

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2022 INTEGRATED) CASE NO.
RESOURCE PLANNING REPORT OF) 2023-00092
KENTUCKY POWER COMPANY)

* * *

Transcript of June 12, 2024, hearing
before Chairman Kent Chandler at the Kentucky Public
Service Commission, 211 Sower Boulevard, Frankfort,
Kentucky 40602-0615.

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ALSO PRESENT:

Ms. Candace Sacre, PSC Court Reporter

* * *

1 (Hearing commenced at 9:09 a.m.)

2 MS. SACRE: You're on, Chairman.

3 CHAIRMAN CHANDLER: We are on the record in
4 Case Number 2023-00092, the Electronic 2022
5 Integrated Resource Planning Report of Kentucky
6 Power Company.

7 My name is -- I'm Kent Chandler. I'm
8 chairman of the Kentucky Public Service Commission,
9 will be presiding over the hearing today. Joining
10 me are Vice Chair Angie Hatton and Commissioner Mary
11 Pat Regan.

12 I'd ask everyone in the hearing room to
13 please either turn off your cell phones or set them
14 to silent mode.

15 The purpose of today's hearing is to take
16 evidence in this matter. Before we get started
17 we'll get start we'll have an entry of appearance of
18 counsel. For the Applicant, Kentucky Power.

19 MS. GLASS: Good morning. Katie Glass of
20 Stites & Harbison for Kentucky Power Company. Also
21 appearing with me is Kent Gish of Stites & Harbison.
22 And appearing pro hac vice is Hector Garcia-Santana,
23 in-house counsel with American Electric Power
24 Service Corporation.

25 CHAIRMAN CHANDLER: All right. Thank you,

1 Ms. Glass.

2 And for the Kentucky Office of the
3 Attorney General?

4 MR. MIKE WEST: Mike West for the AG's
5 office.

6 CHAIRMAN CHANDLER: Okay, Mr. West.
7 For the Kentucky Industrial Utility
8 Customers?

9 MR. KURTZ: Good morning, Your Honor. Mike
10 Kurtz, Jody Kyler Cohn for KIUC.

11 CHAIRMAN CHANDLER: Thank you, Mr. Kurtz.

12 And for the -- is it Joint Intervenors?

13 MR. GARY: Yes, Your Honor. Byron Gary on
14 behalf of the Joint Intervenors. Appearing with me
15 today is Thomas Cmar, Melissa Legge, and Hema
16 Lochan.

17 CHAIRMAN CHANDLER: Thank you.

18 And anyone here from LS Power?

19 MS. KOENIG: Brittany Koenig for LS Power
20 Development.

21 CHAIRMAN CHANDLER: Thank you, Ms. Koenig.

22 Is that all the parties?

23 All right. I reviewed the record. It appears
24 that on -- what's that?

25 VICE CHAIR HATTON: (Indiscernible).

1 CHAIR CHANDLER: Oh, yeah. I'm sorry. For
2 Commission Staff. Excuse me.

3 MR. BELLAMY: Yes. Ben Bellamy for the
4 Commission Staff with Jurgens van Zyl, and we have
5 John Rogness with us.

6 CHAIRMAN CHANDLER: Thank you.

7 Public notice -- proof of public notice has
8 been filed into the record indicating through
9 affidavit of the publication date that ran
10 between -- it appears here May the 24th until May
11 the 30th. So public notice has been provided, and
12 proof of such has been filed.

13 It's my understanding there are a couple of
14 outstanding confidential petitions. Are there any
15 other pending outstanding motions or anything that
16 we need to take up before we get started? Great.

17 Pursuant to the public notice that was
18 provided, we put on our website, consistent with
19 that notice, a link for folks to -- or information
20 for the public to indicate whether they had interest
21 in providing public comment in today's hearing
22 virtually.

23 As of 9:00 o'clock, no one had indicated
24 their interest in providing that public comment
25 virtually. Anybody who is interested who is

1 watching this or views this hearing prior to the
2 submission of this case can provide public comment
3 anytime prior to the case being closed. We just ask
4 that you provide your name, your address, and the
5 case number when you provide public comment, which
6 in this matter is 2023-00092. You can provide
7 public comment via our website, psc@ky.gov. You can
8 email them to the Commission at psc.comment@ky.gov,
9 and then you can also mail them to the Public
10 Service Commission at 211 Sower, S-O-W-E-R,
11 Boulevard, Frankfort, Kentucky 40601.

