   **out that typically the Company doesn't come in for a**

14   **rate case every year; is that correct? You**

15   **recall --**

16   A.   That's correct.

17   **Q.   And you said in that case just that**

18   **slight change of that assumption, I think I'm on**

19   **page 11, line 16 to 18, interestingly this small**

20   **change -- with this small change that, you know, it**

21   **flips two of the plans, whether you would prefer one**

22   **or the other. And so, I think Mr. Rogers previously**

23   **referred to the model as an extremely sensitive**

24   **model. Is that what you're saying there?**

25   A.   I think you misquoted my testimony,

```
 1   but --
 2          Q.    I apologize.  You can recharacterize it
 3   if I did.
 4          A.    It flips it in the beginning of the
 5   years, but the savings are still greater.
 6          Q.    In the long term?
 7          A.    Right.
 8          Q.    I guess my point is you're saying that a
 9   small change might in the model, a small change to
10   an input might change which plan you would prefer
11   depending on what year you're in?
12          A.    I didn't find that.
13          Q.    If you go to page 16, you note that the
14   existing percentage of wind resources will double in
15   the near term; is that correct?
16          A.    If all the -- if all the wind is placed
17   in service, yes.
18          Q.    And your testimony was that just the
19   current level, I guess without that doubling, has
20   caused a significant increase in negative prices?
21          A.    The current wind -- the current
22   portfolio of generation in the SPP market has
23   created negative prices that have -- negative
24   realtime prices that have increased over the last
25   couple years.
```

```
1          Q.    And that's attributable to -- I think
2    I'm on line one of your -- or line one of page 17.
3    That increase is attributable to the prolific growth
4    of wind.  Is that your testimony?
5          A.    That's what the SPP says.
6          Q.    And where do they say that?
7          A.    In the 2017 market report.
8          Q.    Is that the fall 2017 market report?  Do
9    you recall?
10         A.    Yes.
11         Q.    And so, with the addition of additional
12   wind, would you expect that trend to continue?
13         A.    I'd only be speculating.  And remember
14   this is in realtime, too.
15         Q.    Is that a revision to your testimony in
16   line seven through nine where you say if the SPP
17   adds 26,000 more megawatts of wind and the
18   generation mix of wind more than doubles, the
19   possibility of an even greater increase in the
20   number of hours in which negative prices are
21   realized is virtually guaranteed?
22         A.    Well, it says possibility and you asked
23   me if it would certainly happen.
24         Q.    Thank you for the clarification.
25               With respect to the modeling, on page 18
```

1 of your testimony in line six through eight,

2 starting on line seven you say, "Decreased market

3 prices could have a significant impact on savings."

4 Is that a comment about the sensitivity of the

5 modeling?

6   A.   It's a statement about the level of

7 revenues at the low market price and the high

8 probability.

9   Q.   Do you know -- so, you said there were

10 12 possibilities, 12 permutations of scenarios that

11 could be -- that you considered or that the Company

12 considered?

13   A.   Correct.

14   Q.   Do you know what the stipulation and

15 agreement looks like under the highest scenario?

16   A.   In regards to what? The customer

17 savings plan?

18   Q.   Right.

19   A.   If you have the highest -- if you have

20 P50 with high market prices, the customer savings

21 plan doesn't come into effect because the benefits

22 are so great.

23   Q.   You mean the market protection provision

24 doesn't come into effect?

25   A.   Right. I thought that's what you were

```
 1   asking.

 2        Q.   No.  I'm saying do you know the savings?

 3   If we get the best -- the best possible scenario, do

 4   you know what the total customer savings looks like?

 5        A.   I don't have that.  I can tell you that

 6   under the high market price, P50, the generating

 7   rev -- the revenues that are -- that are forecasted

 8   would be over a billion dollars, and that the

 9   revenue requirement for that ten-year period would

10   be about 710 million.

11        Q.   And do you know what it looks like under

12   the worst case scenario?

13        A.   Sure.  Under P95 low, the sales would be

14   573 million and the revenue requirement would be

15   724, but that does not take into account the

16   expiration of the -- of the two PPAs in 2025 and

17   2028.

18        Q.   And are you reading off of a document?

19        A.   It's an analysis that I got from the

20   work papers that I performed myself.

21        Q.   So, as far as you're aware, the worst

22   case and best case scenarios haven't been provided

23   to the other parties?

24        A.   Absolutely have.

25        Q.   And how so?
```

 1   A.   Well, P95 low is in the stipulation, and

 2   the work papers that were provided as a result of

 3   one of our -- of MECG DR was these are all out

 4   there. So, you can -- once you enable the schedule,

 5   you can choose and do every one of these 12

 6   scenarios.

 7   **Q.   If you look at the tax equity financing**

 8   **discussion on page 25, the last several lines**

 9   **starting on line 24 you say, "Had Empire properly**

10   **considered tax equity financing it is likely," and I**

11   **believe that's in the 2010 and 2013 IRPs, "is likely**

12   **that Empire would have pursued additional wind**

13   **generation instead of 110 million of environmental**

14   **improvements to Asbury." Was that your testimony?**

15   A.   That's what it says, yes.

16   **Q.   Is it your opinion that it was imprudent**

17   **of Empire to not consider the addition of wind in**

18   **2010 and 2013?**

19   A.   Are you asking me for a legal

20   conclusion?

21   **Q.   I'm just asking in your opinion. You**

22   **have a lot of experience in these cases, Mr. Meyer.**

23   A.   Well, to the extent that they were

24   seeking recovery of that asset in this case, which

25   they no longer are, I think would come into question

 1   whether they should have invested 110 million in

 2   those retrofits at the time if they were going to

 3   subsequently less than three years later propose to

 4   retire it.

 5   Q.   **Thank you.**

 6   **Turning to your affidavit.**

 7   A.   I'm there.

 8   Q.   **In paragraph nine, line seven through**

 9   **nine you say, "Those savings may disappear if a**

10   **situation develops in which both the low market**

11   **price scenario and the low wind production scenario**

12   **occur simultaneously." Which of the one through 12**

13   **scenarios are you referencing there?**

14   A.   P95 low.

15   Q.   **Is that 12 out of 12, or is that nine**

16   **out of 12?**

17   A.   I don't understand your question.

18   Q.   **You said Mr. Riley -- as far as if you**

19   **rank them by revenues, you said Mr. Riley was using**

20   **the nine, the third lowest, which I would label as**

21   **number nine of 12. So, what you're referencing**

22   **here, is this nine of 12, or 12 of 12?**

23   A.   This is the worst.

24   Q.   **Twelve of 12, okay.**

25   **And so, you said those savings may**

1 disappear. I think earlier you were talking about a

2 situation in which not only did the savings not

3 disappear, but that actually it would cost customers

4 in the first two years. Was that a different

5 situation or was that also 12 of 12?

6   A.   I'm sorry. You're going to have repeat

7 that one.

8   Q.   I can't recall which situation you were

9 talking about, but I think at some point you said

10 that there is a situation in which the plan might

11 cost customers in the first two years. Is that 12

12 of 12 or a different scenario?

13   And I guess this is in conjunction with

14 the lines, I think, 19 and 21 of paragraph nine

15 where you say, "If the low market price and low wind

16 production scenario occur simultaneously, customers

17 will lose 22 million over ten years." So, that's

18 the worst case?

19   A.   That's P95 low, right.

20   Now, if you want me to answer that

21 previous question, you're going to have to restate

22 it or repeat it.

23   Q.   Earlier you talked about customers

24 losing money in the first two years. Is that the

25 worst case scenario or was that a different

1   scenario?

2   A.   I know for sure that it's in the worst

3   case scenario. I'm just not -- I'm not positive if

4   it would exist under -- and I can check here to see

5   if the other ones do.

6   In other scenarios it's possible that

7   you would lose under the -- under the customer

8   savings calculation you would lose in the first two

9   years as well, but the P95 low would be the

10 biggest -- would show the biggest loss.

11   Q.   I think we're getting to the end here.

12   So, on your chart about -- that everyone

13 has been quoting about the 12 percent increase, and

14 that is on page 8 of your affidavit.

15   A.   Okay.

16   Q.   So, these numbers are assuming what

17 scenario one through 12?

18   A.   Are you referring to the table?

19   Q.   Yes.

20   A.   Okay. I don't know what scenario this

21 is off of, but it's not the -- I don't believe it's

22 the worst one.

23   Q.   I thought earlier you said it might be

24 P75 is what the Company used in their modeling; is

25 that right?

1   A.   No. I said that Mr. Riley used P75.

2   Q.   **So, you --**

3   A.   I don't -- I would have it if I could

4   access the, the, the DR that I looked at, but I

5   don't have that here or the program.

6   Q.   **Well, let's do something else here. Is**

7   **that -- is that modeling not based off -- that is**

8   **based off the stipulation, correct?**

9   A.   Yes.

10   Q.   **So, could you arrive at that by looking**

11   **at the wind data spreadsheet attached to the**

12   **stipulation, Exhibit B?**

13   A.   I believe that would be it.

14   Q.   **Mr. Meyer, from looking at the**

15   **spreadsheet attached to the stipulation, are you**

16   **able to tell us which scenario one through 12 you**

17   **use to develop your numbers in your chart and your**

18   **affidavit?**

19   A.   No. The reason is you've given me the

20   revenue requirement calculation.

21   You want this -- you want this back?

22   Q.   **Sure. Thank you.**

23   **Mr. Meyer, can you identify for the**

24   **record the document that you're currently reviewing?**

25   A.   It's the MECG response to 8045.

1   Q.   And does that document allow you to let

2   us know which scenario one through 12 you used to

3   calculate the numbers in your chart in your

4   affidavit?

5   A.   This is the work paper, but it

6   doesn't -- it doesn't show them -- or let me put it

7   this way. If it shows me, I can't read it. That's

8   the problem with getting old.

9   Q.   So, let's assume for your chart you used

10   scenario six, something in the middle, correct?

11   Let's just assume that, okay? And I'll ask you an

12   actual question. What was the tax equity sharing

13   between the tax equity partner at Empire that you

14   assumed for these numbers?

15   A.   I believe that's 45/55.

16   Q.   So, 45 being contributed by Empire?

17   A.   Yes. That's -- if I recall correctly,

18   that's 429 and 529 is 958. 429 is 45 percent of

19   that.

20   Q.   So, if we were -- if we were actually

21   looking at the worst case scenario, we would be

22   looking at scenario 12, which only deals with

23   generation and market prices, but then we'd also be

24   looking at the highest amount contributed by

25   Empire; is that correct?

```
1              A.     All the 12 scenarios assumed 45.
2              Q.     So, your testimony is that none of the
3    12 scenarios would actually be the worst case
4    scenario?
5              A.     I truly don't understand that question.
6    The, the, the way that the model is set up right
7    now, it assumes that Empire will contribute
8    429 million and the tax equity partner would
9    contribute five -- yeah, 529 million, for a total of
10   958 million.  Those percentages are constant
11   throughout the analysis.  Now, if you want to change
12   that, we can address that, but that's, that's not
13   the model.
14             Q.     Are those percentages, that 45, 55, are
15   those the percentages that were agreed to by the
16   signatories in the affidavit?
17             A.     That's the basis for that, yes.  The
18   basis for the -- the basis for the calculations that
19   you see in the appendix is a $429 million investment
20   by Empire and an $81 million investment by Empire
21   for the transmission.  Now, what I heard the other
22   day is that the assumption is that the tax equity
23   partner will invest 529 million.  So, 429 divided by
24   558.
25             Q.     But the stipulation and agreement
```

```
 1   provides a range; is that correct?

 2        A.   Correct.

 3             MS. BELL:  No further questions at this

 4   time.  Thank you.

 5             JUDGE BUSHMANN:  Cross by Public

 6   Counsel.

 7             MR. WILLIAMS:  Thank you.

 8                  CROSS-EXAMINATION

 9    BY MR. WILLIAMS

10        Q.   Good morning, Mr. Meyer.

11        A.   Good morning.

12        Q.   Do you agree that a lot of the

13   differences or maybe all of the differences in this

14   case is differences in modeling estimates?

15        A.   Differences between?  I don't know how

16   to quantify the differences or address it.

17        Q.   Differences between different witnesses.

18        A.   Well, there's a set 12 that I think the

19   signatories used to evaluate the conditions for the

20   stipulation and then Mr. Riley used some of those --

21   some of that inputs and then actually used some

22   other inputs from previous position.  So, those

23   created differences.

24        Q.   Well, this case is all about estimating

25   the future, is it not?
```

```
 1          A.    These are all estimates.
 2          Q.    And reasonable minds can differ as to
 3    the reliability of those estimates?
 4          A.    I agree with that.
 5          Q.    There's been a lot of discussion about
 6    the 12 percent that you put in your testimony.  Does
 7    that include the impacts of the Tax Cuts and Jobs
 8    Act of 2017?
 9          A.    The analysis was done -- let me see
10    here.  The 12 percent has the current revenues.  So,
11    that would not be reflecting tax reform and then
12    it -- and then comparing that to a number with tax
13    reform in it.
14          Q.    And do you know -- did you quantify all
15    the amount of the effect of the tax reform?
16          A.    24 million.
17          Q.    And a --
18          A.    That was a -- that was a -- excuse me.
19    24 million was, was the number provided by the
20    Company.
21          Q.    That 24 million, what does that do to
22    your 12 percent if you -- if there wasn't a change
23    in the tax?
24          A.    17 percent.
25          Q.    You talked about work papers being
```

1   **provided to Public Counsel through a data request**

2   **and work papers being related to the stipulation**

3   **plan. Do you recall that?**

4   A.   8045?

5   **Q.   No. You recall saying that they'd been**

6   **provided through a data request response?**

7   A.   That was my understanding. It was a

8   model that we used to develop the customer savings

9   plan was, I guess, ultimately provided by MECG

10   through 8045.

11   **Q.   Do you know when that data request was**

12   **provided to OPC?**

13   A.   The date on here says May 1. I know

14   that there was some confusion about whether you had

15   received it. It was our belief that the Company had

16   already provided the full model, and then when I

17   talked with Ms. Mantle on the phone it was

18   discovered that you had not received that full model

19   and we got it to you as fast as we could.

20   **Q.   You earlier testified to receiving RFP**

21   **informed revised estimates to O&M. You recall that?**

22   A.   No, I didn't say I received them. I

23   said that the -- that the numbers from the

24   presentation -- it was my understanding from

25   testimony yesterday that the numbers received -- or

1   I'm sorry. The numbers used in the initial

2   presentation or one of the initial presentations

3   from Empire, that those numbers had changed as a

4   result of the information that they received from

5   the RFPs and other information.

6   **Q.   When was the last time you received**

7   **revised estimates of O&M from Empire?**

8   A.   The one that I -- that I know of would

9   be -- well, for the 600?

10   **Q.   Sure.**

11   A.   It would have been in the model that we

12   used that it was provided under 8045.

13   **Q.   So, to your knowledge Public Counsel**

14   **didn't receive that until May 1st?**

15   A.   Just like I said before. As soon as we

16   found out that you did not receive it, we got it to

17   you.

18   **Q.   And is it highlighted in that model**

19   **anywhere?**

20   A.   Is it highlighted?

21   **Q.   Are the O&M estimate easy to find in**

22   **that model?**

23   A.   I believe they are.

24   **Q.   You testified that Asbury provides**

25   **benefits from SPP revenues. Does it provide any**

1   **other benefits to Empire customers?**

2   A.   Sure does. It has been discussed

3   several times it provides fuel diversity and it can

4   provide capacity on the sale if a capacity market

5   opens up or if there's a willing buyer outside of

6   the capacity market. So, there is other -- there is

7   other benefits than it just providing a recovery of

8   fixed costs.

9   MR. WILLIAMS: No further questions.

10   JUDGE BUSHMANN: Questions by

11   Commissioners.

12   CHAIRMAN HALL: No questions. Thank

13   you.

14   COMMISSIONER COLEMAN: No questions.

15   JUDGE BUSHMANN: Redirect by MECG.

16   MR. WOODSMALL: Thank you.

17   REDIRECT EXAMINATION

18   BY MR. WOODSMALL

19   **Q.   I'm going to work in the same order.**

20   **So, starting with questions from Staff, you were**

21   **asked to comment about Ms. Mantle's affidavit and**

22   **you were -- and you were talking about a change in**

23   **SPP regarding dispatchability of wind. Do you**

24   **recall that?**

25   A.   I do.

1   Q.   Would that somehow either explicitly or

2   implicitly be covered by the market protection

3   mechanism?

4   A.   Yes. I think we've talked about that

5   before. If those changes -- if a change in the

6   market, it changes or affects the ability to

7   generate that will be -- that will be captured in

8   the customer protection mechanism.

9   Q.   And let's take it a step further. How

10 is it reflected?

11   A.   Well, to the extent that the Empire is

12 not able to dispatch as much of its generation or

13 receive as much money from the off-system sales

14 market for its generation and wind because it

15 can't -- you can't have those units available, that

16 will decrease the off-system sales, which will make

17 the, the recovery of that over the revenue

18 requirement of the wind project less, and that if it

19 causes that to make it so it's detrimental to

20 customers, it's shared after a deadband and

21 customers are then reimbursed for that.

22   Q.   So, in very general terms, very general,

23 the market protection mechanism compares revenues

24 with revenue requirement. Would you agree with

25 that?

1   A.   It compares off-system sales revenues

2   from the market with the revenue requirement for the

3   wind project.

4   Q.   And so, anything that changes revenues,

5   whether it's production, whether it's market prices,

6   anything that changes revenues will impact the

7   market mechanism and how much money is credited back

8   to customers; is that correct?

9   A.   Correct.

10   Q.   You were also asked some questions about

11   an OPC assumption of no wind revenues, and you

12   talked about -- I believe your answer was it's

13   illogical to think that wind farms would be built

14   and the wind would stop blowing. So, you talked

15   about production. Could you cover the other aspect

16   about couldn't no wind revenues be created by a

17   market price of zero?

18   A.   Well, it could, yes.

19   Q.   And do you find that assumption to be

20   logical?

21   A.   We've seen some negative prices in

22   realtime, but we haven't seen an abundance of zero.

23   Q.   And that was going to be another one of

24   my questions later. Can you explain -- you keep

25   emphasizing realtime negative prices. Can you tell

1   me what other type of pricing there is?

2   A.   It's my understanding that most of

3   the -- of the market at SPP is settled in the day

4   ahead and that's I think the -- when I talked with

5   one of my coworkers at BAI it's between, like,

6   5 percent is settled in realtime and 90, 95 percent

7   is settled in day ahead.

8   Q.   And have you seen a proliferation or any

9   negative pricing in the day ahead market?

10   A.   I think there's some, but I don't --

11   it's not nearly as much as it was in the realtime.

12   Q.   And just for clarity of the record, I

13   think a lot of us get this because we've sat through

14   two weeks of settlements, but let's talk about the

15   market price provision and the modeling that was

16   done behind that. I believe you talk about two

17   different factors that was looked at. First is the

18   production, the wind production. Is that correct?

19   A.   Correct. And that's referred to as a

20   P50, P75, P90, or P95.

21   Q.   So, there were four decision points on

22   the production side?

23   A.   Correct.

24   Q.   And then the second factor is a market

25   price; is that correct?

1   A.   That's correct. And that's based off of

2 a low market price, a base market price, or a high

3 market price.

4   Q.   So, what combination of a P -- of

5 production factor and a market price would lead to

6 the lowest amount of revenues?

7   A.   P95 low.

8   Q.   And what combination of factors would

9 lead to the highest amount of revenues?

10   A.   Of the one study, P50 high.

11   Q.   And when you talk about Mr. Riley

12 modeling his revenues, what assumptions did he make

13 on these two factors?

14   A.   P75 low.

15   Q.   So, that means the lowest market price

16 that was modeled; is that correct?

17   A.   Correct.

18   Q.   And a level of production that is

19 reached 75 percent of the time?

20   A.   The wind production from the units would

21 have -- would exceed or equal the level 75 percent

22 of the time, correct.

23   Q.   You were asked some questions from

24 Empire, and it's in your affidavit, regarding a

25 worst case scenario of $22 million loss for

1   customers. Can you explain what combination -- what

2   differences are being modeled there that leads to

3   that $22 million?

4   A. $22 million is based off of a P95 low

5   market price scenario, which is, again, the worst

6   one, and under that scenario the total, not just the

7   Missouri jurisdictional, but the total would have

8   been $22 million. You have $13 million of cap, I

9   will call, room before you, you would max out on a

10 Missouri jurisdictional basis remember.

11   Q.   So, the difference between the base case

12 scenario, P50 and mid prices, and as compared to P95

13 and low prices would generate $22 million of losses

14 for customers; is that right?

15   A.   You got to repeat that, please.

16   Q.   The base case scenario was P50 with mid

17 prices.

18   A.   Okay.

19   Q.   Is that right?

20   A.   That's, that's what I believe, yes.

21   Q.   And the worst case scenario you said was

22 P95 and low prices; is that correct?

23   A.   P95 low is the worst.

24   Q.   And the difference between those two

25 would be a loss of $22 million?

1   A.   I don't think I agree with that.

2   Q.   **Can you tell me --**

3   A.   P95 low run would generate $22 million

4   of detriment that the -- over $22 million of

5   detriment of which the Company would pick up 22

6   million. P50 mid would not generate anything like

7   that. In fact, would probably show benefits.

8   Q.   **So --**

9   A.   But you can't make the difference and

10 say the difference between the two are $22 million.

11   Q.   **And so, the market provision provides**

12 **for protection of the $35 million; is that correct?**

13   A.   Missouri jurisdictional.

14   Q.   **So, if we -- in order to get to that**

15 **$35 million, we're going to have to see market**

16 **prices below the worst market prices modeled or**

17 **production worse than P95; is that correct?**

18   A.   Correct.

19   Q.   **You find that to be a likely scenario?**

20   A.   I hope not.

21   Q.   **You were asked questions by Joplin**

22 **regarding the IRP and she said -- she was asking you**

23 **whether the IRP, quote, Was it a guaranteed increase**

24 **in rates? Do you recall that?**

25   A.   Yes.

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1          Q.    Do you agree that the IRP is not a limit

2    on the increase in rates, that the rates could go

3    even higher than the IRP?

4          A.    They could go either way.

5          Q.    You were asked about Asbury and you said

6    Asbury is contributing to fixed costs.  Do you

7    recall that?

8          A.    I do.

9          Q.    And you said Asbury is making a

10   contribution to fix -- never mind.  What is your

11   basis for saying Asbury is contributing to fixed

12   costs?

13         A.    Well, I've had discussions with both the

14   Staff and the Public Counsel who've done more

15   expensive analysis of Asbury and they've confirmed

16   that.  I've also -- if you also look at, like we

17   talked about before, the three scenarios that

18   Mr. Rogers puts in his affidavit in support, when

19   Asbury's on line, it lowers the revenue requirement

20   compared to the other two scenarios so that --

21   inherit in that is the fact that Empire is

22   actually -- I'm sorry.  That Asbury is actually

23   contributing to the fixed costs of the unit.

24   Otherwise, with Asbury on line you would see that

25   line to go above those other ones.
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1   Q.   And let me ask you a hypothetical.   If

2   Asbury was not making a contribution to fixed cost,

3   so it's not covering all its variable costs, what

4   position do you think customers would be taking in

5   regard to Asbury in this case?

6   A.   Well, first of all, if Asbury wasn't

7   recovering its variable cost and I found that it was

8   generating -- being used to generate electricity, I

9   would be -- overall for, you know, a period of time,

10   I think that would call into question some severe

11   analysis of why from Company management because it,

12   it doesn't make -- it's not economical for the

13   consumers for them to continue to do that.