12 Given that no one has indicated their
13 interest in providing virtual public comments, is
14 there anyone here from the public that would like to
15 provide in-person comments?

16 Seeing no one from the public, we will move
17 on.

18 Ms. Glass, we'll take up our administrative
19 items.

20 MS. GLASS: Yes, Your Honor. So we filed our
21 witness list last week. Generally that's the --
22 that's our intention, to call our witnesses in that
23 order today, you know, subject to anything changing,
24 with one exception. We intend to call Mr. Gary
25 Spitznogle first. Mr. Spitznogle is recovering from

1 a medical procedure that prevents him for being able
2 to sit for very long periods of time, so we'd like
3 to try and get him in and out of here as quickly as
4 we can. I just wanted to let the Commission know
5 and the Intervenors know.

6 We will also be asking that Mr. Spitznogle be
7 excused at the conclusion of his testimony, but we
8 can make that request at that time.

9 CHAIRMAN CHANDLER: That'll fine. All right.
10 That'll be -- we'll take Mr. Spitznogle and then get
11 started with Mr. West; is that right?

12 MS. GLASS: Yes.

13 CHAIRMAN CHANDLER: Okay. Is there anything
14 else that we need to take up before we get started?

15 Okay. Ms. Glass, please call your first
16 witness.

17 MS. GLASS: Sure. Kentucky Power calls Gary
18 Spitznogle. He'll be presented by Mr. Gish.

19 CHAIRMAN CHANDLER: Mr. Spitznogle, please
20 raise your right hand. Do you swear or affirm that
21 the testimony you are about to give is true and
22 correct under penalty of perjury?

23 THE WITNESS: I do.

24 CHAIRMAN CHANDLER: Please have a seat.
25 Please state your name and address for the record.

1 THE WITNESS: Good morning. My name is Gary
2 Spitznogle. I'm at 1 Riverside Plaza, Columbus,
3 Ohio.

4 CHAIRMAN CHANDLER: Mr. Gish.

5 MR. GISH: Thank you, Mr. Chairman.

6 GARY D. SPITZNOGLE, called by Kentucky Power
7 Company, having been first duly sworn, testified as
8 follows:

9 DIRECT EXAMINATION

10 By Mr. Gish:

11 Q. Mr. Spitznogle, can you please state your
12 title for the record?

13 **A. Yes. I'm a vice president of environmental**
14 **services for American Electric Power Service**
15 **Corporation.**

16 Q. And, Mr. Spitznogle, did you support the
17 preparation of the integrated resource planning
18 report subject to this case?

19 **A. Yes, I did.**

20 Q. And did you provide responses to data requests
21 in this case?

22 **A. I did, yes.**

23 Q. And knowing what you knew at the time of your
24 responses or at the -- when preparing the report,
25 would you -- would you prepare the same report or

1 provide the same responses?

2 **A. I would, yes.**

3 MR. GISH: Mr. Chairman, the witness is
4 available for cross-examination.

5 CHAIRMAN CHANDLER: Okay. First, Mr. West.

6 MR. MIKE WEST: We don't have any questions
7 for this witness, Your Honor.

8 CHAIRMAN CHANDLER: Okay. Mr. Kurtz?

9 MR. KURTZ: No questions, Your Honor.

10 CHAIRMAN CHANDLER: Mr. Gary?

11 MR. GARY: Thank you, Your Honor. Yes.

12 CROSS-EXAMINATION

13 By Mr. Gary:

14 Q. Good morning, Mr. Spitznogle.

15 **A. Good morning.**

16 Q. It's nice to meet you. My name is Byron
17 Gary, attorney here in Kentucky for the Joint
18 Intervenors. With me here at the table is Mr. Cmar.
19 He's just going to be helping, possibly sharing
20 some -- some exhibits or things that we'd like to
21 talk about.

22 First, I just want to start by saying if I
23 ask anything that's unclear, feel free to let me
24 know. I'll try to clear that up or reask it in a
25 different way.

1 I also understand, just heard, you know, you
2 had a medical procedure recently. If I go too long
3 or you need a break, you know, let -- feel free to
4 interrupt me. It's, you know, at the Chair's
5 discretion of course, but -- but no hesitation
6 interrupting me, if -- if you need anything.

7 **A. I appreciate that. Thank you. We should be**
8 **fine.**

9 Q. I hope you're recovering all right.

10 **A. I am. Yes. Thank you.**

11 Q. Good. Good.

12 My first questions just deal with American
13 Electric Power and your role. You work for American
14 Electric Power Service Corporation; is that right?

15 **A. I do, yes.**

16 Q. Okay. And you were just introduced as the
17 vice president of environmental services for AEPSC;
18 is that right?

19 **A. That's correct.**

20 Q. Okay. Could you explain what your job entails
21 broadly?

22 **A. Yes. So my and -- I and my team support the**
23 **environmental compliance activities for the entire**
24 **service corporation, including Kentucky Power. So**
25 **we advise on new rules and regulations, we provide**

1 **training on those, and we support all activities in**
2 **the rulemaking process.**

3 Q. Okay. And you're in charge of that team?

4 **A. Yes. That's correct.**

5 Q. Who do you report to?

6 **A. I report to Chris Beam, Executive Vice**
7 **President of Energy Services.**

8 Q. Okay. And so you're employed by AEPSC, which
9 is a subsidiary of AEP Company, Inc., right, and AEP
10 owns Kentucky Power as well?

11 **A. That is correct, yes.**

12 Q. Okay. But you're not employed directly by
13 Kentucky Power?

14 **A. No.**

15 Q. Okay. So your role is broadly to evaluate
16 environmental regulations and their applicability to
17 those other companies, though, those sort of sister
18 companies?

19 **A. Yes, that's right.**

20 Q. Okay. And did you assist in the preparation
21 of the IRP?

22 **A. I did from an environmental standpoint, yes.**

23 Q. Okay. So just those environmental pieces?

24 **A. That's correct.**

25 Q. Okay. But you reviewed the entire IRP?

1 **A. To some extent, but -- but my focus is on**
2 **providing guidance on the rules and the applicability**
3 **of those rules.**

4 Q. Okay. So you're generally familiar with what
5 else is in the IRP, then?

6 **A. In general, yes.**

7 Q. Okay. And you sponsored certain responses to
8 requests for information. Did you assist in
9 preparing or reviewing responses sponsored by
10 anybody else?

11 **A. Potentially, but not generally.**

12 Q. Okay.

13 **A. My focus was on environmental responses.**

14 Q. So maybe other specific ones, but not all of
15 them broadly?

16 **A. Absolutely. That's true.**

17 Q. Okay. And did you review the comments from
18 the intervening parties in this proceeding?

19 **A. Some of them, yes.**

20 Q. Okay. And did you participate in the
21 preparation of the response to those comments at all?

22 **A. To the extent it affected environmental**
23 **analysis, yes.**

24 Q. Okay. So part of your responsibilities
25 include keeping track of environmental regulations,

1 in particular, for relevance to this case, as they
2 affect Kentucky Power Company's generating assets?

3 **A. Yes.**

4 Q. Okay. And you follow announcements from EPA
5 about proposed and final rulemakings and things like
6 that?

7 **A. Yes, I do.**

8 Q. Okay. So I assume you're familiar with the
9 announcements made by EPA on April 25th of some new
10 final environmental regulations relating to electric
11 generating units?

12 **A. Yes, I am.**

13 Q. Okay.

14 MR. GISH: Mr. Chairman?

15 CHAIRMAN CHANDLER: Yes.

16 MR. GISH: I want to object to asking
17 questions about environmental regulations that were
18 not in effect at the time the IRP itself was
19 prepared. I understand Mr. Spitznogle is an expert
20 in these -- in these regulations, but to the extent
21 that they affect the -- whether or not the IRP
22 itself was prepared in accordance with the Kentucky
23 regulations, what happens a year later is irrelevant.

24 CHAIRMAN CHANDLER: Oh, I'm sorry. I want to
25 be clear, Mr. Gish. I want to be -- are you taking

1 the position that this hearing is about the --
2 exclusively about the compliance of the
3 regulation -- of the integrated resource plan with
4 the regulation?

5 MR. GISH: About the applicability of the --
6 of the -- that the integrated resource plan complies
7 with the rules.

8 I don't -- I just want to be on the record
9 that the -- how the rules have changed since then
10 should not affect how -- whether or not the rules --
11 the app -- the state -- let me try this again in a
12 less jumbled way.

13 CHAIRMAN CHANDLER: Okay.

14 MR. GISH: The rules as they are now could
15 not have been foreseen for whether or not the
16 integrated resource plan properly evaluated the
17 environmental regulations in effect at the time that
18 the integrated resource plan was prepared.