14   Q.   And ultimately, if Asbury wasn't making

15   a contribution of fixed costs, do you think

16   customers would be -- would be supporting the idea

17   of closing it in this case?

18   A.   Holding everything else equal,

19   absolutely, because your rates would -- customer

20   rates would go down.

21   Q.   You were asked some questions by Joplin

22   about uncertainties about the location of these wind

23   facilities and whether that could affect

24   transmission costs.   Do you recall that?

25   A.   I do.

1   Q.   And you talked about $82 million. Would

2   uncertainty in transmission costs, if transmission

3   costs went higher, would that somehow explicitly or

4   implicitly flow through the market price provision?

5   A.   When you talk about the market price

6   provision, are you talking about the customer?

7   Q.   Yes.

8   A.   It's included as part of the revenue

9   requirement. So, if transmission costs go up above

10   the -- I think I said 81 million, then the test

11   would -- the off-system sales would need to be

12   greater than if they were at 81 to cover the revenue

13   requirement.

14   Q.   There was some discussion whether the

15   Empire investment in the wind is capped at 45

16   percent and whether it could go higher than

17   45 percent. Do you recall that?

18   A.   I do.

19   Q.   And would that somehow be reflected in

20   the mechanism?

21   A.   Well, once again, that -- if the

22   ownership changes over 55/45, then the investment

23   associated or assigned to Empire would increase,

24   which would flow through the revenue -- the wind

25   revenue requirement, which was a component of the

1   customer protection mechanism.

2   Q.   So, going through all of these. I heard

3   that if Empire cap investment changes, that could

4   somehow be implicated by the mechanism; I heard if

5   transmission costs change, that could somehow be

6   implicated; I heard that if market prices change,

7   that is reflected; and I heard if production level

8   changes, that will be reflected by the market

9   provision. Is that correct?

10   A.   That's correct.

11   Q.   Finally, I just want you to clarify.

12   You stated in response to questions from OPC a

13   quantification for tax reform of $24 million. Do

14   you recall that?

15   A.   Correct. That was -- that was provided

16   by the Company.

17   Q.   And the stipulation provides for a

18   quantification of tax reform of 17.8 million; is

19   that correct?

20   A.   That's correct.

21   Q.   Can you explain that difference why that

22   happened?

23   A.   I think that's related to the factor,

24   but I'm not positive.

25   Q.   And the $17.8 million, that was an

1   **amount that was agreed upon after Staff had**

2   **conducted some audit of the quantification; is that**

3   **correct?**

4   A.   It's my understanding that the Staff did

5   audit that number.

6   MR. WOODSMALL: No further questions.

7   Thank you.

8   JUDGE BUSHMANN: Thank you for your

9   testimony, Mr. Meyer.   You're excused.

10   Why don't we take the next OPC witness

11 at least for a little while.   We'll break in a

12 little while.

13   MR. WILLIAMS: Public Counsel calls Lena

14 Mantle.

15   LENA MANTLE,

16 having been called as a witness herein, having been

17   first duly sworn, was examined and testified as

18   follows:

19   JUDGE BUSHMANN: Please be seated.

20   DIRECT EXAMINATION

21   BY MR. WILLIAMS

22   Q.   **Would you, please, state your name.**

23   A.   Lena M. Mantle.

24   Q.   **By whom are you employed and in what**

25 **capacity?**

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 1          A.    I'm employed by the Office of the Public
 2   Could as senior analyst.
 3          Q.    I'm going to hand you some exhibits.
 4                What I've handed to you are Lena Mantle
 5   rebuttal testimony that's been marked for
 6   identification as Exhibit 200, confidential and
 7   public versions; Lena Mantle surrebuttal testimony
 8   that's been marked for identification as
 9   Exhibit 201, confidential and public versions; and
10   Lena Mantle affidavit that's been marked for
11   identification as Exhibit 208, confidential and
12   public versions.
13                Would you quickly take a look at those
14   exhibits.
15          A.    I did as you were speaking.
16          Q.    And are those exhibits your testimony
17   here today?
18          A.    Yes, they are.
19                MR. WILLIAMS:  With that I'll offer
20   Exhibits 200, 201, and 208, both in confidential and
21   public versions.
22                (OPC's Exhibits 200, 201, and 208 were
23   offered into evidence.)
24                JUDGE BUSHMANN:  Any objections to the
25   receipt of those exhibits?
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1   Hearing none. They're admitted.

2   (OPC's Exhibits 200, 201, and 208 were

3 admitted into evidence.)

4   MR. WILLIAMS: I'd offer the witness for

5 examination.

6   JUDGE BUSHMANN: First cross would be by

7 City of Joplin.

8   MS. BELL: Thank you.

9   CROSS-EXAMINATION

10 BY MS. BELL

11   **Q.   Good morning, Ms. Mantle.**

12   A.   Good morning.

13   **Q.   You've heard me ask a lot of questions**

14 **about capacity factor, and I think there's been some**

15 **clarification from the witnesses to me about**

16 **capacity versus capacity factor. So, could you just**

17 **give me a general explanation of capacity factor?**

18   A.   Capacity factor is the number that's

19 calculated. It is -- and it can be calculated for

20 any period of time. It is the megawatt hours

21 generated typically by a source, divided by the

22 capacity of that source, times the number of hours

23 in the period you're looking at. So, capacity

24 factor for a year would be the generation of that

25 unit for a whole year, divided by the capacity of

 1   that plant, times 8,760.

 2   Q.   Do you know the capacity factors for

 3   Empire's current wind generation?

 4   A.   I did look that up the other day. I

 5   calculated it. And Empire's capacity factor for

 6   2017 for the wind farms total, because that's the

 7   data I had, showed a capacity factor of 36 percent

 8   for the year, but over the summer that capacity

 9   factor for those same wind farms was only

10   27 percent.

11   Q.   And so, that's less wind in the summer?

12   A.   Yes. That's what that signifies.

13   Q.   And that's for Elk River and Meridian

14   Way combined?

15   A.   That's correct.

16   Q.   Do you know the capacity factor for

17   Asbury?

18   A.   Yes. The capacity factor for Asbury for

19   2017 was 57 percent, and for those summer months of

20   2017 it was at 80 percent.

21   Q.   And so, 57 percent, is that the average

22   over the whole year then?

23   A.   That's over the whole year. And, of

24   course, the capacity factor, that could be one and

25   the least amount is zero. Being closer to one means

1   that there was more generation from that plant over

2   the time period.

3   **Q.   So, is it reasonable to compare capacity**

4   **factors among plants like Asbury versus wind**

5   **projects?**

6   A.   That is -- you can compare those, but

7   there's a big difference because Asbury was run when

8   the price, the market price signal said that it

9   would be in the money. So, and the wind farms

10   are -- that contract is a take or pay. So, whenever

11   the winds generate -- being generated at the wind

12   farms that, that energy is being generated. As far

13   as Asbury, it's only generating when the market

14   price says that it's cost effective to do so. There

15   is another measure called availability factor that

16   kind of takes into account those differences. So,

17   capacity factor is one measure. Availability factor

18   is another.

19   **Q.   And what's availability factor?**

20   A.   Availability factor is how many hours

21   was that generation resource available to generate.

22   So, for Asbury it is -- availability factor, you

23   would take 8,760, which is the number of hours in

24   the year, and subtract off its forced outages, its

25   planned outages. A forced outage is where a plant

1   is taken down for an unforeseen event, and a planned

2   outage is planned. So, other than that, Asbury is

3   available to generate electricity, and for a wind

4   farm it's available when the wind blows.

5   **Q.   Earlier you used the term take or pay.**

6   **I don't think I've heard that from any other**

7   **witness. Can you explain that term?**

8   A.   That means that Empire has to pay for

9   the megawatt hour of electricity -- or of energy

10   that would be generated if -- even if SPP says that

11   unit is curtailed. So, regardless of whether SPP

12   takes that energy or not, Empire has to pay for it,

13   and with their PPAs it's at a set price regardless

14   of what the market price is.

15   MS. BELL: I believe this will be marked

16   Joplin 503.

17   JUDGE BUSHMANN: Do you have copies for

18   the bench?

19   MS. BELL: Sorry.

20   And just for the record, I think many of

21   the charts I'll be using today were previously

22   provided to the parties as a copy of Empire -- or

23   OPC's opening, but I have separated some of those

24   charts out and will be providing additional copies

25   as we go.

1   Q.   (By Ms. Bell) So, Ms. Mantle can you
2   identify this chart?
3   A.   This chart was created from data from
4   information that's submitted to the Commission, and
5   OPC to meet the requirements of the Commission rule
6   243.190 that gives the generation of each source for
7   every month. So, this goes back to January of 2015.
8   Q.   And I think some parties have talked
9   about the intermittency of wind. Is that what I'm
10   seeing here?
11   A.   Yes. What you see is while you can make
12   generalities of it's higher in the winter or spring
13   and fall months than it is in the summer, even that
14   is not consistent across these two time periods.
15   What is consistent is the lowest amount of
16   generation during these time periods always occurred
17   in August and that's when typically the market
18   prices are the highest and the need, not necessarily
19   of Empire because it's a dual peaking and it has
20   been a winter peaking, but SPP in general is higher
21   in the summer than in the winter.
22   Q.   And why does this matter to the modeling
23   that Empire's put forth?
24   A.   What this says is that wind is not
25   available to meet energy requirements in the summer.

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 1    It does not provide electricity when the customers,

 2    when SPP needs it the most.

 3         Q.   And so, does that availability affect

 4    market prices?

 5         A.   Yes.  That would be why market prices

 6    are higher in the summer, supply and demand.

 7    Demand's high and supply is lower.

 8         Q.   Ms. Mantle, can you identify -- it's

 9    been marked Joplin 504.  Can you identify that for

10    the record?

11         A.   This is a plot that has the same data

12    that was on Exhibit 503, but added to it is a second

13    axis on the right.  Additional data that shows the

14    market price and that is for wind for every month,

15    and the way that I calculated the average price in

16    those months was from a report in that same 3.190

17    data that provided the revenue from the wind and the

18    megawatt hours from the wind.  So, I was able to

19    come up with a dollars per megawatt hour that was

20    paid in each month.  That would be the line with the

21    X's through it.

22         Q.   And so, why would this chart matter with

23    Empire's modeling?

24         A.   Again, when you talk about market prices

25    and an average annual price, which is usually what
```

1   is shown, it takes into account these high prices.

2   There's -- the wind availability isn't there. Just

3   because there's a high price does not mean that

4   Empire will be able to sell energy at that hour

5   because the wind turbine may or may not be

6   generating electricity. Whereas, in the -- with a

7   traditional resource such as Asbury, as long as it's

8   not down for an outage, it's available to respond to

9   that price. Wind does not respond to price.

10   **Q.   So, would you agree that the customer**

11   **benefits that Empire has suggested relating to the**

12   **CSP depend on the revenues received from SPP?**

13   A.   It is the benefit. Mr. McMahon said in

14   the GFSA report attached to his direct testimony

15   that that was the benefit of the plan was the

16   revenues from SPP.

17   **Q.   And you would agree that those revenues**

18   **are dependent on wind energy and energy generated?**

19   A.   Yes.

20   MS. BELL: Your Honor, at this time I

21   would offer Joplin 503 and 504.

22   (Joplin's Exhibits 503 and 504 were

23   offered into evidence.)

24   JUDGE BUSHMANN: Any objections?

25   MS. KNOWLTON: Yes. The Company has a

 1   couple of objections to both of these exhibits.

 2   First of all, I believe that this is an attempt by

 3   OPC to supplement its testimony. The OPC could have

 4   and, frankly, should have provided this information

 5   as part of its prefiled rebuttal or surrebuttal

 6   testimony in this case. The Company also submitted

 7   data requests to OPC in this case that would have

 8   called for this type of information and none of this

 9   was produced. And then, lastly, there's not enough

10   information either on the document or based on any

11   testimony that's been provided, for example, with

12   regard to -- it says low market price. It doesn't

13   say is that Empire's price, is that SPP's price.

14   So, there's no way for someone looking at this to be

15   able to verify what this actually is.

16   JUDGE BUSHMANN: Objection is overruled.

17   503 and 504 are admitted.

18   (Joplin's Exhibits 503 and 504 were

19   admitted into evidence.)

20   MS. BELL: Thank you.

21   **Q. (By Ms. Bell) Moving on to market**

22   **prices. Are you familiar with the market prices**

23   **that Empire used in its analysis?**

24   A.   Some of them. The analysis itself at

25   the level that I think Mr. Holmes worked with or ABB

1   would have had should have had prices for every

2   generation node and the load node. I only looked at

3   prices, the 2016 prices for Asbury and then the Elk

4   River prices. With Elk River I looked at both the

5   historical and the ABB forecast as provided to me by

6   Empire, which I believe would be their base

7   forecast.

8   **Q.   Is that the same base forecast that**

9   **Mr. Meyer was referencing?**

10   A.   Yes.

11   JUDGE BUSHMANN: What are you marking

12 this?

13   MS. BELL: It's going to be Joplin 505.

14   **Q. (By Ms. Bell) Ms. Mantle, can you**

15 **identify this chart for the record?**

16   A.   Yes. Very -- I guess it was just last

17 week was when I received the data from Empire on the

18 fall Elk River market prices, and that was -- and

19 the data said that had -- the forecast was 8,760

20 values except for leap year and they, they gave me

21 an extra 24 hours for those years, of market prices

22 for I believe they went out to 2047. In this graph

23 I only have through 2035. What I did with that data

24 was to come up with an -- because that's way too

25 much to graph. I calculated an average annual

1 hourly market price. So, what they gave me was

2 hours, and this is for each year the average annual

3 market price and I had -- also had that same data

4 for the fall 2016 Elk River price nodes. So, that

5 is -- the circles would be the 2016 forecast and the

6 stars would be the 2017 forecast.

7   **Q. And that's the 2016 forecast, okay.**

8 **Strike that.**

9   **So, what are the differences between the**

10 **two forecasts, I guess?**

11   A. It's my understanding from what I

12 learned from Empire that ABB provides a forecast of

13 market prices and then they provide a price

14 differential based off information from past on the

15 price, how the -- prices for different price nodes.

16 So, this would be -- it's not ABB's forecast, but it

17 would be the forecast -- using ABB's forecast, what

18 they believed -- what they forecast Elk River prices

19 to be. And between those two forecasts, there was a

20 19 percent drop in the base forecast for Elk River.

21   **Q. It also seems to me, and I think I might**

22 **have read this in Mr. Meyer's testimony, that the**

23 **forecasts were actually fairly close for the first**

24 **few years and that it seems to, as we get further**

25 **out in time, exponentially be more different. Is**

1   that your understanding of the data?

2   A.   Yes.   That's pretty typical of a

3   forecast.   As you can see the 2017, the circle and

4   the stars are on top of each other and they start

5   separating and get further apart.   Typically these

6   types of forecasts are -- an inflation rate amount

7   is applied and, so, what you get is they increase

8   different -- while they're still both increasing,

9   they increase at different levels because the

10   starting point's the same, but the inflation or the

11   adjustments are applied to that number.

12   Q.   And there's been some discussion about

13   day ahead versus realtime prices.   What are we

14   looking at here?

15   A.   I believe this is day ahead, but I am

16   not certain.   It was not marked.   I asked for Elk

17   River prices and this is what I got.

18   Q.   From the Company?

19   A.   From the Company.

20   JUDGE BUSHMANN: Is this 506?

21   MS. BELL: This is 506, yes.

22   Q.   (By Ms. Bell)   So, Ms. Mantle, this,

23   what's been marked Joplin 506 is titled historical

24   day ahead versus forecast.   Are the dots and the X's

25   on this chart the same as what was in Joplin 505?

1   A.   Yes, they are.

2   Q.   **So, what is added to this chart?**

3   A.   The test of a -- to review a forecast,

4   it is typical to go back and look at what historical

5   data has done, what does history show, and to see

6   how that forecast would track historical. I had

7   also asked and received for Elk River actual hourly

8   prices for -- I got January 15th through -- I think

9   I ended up getting through March of -- and a little

10   bit of April of 2018, but this just shows 2015, 2016

11   and 2017 day ahead prices, the average annual, and

12   what they showed was -- and it wasn't too surprising

13   because the market was new. The SPP market is --

14   well, close to what it is now, opened in March 2014.

15   So, we have -- you know, the first years a market

16   opens there's a lot of fluctuations, there's a lot

17   of feeling things out, how are things going to

18   settle out. So, this is 2015, 2016, and 2017, and

19   it shows a downward trend in prices and I put it on

20   the same graph with this upper trend from AB&B just

21   to show the differences between what's actually been

22   seen and what the forecast is showing.

23   Q.   **And so, there's a box over here that**

24   **says model assumes revenues or prices will increase.**

25   **Is the model you're referencing, is that the**

1   original model?

2   A.   That is AB&B's forecast.

3   **Q.   And that's the forecast that was used by**

4   **Empire?**

5   A.   Yes. And that is -- my understanding is

6   that is a model where they modeled the entire

7   eastern interconnect. So, everything from the Rocky

8   Mountains east they model what the public available

9   information on what generation's out there, what

10   is -- has been announced will be built, what is

11   announced will be retired. So, it is a model and

12   it's a very complex model.

13   **Q.   And is that the same modeling used in**

14   **the Mr. Holmes' modeling of the stipulation and**

15   **agreement?**

16   A.   It's my understanding that the numbers

17   provided by ABB were input into Mr. Holmes -- or I

18   think ABB actually did the modeling. I don't know

19   for sure. There's been a lot of talk about

20   Mr. Holmes doing analysis. I don't know where the

21   split was between what ABB did and what Mr. Holmes

22   did, but the analysis that Empire has referred to,

23   yes.

24   MS. BELL: Judge, I would like to offer

25   Joplin 505 and 506 at this time.

1   (Joplin's Exhibits 505 and 506 were

2   offered into evidence.)

3   JUDGE BUSHMANN: Objections? Any

4   objections?

5   505 and 506 are admitted.

6   (Joplin's Exhibits 505 and 506 were

7   admitted into evidence.)

8   MS. BELL: Thank you.

9   **Q. (By Ms. Bell) Let's talk about negative**

10   **prices. Generally, when does negative pricing**

11   **occur?**

12   A.   Generally negative pricing occurs when

13   there's a lot of wind energy available. Because the

14   production cost tax credits, the operators earn

15   money if a megawatt hour is generated through that

16   credit. So, as long as -- a negative price can

17   occur and they can make money for that through that

18   tax credit up to the amount of that negative amount

19   of that tax credit. So, it's my understanding that

20   these wind farms are being bid into the market at

21   below zero, they're negative, and that is what is

22   driving the negative prices that are being seen.

23   **Q.   Do you know in the modeling were there**

24   **any negative prices included for Asbury or Elk**

25   **River?**

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 1          A.    For the data that I received from

 2  Empire, for every year I asked Excel to find the

 3  minimum price that was in that year and there was no

 4  year that it was negative.  Matter fact, I think the

 5  lowest was like $6.  So, there were no minimum

 6  prices either in the Asbury data set, or there were

 7  no negative prices in either the Asbury data set

 8  that I had or the Elk River data sets that I was

 9  supplied for the forecast.

10          Q.    Ms. Mantle, the title of Joplin 507 is

11  Elk River annual minimum market price.  Is this a

12  chart you created?

13          A.    Yes.

14          Q.    And this is the same chart that appeared

15  in OPC's opening?

16          A.    Yes, it is.

17          Q.    And so, you said you searched the Excel

18  data sheet for a minimum market price at Elk

19  River; is that correct?

20          A.    Yes.

21          Q.    And so, what was the $12 minimum market

22  price?

23          A.    Are you referring to what's in the box

24  under 2017?

25          Q.    Yes.  Where did that $12 minimum price
```

1 come from?

2   A.   That $12 minimum price is the minimum

3 price in the ABB 2016 forecast.

4   Q.   So, then in 2017 ABB revised that

5 forecast and what was the minimum price for that

6 forecast?

7   A.   They revised that down to $9 a megawatt

8 hour. So, that's about 25 percent decrease.

9   Q.   And you've been able to contrast that

10 forecast with actual prices?

11   A.   Yes, because I had the actual -- and

12 what is on here as noted is actual day ahead. I

13 know yesterday there was some discussion about

14 whether it was a five-minute price or what. This

15 was an hourly price as provided to me by Empire.

16 So, in 2017 the minimum day ahead actual hourly

17 price. It wasn't a five minute that was then erased

18 in the next five minutes. It was the hourly price

19 was a negative $50.

20   Q.   Did you perform the same analysis

21 looking at maximum prices?

22   A.   Yes, I did.

23   Q.   Ms. Mantle, this chart labeled Joplin

24 508 that says Elk River or is titled Elk River

25 annual maximum market prices, is that the analysis

1   you were just referencing?

2   A.   Yes, it is.

3   Q.   And so, you performed an analysis

4   similar to the minimum analysis?

5   A.   Yes. I had -- did an Excel formula that

6   asked for the maximum for each year of the Elk River

7   market prices, both the 2016 forecast, the 2017

8   forecast, and also in the actual day ahead data that

9   was provided to me by Empire.

10   Q.   So, from 2016 to 2017, the max market

11   price decreased?

12   A.   Yes, ma'am.

13   Q.   And the actual price was nearly or I

14   guess almost half of the 2016 forecast?

15   A.   The actual price was 61 megawatt -- $61

16   per megawatt hour, and in the 2017 forecast, which

17   was ABB's forecast that they adjusted downward, it

18   was still 102 for 2017.

19   Q.   So, I guess long story short, if the

20   minimum prices are lower and the maximum prices are

21   lower, how does that affect the customer savings

22   plan?

23   A.   It is -- I mean, under traditional

24   ratepayer generation, it would be easier to say, but

25   because the intermittency of wind, you've got that

1 variable coming in, but when you're just looking at

2 prices assuming that something would be generated at

3 that hour, what I -- this leads me to believe

4 that -- I believe ABB forecast may be the best

5 that's out there, but it's still not a very good

6 forecast.

7   Q.   And is one of those reasons -- did you

8 hear me ask Mr. Meyer about the sensitivity of the

9 modeling?

10   A.   It is. I mean, the model is very

11 sensitive to the forecast, which can be seen, you

12 know, just in the impact on rates if -- or in

13 revenue requirement if that revenue's not there, but

14 one of the reasons for my discomfort with the

15 forecast is really the lack of data in the SPP

16 market in trying to forecast 30 years worth of

17 hourly data from really it's only about like 18

18 months of data in the new market where rules are

19 changing. It just leads me to real discomfort with

20 any -- anybody's projections should be -- anybody

21 that gives a definite this is what's going to happen

22 based off that I just can't believe.

23   Q.   So, if you can't rely on the SPP market

24 because it's such a new market, could you look at

25 other RTOs?

 1   A.   That would seem to be logical, and

 2   typically in those other RTOs the market prices

 3   forecast are based off natural gas prices because

 4   those are the marginal units. With SPP they've got

 5   more capacity for wind than just about any other --

 6   maybe ERCOT has more, but with the amount of wind

 7   generation that's being added in SPP, I would not

 8   say that you could rely on a PJM market. That's

 9   probably the one that's been out there the longest.

10   I would not be comfortable with relying on how that

11   market has evolved with different generation-type

12   resources versus the SPP where they will have all

13   this intermittent generation resources and, so, the

14   resource mix is completely different. You can look

15   at -- I've looked at the SPP market monitoring unit

16   reports, state of the market reports. The wind is

17   really driving a lot of changes in SPP and changes

18   to market prices and that is just constantly

19   evolving.

20   MS. BELL: At this time I'm going to

21   offer Joplin 507 and 508.

22   (Joplin's Exhibits 507 and 508 were

23   offered into evidence.)

24   JUDGE BUSHMANN: Is there any

25   objections?

```
 1              Hearing none.  They're admitted.
 2              (Joplin's Exhibits 507 and 508 were
 3    admitted into evidence.)
 4         Q.  (By Ms. Bell)  Ms. Mantle, I believe you
 5    reference a Southwest Power Pool report.  Joplin 509
 6    says state of the market fall 2017.  Is that a
 7    report you are referencing?
 8         A.  Yes.  That's a report that I cited in my
 9    rebuttal testimony.
10         Q.  And that has a publish date of
11    January 22, 2018?
12         A.  Yes.
13         Q.  And Joplin 510 appears to be a similar
14    report except it's labeled winter 2018; is that
15    correct?
16         A.  Yes.  And it just came out last week.
17         Q.  Last week, okay.
18              And how do you obtain these reports?
19         A.  They -- we went out onto the web -- SPP
20    website and they're publicly available.
21         Q.  And these are the same reports that
22    Mr. Meyer was referring to as well that he had
23    reviewed?
24         A.  Yes.  I don't know if he's seen the
25    winter 2018, but...
```

1   Q.   What were the substantial changes

2   between the report that was just issued last week

3   from the fall of 2017 report?

4   A.   I have -- I have not had -- I've glanced

5   through the 2018 report. The one thing that -- and

6   I read the fall 2017, but haven't had time to delve

7   deeply into the 2018, but what I have seen is that

8   the SPP monitoring, market monitoring unit has said

9   the negative prices are increasing, are likely to

10   continue to increase if wind keeps getting added and

11   that the market monitoring unit is recommending some

12   market changes, although it does not say what they

13   are in these reports, to help mitigate some of those

14   negative prices.

15   Q.   And are these reports the kind of

16   reports that you typically rely on in conducting

17   your analysis as part of your work with the Office

18   of Public Counsel?

19   A.   Yes. It's a independent look at the SPP

20   market and what is happening in the market as far as

21   market prices.

22   MS. BELL: I would offer Joplin 509 and

23   510.

24   (Joplin's Exhibits 509 and 510 were

25   offered into evidence.)

1   JUDGE BUSHMANN: Any objections?

2   Hearing none. They're admitted.

3   (Joplin's Exhibits 509 and 510 were

4   admitted into evidence.)

5   MS. BELL: Thank you.

6   **Q. (By Ms. Bell) Yesterday Mr. Holmes had**

7   **testified that under the stipulation and agreement**

8   **customers get 100 percent of the benefits of the**

9   **wind. Do you agree with that statement?**

10   A.   No, I do not.

11   **Q.   Can you explain why?**

12   A.   Part of the market protection mechanism,

13   which that's what they call it, I don't, but there's

14   two sides to it. A lot of it talked about Empire

15   itself taking on up to $35 million of any detriment.

16   What that protection also does is give the Empire

17   shareholders $35 million of any, any revenue above

18   what the -- well, there's the $2 million deadband

19   and then the -- anything above that is split between

20   Empire and the customers up to 35 million. They did

21   put a cap on it that the customers would only be

22   required to -- or that the shareholders would only

23   get 35 million, but that is a big -- that wouldn't

24   be giving customers 100 percent. In addition,

25   there's been some talk about the FAC and it's a very

 1   complex mechanism, and I don't believe the revenues

 2   can flow through the FAC. That's my opinion only.

 3   Well, it's my opinion. But if they did, even then

 4   not all the revenues from these wind farm generation

 5   would flow through the FAC.

 6   **Q.   I'm not sure that I've heard a witness**

 7   **say this, but I heard it during opening, something**

 8   **about Asbury being dispatched less and less. Have**

 9   **you looked at that issue?**

10   A.   I've looked at that and that is true.

11   It is being dispatched less as market prices fall

12   and the variable operation and maintenance costs

13   increase because it is an aging plant. That plant

14   will -- it responds to -- it's dispatched based on

15   the market. So, if market prices fall, it will

16   receive less revenues. If market prices increase,

17   that plant will likely generate even more, but what

18   we have also seen in the -- with the additions for

19   environmental regulations there were improvements

20   made at the plant that increase efficiency of that

21   power plant where now it is operating more

22   efficiently than it has since we had data which

23   started back in 2008.

24   **Q.   I think other witnesses have commented a**

25   **lot about I believe it's paragraph eight of your**

1 **affidavit, and I think the suggestion has been it's**

2 **an unreasonable assumption that there won't be any**

3 **revenues generated from the SPP market. Is that**

4 **your understanding of their testimony?**

5   A.   I don't believe it's paragraph eight,

6 but...

7   Q.   **Oh, paragraph ten maybe. No?**

8   A.   Maybe paragraph 20.

9   Q.   **Paragraph 20, okay. Thank you for that.**

10   A.   But no. I agree it's unrealistic to say

11 that there would be zero, but what that does is

12 provide the boundary for this project. How much the

13 revenue requirement based off -- and this isn't

14 my -- the only part of my analysis is taking off

15 those revenues from the wind farm. The rest of it

16 is Greg Meyers. I did not do an independent

17 calculation, but this is based off his analysis

18 minus that off-system sales revenue, how much impact

19 this would have on the rates of the customer, and

20 then maybe we'll get revenues back, and this is on

21 top of -- as already been explained by Mr. Meyer

22 through questioning from Staff, this is on top of

23 other rate -- I mean this includes other rate

24 increases, but there could be additional that aren't

25 even incorporated in the model. So, we're talking

1   about putting this on the customer, this rate

2   increase, for a project that they don't need, that

3   may reduce their bills in the future.

4   Q.   And --

5   JUDGE BUSHMANN: Excuse me, Ms. Bell.

6   I'm just checking to see how much more examination

7   you have. We need to be taking a break pretty soon.

8   MS. BELL: I would say less than five

9   minutes.

10   JUDGE BUSHMANN: Thank you.

11   Q. (By Ms. Bell) So, Mr. Riley for OPC did

12   a chart estimating customer savings or I think he

13   called it a shortfall, right?

14   A.   Yes.

15   Q.   And is it your understanding that his

16   chart does include the revenues from SPP?

17   A.   Yes, it does.

18   Q.   Just generally I think there's been some

19   discussion about this. Can you describe the type of

20   work papers and spreadsheets you received from the

21   Company and from MECG?

22   A.   Well, I believe your -- what's been

23   talked about is -- or, you know, we've received work

24   papers throughout this process and responses to DR,

25   but when the stipulation was filed on April 24th, we

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 1   received very minimal work papers from with that

 2   stip and agreement.  I believe they were from

 3   Empire.  There was a calculation of the taxes, which

 4   was a new component, and then there was some result

 5   of some modeling.  Then we had to actually ask for

 6   the spreadsheets that were attached to the stip and

 7   agreement because that was not part of the work

 8   papers.  And when I asked Mr. Meyers in the data

 9   request -- you know, this came out on the 24th.  We

10   had three days to ask data requests.  I asked him

11   for work papers for how he got the 12 percent and in

12   that reply, which is attached in my affidavit, MECG

13   replies that, well, we thought this was in the work

14   papers Empire would supply you.  That's my

15   paraphrase.  That's not exactly probably, what was

16   said, but it was much more information about the

17   modeling.  I do not believe that it is of the

18   level -- I don't think we could have done the

19   analysis that Greg Meyer was talking about, that

20   John Rogers was talking about even if we'd had time

21   to do it.  Mr. Holmes talked about some stochastic

22   analysis that was done, which I'm familiar with from

23   my work in resource planning in writing those rules.

24   I would have liked to have seen that.  We did not

25   receive that.  That was not in any of the work
```

1   papers that OPC received if it's what I'm thinking

2   he was talking about. It was not in any of the work

3   papers we received. So, the information that we got

4   came -- much of it came late in the process. We had

5   affidavits to be filed three days after we received

6   much of the information and it was not complete work

7   papers.

8   MS. BELL: No further questions at this

9   time.

10   JUDGE BUSHMANN: All right. We'll be in

11   recess until 10:50.

12   (A short recess was taken.)

13   JUDGE BUSHMANN: Let's go back on the

14   record.

15   We were going through the

16   cross-examination list and the next one would be

17   Division of Energy.

18   MR. POSTON: No questions.

19   JUDGE BUSHMANN: Renew Missouri.

20   MR. OPITZ: No, thank you, Judge.

21   JUDGE BUSHMANN: MECG.

22   MR. WOODSMALL: Yes, briefly.

23   CROSS-EXAMINATION

24   BY MR. WOODSMALL

25   **Q.   Good morning.**

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 1          A.    Good morning.

 2          Q.    Yesterday there was some questions of

 3   Staff about them conducting an audit and relying

 4   upon Company information.  Were you here for that?

 5          A.    Yes.

 6          Q.    And you were asked whether you had

 7   prepared Exhibits 503 through 508 and I think you

 8   said that you had; is that correct?

 9          A.    That is correct.

10          Q.    And in conducting that information, did

11   you rely upon information provided by the Company?

12          A.    Yes.

13          Q.    You didn't independently contact SPP for

14   any of this information?

15          A.    It's probably on their, their web page

16   somewhere, but trying to find it would be -- is

17   nearly impossible.

18          Q.    But you didn't do it?

19          A.    No, I did not do it.

20          Q.    You didn't independently contract with

21   ABB for market prices?

22          A.    No, sir.

23          Q.    You relied entirely on information

24   provided by the Company?

25          A.    Because I wanted what they used in their
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 1   model, yes, sir.

 2              MR. WOODSMALL:  No further questions.

 3   Thank you.

 4              JUDGE BUSHMANN:  Staff.

 5              MS. FORCK:  Yes, thank you.

 6                   CROSS-EXAMINATION

 7    BY MS. FORCK

 8         Q.   I'm going to kind of walk through

 9   some -- hopefully in the order that you -- that you

10   got some questions from Joplin.

11              So, do you recall discussing capacity

12   factor earlier and you discussed the definition of

13   capacity factor and I believe you said that the

14   capacity factor for Elk River and Meridian Way was

15   36 percent for 2017; is that right?

16         A.   Yes.

17         Q.   Were you here yesterday during

18   Mr. Mertens' cross-examination?

19         A.   Yes.

20         Q.   Do you recall him saying that Elk River

21   and Meridian Way are not a good proxy for the 600

22   megawatts contemplated in the stipulation?

23         A.   That is what it says, yes.

24         Q.   Do you also recall discussion about how

25   wind farms, I guess, degrade over time?
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 1          A.   Yes.
 2          Q.   And how old are Elk River and Meridian
 3    Way?
 4          A.   I believe one of them was -- began
 5    operation in 2005.  The other in 2008.
 6          Q.   So, would it be fair to say that both of
 7    these wind farms would likely have degraded over
 8    that life so far?
 9          A.   I believe at the time they were built
10    they had an expected life of 20 years.  So, they
11    would be one of them a little bit more than halfway
12    through their expected life and the other halfway
13    through.
14          Q.   If the 36 percent is the average
15    capacity factor for 2017 for these farms and
16    27 percent is the capacity factor for the summer,
17    wouldn't the winter capacity factor be higher than
18    36 percent?
19          A.   Yes.
20          Q.   You also discussed something called an
21    availability factor.  Do you recall that?
22          A.   Yes.
23          Q.   And you said that that provides for how
24    many hours the resource was available to
25    generate; is that right?
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 1        A.    Yes.

 2        Q.    And you said it accounts for things like

 3   planned outages?

 4        A.    When you calculate on a historical basis

 5   it would be planned outages and forced outages on a

 6   forward looking basis because it would be an

 7   estimate of forced outages based off history and

 8   planned outages.

 9        Q.    Does the availability factor account for

10   the possibility of SPP not taking the energy

11   generated?

12        A.    No, it does not.  It is purely when is

13   that --

14        Q.    I think you've answered my question.

15              Earlier in answering one of Ms. Bell's

16   questions you said, and this will be a paraphrase,

17   but you said wind did not provide energy when

18   customers need it most.  Do you recall that?

19        A.    Yes.

20        Q.    And I believe you're referring to

21   Exhibit 503 when you said that; is that correct?

22        A.    That's probably correct.  I don't

23   remember exactly.

24        Q.    When you're referring to Exhibit 503,

25   you said August is the time when customers need the
```

1   wind -- or need the energy the most but when the

2   wind is not being produced; is that correct?

3   A.   I don't know if I said -- it's not zero

4   production. There is some and it's not necessarily

5   when Empire's customers because Empire is dual

6   peaking and their peaks have been -- their last

7   peaks have been set in the winter, but it is when

8   SPP's peak is is in the summer in August, either

9   late July or August typically.

10   Q.   And Exhibit 503 shows wind

11   generation; is that correct?

12   A.   It is the sum of the generation over

13   each one of those months.

14   Q.   And it does not show zero for any of

15   these months; is that correct?

16   A.   No, it does not.

17   Q.   So, looking at Exhibits 503 and 504 show

18   historic wind generation and market pricing and the

19   volatility associated with that. Don't the models

20   used to produce the stipulation and its market price

21   protection mechanism account for the market prices

22   and generation volatility?

23   A.   There is an estimate of when the wind

24   will be available. There is an estimate of the

25   loads -- although, loads don't -- loads have

1   absolutely nothing to do with their model.

2   Q.   I don't believe that this shows load.

3   A.   You are correct. I'm sorry. Could you

4   ask your question again.

5   Q.   Wouldn't you agree that the models used

6   to produce the stipulation and the market price

7   protection mechanism account for the variability in

8   market prices and generation volatility for wind?

9   A.   They have some, but as shown in the

10   other graphs, at least for 2017 what was input for

11   2017 was way off for Elk River.

12   Q.   Thank you. That's beyond the scope of

13   my question.

14   Do you have a copy of the stipulation in

15   front of you?

16   A.   No, I do not.

17   Q.   I'll preface my question first and then

18   I'll bring you a copy so I can look at this, too.

19   A.   Okay.

20   Q.   Do you recall a conversation with

21   Ms. Bell that the market protection provision from

22   the stipulation involves a sharing of the benefits

23   with Empire?

24   A.   Yes.

25   Q.   And you said that there's a cap on that

1   of 35 million?

2   A.   There's a cap -- that is my

3   understanding. Well, after the $2 million deadband,

4   yes.

5   Q.   I'm going to point to appendix A.

6   MS. FORCK: Your Honor, do you mind if I

7   perform this portion of the cross up here so I

8   can --

9   JUDGE BUSHMANN: That's fine. Just

10   speak up so it kind of picks up in the microphone.

11   MS. FORCK: Thank you.

12   Q.   (By Ms. Forck) All right. I'll point

13   you to -- well, let me first point you to appendix

14   A, page 3. Would you read beginning under the

15   adjustment periods the second paragraph, third line

16   up from the top beginning with, "If the amount."

17   A.   "If the amount of the reg_input prelimit

18   would result in an overpayment to Empire, then it

19   would be reduced to ensure that Empire can dig out

20   of a regulatory liability, but not be ahead over the

21   entire period. This value is the reg_input shown in

22   row 46 of Exhibit D."

23   Q.   And we'll turn to Exhibit D shortly, but

24   I also want to point to page 1 of appendix A where

25   it defines reg_input prelimit. Would you read that,

```
 1   please.

 2           A.    "Reg_input prelimit equals the

 3   calculated reg_input before the upper limit is

 4   placed on it to prevent an overpayment to the

 5   Company (row 41 Excel)."

 6           Q.    I don't think we have these very nicely

 7   delineated, but at the end of appendix A, Exhibit D

 8   shows regulatory asset examples and there are four

 9   charts and I'm going to point to the third chart

10   because I know that has an example of what we're

11   discussing here.  Would you look at the -- at line

12   41 that we just discussed?

13           A.    Excuse me.

14           Q.    Sorry.  And what is line 41 labeled as?

15           A.    Reg_input prelimit.

16           Q.    And then across the top it labels each

17   column as a different year number.  Would you look

18   at year two and look at the value of reg_input

19   prelimit?

20           A.    I see a value.  I do not know how it was

21   calculated.

22           Q.    Is that value greater than zero?

23           A.    Yes.

24           Q.    Would you now look at row 43, and how is

25   that row labeled?
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 1          A.    Is reg_input too high.

 2          Q.    And then what does that say for year

 3   two?

 4          A.    It says yes.

 5          Q.    Looking at year one, what is the value

 6   of the reg_input prelimit?

 7          A.    Zero.

 8          Q.    And what's the answer to the is

 9   reg_input too high?

10          A.    No.

11          Q.    So, would you agree that looking across

12   this whole chart, the values above zero for the

13   reg_input prelimit indicate the reg_input is too

14   high?

15          A.    As -- I don't know what this means, but

16   that is what it says.

17          Q.    Now, would you look at -- excuse me.

18   Sorry.  Would you look at the bottom row, row 48,

19   and how is that defined?

20          A.    Missouri reg_input.

21          Q.    And what is that value for year two?

22          A.    Zero.

23          Q.    And year two was the year where there

24   was a reg_input prelimit above zero; is that

25   correct?
```

```
 1          A.    That is what's on line 41, yes.

 2          Q.    Thank you.

 3                MS. FORCK:  All right.  I have nothing

 4   further.  Thank you.

 5                JUDGE BUSHMANN:  Cross by Empire.

 6                MS. KNOWLTON:  Thank you.

 7                    CROSS-EXAMINATION

 8   BY MS. KNOWLTON

 9          Q.    Good morning, Ms. Mantle.

10          A.    Good morning.

11          Q.    I want to go back to your testimony

12   regarding availability factors.  I believe that you

13   stated that Asbury's availability factor is greater

14   than that of Empire's wind assets; is that correct?

15          A.    That is correct.

16          Q.    Can you point me in -- where in the

17   record do you find the basis for that conclusion?

18          A.    It is based on my professional judgment

19   of working with electric utilities for over 30

20   years.

21          Q.    So, there's no -- well, let me just step

22   back for a minute.  Would you agree that the

23   availability factor is calculated by taking the

24   amount of time a unit is able to produce divided by

25   total time?
```

```
 1        A.    Yes.

 2        Q.    So, you don't have any data that you

 3   performed that calculation with than testifying to

 4   your position today?

 5        A.    I did look at some of the data that

 6   Empire has submitted in their 3.190 submissions to

 7   the Commission.  That is fuel and generation reports

 8   that's provided monthly.  There was not -- some of

 9   the months had the hours that Asbury was available.

10   Some just had when it wasn't.  From that I

11   calculated an approximate availability factor of 88

12   percent, but because those numbers weren't all -- I

13   don't think they were all exactly right, I did not

14   want to mention those numbers, but I did look at

15   what the availability factor would be for Asbury in

16   2017.

17        Q.    You haven't produced any of that to the

18   Company or any of the other parties in this docket,

19   have you?

20        A.    No, I have not.

21        Q.    Would you take, subject to check, that

22   Asbury's availability factor was 80 percent in 2016

23   and 2017?

24             MR. WILLIAMS:  I'm going to object to

25   the subject to check.  She either knows or she
```

 1   doesn't know.

 2   JUDGE BUSHMANN: Overruled. You can

 3   answer if you --

 4   A.   I don't know. I don't know how you

 5   calculated that, so, and what -- it doesn't compare

 6   well with the numbers that you provided to the

 7   Commission. So, I would -- to be able to say that,

 8   I would need to know why the differences were there.

 9   **Q.   (By Ms. Knowlton) And would you take,**

10   **subject to check, that Elk River's availability**

11   **factor was over 99 percent in 2016 and 2017?**

12   MR. WILLIAMS: I'd make the same

13   objection to the subject to check. She's either

14   putting a number out there for Ms. Mantle to verify

15   or not. That would be okay, but to put the subject

16   to check...

17   JUDGE BUSHMANN: Overruled.

18   A.   No, I would not agree to that because

19   Elk River is only available to generate power if the

20   wind is blowing and the wind is not blowing that

21   many hours of the year. Asbury would not be

22   available to generate if coal was not available.

23   The same way the wind -- I would not

24   calculate available -- availability factor for a

25   wind turbine should be not necessarily when it's

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 1    just standing, but when there is the fuel, the wind,

 2    to produce electricity.

 3         Q.   (By Ms. Knowlton)  Now let's talk about

 4    this document that you have testified to that's been

 5    marked as Exhibit 508 -- or excuse me, the 507 Elk

 6    River annual minimum market price.  Do you have that

 7    in front of you?

 8         A.   Yes.

 9         Q.   Do you know how often the negative price

10    that's on this chart has occurred and how many hours

11    in 2017?

12         A.   I assume just once because it was the

13    minimum for the year, but there were other hours

14    that were negative.

15         Q.   But at that low, at negative 50 it

16    occurred in one hour out of the year?

17         A.   The day ahead, yes.

18         Q.   Thank you.

19              On page 14 of your rebuttal testimony,

20    lines 17 to 18 you state that market prices are key

21    to achieving the benefits Empire estimates will

22    occur to its customers from its change in its

23    resource plan; is that right?

24         A.   Was that page 14?

25         Q.   Yes, of your rebuttal.
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 1          A.    Beginning on line 17.

 2          Q.    Correct.

 3          A.    Yes.

 4          Q.    And you were on the Staff of this

 5   Commission for many years, right?

 6          A.    Yes.

 7          Q.    About 29?

 8          A.    Yes.

 9          Q.    And while you're on the Staff, you were

10   a part of the team that developed the original

11   electric utility resource planning chapter 22 rules,

12   I believe?

13          A.    That is correct.

14          Q.    And did you also oversee the revisions

15   that the Staff proposed to the Commission to those

16   rules in 2010?

17          A.    Yes.

18          Q.    Are you aware that those rules require

19   that electric utilities that are subject to this

20   Commission's jurisdiction require the use of a fuel

21   price forecast as part of a resource planning

22   pursuant to those rules?

23          A.    Yes.

24          Q.    How many electric utilities does this

25   Commission regulate?
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 1         A.    There are four investor-owned utilities
 2   that they regulate.
 3         Q.    Would you identify each of them?
 4         A.    Union Electric Company, which is known
 5   as Ameren; Kansas City Power & Light Company, KCP&L;
 6   Greater Missouri Operations Company; and the Empire
 7   District Electric Company.
 8         Q.    Do you know for purposes of the electric
 9   utility resource planning rules the source of the
10   price forecasts that each of those four electric
11   distribution utilities use?
12         A.    Are you asking me if I know who provides
13   them?
14         Q.    Correct.  The source of their forecasts.
15         A.    No, I do not.
16         Q.    Would you take, subject to check, that
17   each of those four obtain their forecasts from ABB?
18         MR. WILLIAMS:  I object to the subject
19   to check in the question.
20         JUDGE BUSHMANN:  Overruled.
21         A.    I am not aware at this time who provides
22   those forecasts.
23         Q.    (By Ms. Knowlton)  And OPC didn't produce
24   any forecasts in this docket, did it?
25         A.    No, it did not.
```

1   Q.   If you would take a look at your

2   surrebuttal testimony. I believe on page 10 of that

3   testimony you raised reliability concerns about

4   Empire's plan that is before this Commission; is

5   that right?

6   A.   That would have been the plan with

7   Asbury retired.

8   Q.   Do you still have those reliability

9   concerns based on the stipulation plan?

10   A.   No.

11   Q.   Turning back to your rebuttal testimony

12   on page 5, lines 12 to 22, you state that Empire

13   needed to correct its estimate of $325 million in

14   savings. Your view was that this correction was

15   necessary because in order to, quote, achieve

16   savings from reductions in revenue requirement

17   Empire would need to file rate cases every year in

18   the next 20 years, end of quote. Is that right?

19   A.   Yes.

20   Q.   So, in other words, your concern was

21   that any savings achieved from Empire's proposal

22   couldn't be flowed back to customers fast enough?

23   A.   My concern was a lot of the savings due

24   to depreciated -- depreciation cannot flow through

25   between rate cases and other cost savings cannot

1   flow through rate cases, and I even have concern

2   that the off-system sales revenues could be flowed

3   through between rate cases.

4   Q.   Right. And we'll get to that one in

5   just a minute.

6   And, in fact, you argued that the $325

7   million in savings really would equate to

8   103 million in savings because of that timing

9   difference concern that you had; is that right?

10   That's, I think, on page 6, line one.

11   A.   It would be reduced by 103 million.

12   Q.   And on May 9th you filed an affidavit,

13   which has been marked for identification this

14   morning as OPC 208 public and confidential, and in

15   that affidavit you expressed additional concerns

16   about the inability to get savings back to

17   customers; is that right?

18   A.   That is correct.

19   Q.   And those concerns are based on what you

20   refer to as the fuel adjustment clause --

21   A.   Yes.

22   Q.   -- is that right?

23   So, in your view any savings that would

24   be achieved by Empire's proposal would be difficult

25   to get back to customers; is that right?