19 CHAIRMAN CHANDLER: Yeah, I'm -- I just want
20 to be -- I think I -- I have an appreciation for
21 your objection, but it seems like you're more --
22 your objection is more about how we -- what we apply
23 the evidence to or in what way we apply the evidence
24 that's from this cross-examination, not that it's
25 not necessarily relevant to the proceeding. Is that

1 accurate?

2 I just want -- I think your -- just so I can
3 rule on it correctly, I take your objection to be
4 not that the questions are asked and answered but
5 that the Commission take the evidence from the
6 responses as indicative of compliance with the
7 regulation.

8 MR. GISH: That's right. The regulation --
9 the IRP was prepared at a point in time when the
10 regulations were in effect.

11 CHAIRMAN CHANDLER: Which is a fact.

12 MR. GISH: Yeah. And questions about
13 regulations that have changed since then have no
14 bearing on whether or not the regulations that were
15 in effect at the time of the IRP are correct.
16 That's it.

17 CHAIRMAN CHANDLER: Okay. So I just -- so
18 I'm going to overrule the objection. And I think
19 the -- I think the reason I asked the question,
20 Mr. Gish, I think the best place for that would be
21 in subsequent briefing or comments that are filed,
22 how the -- how you would ask the Commission to -- to
23 what this evidence is relevant to --

24 MR. GISH: Okay.

25 CHAIRMAN CHANDLER: -- may be something you'd

1 like to address in subsequent comments. I think
2 that would be helpful.

3 MR. GISH: Understood.

4 CHAIRMAN CHANDLER: All right. Thank you.

5 MR. GARY: Thank you for clearing that up.

6 Q. And to be clear, April 25th of this year was
7 after the IRP and all of the responses to data
8 requests, right?

9 **A. That's correct.**

10 Q. So these rules weren't applicable at the
11 time, but the -- all four of those, as far as I'm
12 aware, are still applicable as of right now?

13 **A. As of right now they're applicable, yes.**

14 Q. Okay. So specifically turning to the new
15 greenhouse gas regulations under Section 111 of the
16 Clean Air Act, you reviewed those, I assume, right?

17 **A. Yes, I did.**

18 Q. Okay. And just for ease of reference, if
19 it's amenable to the Commission and opposing
20 counsel, I'd like to refer to a table the EPA
21 published in reference to this. You may or may not
22 be familiar with it, but we'll show that up on the
23 screen here.

24 All right. All right.

25 CHAIRMAN CHANDLER: Would you like Mr. Rhodes

1 to turn on the --

2 MR. GARY: Yes, we are ready to --

3 CHAIRMAN CHANDLER: -- sharing feature?

4 MR. GARY: -- share that.

5 Q. All right. Are you familiar with this table?

6 Does this look familiar at all?

7 **A. Yes.**

8 Q. Okay. So you've reviewed this before?

9 **A. I have, yes.**

10 Q. Okay. And generally what this contains, it's

11 tabled [sic] BSER At-A-Glance. Can you say what

12 BSER is?

13 **A. That's best system of --**

14 Q. Emissions? If I told you it was best system

15 of emission reduction, would that --

16 **A. Yes. Yes.**

17 Q. Okay. Sounds right?

18 And generally it has, at the top, two sort of

19 categories. There is Existing Steam Generators and

20 then New and Reconstructed Stationary Combustion

21 Turbines; is that right?

22 **A. That's correct.**

23 Q. Okay. And below that it contains what the

24 standards that were promulgated in the rule are,

25 right?

1 **A. Yes.**

2 Q. Okay. And as far as you're aware, these
3 are -- are consistent with what was promulgated in
4 that final rule, right?

5 **A. It is.**

6 Q. Okay. I just find this table much easier
7 than going back and forth throughout that entire
8 rulemaking, so I hope we can go through this just
9 really quickly.

10 There are requirements for existing steam
11 generators, in particular for coal units that
12 require -- have different requirements for long-term,
13 medium-term units. For long-term, those units have
14 to install carbon -- well, they have been to be
15 compliant with carbon capture and sequestration; is
16 that right?

17 **A. Depending on the disposition plan of the
18 unit, yes.**

19 Q. Okay. For the long-term units specifically --

20 **A. That's correct.**

21 Q. -- that they plan to operate into 2039 or
22 beyond?

23 **A. Beyond 2039.**

24 Q. Okay. And then on the other side there are
25 requirements for new and reconstructed stationary

1 combustion turbines, right? On the -- the right
2 half of this table?

3 **A. That's correct.**

4 Q. Okay. And at the top it has Phase I and
5 Phase II that are generally sort of along a
6 timeline, right?

7 **A. Yes.**

8 Q. Okay. And then below that it has the
9 different subcategories of stationary combustion
10 turbines. It has the low load, and those are those
11 that operate at a capacity factor of less than 20
12 percent; is that right?

13 **A. That is correct.**

14 Q. Okay. And then intermediate load between 20
15 and 40 percent?

16 **A. Yes.**

17 Q. Okay. And for those two subcategories, they
18 have Phase I standards of 160 pounds of CO2 per
19 million Btu and 1,170 pounds of CO2 per megawatt
20 hour respectively, right?

21 **A. Correct.**

22 Q. Okay. But there's no Phase II standards for
23 those?

24 **A. That is correct.**

25 Q. Okay. It's just for the base load subcategory

1 at the bottom that have a capacity factor of greater
2 than 40 percent that there are requirements, right?

3 **A. Right.**

4 Q. Okay. And for the base load subcategory,
5 they have an initial standard of 800 pounds per
6 megawatt hour, which is again lower, but then even
7 lower once 2032 hits, right? Generally they have to
8 comply with that 90 percent carbon capture that's
9 described?

10 **A. That's correct, yes.**

11 Q. Okay. Just wanted to lay those out, make
12 sure we're on the same page.

13 Okay. I'm going to stop sharing so I can
14 bring back up my notes.

15 In the IRP, are you familiar with the
16 preferred plan that was selected, just generally, in
17 the IRP?

18 **A. In general, yes.**

19 Q. Okay. And in the IRP, a new gas combustion
20 turbine that would come online as early as 2029 was
21 selected, correct?

22 **A. Yes.**

23 Q. Okay. And do you recall in the IRP, it's --
24 or, sorry, in a response that you may not have
25 prepared, but in a response it was stated that

1 Kentucky Power would plan for that new gas plant to
2 operate at a long-term capacity factor of around 30
3 percent. Does that sound familiar? I can refer to
4 this -- it's in response Joint Intervenor 122.

5 **A. Okay. I don't -- I don't recall those**
6 **details.**

7 Q. Okay. So you didn't look at the long-term
8 capacity factor of that plant?

9 **A. I'm sure I did, I just don't recall --**

10 Q. Okay.

11 **A. -- what the numbers are.**

12 Q. Does that sound about right?

13 **A. Yes.**

14 Q. Okay. But -- you're not familiar with it,
15 but generally capacity factors don't stay the same
16 every year, do they?

17 **A. They do not, no.**

18 Q. Okay. So it can vary significantly from year
19 to year for many resources.

20 And do you have available to you your
21 responses to data requests with you?

22 **A. I don't -- I don't have them with me.**

23 Q. You don't have anything with you up there?

24 **A. No.**

25 Q. Okay.

1 MR. GARY: If I were to refer to a response,
2 would counsel be able to provide him with it?

3 MR. GISH: Yes.

4 MR. GARY: Specifically Staff 231.

5 MS. GLASS: May I approach the witness?

6 CHAIRMAN CHANDLER: You may.

7 MR. GISH: Staff 231?

8 MR. GARY: Yes.

9 Q. And I don't think this is one you responded
10 to. Could you take just a minute and review the
11 response there, though?

12 So I don't intend to ask you about whether
13 that information is factually correct, just about
14 the information in the table specifically.

15 **A. Okay.**

16 Q. So for the new gas CT chosen by the model,
17 the capacity factor shown varies from as low as 26
18 percent but up to as high as 58 percent; is that
19 right?

20 **A. I don't know. That's not a --**

21 Q. That's -- sorry. Is that what the table
22 states, is -- as the response of the Company?

23 MS. GLASS: Are you referring to an
24 attachment to that response?

25 MR. GARY: Oh, I'm sorry. I thought it was

1 included in -- I'm sorry.

2 Q. Attachment 1 to the response.

3 **A. There's a table here.**

4 Q. I thought it was included directly in the
5 body of the text.

6 **A. Yes, I've got the table.**

7 Q. You've got the table now?

8 **A. Yes.**

9 Q. I'm sorry. I thought it was directly with
10 the response. It must be the next page.

11 So generally the -- the combustion turbine
12 that was selected, the modeling picked it to run at
13 between 26 and 58 percent?