```
 1        A.    Yes.

 2        Q.    Don't you think that that's a problem

 3   that this Commission could solve?

 4        A.    Through rate cases?

 5        Q.    Any other mechanisms the Commission

 6   could use or statutory authority that it --

 7   statutory authority that it could rely upon to get

 8   savings back to customers?

 9        A.    I'm not an attorney, but I've probably

10   read the statutes regarding FAC more than most

11   attorneys in the state.  It does not contain any

12   reference to off-system sales revenues flowing

13   through a rate adjustment mechanism.  It's only fuel

14   and purchase power, including transportation.  So,

15   therefore -- and this project is created to make

16   off-system sales.  The customers don't need this

17   wind.

18        Q.    That's actually not my question.  My

19   question is is that if there are savings that are

20   achieved, is there a way for this Commission to get

21   those savings back to customers, and my question to

22   you is don't you think that this Commission could

23   solve that problem?

24        A.    No.

25        Q.    Thank you.
```

1   MS. KNOWLTON: I have no further

2 questions for Ms. Mantle.

3   JUDGE BUSHMANN: Commissioner questions?

4   CHAIRMAN HALL: Yeah.

5   QUESTIONS

6 BY CHAIRMAN HALL

7   **Q.   Good morning.**

8   **Why do you think that the Commission**

9 **cannot require off-system sales to flow back to**

10 **ratepayers through the fuel adjustment clause?**

11   A.   The statute is written to allow fuel and

12 purchase power costs, including transportation. It

13 does not say anything about revenues. And even the

14 rules say if the Commission allows off-system sales

15 revenues. In going back to the time those rules

16 were written and even the first fuel adjustment

17 clauses in Missouri, GMO's did not pass through

18 off-system sales, the very first one, but because it

19 was so complicated to separate the fuel cost for

20 off-system sales revenues versus the others then

21 that off-system sales revenue was included.

22 Those -- if it's firm generation that was built to

23 meet customers' needs, therefore the customers -- my

24 understanding, the thought was those customers

25 should get the flow back and actually that's where

 1 we're seeing the most variability in our fuel

 2 adjustment clause cost.

 3   **Q.   So, have you -- are you familiar with**

 4 **Ameren's FAC clause?**

 5   A.   Yes.

 6   **Q.   And are you aware that Ameren receives**

 7 **or has received in the past payments from MISO**

 8 **related to capacity sales?**

 9   A.   Yes.

10   **Q.   And is it not true that those sales**

11 **flowed back to Ameren ratepayers through the FAC?**

12   A.   Initially they did not.

13   **Q.   Right now don't they?**

14   A.   They do now, yes, sir.

15   **Q.   So, then how can you reconcile that**

16 **testimony with your testimony a moment ago that**

17 **there's nothing that this Commission can do to**

18 **ensure that off-system sales that might come from**

19 **this additional wind generation could flow back to**

20 **Empire ratepayers?**

21   A.   Ameren's capacity has excess capacity --

22 well, it has excess because of the reserve

23 requirement, but then it also has the excess

24 capacity because it no longer serves a big customer

25 in --

1   Q.   How is that relevant?

2   A.   That was 500 megawatts. That's capacity

3   that they're no longer required to meet. MISO no

4   longer requires them, but the customers, all of them

5   are paying for that capacity that was acquired

6   for --

7   Q.   And wouldn't Empire ratepayers be paying

8   for this additional capacity?

9   A.   But it was not added to meet the

10   customers' needs.

11   Q.   I don't understand why that's relevant.

12   A.   This proposal by Empire is purely a

13   business venture. The customers do not need this.

14   Q.   I don't understand why that's relevant.

15   I mean, the question that you were asked and the

16   question I'm trying to get more understanding about

17   is if, if Empire has excess capacity or excess

18   energy and it sells that, why would that not -- why

19   would that not flow back to ratepayers 95/5 just on

20   the terms of the statute, the rule and the tariff.

21   And you're saying under the statute it shouldn't,

22   but now you've given me an example with Ameren at

23   least where it has, and I don't -- I don't know

24   Empire's FAC as well as I know Ameren's, so I don't

25   know if there's a difference in the tariff or the

1 applicability of the rule or statute.

2   A.   All of the electric utilities now have

3 off-system sales revenues that flow through their

4 FAC.

5   Q.   Well, then why wouldn't this -- why

6 wouldn't these off-system sales appropriately flow

7 through the FAC as well?

8   A.   As I explained, it is OPC's position at

9 this point that the statute does not allow for

10 off-system sales for something that is built purely

11 to make revenues on the markets.

12   Q.   Well, I will be intrigued to read your

13 counsel's learned briefing on that topic because I

14 don't understand that testimony at all. So, thank

15 you.

16   A.   And I did talk about this with Hampton

17 before.

18   Q.   I'm sure.

19   JUDGE BUSHMANN: Recross based on

20 Commission questions? Anything from Joplin?

21   MS. BELL: No.

22   JUDGE BUSHMANN: Division of Energy.

23   MR. POSTON: No, thank you.

24   JUDGE BUSHMANN: Renew Missouri.

25   MR. OPITZ: No, thank you, Judge.

1   JUDGE BUSHMANN: MECG.

2   MR. WOODSMALL: No questions.

3   JUDGE BUSHMANN: Commission Staff.

4   MS. FORCK: No, thank you.

5   JUDGE BUSHMANN: Empire.

6   MS. KNOWLTON: None.

7   JUDGE BUSHMANN: Redirect by OPC.

8   MR. WILLIAMS: Hopefully just a few

9   questions.

10   REDIRECT EXAMINATION

11   BY MR. WILLIAMS

12   Q.   Do you remember when you testified

13   regarding availability -- let me make sure I have

14   the right terminology. -- availability factors for

15   Empire where you indicated, I believe, that Elk

16   River and Meridian Way in the summer had an

17   availability factor of 27 percent and Asbury had an

18   availability factor of 80 percent that you

19   calculated?

20   A.   Yes.

21   Q.   When you said the summer, what were you

22   referring -- what period of time is that?

23   A.   The calendar months of June, July,

24   August, and September.

25   Q.   Do you remember when Staff asked you

```
 1   about capacity factors?

 2          A.    Yes.

 3          Q.    And you were asked about whether or not

 4   the modeling for the stipulation plan took into

 5   account wind farm degradation?

 6          A.    Yes.

 7                MS. FORCK:  Objection.  I didn't ask

 8   that question.

 9                JUDGE BUSHMANN:  Your response,

10   Mr. Williams.

11                MR. WILLIAMS:  I believe it was a topic

12   that came up.

13                JUDGE BUSHMANN:  I'll allow it.  Go

14   ahead.

15                MR. WILLIAMS:  She's already answered

16   the question anyway, so...

17          Q.    (By Mr. Williams)  Do you know how that

18   was -- degradation was taken into account?

19          A.    My understanding from testimony

20   yesterday is they used an average capacity factor

21   over I'm assuming a 30-year time period.  So,

22   it's -- they didn't put a capacity factor in for the

23   first year and then degradate it.  It was an average

24   amount for -- it was same for all 30 years.  That is

25   my understanding.
```

1   Q.   Is another way to phrase that your

2   understanding is that they put in a levelized -- or

3   an amount to account for I guess it would be

4   levelized degradation?

5   A.   Yes.

6   Q.   And is degradation levelized?

7   A.   No, it is not.

8   Q.   And in the modeling --

9   MS. FORCK: Your Honor, I'm going to

10   object to this line of questioning again. I didn't

11   ask Ms. Mantle about the modeling related to

12   degradation. I simply asked her whether she agreed

13   that the wind farms degrade over time.

14   JUDGE BUSHMANN: Mr. Williams, does this

15   line of questioning fall within that scope?

16   MR. WILLIAMS: The only other thing I

17   was going to point out is that the modeling

18   increases prices and the degradation increases over

19   time.

20   JUDGE BUSHMANN: Well, go ahead and ask

21   that question.

22   Q. (By Mr. Williams) Isn't it true that in

23   the modeling, the ABB forecasts that were used show

24   increasing prices over time, whereas actual

25   degradation increases over time, which would mean

1   **lowered output?**

2   A.   Yes. The levelized capacity factor

3   would mean the capacity factor in those later years,

4   which ABB forecasted very high market prices for,

5   would actually produce more wind at that higher

6   price and that is the time period where you get most

7   of what Empire calls customer savings.

8   **Q.   And do you know if Empire's modeling**

9   **took that into account?**

10   A.   No, I do not.

11   **Q.   Do you know anything about how well the**

12   **modeling that was performed took into account the**

13   **variability in the market prices in wind**

14   **generating -- and wind generation interruptibility?**

15   A.   I heard I think it was Mr. Holmes say

16   yesterday that that was taken into account, and

17   thinking through that, the only time a wind

18   generator that was owned by Empire would be

19   curtailed due to market prices would be when they

20   fell either below the variable cost of operation,

21   but definitely when there was negative pricing. The

22   fact that the forecasted market prices included no

23   negative prices meant there would be no curtailing

24   of the wind. The model would model wind being

25   generated at all times. So, while in theory the

1 model was doing that, the fact of the inputs kept

2 the model from ever curtailing the wind.

3   **Q.   Turning back to the availability factors**

4 **that you calculated. What was your source for those**

5 **calculations?**

6   A.   Those -- that is from reports that are

7 submitted monthly to the Commission in response to 4

8 CSR 243.190 and I believe attached with that is an

9 affidavit from Empire that the data is accurate to

10 the best of their abilities.

11   MR. WILLIAMS: No further questions.

12   JUDGE BUSHMANN: Thank you for your

13 testimony, Ms. Mantle. You may step down.

14   OPC may call its next witness.

15   MR. WILLIAMS: The Office of the Public

16 Counsel calls John Robinett.

17   JOHN ROBINETT,

18 having been called as a witness herein, having been

19   first duly sworn, was examined and testified as

20   follows:

21   JUDGE BUSHMANN: Please be seated.

22   DIRECT EXAMINATION

23 BY MR. WILLIAMS

24   **Q.   What is your name?**

25   A.   John A. Robinett, and it's

```
 1   R-O-B-I-N-E-T-T.
 2        Q.   By whom are you employed and in what
 3   capacity?
 4        A.   I'm employed by the Missouri Office of
 5   the Public Counsel as a utility engineering
 6   specialist.
 7        Q.   I'm going to hand you some documents
 8   that have been marked as exhibits.
 9             Have you had an opportunity to review
10   those?
11        A.   Yes.
12        Q.   And are those documents rebuttal
13   testimony you prepared that have been marked for
14   identification as Exhibit 202, public and
15   confidential; surrebuttal testimony that you
16   prepared that have been marked as Exhibits 203,
17   confidential and public; an affidavit in opposition
18   to a stipulation and agreement that has been marked
19   as Exhibit 209, confidential and public; and
20   Exhibit 213?
21        A.   Yes.
22        Q.   Do you have any changes to any of those
23   documents for those to be your testimony here today?
24        A.   I have one change to the affidavit in
25   opposition.  It's on page 2.  It's at the top of the
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1   page and the sentence that starts, "Additionally, it

2   is S&P." That should be an A instead of a P.

3   **Q.   So, it would be S&A?**

4   A.   Yes.

5   **Q.   With that change, are Exhibits 202, 203,**

6   **209, and 213 your testimony here today?**

7   A.   They are.

8   MR. WILLIAMS: I offer Exhibits 202,

9   203, 209, and 213.

10   (OPC's Exhibits 202, 203, 209, and 213

11   were offered into evidence.)

12   JUDGE BUSHMANN: Any objections?

13   MS. MERS: I object to Exhibit 213.

14   It's an affidavit. The procedural schedule outlines

15   that the last day affidavits would be submitted

16   would be May 4th. It came in on May 9th at 1 p.m.

17   JUDGE BUSHMANN: I understand. And it

18   was submitted late, but I think since all the

19   parties have had it for a couple of days now and

20   it's been actually discussed during the hearing I'll

21   overrule that objection. So, I'll admit all four

22   exhibits.

23   (OPC's Exhibits 202, 203, 209, and 213

24   were admitted into evidence.)

25   MR. WILLIAMS: Thank you. With that

1   I'll offer Mr. Robinett for examination.

2   JUDGE BUSHMANN: First cross will be by

3   City of Joplin.

4   MS. BELL: Thank you.

5   CROSS-EXAMINATION

6   BY MS. BELL

7   **Q.   Good morning, Mr. Robinett.**

8   A.   Good morning.

9   **Q.   I am looking at your rebuttal testimony**

10   **initially and in that testimony you have a lot of**

11   **discussion regarding Asbury. Do you recall the**

12   **amount of improvements that were made to Asbury over**

13   **the last several rate cases? Do you know the**

14   **magnitude of those?**

15   A.   I know for the AQCS it was approximately

16   $122 million.

17   **Q.   And did those improvements increase the**

18   **efficiency of Asbury?**

19   A.   In conjunction with the installation of

20   the AQCS equipment on Asbury a turbine overhaul was

21   also done, as well as I believe there was a filter.

22   The filter media in the cooling stack was also

23   changed out. And yes, it did increase the

24   efficiency of the plant.

25   **Q.   So, I think there's been some testimony**

1   regarding whether or not it's economic to continue

2   to operate Asbury. Do you have an opinion about

3   that?

4   A.   I do not.

5   Q.   Can you talk about the costs that would

6   be -- I think the Company has estimated that there,

7   and Mr. Mertens testified there was 20 to

8    $30 million of costs related to Asbury in the near

9   term if it remains open. Is that your

10   understanding?

11   A.   I believe those are related to the coal

12   combustion residual rules and the effluent

13   guidelines. There was a DR from Sierra Club that

14   addressed that value and that differs a little bit

15   from what I've seen in the depreciation study

16   estimates for their future additions as well.

17   Q.   And how does that differ?

18   A.   The number is slightly lower in the

19   depreciation studies that I pulled from the 2016

20   depreciation study filed in their rate case. In

21   that that can be found at page 8 of my rebuttal in

22   that table, and that is a confidential table.

23   Q.   So, you believe Mr. Mertens' testimony

24   overstated what's in the depreciation's information?

25   A.   It's not by a whole lot, but it is.

1   Q.   And there was some testimony about

2   whether some of those costs -- I think at one point

3   they were referred to as some cost. Whether or not

4   some of those costs would be incurred regardless of

5   whether Asbury stays open or closed. Can you

6   comment on that?

7   A.   That would be true. That would be

8   related to the closure of the existing ash pond.

9   Q.   And so, is that amount confidential?

10   A.   I don't believe it was, and that would

11 be found in my surrebuttal actually and that's on

12 page 4.

13   Q.   The chart that starts after line six?

14   A.   Yes.

15   Q.   And so, is that -- the $5.7 million,

16 you're saying that is the cost regardless of whether

17 Asbury's opened or closed?

18   A.   No. That's actually for the new

19 landfill that would be required as a part of the CCR

20 rules. It's actually line PA0038R, and I believe

21 Mr. Mertens testified that part of that 5 million in

22 2018 would not be a sum cost.

23   Q.   And do you agree with that?

24   A.   I honestly don't know.

25   Q.   Is there a cost associated with

1   dismantlement of Asbury if it's closed?

2   A.   There could be if it's determined that

3   they will remove it.

4   Q.   I think there's some testimony, I think

5   it's in your surrebuttal, about new tariffs. Do you

6   recall that discussion?

7   A.   Are you talking about the steel --

8   Q.   Yes.

9   A.   -- tariff?

10   Q.   Can you comment on that? I know -- I

11   don't know the date your surrebuttal was filed

12   exactly. Has there been any update to your

13   conversation in that?

14   A.   Not that I'm aware of. I issued a DR

15   and relating to the impact of it, but I don't recall

16   the response that I was given.

17   Q.   And I believe you said that if that

18   tariff goes through, then it could change the RFP

19   responses. Is that your concern?

20   A.   And I think that's what the DR asked. I

21   know there was a provision in the RFPs for the

22   potential to change the bids, but I don't know if it

23   would or not.

24   Q.   So, if we're looking at the estimates

25   that we've seen from both I think Mr. McMahon and

1   Mr. Holmes and then Mr. Riley's chart, that factor

2   wouldn't change the O&M? It would change the

3   project costs?

4   A.   I believe it should -- it could change

5   the capital costs.

6   Q.   Now, in your second affidavit you have

7   four charts; is that correct?

8   A.   Yes.

9   Q.   And when I look at these, they remind me

10   of Ms. Mantle's testimony that they appear to be

11   showing that the wind production is highest when the

12   load is lower, that there's a mismatch between load

13   and production. Is that your under -- is that what

14   you were trying to show with these?

15   A.   What I was really trying to show is the

16   variability of wind and what I -- what these data

17   source where there's actually HRs attached to the

18   affidavit was sourced from the DR 8557 in which I

19   asked for the hourly wind production curves for the

20   Elk River's facility during 2016 and 2017. What

21   Empire provided me was hourly data of Empire's load

22   from January 1 at 1 a.m. in 2013 through

23   December 31st 2017 at midnight. And so, I was given

24   the load for Empire, Elk River's production, as well

25   as Meridian's Way production.

```
 1        Q.   So, is that like an average between wind
 2   between Elk River and Meridian that we're seeing?
 3        A.   So, in the charts it is a combination of
 4   -- the orange line is a combination of the output
 5   from Meridian and Elk River on a given day in which
 6   the days that were selected I looked for the peak
 7   hourly load that would have occurred in the winter
 8   months, which would be December, January, February,
 9   and then I looked for the peak in the summer months
10   for June, July, and August.  Additionally shown are
11   the minimum loads sourced from the spring and fall,
12   and then I -- once I had those days where I found
13   the max and the mins, I charted Empire's load over
14   that day in connection with the combination of the
15   wind production from Meridian and Elk River, but
16   what I did was I scaled that up to match the request
17   here for an additional 600 megawatts of wind on top
18   of the production of those two PPAs.
19        Q.   Oh, I don't think I understood that.
20   So, the wind production also includes the new wind,
21   the orange line?
22        A.   The orange line is scaled up for 600
23   megawatts plus the existing PPAs.
24        Q.   So, if I'm on fall minimum and I'm in
25   hour 12 any --
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 1        A.    For which year?

 2        Q.    For 2016.

 3        A.    So, October 2?

 4        Q.    Yes.

 5        A.    Okay.

 6        Q.    And I'm on hour 12 and the blue bar is

 7   all the way up between 400 and 500 and the orange

 8   line is down below 100.  What happens in that hour?

 9        A.    Certainly the wind projection based on

10   that day does not meet Empire's load, so there would

11   be other generation needed.

12        Q.    Do you have -- have you looked at other

13   wind curves from other projects besides Elk River

14   and Meridian?

15        A.    No.

16        Q.    Do you have any reason to suspect that

17   the curves would be different for other wind

18   projects?

19        A.    Based on their location, they probably

20   see different amounts of wind.  So, with the wind

21   it's variable and depends on the location of where

22   it's at.  You may not see the same curve on any

23   given day.

24        Q.    Do you know what types of wind shapes

25   Empire used in its modeling?
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 1           A.    No, I don't.
 2           Q.    Is there a way to, I guess, equalize
 3   some of this to save the wind up and use it at the
 4   time you need it?
 5           A.    I believe there is battery technology,
 6   but I do not know that it is capable of holding the
 7   wind for extended periods of time and I don't know
 8   that currently that technology is cost effective.
 9           Q.    And are you aware whether batteries were
10   included in Empire's plan?
11           A.    I do not believe they were.
12           Q.    And I think Ms. Forck had asked some of
13   the other witnesses or maybe I'm incorrect.  I
14   believe about paragraph eight of your affidavit, the
15   initial affidavit, and I think that's about
16   retirements?
17           A.    Yes.
18           Q.    Do you recall that line of questioning?
19           A.    Yes.
20           Q.    And I think -- I think it was
21   Mr. McMahon who had commented on that.  Do you agree
22   with Mr. McMahon's analysis of those retirements and
23   depreciation?
24           A.    If I recall what was said is that they
25   specifically modeled 20 years, but there are present
```

1 values put out there for 30 years and my concern was

2 that the analysis may not have picked up retirements

3 that are projected and estimated by the depreciation

4 study.

5   MS. BELL: No further questions at this

6 time.

7   JUDGE BUSHMANN: Division of Energy.

8   MR. POSTON: No questions. Thank you.

9   JUDGE BUSHMANN: Renew Missouri. Renew

10 Missouri.

11   MR. OPITZ: No, thank you.

12   JUDGE BUSHMANN: MECG.

13   MR. WOODSMALL: Yes. Briefly, Your

14 Honor.

15   CROSS-EXAMINATION

16 BY MR. WOODSMALL

17   **Q.   Good morning, sir.**

18   A.   Good morning.

19   **Q.   Empire currently has wind PPAs; is that**

20 **correct?**

21   A.   I believe two of them, yes.

22   **Q.   Empire doesn't have any current wind**

23 **investment; is that correct?**

24   A.   You mean ownership?

25   **Q.   Right.**

```
 1         A.    Not to my knowledge.

 2         Q.    So, Empire doesn't have -- because of

 3   that, they don't have a depreciation rate for the

 4   wind plan accounts; is that correct?

 5         A.    Since they don't have wind, they would

 6   not have depreciation rates specific to wind.

 7   However, there are depreciation rates in the 341

 8   series, other generation, which is more likely where

 9   these assets would fall.

10         Q.    The point of my questioning is the

11   stipulation has a provision for a 3.33 percent

12   depreciation rate, and I'm wondering in its

13   objection does OPC have a problem with that

14   depreciation rate?

15         A.    My concern is that the net salvage --

16         Q.    I understand your concern about the

17   timing of the depreciation study.  Is your concern

18   different than the timing of the study?

19         A.    Yes.  There's -- the net salvage is a

20   zero percent under the 3.33 percent depreciation

21   rate in the recommendation.  I believe that there

22   will be some sort of cost removal at the end of this

23   asset's life and there may be salvage value related

24   to this -- the turbines themselves as well, and I

25   don't believe that's accounted for with a zero
```

1   percent net salvage rate included in the 3.33

2   percent.

3   Q.   Has Public Counsel proposed an

4   alternative depreciation rate?

5   A.   It has not.

6   MR. WOODSMALL: I have no further

7   questions. Thank you.

8   JUDGE BUSHMANN: Cross by Staff.

9   MS. MERS: No questions. Thank you.

10   JUDGE BUSHMANN: Empire.

11   MR. COOPER: Very briefly.

12   CROSS-EXAMINATION

13   BY MR. COOPER

14   Q.   You were asked a question about your,

15   oh, your steel tariff concern by, I believe,

16   Ms. Bell. Is it your understanding that

17   negotiations with those same bidders are still

18   underway or underway right now?

19   A.   I would caveat that with I believe there

20   is -- I don't know how to call it. It's a -- it's a

21   shortened list. So, it's not all of the bids

22   received, but I believe there are still negotiations

23   going on.

24   Q.   So, a shorter list of bids than what you

25   had access to and looked at, right?

```
 1        A.   Correct.

 2        Q.   And in terms of your concern about the

 3   steel costs, those would be worked out during the

 4   negotiations, wouldn't they?

 5        A.   I would assume so.  I don't know,

 6   though.

 7             MR. COOPER:  No further questions.

 8             JUDGE BUSHMANN:  Commissioner questions.

 9             CHAIRMAN HALL:  No questions.  Thank

10   you.

11             JUDGE BUSHMANN:  Redirect.

12             MR. WILLIAMS:  No, thank you.

13             JUDGE BUSHMANN:  Thank you,

14   Mr. Robinett.  You may step down, sir.

15             THE WITNESS:  Thank you.

16             JUDGE BUSHMANN:  You may call your next

17   witness.

18             MR. WILLIAMS:  The Office of the Public

19   Counsel calls John Riley.

20             JUDGE BUSHMANN:  JSR-1 would be

21   Exhibit 218, and JSR-R-2 corrected would be 219.

22                     JOHN RILEY,

23   having been called as a witness herein, having been

24     first duly sworn, was examined and testified as

25                       follows:
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 1              JUDGE BUSHMANN:  Go ahead.
 2                   DIRECT EXAMINATION
 3    BY MR. WILLIAMS
 4         Q.    What is your name?
 5         A.    My name is John S. Riley.
 6         Q.    By whom are you employed and in what
 7    capacity?
 8         A.    I'm employed by the Office of the Public
 9    Counsel as a utility accountant III.
10         Q.    I'll locate it and provide it to the
11    court reporter later.  Did you prepare rebuttal
12    testimony that's been marked for identification as
13    Exhibit 204, surrebuttal testimony that's been
14    marked for identification as 205-C and P, and an
15    affidavit in opposition to the nonunanimous
16    stipulation agreement that's been marked for
17    identification as Exhibit 210?
18         A.    Yes, I have.
19         Q.    And do you have corrections to any of
20    those exhibits?
21         A.    Yes, I do.  In my rebuttal testimony I
22    filed some exhibits that I ended up doing a little
23    cut and pasting and incorrectly marked some numbers
24    down on the retirement of Asbury.
25         Q.    Well, before you go into the details of
```

1   that, have two exhibits marked 218, which is shown

2   as Exhibit JSR-1 corrected, and another Exhibit 219

3   that is Exhibit JSR-R-2 corrected. Did you prepare

4   those exhibits?

5   A.   Yes, I did.

6   Q.   And what does Exhibit JSR-1 reflect, the

7   corrected exhibit?

8   A.   JSR-2. JSR-1 is -- JSR-1 would be my

9   caseload that I've worked on.

10   Q.   Exhibit 218?

11   A.   Oh, JSR. Excuse me. This is -- this is

12   the --

13   Q.   What correction is reflected on that

14   document to what you originally filed?

15   A.   On JSR. JSR-1 I corrected -- there's a

16   line down in the lower, lower portion of the -- of

17   the spreadsheet called less contributions to TE. I

18   made some corrections on that line, and below that

19   on add back distribution to TE I made some

20   corrections on that line.

21   Q.   And what are those corrections?

22   A.   After discussing some numbers with

23   Mr. Greg Meyer, I determined that I had made some

24   errors in my entries and had corrected the

25   contributions from TE, which as that flows down

1   through the spreadsheet will make corrections to the

2   distributions to the TE.

3   **Q.   And what was the nature of your errors?**

4   A.   I had originally looked at the

5   stipulation and agreement and made an assumption as

6   to what the contributions to the TE were and I had

7   plugged those in here. I had later found out that

8   those were netted out between the contributions from

9   the TE and the distributions to the TE. So, I

10 separated those and carried those out to make my

11 corrections.

12   **Q.   Were you aware of that netting issue**

13 **before you spoke with Mr. Meyer?**

14   A.   No.

15   **Q.   And then I -- what are you showing on**

16 **Exhibit 219? What changes are you making there and**

17 **why?**

18   A.   JSR-R-2?

19   **Q.   Yes.**

20   A.   This was accompanying my rebuttal

21 testimony and I had done some calculations to the

22 projected 800 megawatts and below that I showed some

23 projections as to the first 11 years if Asbury was

24 closed and as I was carrying out my numbers I cut

25 and pasted, made a mistake on the last, last year of

1   the Asbury closure which, of course, I carried over

2   to the next spreadsheet behind that,

3   Exhibit JSR-R-3. So, when I corrected, corrected

4   the numbers on R-2, which, of course, I would have

5   had to correct the numbers on R-3. So, it provided

6   different calculations on Asbury's closure.

7   **Q.   Exactly which number was the I guess I**

8   **use the word erroneous one or the one you corrected**

9   **that then flowed through to the others or series of**

10   **numbers?**

11   A.   On the last, on year 2030, which is year

12   number 11 I believe I had incorrectly calculated the

13   rate -- return on equity, which, of course, affected

14   the tax requirement and the interest, and I

15   believe -- I don't have that right in front of me,

16   but I originally said that the revenue requirement

17   was 14, $14 million instead of the 18 million point

18   53 that I put down.

19   **Q.   So, what you're saying, I believe, is**

20   **that on the last column on the first page of that**

21   **exhibit you changed the line associated or the**

22   **number in the line called equity 50 percent or on**

23   **ROE?**

24   A.   ROE.

25   **Q.   On ROE and then that flowed through to**

 1   affect other numbers?

 2   A.   Yes, sir.

 3   Q.   And it also followed through to the next

 4   schedule?

 5   A.   Garbage in, garbage out. Yes.

 6   Q.   With the correction shown on Exhibits

 7   218 and 219, which really are substitutions to the

 8   schedules attached to your rebuttal and surrebuttal

 9   testimony, are Exhibits 204, 205, and 210 your

10   testimony?

11   A.   I do have slight changes within the body

12   of the testimony.

13   Q.   Would you identify what changes you'd

14   like to make within the body of the testimony?

15   A.   Because of the change in the

16   spreadsheets and my rebuttal testimony on page 4,

17   line 15, where it says the shortfall nearly

18   14.7 million should read 18.53 million. And because

19   of the change in the spreadsheets, on page 8 of my

20   rebuttal, line three where it says will be over

21   427.5 million, that should read over 460 million.

22   Because of the change in the spreadsheets, on my

23   surrebuttal there's a change in a number on page 8,

24   line ten. Instead of 427 million, it should read

25   460 million.

1   Q.   Do you have any further changes to any

2   of these exhibits?

3   A.   One more. Because of the correction on

4   Exhibit JSR-1, in my affidavit, page 8, second to

5   the last line where it reads Company approximately

6   380 million, the number should now read 319 million.

7   MR. WOODSMALL: Did you say page 8?

8   THE WITNESS: Page 7. Excuse me. Last

9   page, second to last line.

10   Q.   (By Mr. Williams) Any further changes?

11   A.   No.

12   Q.   Then with those changes you've

13   identified, are Exhibits 204, 205, 210, 218, and 219

14   your testimony here today?

15   A.   Yes, it is.

16   MR. WILLIAMS: I offer Exhibits 204,

17   205, 210, 219, and 218.

18   (OPC's Exhibits 204, 205, 210, 218, and

19   219 were offered into evidence.)

20   JUDGE BUSHMANN: Any objections?

21   Hearing none. They're received.

22   (OPC's Exhibits 204, 205, 210, 218, and

23   219 were admitted into evidence.)

24   MR. WILLIAMS: I offer the witness for

25   examination.

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 1              JUDGE BUSHMANN:  First cross is by City

 2   of Joplin.

 3                   CROSS-EXAMINATION

 4    BY MS. BELL

 5         Q.    Good morning, Mr. Riley.

 6         A.    Good morning.

 7         Q.    Let's start with your rebuttal

 8   testimony, and your rebuttal testimony addressed

 9   Empire's original CSP plan; is that correct?  It

10   didn't address the stipulation and agreement,

11   correct?

12         A.    No, it does not.

13         Q.    And on page 3 in line one you state,

14   "I'm not convinced that Empire's retail customers

15   will realize any savings."  Do you maintain that

16   same position about the stipulation and agreement?

17         A.    Yes, I do.

18         Q.    And on page -- or lines ten and 11 of

19   that same page you indicate there are only two ways

20   that a company can increase their return to

21   shareholders.  What are those two ways?

22         A.    Well, to increase customer load as in

23   more customers or more power use, or to increase

24   rate base.

25         Q.    And this plan would substantially
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1   increase Empire's rate base; is that correct?

2   A.   Yes, ma'am.

3   Q.   And the amount by which it would

4   increase the rate base is dependent on the capital

5   contribution of Empire; is that correct?

6   A.   That would be correct.

7   Q.   On page 5 of your rebuttal testimony you

8   said you started with an initial investment of

9   700 million. Do you know what percentage that was?

10   Was that 700 million out of the 1.5 billion?

11   A.   Yes, ma'am. Yes. Originally they

12   presented the presentation with a 700 to 800 split.

13   700 to the Empire and 800 to the tax equity partner.

14   Q.   Let's turn to your surrebuttal. On page

15   5 you indicate in line 15 that all the financial

16   risk of Empire CSP falls on Empire's retail

17   customers; is that correct?

18   A.   Yes. That is what I stated.

19   Q.   And do you believe that that risk is

20   mitigated by the provision that has been called the

21   market protection provision, I think?

22   A.   Well, the market protection calls for

23   $35 million to be -- if there's losses, $35 million

24   would be borne by Empire. So, I guess there is a

25   reduced financial risk to the retail customer by

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 1   that amount.

 2        Q.    And you were in the room for

 3   Ms. Mantle's testimony, correct?

 4        A.    Yes, ma'am.

 5        Q.    And she indicated, I think, there might

 6   be some sharing of the savings.  Was that your

 7   recollection of her testimony?

 8        A.    I'm not quite sure what you would mean

 9   by savings, but...

10        Q.    The way that I understand the market

11   protection provision to work was in the first rate

12   case if Empire comes in and hits that $35 million

13   cap or then -- and there's a loss, then that is

14   essentially booked or returned to customers, but if

15   they come back in year six and there is equal

16   savings, that in the first ten years they are

17   allowed to net savings versus losses?

18        A.    I'm not intimately familiar with that,

19   but that's, I think, kind of my understanding, yes.

20        Q.    Are you familiar with the wind catcher

21   project in Oklahoma?

22        A.    Not really.

23        Q.    Looking at your affidavit in the

24   schedule JSR-1, which I guess now I'm looking at the

25   corrected JSR-1.  There were -- I think several of
```

1 the Empire witnesses have testified on regarding

2 this JSR-1, correct?

3   A.   Yes, ma'am.

4   Q.   And you were present or have reviewed

5 that testimony?

6   A.   Yes, I was.

7   Q.   One of the things that was commented on

8 with respect to the first JSR-1 was a -- I think it

9 was called a double counting. Do you recall that

10 discussion?

11   A.   Yes, ma'am.

12   Q.   And was that issue the one that you

13 corrected in -- so, essentially there are two

14 numbers that were netted and then you added it back

15 in. So, is that what they meant by double counting?

16   A.   That's my understanding. When I talked

17 to Mr. Meyer, we went over that and that was how it

18 was presented to me, yes.

19   Q.   So, the corrected version in your

20 opinion doesn't contain any double counting errors?

21   A.   No. I don't believe it does.

22   Q.   And I believe there was also some

23 discussion about whether or not the income tax rate

24 you utilized in your chart was correct. Can you

25 comment on that?

1   A.   Well, the -- what I basically did on the

2   spreadsheet is I tried to replicate how Staff would,

3   you know, do a revenue run on this particular asset

4   and one of the -- one of the features that would

5   happen on a revenue run is you do a tax gross-up.

6   Now, the taxes have changed. People may be a little

7   more familiar with the 1.6628 that Staff used to use

8   to gross-up taxes. However, now with a 2 percent

9   rate and a 6.5 percent Missouri rate, when you put

10   those two together and you gross those up, it comes

11   up to -- it would say 1.3325, 245, but I only went

12   ahead and just put in the percentage of 33245.

13   **Q.   And I believe there was also some**

14   **discussion. That testimony relates to income tax,**

15   **correct?**

16   A.   That's correct.

17   **Q.   I think there was also some discussion**

18   **about the property tax rate. Was that your**

19   **understanding?**

20   A.   Yes, ma'am.

21   **Q.   And is your opinion that the .86 percent**

22   **is the correct number to use there?**

23   A.   Well, the .86 percentage was something

24   that the Company used and I went ahead and

25   duplicated it on my spreadsheet. I believe the

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 1   question they had was what exactly did I apply that

 2   to, so...

 3             Q.    So, what exactly did you apply that to,

 4   sir?

 5             A.    Well, because it's going to flow through

 6   either through the Wind Co. company or revenue

 7   requirement, I added -- I added the entire amount of

 8   the project, which was $1,039,000,000 and applied

 9   the .86 percent to that and as it depreciated down I

10   applied it for each year.  So, as you -- as you see,

11   in the first year of this spreadsheet is only for

12   based on a quarter of a year, but in 2021 the

13   property tax is 8.75, which represents the 500 --

14   nearly 506 million plus the 529 million that the tax

15   equity partner would have had less their

16   depreciation.  So, as you go on down the line, 875,

17   846, 817.  It represents the entire project's

18   property taxes.

19             Q.    And Mr. Meyer testified earlier that he

20   believed you used the third lowest scenario out of

21   12 for your calculations.  Would you agree with

22   that?

23             A.    Well, I wasn't familiar that there was

24   12.  I actually used, I guess to be more accurate

25   with me, it was the third lowest that was in the
```

1   stipulation and agreement.

2   **Q.   Of the four spreadsheets that were**

3   **attached?**

4   A.   Yes, ma'am.

5   **Q.   And is that the expected case in your**

6   **opinion?**

7   A.   Excuse me. Say that again.

8   **Q.   Is that the expected case in your**

9   **opinion?**

10   A.   I based using that particular one

11   against some earlier presentations the Company did,

12   and because they were a presentation based on 800

13   megawatts and not 600, I used 75 percent, but the

14   scenario that they have on the stipulation and

15   agreement closely matched what their prior revenue

16   expectations were, so I stayed with that one.

17   **Q.   As far as percentage of contribution by**

18   **Empire as shared with the tax equity partner, what**

19   **does your spreadsheet assume?**

20   A.   Would that be the -- can you ask me that

21   again, please?

22   **Q.   There's been some discussion. I think**

23   **Empire's modeling used 44 percent, a 44 percent**

24   **capital contribution by Empire. What did your model**

25   **use?**

 1   A.   I've actually used a 51 percent tax

 2   equity and a 49 percent Empire.

 3   **Q.   So, 49 percent Empire?**

 4   A.   Based on the total expectations of

 5   1,039,000,000 and the tax equity partner would have

 6   529 million of that, 510 million left. That makes

 7   49 percent of the total.

 8   **Q.   And we talked earlier about risks to**

 9   **customers. To the extent that 49 percent increases,**

10   **does that increase the risk on customers in your**

11   **opinion?**

12   A.   Well, it would raise -- I'm not sure

13   there would be any more -- any more risk. It would

14   raise the revenue requirement that the customer is

15   going to have to absorb it, if this doesn't pay for

16   itself.

17   **Q.   So, it potentially would increase the**

18   **customer rates?**

19   A.   Yes, ma'am.

20   **Q.   I believe there was also -- I think**

21   **Mr. Meyer discussed that on your chart if we look at**

22   **operating costs, which there's kind of two blocks of**

23   **numbers. Operating costs appears to be the third**

24   **line down in this second block, and that that number**

25   **is different from what Empire has modeled currently.**

1 **Can you explain where you got your numbers for**

2 **operating costs.**

3   A.   Well, basically they're the same numbers

4 I used in my original rebuttal. The numbers are

5 moved around a little differently, but I used -- I

6 used the numbers they presented in a November

7 presentation and because it was set up for 800

8 megawatts instead of 600, I used 75 percent, and I

9 went through their O&M, BOP, maintenance, insurance,

10 land leases, and administration in general and came

11 up with totals from that, applied 75 percent to it,

12 and had used -- and went ahead and used that in this

13 one.

14   **Q.   And so, is it your understanding that**

15 **since that time Empire has revised those numbers?**

16   A.   It's my understanding they have, yes.

17   **Q.   So, if I'm trying to get from their old**

18 **O&M numbers to the new O&M numbers, all I have to do**

19 **is find out what the difference of each year in**

20 **those two numbers is, correct?**

21   A.   To find out, yeah, the difference

22 between what they have now and, yes, that you do.

23   **Q.   Do you know what the total of that**

24 **difference is over the ten years?**

25   A.   Not exactly. I'm never really sure what

1   they have in their -- in their new number because I

2   was -- I've never -- I've never really seen what

3   exactly they consider an O&M expense, so I'm not

4   really sure how to make -- how that's made up. I

5   mean, I know they have a new number on the

6   stipulation and agreement, but I've never actually

7   separated them.

8   Q.   Fair enough.

9   So, I could do that math if I look at

10 your corrected JSR-1, the operating costs versus the

11 operating cost with their line is called fixed O&M

12 and that is in, I believe, OPC 216, which was their

13 response to OPC DR-5, correct?

14   A.   I never saw that DR, so not real sure.

15   Q.   So, in this OPC, what's the exhibit

16 that's been marked OPC 216, do you see that line

17 fixed O&M? Is that the Company's revised O&M rates?

18   A.   Yes, it is. It is, I think, the same

19 ones that are actually in the stipulation and

20 agreement.

21   Q.   So, would you -- would you believe me if

22 I told you the difference was $90 million between

23 your O&M numbers and their O&M numbers over ten

24 years, subject to check?

25   A.   I think I can take your word for it.

1   Q.   And so, if I was trying to use your

2   chart, which is JSR-1 corrected, and figure out what

3   you're calling -- so, right now you're saying the

4   total shortfall is 318,67 over ten years; is that

5   correct?

6   A.   That's correct.

7   Q.   So, if I was to take Empire's new O&M

8   numbers just as an assumption, then your total

9   shortfall calculation would just be 318 minus the

10   90 million, correct?

11   A.   There would be slight changes in the

12   distribution to the tax equity, but basically. I

13   mean, for arguments, yeah.

14   Q.   And so, you're still predicting a

15   shortfall in excess of the $35 million cap in the

16   market protection provision, correct?

17   A.   Yes, ma'am.

18   Q.   So, according to JSR-1 when would the

19   customer protection provision cap be exceeded? What

20   year?

21   A.   I believe it would be in the third year,

22   2022.

23   Q.   And so, then after that year, who bears

24   the risk of any shortfall?

25   A.   I believe the customer would.

1   Q.   Would you consider JSR-1 corrected the

2   worst case scenario?

3   A.   Well, no. I didn't take -- I didn't

4   take the lowest revenue figures or anything like

5   that. I took -- I took what I thought they had used

6   back in November basically.

7   Q.   So, the worst case scenario would have

8   to be the lowest revenues and also the highest

9   capital contribution from Empire?

10   A.   That would be a much worse scenario,

11   yes.

12   Q.   All right. I am going to hand you

13   what's been marked JOP 511.

14   Can you identify the title of this

15   chart?

16   A.   (The answer given was deemed to be

17   confidential and was stricken from the public

18   record.)

19   MS. BELL: Oh, can we go in camera,

20   please?

21   (REPORTER'S NOTE: At this point, an

22   in-camera session was held, which is contained

23   Volume 8, Page 824 through 828.)

24   ************************

25

 1   (The proceedings resumed in open

 2   session.)

 3   JUDGE BUSHMANN: Go ahead and make your

 4   offer again.

 5   MS. BELL: Your Honor, I would like to

 6   offer Joplin 511.

 7   JUDGE BUSHMANN: C.

 8   MS. BELL: C, correct.

 9   (Joplin's Exhibit 511-C was offered into

10   evidence.)

11   JUDGE BUSHMANN: Are there any

12   objections to that?

13   MS. KNOWLTON: The company has no

14   objection, but subject to the same position that I

15   took with regard to the prior corrected JSR-1, which

16   is we would like to have the ability to recall

17   Mr. Holmes because we believe that there are errors

18   in this second correction.

19   JUDGE BUSHMANN: Then I will admit

20   511-C.

21   (Joplin's Exhibit 511-C was admitted

22   into evidence.)

23   JUDGE BUSHMANN: And you said you had no

24   more questions --

25   MS. BELL: Correct, Your Honor.

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 1              JUDGE BUSHMANN:  -- of this witness?

 2              MS. BELL:  Thank you.

 3              JUDGE BUSHMANN:  Next cross would be by

 4   Division of Energy.

 5              MR. POSTON:  No questions.  Thank you.

 6              JUDGE BUSHMANN:  Renew Missouri.

 7              MR. OPITZ:  No, thank you, Judge.

 8              JUDGE BUSHMANN:  MECG.

 9              MR. WOODSMALL:  No questions.

10              JUDGE BUSHMANN:  Commission Staff.

11                 CROSS-EXAMINATION

12    BY MS. MERS

13         Q.   My understanding is that 511-C is your

14   work product, correct?

15         A.   Yes, ma'am.

16         Q.   And since Joplin entered it, I assumed

17   it was work product prepared earlier?

18         A.   Yes, ma'am.

19         Q.   Was it sent to any other parties other

20   than Joplin?

21         A.   I couldn't tell you that.

22         Q.   Do you have a copy of the nonunanimous

23   stipulation and agreement in front of you?

24         A.   I think so.

25         Q.   Could you turn to page 8?
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 1          A.    Yes, ma'am.
 2          Q.    17(c).  Do you agree that that paragraph
 3   reads, "In general terms the mechanism seeks to
 4   provide for the sharing of risk between customers
 5   and shareholders"?
 6          A.    Well, there was -- there will be a
 7   sharing of risk --
 8          Q.    Yes.
 9          A.    -- off of appendix A, yes.
10          Q.    Doesn't mention benefits, does it?
11          A.    I don't think so.
12          Q.    And from your understanding, this
13   provision will be flowing benefits of off-system
14   sales revenues through the FAC twice a year,
15   correct?
16          A.    My under -- my understanding is that it
17   could possibly flow.
18          Q.    And that would be just straight pass
19   through without a calculation of sharing from your
20   understanding?
21          A.    I couldn't tell you that yet.
22                MS. MERS:  I have nothing further.
23   Thank you.
24                JUDGE BUSHMANN:  Just an inquiry of
25   Empire before we get started.  We're going to have
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1   to break no later than 12:45. If you have more

2   cross than that, we can go ahead and wait till after

3   lunch, but if you think you can get done before

4   then.

5   MS. KNOWLTON: Sure. I should be able

6   to get done before then.

7   JUDGE BUSHMANN: All right. Then go

8   ahead.