14 **A. Yes. That is correct.**

15 Q. Okay. But to comply with the EPA rule, it
16 would have to either accept an operating limit on
17 that capacity factor of 40 percent or it would have
18 to implement CCS achieving 90 percent carbon
19 capture --

20 **A. Yes.**

21 Q. -- correct? Okay.

22 Turning to -- to the rule itself, you assisted
23 in -- and actually I think you signed the comments
24 on behalf of AEP on that rule. Do you recall that?

25 **A. Yes.**

1 Q. Okay. And I'm actually going to pull those
2 up just really quickly.

3 MR. GARY: If Mr. Rhodes is listening, could
4 he share my screen again?

5 Thank you very much.

6 Q. Do these appear to be those comments? I'm
7 not sure how easy it is to see up there.

8 **A. Yeah, I can be --**

9 Q. I can zoom in more or less, if needed.

10 **A. Yeah, you can zoom out a little bit.**

11 Q. Okay.

12 **A. That looks like the cover page to the**
13 **response.**

14 Q. Okay. And that's your signature down there?

15 **A. Yes, that's correct.**

16 Q. Okay. And just generally, you submitted
17 comments on a number of aspects of the rules, and
18 specifically with regard to carbon capture, I think
19 the Company stated that CCS is a promising
20 technology, but significant development challenges
21 remain that will require years to resolve?

22 **A. Yes.**

23 Q. Okay. And the -- the intent of that is that
24 you don't believe that CCS would be achievable on a
25 timeline of the rule, right?

1 **A. That is true.**

2 Q. Okay. And among those challenges, there were
3 sort of logistic challenges with carbon capture at
4 plants, right?

5 **A. Yes. There's physical and other challenges,**
6 **yes.**

7 Q. And aside from those, just the -- the --
8 after it's captured, what to do with it is also
9 another potential issue?

10 **A. It is, yes.**

11 Q. Okay.

12 MR. GARY: Oh, yes, I'm sorry. I believe
13 this is JI-2, the second thing that I shared here,
14 just to mark.

15 MR. GISH: You're saying the comments are
16 Joint Intervenors 2?

17 MR. GARY: Yes, this would be JI-2. We can
18 discuss moving to admit later, but just for ease of
19 reference, this would be JI-2.

20 CHAIRMAN CHANDLER: Let me be clear, Mr. Gary.
21 JI-1 was the --

22 MR. GARY: The BSER at a Glance.

23 CHAIRMAN CHANDLER: The fact sheet or
24 whatever they provided?

25 MR. GARY: Yes.

1 CHAIRMAN CHANDLER: And then those that
2 you're sharing are AEP's comments?

3 MR. GARY: These are AEP's comments on the
4 rulemaking.

5 CHAIRMAN CHANDLER: And Mr. Gish and
6 Ms. Glass have copies of these?

7 MR. GARY: Yes. Those were sent out this
8 morning. Did you -- were you able to receive those?

9 MS. GLASS: We did receive them, although we
10 will need copies for the court reporter. Will you
11 be providing those?

12 MR. GARY: I can -- I can include you. I
13 think I have your email address now as well. I can
14 send those as soon as I'm done here.

15 MS. GLASS: I can do that as well. I just
16 didn't know if you had paper copies.

17 MR. GARY: No, sorry.

18 CHAIRMAN CHANDLER: All right. Let's --
19 let's convey this one by electronic means, because I
20 think it's 726 pages.

21 MR. GARY: That's generally why I chose
22 electronic for a few of these.

23 Q. I'm not going to go through all of your
24 comments, but generally there are significant
25 hurdles to achieving carbon capture, right?

1 **A. There are, yes.**

2 Q. Okay. Thank you.

3 Another issue, I just wanted to briefly
4 mention that the running of a carbon capture system
5 also takes significant energy to run, correct?

6 **A. It does, on the order of 25 to 30 percent of
7 the unit's generating electricity.**

8 Q. Okay. Generally the parasitic load, I
9 think --

10 **A. Yes.**

11 Q. -- it's often called?

12 **A. Yes.**

13 Q. Okay. I'd like to turn to another rulemaking.
14 Do you also follow developments around the -- the
15 National Ambient Air Quality Standards, or the
16 NAAQS?

17 **A. I do.**

18 Q. Okay. EPA reviews and updates those
19 periodically every five years, and generally each
20 time those standards tend to go down or stay the
21 same, in your experience?