9   CROSS-EXAMINATION

10   BY MS. KNOWLTON

11   Q.   Good morning, Mr. Riley.

12   A.   Afternoon.

13   Q.   Afternoon.

14   In your rebuttal testimony on page 1 you

15   list your work history. During any of that

16   employment were you involved in a tax equity

17   financing transaction?

18   A.   No, ma'am.

19   Q.   And I believe in your affidavit on page

20   6, paragraph 13 you indicate that you don't

21   completely understand how these tax equity

22   contributions and distributions have been

23   calculated, correct?

24   A.   Well, I'm probably more in line with it.

25   I don't exactly understand why they're done the way

1   they are.

2   Q.   There's been testimony from Mr. Meyer

3   and as well from you regarding how operating costs

4   are reflected in your JSR-1, correct?

5   A.   I believe so.

6   Q.   And Mr. Meyer's testimony was that your

7   reflection of those operating costs in JSR-1 is

8   about 80 to $90 million higher in your calculations

9   than what the Company used in developing the

10 stipulation; is that right?

11   A.   I believe that's correct.

12   Q.   And Mr. Meyer testified that the fixed

13 O&M numbers that he relied upon and as well as the

14 Company and the signatories in developing the

15 stipulation came from the responses that Empire

16 received to its RFP; is that correct?

17   A.   I'm not really positive of that, no. I

18 don't really quite understand how that would -- that

19 works, but yes. I think that somebody did make that

20 statement.

21   Q.   Did you have access to the bids that

22 were submitted in response to Empire's RFP?

23   A.   I didn't read all of the bids, no.

24   Q.   Did you go to Mr. Cooper's office and

25 review those bids?

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 1          A.    Mr. Robinett actually reviewed the bids

 2    themselves.

 3          Q.    Were you there?

 4          A.    I was there.

 5          Q.    Do you remember if that was before

 6    surrebuttal was filed in this case?

 7          A.    I think it was, yes.

 8          Q.    There was a data request that the Office

 9    of Public Counsel asked to the signatories in this

10    docket numbered 8039.  In that data request OPC

11    asked that the signatories provide -- it says,

12    "Please provide the S&A attachment A Excel

13    spreadsheet with formulas intact."  Do you have any

14    familiarity with that data request that OPC made?

15          A.    No, I do not.

16          Q.    What is the process of the OPC for when

17    data responses are submitted to the office -- when a

18    party receives a request and responds back to OPC,

19    what is the process at your office for sharing that

20    information among people that are working on a case?

21          A.    Well, the data request that you

22    mentioned was submitted by Ms. Lena Mantle and I

23    would have an opportunity to look at it if I -- if I

24    wanted to or realized what was on that data request.

25          Q.    And would that have been the case with
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 1   the other data request that we -- there's been

 2   testimony about today, 8045?

 3        A.    Yes.

 4        Q.    And are you aware now that with regard

 5   to 8045 that that included information on it with

 6   regard to the fixed cost amounts that the Company

 7   and the signatories relied upon in developing the

 8   stipulation?

 9        A.    I'll have to take your word for it.  I

10   don't know exactly what's, what's on the

11   spreadsheet.

12             MS. KNOWLTON:  May I approach the

13   witness?

14             JUDGE BUSHMANN:  You may.

15             MS. KNOWLTON:  May I examine him from

16   here?

17             JUDGE BUSHMANN:  Yes.

18        Q.  (By Ms. Knowlton)  Mr. Riley, I'm going

19   to hand you a copy of data response --

20             JUDGE BUSHMANN:  Actually, you might

21   want to use the podium so the microphone can pick up

22   you.

23             MR. WILLIAMS:  May I see what it is

24   you're...?

25             MS. KNOWLTON:  Sure.
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 1          Q.  (By Ms. Knowlton)  So, do you have 8045

 2     before you?

 3          A.   Yes, ma'am.

 4          Q.   And this request was asking for work

 5     papers that Mr. Meyer had relied upon in developing

 6     his affidavit in support of the stipulation; is that

 7     right?

 8          A.   I'll take your word for it.

 9          Q.   And attached to 8045, the response

10     indicates see the attached spreadsheet.  Do you see

11     that clipped to the response?

12          A.   Yes, ma'am.

13          Q.   And I'll represent to you that this is

14     nine pages long, and if you can turn to the sixth

15     page of the attachment?  And again, I apologize for

16     the small numbers.

17          A.   I think I'm there.

18          Q.   And about a third of the way down the

19     page do you see a line that says fixed O&M?

20          A.   Yes, ma'am.

21          MS. KNOWLTON:  The Company has nothing

22     further for Mr. Riley.

23          JUDGE BUSHMANN:  Commissioner questions.

24          CHAIRMAN HALL:  No questions.  Thank

25     you.
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 1                    JUDGE BUSHMANN:  Redirect.

 2                    MR. WILLIAMS:  Thank you.

 3                    REDIRECT EXAMINATION

 4    BY MR. WILLIAMS

 5         Q.    Mr. Riley, turning your attention to the

 6    data request that was just handed to you, which

 7    includes a response.  What date is shown as the

 8    responding date of the response?

 9         A.    I'm afraid she took it back.

10               Response date is May 1st, 2018.

11         Q.    And did you actually look at the data

12    request response before today?

13         A.    No, sir.

14         Q.    So, you don't know what format it was

15    provided in, if it was an Excel spreadsheet or

16    printouts like we're seeing here?

17         A.    No, sir.

18         Q.    And in the response it says, "It is

19    MECG's understanding that the spreadsheet was

20    previously provided by Empire District Electric

21    Company as a work paper supporting its affidavit in

22    support of the stipulation."  Do you see that?

23         A.    Yes, sir.

24         Q.    Do you know if Empire District Electric

25    Company actually provided a work paper -- or if this
```

1   spreadsheet was provided in support of its affidavit

2   in support of the stipulation?

3   A.   I never saw it, so I couldn't tell you

4   that it was here.

5   Q.   Were you involved or a participant in a

6   telephone conference regarding the -- getting

7   information regarding the stipulation and agreement?

8   A.   Probably.

9   Q.   Would have been a telephone conference

10   with Empire and other parties where Public Counsel

11   was attempting to get a better understanding of

12   information underlying the stipulation and

13   agreement, and the agreement?

14   A.   If memory serves me correctly, Empire

15   thought we were going to be asking for something

16   different and wasn't prepared to answer the

17   questions that we had, and if that's the phone

18   conversation we had.

19   Q.   Well, as I recall, Empire's attorney

20   offered to have a technical conference between

21   Public Counsel technical personnel and Empire, I'll

22   use the word Empire technical personnel. Do you

23   recall that?

24   A.   I'm a little fuzzy on it. Honestly, I'm

25   not sure.

 1   Q.   Then I won't pursue that any further.

 2   Thank you.

 3   JUDGE BUSHMANN: Any further questions?

 4   MR. WILLIAMS: No.

 5   JUDGE BUSHMANN: Thank you, Mr. Riley,

 6   you may step down, sir.

 7   I think we're going to take a break.

 8   We'll come back at 1:45. We'll have Dr. Marke, and

 9   then also I will allow a limited examination of

10   Mr. Holmes related only to whether his testimony may

11   have changed in relation to the corrected charts of

12   Mr. Riley, but I want to limit it just to that

13   particular issue.

14   All right. We'll be in recess until

15   1:45.

16   (A lunch recess was taken.)

17   JUDGE BUSHMANN: Let's go back on the

18   record.

19   Just a couple of preliminary matters

20   before we get to our witness. Right before lunch I

21   said when Mr. Holmes come back up that his testimony

22   would be limited to the corrections that were in

23   Mr. Riley's two charts, 218 and 219. I neglected to

24   say that I was also going to allow Mr. Holmes to

25   respond to the Joplin 511-C exhibit. Am I -- I got

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 1   the impression that this was the first time today

 2   that the parties had seen that exhibit; is that

 3   correct?

 4            I'm seeing nods.  I'm seeing nods yes.

 5   So, to prevent any unfairness, I will allow

 6   Mr. Holmes, if he wants to respond to that exhibit,

 7   he can do that.  So, I'll allow questioning about

 8   that.

 9            Also, to be fair, I should also extend

10   that offer if Staff, for example, wants to provide a

11   witness to respond to that, I will allow that also,

12   but that's totally discretionary, and you can think

13   about that and we'll do that at the end of the

14   hearing.

15            And also, Mr. Williams, I believe you

16   wanted to make an offer of something.

17            MR. WILLIAMS:  Yes.  I've circulated to

18   the parties a data request response from Empire to

19   Public Counsel data request 1311, relates to where

20   entries would be recorded on the books and records

21   for treating Asbury generation facilities as a

22   regulatory asset.  It's been marked as Exhibit 220

23   and I offer that exhibit.

24            (OPC's Exhibit 220 was offered into

25   evidence.)
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 1                JUDGE BUSHMANN:  Are there any

 2   objections to 220 being admitted into the record?

 3                MR. COOPER:  No, Your Honor.

 4                JUDGE BUSHMANN:  Then 220 is admitted.

 5                (OPC's Exhibit 220 was admitted into

 6   evidence.)

 7                JUDGE BUSHMANN:  Anything further before

 8   we go on to our next witness?

 9                All right.  Dr. Marke, would you raise

10   your right hand.

11                GEOFF MARKE,

12   having been called as a witness herein, having been

13     first duly sworn, was examined and testified as

14                      follows:

15                DIRECT EXAMINATION

16   BY MR. WILLIAMS

17        Q.    What is your name?

18        A.    My name is Geoff Marke.

19        Q.    By whom are you employed and in what

20   capacity?

21        A.    The Missouri Office of the Public

22   Counsel.  I'm the chief economist.

23        Q.    And then I put in front of you some

24   documents that have been marked as Exhibits 206,

25   207, and 211.  211 has a confidential version and a
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1 **public version. What's been marked as Exhibit 206**

2 **is rebuttal testimony that you prepared, 207**

3 **surrebuttal testimony that you prepared, and 211 is**

4 **an affidavit in opposition to the nonunanimous**

5 **stipulation and agreement that you prepared; are**

6 **they not?**

7   A.   Yes, they are.

8   **Q.   Do you have any changes to those**

9 **exhibits for them to be your testimony here today?**

10   A.   No changes.

11   **Q.   Are they your testimony then here today?**

12   A.   Yes.

13   MR. WILLIAMS: With that I offer

14 Exhibits 206, 207, and 211.

15   (OPC's Exhibits 206, 207, and 211 were

16 offered into evidence.)

17   JUDGE BUSHMANN: Any objections?

18   Hearing none. They're admitted.

19   (OPC's Exhibits 206, 207, and 211 were

20 admitted into evidence.)

21   MR. WILLIAMS: I tender the witness for

22 examination.

23   JUDGE BUSHMANN: First cross would be

24 City of Joplin.

25

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 1                    CROSS-EXAMINATION

 2    BY MS. BELL

 3         Q.    Good afternoon, Dr. Marke.

 4         A.    Good afternoon.

 5         Q.    Let's see.  Were you present for the OPC

 6    opening or have you reviewed it?

 7         A.    Yes.

 8         Q.    There was a quote in the opening from

 9    the SPP market monitor report.  Are you familiar

10    with those reports?

11         A.    Yes, I am.

12         Q.    And have you reviewed the reports?

13         A.    Yes, I have.

14         Q.    Specifically, you're familiar with

15    what's been marked Joplin 509, which is the fall

16    2017 report, and the Joplin 510, which is the winter

17    2018 report?

18         A.    Yes.

19         Q.    And I believe the quote in the opening

20    was about negative prices.  What does that fall 2017

21    report say about negative prices?

22         A.    Well, it says a lot of things about

23    negative prices, but in reference to the opening

24    that OPC had, I believe it's marked slide number 27,

25    and this is also included in my rebuttal testimony,
```

1   but it gives a breakdown of monthly negative price

2   intervals over the realtime and what you see is that

3   there is an uptick year over year between 2015 and

4   2017, 2.6 to 7 percent.

5   **Q.   And so, that uptick was noted in the**

6   **fall 2017 report. Was that also just restated in**

7   **the winter 2018 report?**

8   A.   The winter '18 report focused -- it

9   didn't focus on the entire year. It focused on the

10   winter months, which bled into, obviously, 2018. Of

11   particular note, in the 2018 market monitor report

12   they talk about some of the problems with wind

13   turbines.

14   And let me step back for a second. It

15   was an unusually-cold winter across the SPP

16   landscape. So much so that, apparently, some of the

17   wind turbines actually froze. They stopped working.

18   So, the market monitor pointed that out and that's a

19   concern moving forward, and that's in that -- that's

20   in the last chapter of that monitor report.

21   **Q.   You're referencing the section wind**

22   **turbine icing February 19 to 21, 2018, that's on**

23   **page 44 --**

24   A.   Yes.

25   **Q.   -- of the winter report?**

1   A.   Yeah, that sounds correct.

2   **Q.   And so, in that situation I think that**

3   **paragraph uses another word I haven't heard in the**

4   **testimony. I think it talks about regulation**

5   **scarcity. What happens in the SPP in that kind of**

6   **situation?**

7   A.   Well, you know, there's been a lot of

8   talk about negative pricing and it -- in part, I

9   mean, we're -- I raised it. I think it might be

10 being overplayed just a little bit. I think the

11 main point to take away from what's taking place in

12 the SPP or any market for that matter is that you're

13 conveying information with market prices. You're

14 essentially sending messages out to those takers and

15 those bidders those offers, and when the prices are

16 low the message that's being sent is that we've got

17 more generation than we need, right? Supply/demand.

18 So, negative prices, whether it's in the realtime or

19 the day ahead -- and it's true, day ahead is going

20 to have more negative prices than realtime, but day

21 ahead is a voluntary market, too. The mere presence

22 of an increase in negative prices is going to

23 depress the overall market. So, you're going to see

24 a lowering of overall cost, which in part that's

25 sort -- that is some of the concerns that we raised

1   and that's, that's echoed in the state of the market

2   report by SPP. It's been echoed by members. It's,

3   it's so much so that they're calling into question

4   potential rule changes.

5   **Q.   So, the chart that Ms. Mantle testified**

6   **about earlier that showed the trend of actual market**

7   **prices, I think one of her criticisms was that the**

8   **modeling showed increasing prices and that the**

9   **actuals are decreasing. Is that consistent with**

10   **what you're talking about?**

11   A.   In part. So, yes, the reality of it is

12   is the historical data that we have is very limited,

13   the market's only been around for a few years, and

14   the wind turbine data that we do have has shown

15   slight decrease, but it's also true that the wind

16   turbines that are going to be coming on line will be

17   better. I mean, moving forward things are going to

18   improve. It's not static, and I think that's lost

19   in this conversation, too, is that when we're

20   projecting these benefits out here, we're projecting

21   a static future. We're saying today in 2018 moving

22   forward these are prices we can hope to gain in 20

23   years. I struggle with that in a lot of the

24   assumptions here because the technology, the market

25   itself is just moving so rapidly. It might be one

1   thing if this was a need for customers, but it's

2   been said clearly, Empire has enough generation to

3   serve its load.

4   Q.   So, let's step back and talk about just

5   rates. I think you addressed Empire's rates in your

6   testimony with a chart showing the compounded

7   increases over time. Do you recall that?

8   A.   I do recall that.

9   Q.   And regardless, I guess for now let's

10   ignore the increases and just as a matter of raw

11   numbers, do Empire customers pay more than other

12   Missouri electric customers?

13   A.   They do.

14   Q.   And why is that?

15   A.   There's not one real good answer for

16   that. In part, Empire's a smaller utility, so

17   there's less costs to spread out across those

18   customers. Another part here, Empire has come in

19   with a number of rate cases right before they were

20   acquired by Liberty Utilities. Two of them were to

21   bring on Riverton, the combined cycle, but also the

22   Asbury upgrade. So, in short, the Company invested

23   a lot in supply-side generation. They put us in the

24   present position where really we can take a

25   breather, ratepayers can take a breathe because that

1   element of the vertically integrated utility is

2   okay.

3   Q.   So, I think your testimony said that the

4   compounded increases since 2006 was 62 percent

5   approximately?

6   A.   That sounds correct.

7   Q.   And is that a typical increase for

8   utilities?

9   A.   It's on the high end.

10   Q.   You mentioned the upgrades to Asbury and

11   you mentioned the Riverton cases. Was there any

12   other drivers of those costs?

13   A.   There were. Empire had a fairly robust

14   get-tough program for their distribution system. I

15   think that's still going on, but the primary drivers

16   was that supply-side generation.

17   Q.   You also mentioned that Empire, one of

18   the reasons is Empire is a smaller utility. Was

19   there, I guess, maybe a hope that with the merger

20   acquisition and then being subsumed into the larger

21   family that they would obtain some efficiency such

22   that we might be able to see rate decreases?

23   A.   I don't think rate decreases were ever

24   put forward during the merger acquisition. Being

25   part of that, that case, as I recall it, the Company

 1   put -- Liberty that is, Liberty when they acquired

 2   Empire put forward a no net benefit, no net

 3   detriment. It's just going to remain the same and

 4   business as usual essentially. We called into

 5   question some of those assumptions, but ultimately

 6   we felt comfortable as an office signing on to a

 7   stipulation and moving forward.

 8   Q.   Well, is one of the questions you had in

 9   that case the price that Liberty paid?

10   A.   It was a concern. Empire, I believe,

11   paid $2.4 billion -- or sorry, Liberty paid

12   $2.4 billion to acquire Empire Electric, which at

13   the time represented, I want to say, a 21 percent

14   premium over book value when it was closed. This is

15   a lot of money to pay for a utility, especially

16   one -- and I'm going to use the word head room,

17   which head room suggests that you can go ahead and

18   make additional investments to move forward to, you

19   know, build up that rate base to get a return on,

20   and the reality of it was was that Empire really

21   didn't have a lot of head room. We had made a lot

22   of major investments, again, in the supply side that

23   I had mentioned before.

24   Q.   So, would a project like the one that's

25   currently on the table make Empire more attractive

1   to potential buyers?

2   A.   I don't think so. I don't have any

3   reason to believe that Empire or Liberty,

4   Empire/Liberty is in a position where they want to

5   sell or entertain that. I don't know. I can't

6   speak to that, but...

7   Q.   I guess not now, potential for

8   additional acquisition, but, like, when the merger

9   happened was Liberty looking to the future thinking,

10   you know, there's a lot of potential with Empire?

11   Is that maybe why?

12   A.   Well, they, they acquired them -- or

13   they, they put forward the bid in early 2016 and

14   just stepping back just geopolitically, it was a

15   very, very different world in 2016. At that time I

16   was preparing for the clean power plant. I was -- I

17   was visioning a very different future that we would

18   be operating in both regulatory and environmentally,

19   and those assumptions and those paths have changed

20   rapidly since then.

21   Q.   And so, what specifically about Empire's

22   situation have those changes -- I guess what has

23   changed -- how have those changes affected Empire's

24   situation?

25   A.   It's made -- I mean, I would say

1   Empire's the same utility as it was then. You know,

2   in 2016 they didn't need to go ahead and procure

3   more supply-side generation, and in 2018 they don't

4   need to do that either. Everything has gotten

5   cheaper. You know, you do get production tax

6   credits that make, you know, wind a viable option.

7   Gas is very cheap. Coal is very cheap. I mean,

8   outside of, you know, building a huge nuclear power

9   plant, the prices are relatively low.

10   **Q.   So, do you -- there's been differing**

11   **testimony about whether it's economical to continue**

12   **to keep Asbury on line. What are your thoughts on**

13   **that issue?**

14   A.   And I don't know what number we've

15   landed on as sort of the approximate number as to

16   what we think this entire endeavor will cost, but to

17   put this in perspective if it's about 1.3 billion

18   versus $19 million, that represents about a little

19   over 1 percent. That's, that's, that's just not

20   comparable. I mean, if you're -- I don't like to

21   frame this as coal versus wind. I mean, the coal

22   plant's paid for. Ratepayers have been paying for

23   it. This is an investment that still earns, that

24   still is used, and it -- and it generates revenues.

25   Moving forward, I think reasonable minds can differ

1   as to what the market is going to look like, but to

2   suggest that we should shutter the coal plant I

3   think might be -- I think is premature.

4   Q.   So, let's ignore the Asbury issue for

5   now and just on the pure wind side -- well, first,

6   you wouldn't -- so, you just said you're not

7   anti-wind --

8   A.   No.

9   Q.   -- right?

10   A.   No.

11   Q.   I think you are the only person who

12   brought up any conservation efforts. Can you -- can

13   you explain that position?

14   A.   We, our office made sort of the policy

15   observation that there's a lot of wind generation

16   coming on. That's -- regardless, we're going to be

17   seeing it across. We've seen similar themes in

18   other utilities. Based off of conversations that

19   we've had with specialists in the field, you know,

20   we became aware of the potential problems from a

21   conservation standpoint, and I'll make this brief,

22   but it really revolves around two points. Raptors,

23   birds, eagles, bats in particular, you know, are all

24   prone to wind turbines. They get -- they get caught

25   up. Bats, actually it's something called

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 1   barotrauma.  It's sort of like the Bends, you know,

 2   going down in the ocean.  Right?  It's awful.  We,

 3   we looked at the potential sites, you know, that

 4   where the wind might be going up and we looked at

 5   concerns associated with that and we made some

 6   recommendations.  Those recommendations are actually

 7   in my affidavit.  It's really twofold.  It's one to

 8   look at pre-site selection and post-site --

 9   post-construction data collection.  The problem is

10   is that a lot of birds, a lot of bats, a lot of

11   eagles, they die, and we don't have a good sense of

12   how many are actually being impacted for a variety

13   of reasons.  It's not very transparent.  So, from

14   just a pure policy perspective, being able to record

15   that data, being able to move forward and cite those

16   correctly I think is good policy.  I think it's

17   something that the State of Missouri has valued, and

18   I think it's valuable from a ratepayer perspective,

19   too, because the reality of it is is if we just move

20   forward aggressively with just siting a wind turbine

21   in a volatile area, that has the potential of being

22   opened to U.S. Fish and Wildlife curtailment, U.S.

23   Fish Wildlife fines.  Those would all be passed down

24   to ratepayers again, and we wanted to make sure the

25   diligence was being taken, undertaken.  My
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1   understanding with Empire is that they're still

2   currently going through that process.

3   Q.   So, ignoring Asbury and the conservation

4   efforts or the conservation issues, generally do you

5   think that the acquisition of 600 megawatts of wind

6   with a tax equity partner is a good idea?

7   A.   In a vacuum. I think that the idea of a

8   tax equity partner and being able to shield some of

9   those costs, especially if we needed generation, is

10 a very, very promising way to move forward. You

11 know, I'd go so far as to suggest why other

12 utilities aren't considering the tax equity

13 financing, but they don't need it, and the problem

14 here is we spent an enormous amount of time talking

15 about models. We spent a lot of time talking about,

16 well, what would happen if we change, you know, this

17 variable or that variable. At the end of the day,

18 in my opinion we're talking about changing the

19 paradigm as to how we treat ratepayers, and that's,

20 that's, that's the real problem here is that now

21 we're essentially saying that these ratepayers are

22 bearing that risk of playing the market.

23   Q.   So, you've talked about need. I think

24 the testimony has been that there are some purchase

25 power agreements that are going to expire in the

1   near term. There are also other generation

2   facilities that I think, according to Empire's

3   modeling, will be coming offline, so that will be I

4   think decreasing the total generation of Empire.

5   So, how do you -- how do you respond to those

6   concerns that the wind will be replacing things that

7   are already planned to come offline or out of

8   Empire's mix?

9   A.   So, I guess that's true. I mean, your

10   existing generation is going to retire over time,

11   right, and if you have excess generation, more than

12   excess generation already on hand, that will replace

13   it. You know, the big concern that we have is one

14   of opportunity cost. Ask yourself this: Is it

15   reasonable to assume that because the production tax

16   credits are expiring here in 2020 that they will

17   never -- we'll never have something like that again

18   in the future or over the next 18 years? Is it

19   reasonable to assume that we won't have more

20   efficient wind turbines here or some other

21   opportunity? Essentially by going down this path of

22   playing the market, we are locking ourselves into a

23   path-dependent outcome and we're hoping that that is

24   going to pay off. I don't think that's fair to

25   ratepayers. Generally speaking, most people are

 1   risk averse.

 2   **Q.   So, back on the purchase power**

 3   **agreements and the need. I think questions were**

 4   **raised by the Chairman about whether it's more**

 5   **economical for the Company to own the wind assets or**

 6   **whether it would be more economical or beneficial**

 7   **for ratepayers if the Company were just to**

 8   **renegotiate or have those -- have additional**

 9   **purchase power agreements. Do you have an opinion**

10   **about that?**

11   A.   I guess my knee-jerk reaction is

12   neither. I mean, again, we just we don't need it.

13   We've given a lot of dialogue and energy, no pun

14   intended, to talk about, you know, demand side

15   management to distribution to even transmission.

16   Those are all vital areas where we can make solid

17   investments moving forward, but trying to make

18   investments in that is going to be that much more

19   difficult if we are spending money on top of money

20   on top of money on the generation side.

21   **Q.   Dr. Marke, I've handed you what's been**

22   **marked as Joplin 512. Have you seen this table**

23   **before?**

24   A.   Yes, I have.

25   **Q.   And this was a slide in OPC's opening,**

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 1   correct?

 2         A.    Correct.

 3         Q.    And were you -- is this in your area of

 4   responsibility for OPC?

 5         A.    Yes, it was.

 6         Q.    So, did you create this table?

 7         A.    I did not create the table, but I added

 8   the table I guess to the PowerPoint.

 9         Q.    So, where did the table come from?

10         A.    So, the table is populated with

11   information from EIA Forms 923 and 860.  So, that's

12   all publicly-available information.

13         Q.    And I'm not familiar with those forms.

14   So, can you -- or do they come in a report or

15   they're individually?

16         A.    They're spreadsheets.  Yeah, they're

17   annual spreadsheets.

18         Q.    And are you familiar with some of these

19   projects in the table?

20         A.    Yes, I am.

21         Q.    So, out to the side it says modeled

22   54 percent.  What's meant by that?

23               MR. WOODSMALL:  Your Honor, I'm going to

24   object.  I don't believe a sufficient foundation has

25   been set.  He said he has some general familiarity.
```

1 He said he put it into a PowerPoint, but he didn't

2 say that he was the one that took it from the ten --

3 the FERC Form 1s. Whoever did that, so that we can

4 cross and get that verification, is the one that

5 should have laid the foundation, but all he said was

6 he took it from somewhere and put it into a

7 PowerPoint.

8   JUDGE BUSHMANN: What's your response?

9   MS. BELL: I think he said that he had

10 reviewed the reports from which this chart came and

11 that he's familiar with the data and that it's

12 publicly available. I don't know how this chart

13 would be any different than the SPP information,

14 which is publicly available.

15   JUDGE BUSHMANN: Well, I'll hold the

16 objection until you offer it.

17   **Q.   (By Ms. Bell) So, Dr. Marke, what was**

18 **meant by modeled?**

19   A.   So, modeled 54 percent is if you look at

20 the original GFSA, all of those models, everything

21 that went into it assumed a 54 percent capacity

22 factor moving forward.

23   **Q.   And did you hear the testimony yesterday**

24 **that that 54 percent I think was the average over a**

25 **certain time because of the degradation. So, that**

```
 1    54 percent isn't the year one number; is that

 2    correct?

 3         A.    That sounds right.

 4         Q.    And the year one number would actually

 5    be -- in the model would be something higher than

 6    54 percent?

 7         A.    Presumably.

 8         Q.    And so, the RFP amount, that's what the

 9    Company sent out in the RFPs?

10         A.    Right.  We went through several

11    different iterations of models and versions.  The

12    47 percent represents the request for proposal, bids

13    that came back that suggest that -- at least the

14    Company put forward that the bids at 47 percent

15    could be achieved.

16         Q.    And there's been some testimony about

17    new technology with wind.  Does this chart show some

18    newer wind farms?

19         A.    The chart's a little difficult to -- so,

20    these are all, I guess, older, you know, and I kind

21    of use the air quotes for that.  I mean, any

22    individual project might have added on additional

23    wind on top of it over that time.  So, it's

24    difficult to glean that information from EIA, but I

25    would conservatively just say that, yes, these are
```

1   generally older wind farms.

2   Q.   And your understanding is that none of

3   the Kansas wind farms in this table produced a

4   capacity factor in excess of 50 percent, correct?

5   A.   That's --

6   MR. WOODSMALL: Your Honor, and this is

7   the point that I need to object. He's putting in

8   evidence based upon what he's reading here without

9   any firsthand knowledge.

10   JUDGE BUSHMANN: What's your response?

11   MS. BELL: I think he has firsthand

12   knowledge. Again, information that is in publicly

13   available reports that is traditionally relied on by

14   energy professionals such as Mr. Marke -- or

15   Dr. Marke and the other witnesses comes in as

16   evidence and is an exception to the hearsay rule.

17   MR. WOODSMALL: I'm not making a hearsay

18   objection. I'm saying he doesn't have firsthand

19   knowledge. He can't verify or tell us that, yes, I

20   went to the FERC Form 1 and Flat Ridge 2 has a

21   capacity factor of 42.7 percent. Someone, some

22   unknown person did that and now she's trying to

23   build record based upon that, but we don't know who

24   that person was and we don't know if it's accurate.

25   JUDGE BUSHMANN: I think that goes more

1 to weight than admissibility, so I'll allow the

2 questioning to continue.

3   Q. (By Ms. Bell) None of the Kansas wind

4 farms were in excess of 50 percent capacity factor,

5 correct?

6   A.   That's correct. And real quick, that's

7 extremely important because Kansas is where the good

8 wind is. I mean, this is -- this is the -- this is

9 wind alley. Right? I mean, this is where --

10   Q.   Mr. Marke, you're in Missouri. No one

11 says anything nice about Kansas. Are you saying

12 something nice about Kansas?

13   A.   Fair enough.

14   Q.   So, and that I think has been testified

15 to by other witnesses is that generally Kansas has

16 better wind than Missouri. Is that your testimony?

17   A.   Yes.

18   Q.   And how does a capacity factor

19 ultimately affect Empire's modeling?

20   A.   A lower capacity factor will have lower

21 benefits.

22   Q.   And is there a capacity factor guarantee

23 in the stipulation?

24   A.   No.

25   Q.   Can you turn to your affidavit on page

```
 1   4?

 2        A.   Yes.

 3        Q.   And I think this gets at some of the

 4   retirements and other things in Empire's plan.  Why

 5   ultimately -- and I believe you took this chart from

 6   Empire's testimony, correct?

 7        A.   Yes, I did.

 8        Q.   And then you added the boxes?

 9        A.   That's correct.

10        Q.   Can you explain why you -- why you

11   needed or felt like you needed to modify their

12   chart?

13        A.   Yeah.  Thank you.  So, on page 3 is the

14   same chart that was in witness McMahon's testimony

15   and that puts forward three different paths.  One

16   the stipulated path, one the original customer

17   savings plan, and one the 2016 IRP.  I took issue

18   with Mr. McMahon's portrayal of that because it

19   seemed to suggest that even though the Company

20   stipulated to this outcome, by the way the customer

21   savings plan is really good because it includes

22   these retirements.  That's the unstated assumption

23   if you just look at that.  So, I added the

24   modifications to show that retirements to Energy

25   Center 1 and 2 would be taking place in both plans,
```

1   that the 2016 IRP does contain a retirement date for

2   Asbury, amongst other issues. You know, the big

3   clear thing I would say is just in that 2016 IRP

4   preferred plan between 2018 and 2028, a roughly

5   ten-year period, there's nothing there. And models

6   and assumptions in the world that we operate change

7   very quickly. Ten years ago, 2007, 2008, if you

8   read the trade journals, we were undergoing a

9   nuclear renaissance. Today Westinghouse has gone

10   bankrupt. Right? Things moved very quickly. To

11   suggest that this is the most optimal path, so

12   optimal that we need to risk it on the market gives

13   us a lot of concern.

14   **Q.   Let's talk a little bit about SPP. I**

15   **think you mentioned they're considering rule changes**

16   **and I think in the opening it was talked about how**

17   **that rule change was voted down. Does OPC still**

18   **view that as a risk?**

19   A.   Yes.

20   **Q.   Why?**

21   A.   Because this project needs to be in the

22   green for the next 20-plus years. What we need --

23   it doesn't need to just nail it today. The idea

24   that the market might evolve to go ahead and do

25   dispatchable or that they might open up a capacity

1   market which would allow Asbury to get money. You

2   know, all of these things are at play. On a short

3   term basis it's already been suggested that come

4   July they're going to revote. So, I mean, even --

5   and that's -- that's sort of -- that underscores

6   sort of the problem we've had and the challenges

7   we've had with this entire proposal is that almost

8   on a week to week basis the assumptions have

9   changed.

10   **Q.   On page 6 of your affidavit you include**

11   **the quote, Successful investing is anticipating the**

12   **anticipation of others. What do you -- what do you**

13   **mean by that?**

14   A.   You know, even last year we raised a

15   concern and we filed annual IRPs. The amount of

16   wind that was coming online as the production tax

17   credits were being phased down. Wind Catcher has

18   been talked a lot about here. Wind catcher is 2

19   gigawatts of wind. It's the largest wind farm ever

20   in the United States. That's wind going into SPP.

21   That's wind that is being bid into the market just

22   like this wind would be. Again, it's supply-demand,

23   and if everybody is seeing the opportunity to go

24   ahead and make a dollar, if it seems too good to be

25   true, sometimes it helps to have a healthy degree of

 1   skepticism.

 2   Q.   So, why is so much new wind being added

 3   to SPP? Is it the PTCs or is it the low cost or...?

 4   A.   Yeah, that's a combination of a lot of

 5   things. It's not just one thing -- well, the

 6   primary driver is the production tax credits

 7   phasedown, yes.

 8   Q.   So, when the PTCs start to expire, will

 9   that mean that we won't see people adding wind to

10   the SPP?

11   A.   No. The technology will advance.

12   People will move forward. To suggest again that

13   things are just going to stop -- I mean, first, it's

14   a phasedown. So, it's not if you don't get the

15   production tax credits in by 2020, it's over.

16   You'll still get -- the production tax credits are

17   still worth 80 percent the following year and so

18   forth. They degrade by increments of 20 percent

19   year over year, but to suggest that that's it, this

20   is the only window of opportunity that we'll ever

21   have has not borne out historically. It just

22   hasn't. I think it's a as reasonable assumption as

23   any other assumptions that have been made out here

24   projecting 30 years that we couldn't have, you know,

25   large scale public policy in place that opens up

```
 1   production tax credits or something else.

 2                MS. BELL:  I'm going to go ahead and

 3   offer Joplin, I believe that's 512.

 4                (Joplin's Exhibit 512 was offered into

 5   evidence.)

 6                JUDGE BUSHMANN:  Mr. Woodsmall has

 7   already objected.  Are there any other objections?

 8                MR. COOPER:  We would join in the

 9   objection as well.  I don't think there's any

10   sufficient foundation been provided for that

11   exhibit.

12                JUDGE BUSHMANN:  I'll overrule.  512 is

13   admitted.

14                (Joplin's Exhibit 512 was admitted into

15   evidence.)

16                JUDGE BUSHMANN:  Any further questions?

17                MS. BELL:  Yes.

18        Q.  (By Ms. Bell)  Mr. Robertson was asking

19   questions yesterday about I think grid reliability.

20   Do you have any reliability concerns?

21        A.   I don't -- I think that's probably an

22   incorrect characterization of OPC's concerns with

23   this proposal.  Reliability is an overall issue in

24   terms of huge amounts of base load generation being

25   retired, but I don't think -- of the list of
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1 concerns that's very, very, very low down the totem

2 pole. They've -- the SPP has lowered their overall

3 capacity requirements and in part because there's

4 just so much more generation coming on again.

5   And, Ms. Bell, if I may just add onto

6 that real quick?

7   Q.   Sure.

8   A.   The issue isn't so much reliability.

9 It's volatility is what I would say.

10   Q.   Would you describe -- is volatility the

11 same thing as intermittence?

12   A.   I would say that they're strongly

13 correlated.

14   Q.   I've handed you what's been marked

15 Joplin 513, and that chart is titled wind farm

16 performance degradation with time. I think you may

17 have referenced this earlier. Are you familiar with

18 this chart?

19   A.   Yes, I am.

20   Q.   And what's the source of that chart?

21   A.   This is a pretty common chart that's

22 cited in DOE studies on wind generation.

23   Q.   And so, the source, Berkeley Labs --

24   A.   Berkeley Labs is a lab out of the

25 Department of Energy.

1   Q.   And so, this -- you've seen this chart

2   before?

3   A.   Yes.

4   Q.   And I think other witnesses have said

5   they agree with degradation. Is that your

6   understanding of their testimony?

7   A.   Yes. I don't think anybody's going to

8   contest that.

9   Q.   And so, so that I understand, when you

10   start getting out into these years where it's closer

11   to 90 percent, can you do things to increase the

12   performance of the wind farm again?

13   A.   You can. You can -- you can ad parts,

14   you make things more efficient. You know, the

15   margin of error on this is fairly big. So, you

16   can -- you know, the performance varies

17   considerably, but yes, you can add additional

18   dollars onto, like anything. Asbury is a good

19   example that we had a chart earlier that showed

20   Asbury having higher heat rates and now they've got

21   lower heat rates. It's a more efficient unit.

22   Q.   Do you know if Empire's modeling

23   included costs to account for this degradation?

24   A.   I can't confidently say that. There's a

25   lot of assumptions within the model that made it --

1   we found challenging as an office to get across.

2   Q.   Let's start here. Do you believe that

3   the $35 million rate -- or the $35 million market

4   protection -- let me say that again.

5   Do you believe the market protection

6   provision, which has a $35 million one-to-one

7   exposure, downside exposure risk for Empire, does

8   that protect customers from the expected case?

9   A.   I think clearly there's disagreement in

10   this room as to the potential margin of error and

11   risk exposure that ratepayers may be subject to. I

12   think that the point in it is that why are they

13   bearing any risk? There's no need for this

14   additional wind. I point to wind catcher

15   stipulation which, you know, is still being fleshed

16   out, too, by other parties, no doubt, but the mere

17   fact that AEP went ahead on the record and said that

18   they were guaranteeing benefits over the ten-year

19   period gives me more confidence than saying, well,

20   we'll cap shareholder exposure at 35 million.

21   Q.   So, you believe the Wind Catcher

22   provision or the stipulation provides more customer

23   protection?

24   A.   Yes, yes.

25   Q.   Other items that were identified in your

1 affidavit about that Oklahoma stipulation. It

2 contains a capacity factor guarantee?

3   A.   Yes, it does.

4   Q.   And so, is your understanding, then,

5 that the customers would have some sort of recourse

6 if the capacity factor was not what they had

7 projected?

8   A.   Yes.

9   Q.   And what about investment costs? Does

10 it contain a provision related to investment costs?

11   A.   Yes, it does.

12   Q.   And how does that operate?

13   A.   Yeah. I mean, I guess the first obvious

14 one is that they know how much it's going to cost or

15 at least have a pretty good idea. Today sitting

16 here I can't tell you how much this is going to

17 cost.

18   Q.   And then not only -- so, then they have

19 set a number and if it goes above that number, what

20 happens?

21   A.   Shareholders will eat it.

22   Q.   There's also what OPC identified as an

23 off-system energy sales margin. Can you explain

24 that concept?

25   A.   Customers are guaranteed that and I

1   think it's in my testimony. I believe Mr. Krygier

2   made a similar offer to Arkansas in this case in

3   Arkansas. Arkansas has also got a Wind Catcher

4   going through it and, so, that's probably why he

5   made that offer, and the renewable energy credits.

6   So, there's additional benefits that would be

7   flowing back to customers.

8   **Q.   From the RECs?**

9   A.   Right.

10   **Q.   There's a limitation on the return on**

11   **deferred tax asset balance. What is that concept?**

12   A.   You know, to be fully honest with you,

13   that was probably the one area that I probably

14   skimmed over -- I did not spend a lot of time

15   looking at.

16   **Q.   Let's go to -- I guess the Missouri**

17   **stipulation has a most favored nation provision and**

18   **in OPC's summary of the Oklahoma stipulation you**

19   **mention most favored nation and an**

20   **extra-jurisdictional denial?**

21   A.   Yes.

22   **Q.   What's the difference between the two**

23   **and how are they different than what's being offered**

24   **in Missouri?**

25   A.   That extra-jurisdictional denial is key,

1   like really, really important because this is a

2   contested case right now in Kansas, case in

3   Arkansas. Arkansas is not going to hear this until

4   August. I'm not even sure Kansas has a date for

5   their hearing.

6   Meanwhile, everybody's basically looking

7   for Missouri right now. If Kansas denies this,

8   we've raised this scenario and I'm 90 percent sure

9   we sent this out as a data request, what would

10   happen if our Commission approved this, but Kansas

11   denied it? Would you still move forward with the

12   project? The response I want to say was an expected

13   response. We'll reevaluate it if that were to

14   happen, but that's a real risk if the Kansas cost --

15   if Kansas Commission somehow, you know, says no and

16   they do move forward with that, that means you've

17   got additional costs that would be flowing down and

18   being borne by Missouri ratepayers, or if Arkansas

19   were to do that. The provision within the Oklahoma

20   AEP stip at least recognizes that risk, that

21   potential risk where ratepayers would be exposed.

22   **Q.   You mentioned -- earlier we talked about**

23   **need and I think yesterday Mr. Mertens alerted the**

24   **parties that there was a new all-time peak in**

25   **January. Does his testimony change your analysis of**

1 **whether Empire needs the generation proposed here to**

2 **serve its customers?**

3   A.   No.

4   Q.   **And I think you answered my question**

5 **about extra-jurisdictional denial, but did you**

6 **compare the most favored nations clause between**

7 **Missouri and Oklahoma?**

8   A.   Yeah. And I want to say Chairman Hall

9 brought this up in the openings with the attorneys.

10 There is some concern as to what -- how you sort out

11 the most favored nation. If Oklahoma's got a most

12 favored nation that is retiring Asbury, but also

13 includes the language that the Company's not going

14 to get a return on Asbury, with a Missouri

15 stipulation which might keep Asbury on, with a

16 Kansas one that might say, well, no wind at all. In

17 that sort of scenario, well, it's chaos.

18   The other thing I'd just point out and

19 this has been cited before, but our most favored

20 nation clause has carve-outs that can't be

21 considered after the fact. If Kansas negotiates a

22 better deal, if they say, well, shareholders can be

23 exposed to now 100 million, Missouri's stuck with 35

24 or anything, you know, in between.

25   MS. BELL: I'm going to offer Joplin

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 1   513, which is the wind farm performance degradation.
 2              (Joplin's Exhibit 513 was offered into
 3   evidence.)
 4              JUDGE BUSHMANN:  Any objections?
 5              Hearing none.  It's admitted.
 6              (Joplin's Exhibit 513 was admitted into
 7   evidence.)
 8              MS. BELL:  Thank you.
 9         Q.   (By Ms. Bell)  Do you consider
10   Mr. Riley's chart to be the worst case scenario?
11         A.   No.  I mean, yeah, I guess in the
12   universe of outcomes it could always get worse.  So,
13   I can't -- I didn't try modeling the worst case
14   outcome.  I guess my concern would be if, within
15   this time period, if they made all available energy
16   dispatchable, what that would mean, what that would
17   mean if we had to prop up this investment with
18   battery technology or with gas peakers to complement
19   it because, you know, things change.  You know,
20   these were all issues that I had raised in my
21   rebuttable testimony, and then just a crowding out
22   of the market.  Again, Oklahoma staff pointed out
23   the exact same concerns that I did.  They cited
24   Empire wind as concern for putting on Wind Catcher.
25         Q.   You've looked at the attachments to the
```

1   stipulation and agreement, specifically the

2   flowchart on the market protection provision?

3   A.   I have.

4   Q.   And I asked Empire witnesses yesterday

5   about the PPA value that's added into --

6   A.   Yes.

7   Q.   -- that, and I'm still not quite sure

8   how that figures into the calculation. Can you

9   explain that?

10   A.   My understanding is that the power

11   purchase agreements are an offset. So, they're

12   counted as a benefit. What's less clear to me is if

13   we've got to make additional investments over that

14   ten-year period for, say, degradation, is that a

15   cost offset? What if we got to add a battery? Is

16   that a cost offset? Again, it just seems one-sided.

17   Q.   And does increasing the range of capital

18   contribution for Empire, does that increase risk to

19   customers in your opinion?

20   A.   Yes.

21   Q.   You mentioned earlier a little bit about

22   Asbury's efficiency based on recent investments.

23   Can you -- can you speak to that?

24   A.   It was a little over $100 million

25   that --

```
 1          Q.    Were the actual investments?

 2          A.    Right.

 3          Q.    And but the plant itself is

 4   generating --

 5          A.    Energy.

 6          Q.    -- energy at a more efficient?

 7          A.    Yes.

 8          Q.    On a more efficient basis?

 9          A.    Yes.

10          Q.    Do you know how much more efficient?

11          A.    So, the investments were not just --

12   there were environmental investments made into the

13   plant to make it cleaner and then there were

14   efficiency investments made to bring down the

15   overall heat rate.  I believe it's in one of our

16   slides, one of the latter ones.  It gives you a

17   general sense of how things have improved over time.

18          Q.    And does that factor into OPC's position

19   on whether or not Asbury should stay on?

20          A.    It does, absolutely.

21          Q.    And the other reason -- is another

22   reason the generation mix?

23          A.    There's an argument to be made for fuel

24   diversity to have stuff available.  I mean, coal

25   prices are really good example.  You know, it's come
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 1   out now that coal prices are probably going to drop

 2   even more drastically moving forward because of

 3   trains, because of transportation, because the rails

 4   essentially rely so much on that revenue from

 5   transporting coal from Wyoming out to various coal

 6   plants that they can -- they can basically thin

 7   their margins and those are going to be savings that

 8   are going to be passed on to customers as well.

 9        Q.    Have you examined the tables from

10   Mr. Holmes and Mr. McMahon?

11        A.    I mean, yes, in general I have.

12        Q.    Regarding customer savings?

13        A.    Is there one in particular?

14        Q.    I think the one that I've been using is

15   marked OPC 216 and that's the DR-5.  It looks like

16   Mr. Williams has a copy of that.  And I'm on page 5

17   of 10.  Yes.

18             And so, there's been discussion between

19   the difference between this chart and Mr. Riley's

20   chart.  Were you in the room for Mr. Riley's

21   explanation of his calculation of the income tax?

22        A.    Yes, it was.

23        Q.    And do you agree with his calculation of

24   income tax?

25        A.    I've got to be honest.
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1   MR. COOPER: I'd like to object. I

2   mean, I don't think this is proper cross-examination

3   to be asking one OPC witness what they think of the

4   other OPC witness's testimony.

5   MR. WOODSMALL: Your Honor, and I would

6   add the objection that I don't believe any

7   foundation has been laid for Mr. Marke's expertize

8   in taxes. It would be like asking me what I know

9   about taxes, which very little.

10   MS. BELL: You don't have a Ph.D, do

11   you?

12   MR. WOODSMALL: Not in taxes, nor does

13   he.

14   MS. BELL: I will move along.

15   **Q.   (By Ms. Bell) I do have -- Mr. Marke,**

16   **your testimony includes criticisms of the**

17   **assumptions in the model; is that correct?**

18   A.   Yes.

19   **Q.   And so, in your opinion do you agree**

20   **that customers will see savings from Empire's**

21   **proposed plan as modified by the stip?**

22   A.   I don't have confidence in that.

23   **Q.   Do you believe there's a substantial**

24   **risk that customers are actually harmed by the plan?**

25   A.   The mere fact that they can be, that

1   there's -- you know, that people went to such

2   lengths to create a provision, a sharing detriment

3   provision, I think just underscores that risk.

4   MS. BELL: I just have one last

5   question, but I think we need to go in camera,

6   Judge, please.

7   (REPORTER'S NOTE: At this point, an

8   in-camera session was held, which is contained in

9   Volume 8, Page 880 through 882.)

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1   (The proceedings resumed in open

2   session.)

3   JUDGE BUSHMANN: All right. We're back

4   in public session.

5   MS. BELL: No further questions at this

6   time.

7   JUDGE BUSHMANN: Division of Energy.

8   MR. POSTON: Yeah, just a few.

9   CROSS-EXAMINATION

10   BY MR. POSTON

11   Q.   The Public Counsel represents the public

12   interest; is that correct?

13   A.   That's correct.

14   Q.   And generally speaking, are there public

15   interest benefits to renewable energy?

16   A.   Yes.

17   Q.   And what are those?

18   A.   So, there's a lot potentially. So,

19   cleaner, positive externalities as far as not, you

20   know, burning fossil fuel. It can be -- you know,

21   definitely large companies have put forward that

22   that they would like to move forward with

23   renewables, and there's fuel savings.

24   Q.   So, on one of those things you mentioned

25   about businesses, do you have any reason to dispute

1   that there's an increasing trend among businesses to

2   want to run their businesses on renewable energy?

3   A.   I would not dispute that.

4   Q.   And do you believe retaining and

5   attracting businesses to Missouri is in the public

6   interest?

7   A.   Yes.

8   MR. POSTON: That's all I have. Thank

9   you.

10   JUDGE BUSHMANN: Renew Missouri.

11   MR. OPITZ: No, thank you, Judge.

12   JUDGE BUSHMANN: MECG.

13   MR. WOODSMALL: No, thank you.

14   JUDGE BUSHMANN: Commission Staff.

15   MS. MERS: No, thank you.

16   JUDGE BUSHMANN: Empire.

17   MR. COOPER: A couple, Your Honor.

18   CROSS-EXAMINATION

19   BY MR. COOPER

20   Q.   It was mentioned that you have a

21   Doctorate of Philosophy, I believe, Dr. Marke,

22   that's in public policy analysis, correct?

23   A.   Yes, sir.

24   Q.   And I don't think you have your full

25   educational background in this particular case, but

 1   I've seen it before. Your undergrad degree is in

 2   English, correct?

 3   A.   That's correct.

 4   Q.   And you are not a biologist?

 5   A.   I'm not.

 6   Q.   You are not an engineer?

 7   A.   No, sir.

 8   Q.   Nor a income tax expert, I take it?

 9   A.   I'm not.

10   Q.   In regard to the Wind Catcher project,

11   is it your understanding that AEP performed no

12   request for proposal process or competitive bidding

13   process to come up with the project that's being

14   proposed there?

15   A.   Yes.

16   Q.   Is it your understanding that that

17   project includes approximately a $1 billion

18   transmission line?

19   A.   Yes.

20   Q.   I assume you have not reviewed any of

21   the modeling specific to that project?

22   A.   No.

23   Q.   Is it also your understanding that the

24   benefits that are cited in there would not start at

25   the earliest until year 11?

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 1          A.    Yes.

 2          Q.    Would you be in favor of Empire's

 3    proposal if it had a Wind Catcher-type net benefits

 4    test?

 5          A.    I mean, we certainly would absolutely

 6    consider that.

 7          Q.    In terms of -- okay.  So, that's all

 8    that's getting between OPC and being in favor of

 9    this transaction?

10          A.    I can't say that or have the authority

11    to.

12          Q.    You talked about Empire's different

13    states.  What are the relative sizes of it's service

14    territories and percentages amongst Missouri,

15    Kansas, Arkansas, and Oklahoma?

16          A.    For Empire?

17          Q.    Yeah.

18          A.    So, Missouri clearly has the most

19    customers.  Joplin alone has more customers than

20    Kansas, Oklahoma, and Arkansas.

21          Q.    Missouri approximately 85 percent?

22          A.    Yeah.

23          Q.    And then the other 15 kind of smattered

24    out amongst the other three states?

25          A.    Right.  There's very little in Oklahoma.
```

1   Q.   Do you know the breakout of AEP's

2   service territory?

3   A.   Oklahoma, Arkansas, Louisiana, and

4   Texas.

5   Q.   But in terms of sizes?

6   A.   Overall numbers?

7   Q.   Sure. Percentages in those states.

8   A.   My understanding is is that it's

9   30 percent in Oklahoma and approximately 70 percent

10   in Arkansas. There's a little bit in Louisiana and

11   Texas. That's SWEPCO, so...

12   MR. COOPER: No further questions.

13   JUDGE BUSHMANN: Commissioner questions.

14   COMMISSIONER HALL: No questions. Thank

15   you.

16   COMMISSIONER COLEMAN: No questions.

17   JUDGE BUSHMANN: Redirect.

18   MR. WILLIAMS: Just a few.

19   REDIRECT EXAMINATION

20   BY MR. WILLIAMS

21   Q.   Good afternoon, Mr. Marke.

22   A.   Good afternoon.

23   Q.   You remember when you were being asked

24   about the history regarding Empire and rate changes

25   and capital improvements that it made?

```
 1          A.    Yes, I do.

 2          Q.    And you spoke a bit about Asbury.  As I

 3   recall, you said there was something over

 4   $100 million invested a few years back for

 5   Asbury; is that correct?

 6          A.    That's correct.

 7          Q.    Do you know what kind of investment was

 8   put it at Riverton and what it was done for?

 9          A.    Oh, I should.  I don't recall off the

10   top of my head everything that went into Riverton to

11   make that natural gas.

12          Q.    So, it was a conversion from coal to --

13          A.    It was conversion, yes, right.

14          Q.    And do you recall any extraordinary

15   weather events in Joplin?

16          A.    Yes.  The tornado.

17          Q.    And do you recall when that occurred?

18          A.    I should.

19          Q.    Around 2011 perhaps?

20          A.    Yes.  That sounds right.

21          Q.    In response to a question about whether

22   or not increasing Empire's capital cost in the

23   projects would increase customer risk, you said yes.

24   Would you explain why you said yes?

25          A.    It goes -- it goes to the assumptions
```

 1   within the model as well. So, if you're -- if

 2   you're increasing the overall amount of upfront

 3   capital that Empire would need to invest to make

 4   this investment, then that's going to lower the

 5   overall benefits that have been espoused.

 6   MR. WILLIAMS: No further questions.

 7   JUDGE BUSHMANN: Thank you, Dr. Marke.

 8   You may step down.

 9   THE WITNESS: Thank you.

10   JUDGE BUSHMANN: Did Empire want to

11   recall Mr. Holmes?

12   MS. KNOWLAN: Yes, very briefly.

13   JUDGE BUSHMANN: Mr. Holmes, would you

14   come forward, please.

15   Remind you you're still under oath.

16   THE WITNESS: I understand.

17   JUDGE BUSHMANN: And the Company can

18   inquire to the limited extent that we discussed

19   earlier.

20   MS. KNOWLTON: Thank you.

21   DAVID HOLMES,

22   having been called as a witness herein, having been

23   first duly sworn, was examined and testified as

24   follows:

25

1   DIRECT EXAMINATION

2   BY MS. KNOWLTON

3   **Q.   Please, state your name, Mr. Holmes.**

4   A.   David Holmes.

5   **Q.   Are you the same David Holmes that**

6   **appeared and testified earlier in this proceeding?**

7   A.   I am.

8   **Q.   Have you had a chance to review OPC**

9   **Exhibit 218, which is corrected JSR-1?**

10   A.   I have.

11   **Q.   Is it your understanding that this is a**

12   **correction of JSR-1 from Mr. Riley's affidavit which**

13   **was marked as Exhibit 210?**

14   A.   That is my understanding.

15   **Q.   Yesterday you testified as to some**

16   **problems with Exhibit 210. Are those issues you**

17   **identified equally applicable to Exhibit 218?**

18   A.   I believe so. The double count that is

19   the subject of the correction in JSR-1 from the line

20   item less contribution to -- from TE and add back

21   distribution to the TE, I still believe that that

22   double count exists. It is reduced from the

23   original document, but I still believe it exists in

24   addition to my other comments from yesterday.

25   **Q.   With regard to Joplin 511-C, do you have**

1   that in front of you?

2   A.   I do.

3   Q.   Is it your understanding that on Joplin

4   511-C Mr. Riley took JSR-1 and changed the tax

5   equity contribution percentage?

6   A.   That is my understanding.

7   Q.   Does Exhibit 511-C have the same

8   problems that you described yesterday with regard to

9   JSR-1 and with regard to Exhibit 218 that you've

10   described this afternoon?

11   A.   I believe it does.

12   Q.   Does it have any additional problems?

13   A.   I believe so. When the tax equity

14   percentages changed, it will impact at least three

15   other line items on this document. One, the amount

16   of Empire PTCs is likely to change. Two, the less

17   contributions from TE is likely to change. Three,

18   the add back distributions to the TE is likely to

19   change more than what is the different shown between

20   JSR-1 corrected and this exhibit.

21   In addition, it appears that when you

22   look at the equity percentage after rate base, it

23   appears that the equity percentage in this document

24   is now 60 percent, which I believe is higher than

25   what Empire's authorized to -- it relates to a

1   capital structure, which we've been modeling at 51

2   percent as opposed to 60 percent.

3   **Q.   When you refer to that last 60 percent,**

4   **you're not talking about the tax equity**

5   **contribution. You're talking about as you refer to**

6   **Empire's capital structure?**

7   A.   Correct. The tax equity percentage in

8   the project happens above and only the Empire

9   portion of the project would go into rate base and

10   then the traditional capital structure would then be

11   applied onto that rate base value.

12   MS. KNOWLTON: The Company has no

13   further questions for Mr. Holmes.

14   JUDGE BUSHMANN: I'll now allow cross,

15   but only limited to the scope of the questions that

16   were just asked.

17   Any questions from Commission Staff?

18   MS. FORCK: Just briefly.

19   CROSS-EXAMINATION

20   BY MS. FORCK

21   **Q.   I wanted to go back to that, that equity**

22   **percent.**

23   A.   Yes.

24   **Q.   I'm sorry. Can you -- I know that you**

25   **just answered a question about that. That equity**

1 **percent is not representative of the contribution as**

2 **compared to the tax equity partner contribution; is**

3 **that right?**

4   A.   Correct.   There's the gross capital cost

5 required for the project and then there's a split of

6 a tax equity portion of that and then there's the

7 remaining Empire portion and in this document the

8 Empire portion of the investment in this scenario is

9 shown to be 623,400,000. That amount then would go

10 into rate base at which point the normal debt equity

11 capital structure would be applied to rate base.

12   Q.   **So, the change related to the tax equity**

13 **partnership is shown in the rate base line on**

14 **this; is that right?**

15   A.   It would be shown in the wind project

16 investment, which then would roll down into the rate

17 base, which is the project investment less the

18 accumulated depreciation.

19   Q.   **So, the title of this chart says**

20 **Empire --**

21   **I just want to caution Staff counsel on**

22 **not stating something confidential.**

23   JUDGE BUSHMANN: If you need to ask a

24 question that's confidential, we can go in camera.

25   MS. FORCK: I'm just trying to -- I just

 1   don't know if it's confidential.

 2   JUDGE BUSHMANN: You want to check with

 3   the Company counsel?

 4   MS. FORCK: If you don't mind.

 5   JUDGE BUSHMANN: That would be fine.

 6   MS. FORCK: Can we go in camera?

 7   (REPORTER'S NOTE: At this point, an

 8   in-camera session was held, which is contained

 9   Volume 8, Page 895 through 897.)

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 1                    (The proceedings resumed in open
 2      session.)
 3                    JUDGE BUSHMANN:  We're back in public.
 4                    MS. FORCK:  And I have no further
 5      questions.
 6                    JUDGE BUSHMANN:  All right.  Next cross
 7      would be MECG.
 8                    MR. WOODSMALL:  No questions.
 9                    JUDGE BUSHMANN:  Division of Energy.
10                    MR. POSTON:  No questions.
11                    JUDGE BUSHMANN:  Renew Missouri.
12                    MR. OPITZ:  No, thank you, Judge.
13                    JUDGE BUSHMANN:  City of Joplin.
14                    MS. BELL:  Just briefly.
15                         CROSS-EXAMINATION
16       BY MS. BELL
17           Q.    One of the -- so, one of your comments
18      is that on 511-C the fourth line down should not be
19      .60, correct?
20           A.    That's correct.
21           Q.    And so, what is the normal percentage?
22           A.    We've been using .51 through, through
23      this case and that's what's in JSR-1 corrected.
24           Q.    So, all I would need to do to correct
25      for that would be take 623.40 times .51?
```

1   A.   And the associated changes on the

2   interest side as well.

3   Q.   And that is in which row?

4   A.   The interest row.

5   Q.   Got it. And so, there would be a change

6   to that row as well?

7   A.   Correct. When you change the equity

8   percentage, the equity percentage row would change,

9   the equity row would change, the ROE row would

10   change, the interest row would change, the revenue

11   requirement row would change, and the income tax row

12   would change.

13   Q.   But that particular issue is not in

14   JSR-1 corrected?

15   A.   Specifically related to the equity

16   percentage, no. JSR-1 is just from my comments from

17   yesterday with the added piece from just earlier.

18   Q.   And you indicated that you still think

19   there is double counting?

20   A.   That is correct.

21   Q.   In what line?

22   A.   In JSR-1 corrected?

23   Q.   Yes.

24   A.   In the combination of less contributions

25   from TE and add back distributions to TE the numbers

1   that we believe it should be are the tax equity

2   expense or credit from the stip agreement or the

3   various other documents, which shows both the pay go

4   and the distributions to tax equity combined as one

5   line item.

6   **Q.   So, in 2021 I'm looking at a negative $2**

7   **for less -- or negative $2. Negative 2.00 for less**

8   **contributions for TE. What would you -- what would**

9   **you say that number should be?**

10   A.   I have no issue with that number.

11   **Q.   And then the remaining numbers are $13**

12   **for the other years. Do you have an issue -- and**

13   **that's a negative 13.00. Do you have an issue with**

14   **those numbers?**

15   A.   No issues with the numbers until 2024.

16   **Q.   Okay.**

17   A.   And then starting in 2024 is when I

18   believe the numbers deviate from that which are in

19   the stipulation.

20   **Q.   And in 2024 if it should not be negative**

21   **13.00, what would you suggest the number should be?**

22   A.   I'd refer back to the tax equity expense

23   or credit line in Exhibit B of appendix A of the

24   stipulation, and that that row is the combination of

25   both the less contributions from tax equity and add

1 back distributions to tax equity.

2   Q.   And so, JSR-1 would make that number

3 negative 12. What are you saying it should be?

4   A.   I'm saying that you have to look at the

5 two rows, the less contributions from tax equity and

6 add back distributions to tax equity. So, whether

7 it's done in one row or both would be open to

8 discussion, but I wouldn't be able to say what one

9 specific number is in isolation of the other number,

10 if that makes sense.

11   Q.   So, would you delete out one of those

12 rows from JSR-1?

13   A.   For simplicity, I would delete out the

14 add back distributions to the tax equity and adjust

15 the numbers and less contributions from tax equity

16 to be the same as the tax equity expense bracket

17 credit bracket line item from Exhibit B of appendix

18 A of the stipulation and agreement.

19   Q.   So, in your opinion, we would delete out

20 the row starting with number one and then in 2024

21 the number would not be, let's see, the number would

22 be negative 12; is that right?

23   A.   In 2024?

24   Q.   Yes.

25   A.   I believe it would be negative 13.

1   Q.   Negative 13. So, just -- so, what

2   you're saying is Mr. Riley had a negative 12 there

3   because he had the negative 13 plus the number one,

4   and you're saying it should be negative 13. So, we

5   are $1 million off is your criticism?

6   A.   In that specific year.

7   Q.   And in the next line you argue that that

8   13 should be a negative 12, right?

9   A.   Correct. With the adjustment to the

10   deletion of the 11.4 in add back distribution to the

11   TE.

12   Q.   And so, the difference between your

13   number and his number is what?

14   A.   Do you want me to do the math?

15   Q.   Yes, please.

16   A.   Approximately 10.8.

17   Q.   10.8. So, if we -- if we made an

18   adjustment for that 10.8 amount that you are

19   asserting is incorrect in JSR-1 in order to get the

20   shortfall in revenue, according to Mr. Riley, then

21   you would just subtract 31.34 minus 10.8, which

22   according to Mr. Riley would still leave a shortfall

23   in excess of $20 million in that year. Is that your

24   understanding of Mr. Riley's chart?

25   A.   I guess I would refer you back to my

1   lengthy list of comments from yesterday on JSR-1,

2   and that at numerous areas that I believe lead to

3   different numbers, but specifically related to

4   contributions from tax equity and contributions to

5   tax equity I believe for specifically 2025 your

6   statement is correct.

7   MS. BELL: Thank you. No further

8   questions.

9   JUDGE BUSHMANN: Public Counsel.

10   CROSS-EXAMINATION

11   BY MR. WILLIAMS

12   **Q.   Do you agree that the differences**

13   **between what you think the numbers are and what**

14   **Mr. Riley has done could be just different**

15   **understandings of the agreement?**

16   A.   Not really sure how to answer that. I

17   believe that the modeling that we've produced and is

18   shown in Exhibit B of appendix A of the stipulation

19   accurately shows the tax equity agreement and I

20   believe it's complete and accurate. I have no

21   reason to believe that Mr. Riley's document was not

22   made in good faith. I'm not really sure how to

23   answer that.

24   **Q.   Well, at this point in time Empire**

25   **doesn't have any -- there is no tax equity**

1   **agreement, is there?**

2   A.   Correct. There are parameters that were

3   used to create the modeling. As we've talked about,

4   there's a percentage that has been assumed in the

5   model, which comes with an associated cash

6   distribution and an associated pay go amount and

7   that those are the numbers that have been carried

8   through the model that fall within the ranges of tax

9   equity that are in the stipulation and agreement.

10   **Q.   But don't you agree that someone else**

11   **could change some of the modeling and get different**

12   **results?**

13   A.   I don't know about the modeling. You

14   could -- if you changed a tax equity agreement, you

15   could come up with different numbers. So, based on

16   the agreement that is the most probable agreement,

17   which is what we believe we've modeled, I think

18   that's -- that we have this accurate.

19   MR. WILLIAMS: No further questions.

20   JUDGE BUSHMANN: Any Commissioner

21   questions?

22   COMMISSIONER HALL: No questions. Thank

23   you.

24   COMMISSIONER COLEMAN: No questions.

25   JUDGE BUSHMANN: Any more questioning

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 1   from Empire?  Redirect?

 2              MS. KNOWLAN:  No.  The Company has none.

 3              JUDGE BUSHMANN:  Thank you, Mr. Holmes.

 4   You may step down, sir.

 5              I had offered earlier if Staff wanted to

 6   make any comments in response to 511-C.  Did Staff

 7   want to present any additional evidence on that?

 8              MS. FORCK:  No, thank you, Your Honor.

 9              JUDGE BUSHMANN:  In that case, I think

10   we've completed all witness testimony.  Expedited

11   transcripts, I believe, are going to be available on

12   Tuesday, May 15th.  Initial briefs are due on

13   May 31st.  Reply briefs are due on June 12th.

14              Any parties have anything further?

15              In that case, we are adjourned.

16              COMMISSIONER HALL:  No.  No, we're not.

17              JUDGE BUSHMANN:  Oh, I'm sorry.

18              COMMISSIONER HALL:  Briefing.

19              JUDGE BUSHMANN:  That's right.  The

20   Chairman wanted to add something as far as briefing.

21              COMMISSIONER HALL:  I, of course, have

22   made no determination as to what I think is the

23   appropriate resolution of this case and certainly

24   haven't spoken to other commissioners about that

25   either.  I do have a proposed -- proposed is the
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1 wrong word. I have one concept in mind and I'm

2 interested in the parties' reaction to this concept

3 and that is as follows: A report and order that

4 contains a factual finding that acquisition and

5 operation of the additional 600 megawatts of wind

6 energy is reasonable based upon the record in this

7 case; number two, a factual finding that the

8 financial components of the plan are reasonable

9 based upon the record in this case; a legal

10 determination that it would be appropriate to book

11 those expenses as plant and service with a

12 3.33 percent depreciation rate; and fourth, a legal

13 determination that a variance of the affiliate

14 transaction rule is appropriate.

15   Next, I am interested in briefing as to

16 whether any of the reasonable determinations

17 requested in this case related to the first two

18 items above, retirement of the Asbury plant, the CCR

19 investment, or any other request would constitute an

20 inappropriate or possibly illegal advisory opinion.

21   And finally, I'm interested in briefing

22 on whether or not -- if the Commission does not

23 adopt or approve the entire stipulation, whether it

24 can or should order Empire to abide by any of the

25 provisions in the stipulation such as the rate

1   moratorium and the tax cut provision.

2   I look forward to reading briefing on

3   those issues and I, like the other commissioners,

4   will make a decision after reading such analysis.

5   Thank you.

6   MR. WOODSMALL: Can I ask a question

7   just so I make sure I got this right?

8   JUDGE BUSHMANN: Sure.

9   MR. WOODSMALL: When you were going

10   through the factual findings under potential

11   findings you mentioned 600 megawatts as reasonable.

12   Later when you talked about legal advisory, you

13   mentioned Asbury. Was Asbury in the reasonable

14   finding up above as well?

15   COMMISSIONER HALL: No.

16   MR. WOODSMALL: It was --

17   COMMISSIONER HALL: No. The concept

18   that I've raised concerns just those four provisions

19   and nothing else.

20   MR. WOODSMALL: Okay.

21   JUDGE BUSHMANN: Any other questions?

22   Hearing none. We're adjourned.

23   (The hearing was adjourned at 3:16 p.m.)

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 1                CERTIFICATE OF REPORTER

 2

 3          I, Amanda N. Farrar, a Certified Court

 4   Reporter for the State of Missouri, do hereby

 5   certify that the witnesses whose testimony appears

 6   in the foregoing transcript were duly sworn; the

 7   testimony of said witnesses was taken by me to the

 8   best of my ability and thereafter reduced to

 9   typewriting by me; that I am neither counsel for,

10   related to, nor employed by any of the parties to

11   the action in which this hearing was taken, and

12   further that I am not a relative or employee of any

13   attorney or counsel employed by the parties thereto,

14   nor financially or otherwise interested in the

15   outcome of the action.

16

17                          amanda Farrar

18                  _____

19                  Certified Court Reporter

20

21

22

23

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