22 **A. Yes.**

23 Q. Okay. And after NAAQS is adopted, there are
24 a few things that have to happen: EPA has to
25 designate areas attainment or nonattainment?

1 **A. Correct.**

2 Q. And then states also have to submit an
3 infrastructure SIP or an iSIP. Are you familiar
4 with those?

5 **A. Yes.**

6 Q. Okay. And part of that iSIP is showing that
7 the state doesn't contribute to nonattainment or
8 interfere with maintenance or contribute to
9 significant deterioration downwind, right?

10 **A. That is correct.**

11 Q. The interstate transport portion of the iSIP
12 generally. Okay.

13 So EPA has submitted a number of those, and
14 in the past, are you familiar with EPA having found
15 Kentucky's submittals deficient with regard to
16 interstate transport?

17 **A. Yes.**

18 Q. And the next step after that is EPA institutes
19 a federal implementation plan, or a FIP, right?

20 **A. That's right.**

21 Q. Okay. And for interstate transport, they
22 have done that a number of times now. I'm sure you
23 probably -- I don't know. How long have you been in
24 your position or generally evaluating environmental
25 regulations?

1 **A. About five years.**

2 Q. Okay.

3 **A. Yes.**

4 Q. Prior to that, have you -- prior to that
5 five-year period, have you also followed the
6 previous developments around this?

7 **A. At times.**

8 Q. Okay. So generally, would you say you're
9 familiar with the four-step process that EPA uses
10 for those interstate transport FIPs?

11 **A. In general. That's not what I focus on every
12 day.**

13 Q. Yeah. I'm not going to ask you too many
14 technical details. I plan to move on just to sort
15 of the effect of it pretty quickly, but generally
16 they have used that same four-step process each time
17 they have updated the interstate transport SIP?

18 **A. Yes, I believe so.**

19 Q. Okay. And so we've been through the
20 Cross-State Air Pollution Rule, the CSAPR update,
21 the revised CSAPR update, and now the Good Neighbor
22 Plan, and you're generally familiar with all of
23 those?

24 **A. I am, yes.**

25 Q. Okay. So the -- the current Good Neighbor

1 Plan is undergoing litigation. I'm sure you have
2 followed that the SIP disapproval for Kentucky was
3 stayed by the Sixth Circuit?

4 **A. Yes.**

5 Q. Okay. But the -- the rule itself is
6 undergoing separate litigation in the D.C. circuit,
7 correct?

8 **A. That's right.**

9 Q. To your knowledge, that rule has not been
10 stayed by a court at this point, right?

11 **A. I believe that's true, yes.**

12 Q. Okay. But EPA separately stayed that -- the
13 Good Neighbor Plan, as did the states where the SIP
14 disapproval was stayed, including Kentucky?

15 **A. Yes.**

16 Q. Okay. Sorry. This -- this gets really
17 confusing, so I'm walking it a little bit slowly.
18 I'm sorry. I'm going to try and speed it up just a
19 little bit.

20 Just a couple of things from that EPA stay.
21 When EPA stayed the Good Neighbor Plan as to
22 Kentucky and other states, it also reinstated the
23 previous allowance system in effect in each state,
24 right?

25 **A. That's my understanding, yes.**

1 Q. Okay. So for Kentucky, that would be the --
2 even more confusingly called the new plan under the
3 Good Neighbor Plan Group 3, but the previous plan
4 was also Group 3, correct?

5 **A. Right.**

6 Q. But Kentucky is under the old Group 3
7 allowance system at this point, right?

8 **A. Yes.**

9 Q. Okay. And before that came into place, under
10 the revised CSAPR updates was Group 2 under the
11 CSAPR update that would have been in effect up till
12 2021, I believe. Does that sound right?

13 **A. That sounds right, yes.**

14 Q. Okay.

15 **A. It's --**

16 Q. It might be 2022. I'll get to it in a
17 second. I have it in my notes here. But looking
18 just at Group 2 first, are you generally familiar
19 with the allocations that were made under that
20 annually?

21 And I have those available as well. I'm
22 sorry to keep switching back and forth on my screen.
23 Maybe I can save a little time and do Group 2 and
24 Group 3 really quickly at the same time.

25 MR. GARY: This would be JI-3, whenever

1 Mr. Rhodes is able to share my screen, and I will
2 zoom in quite a bit here.

3 Q. Does this spreadsheet look familiar? Is this
4 something you might have reviewed titled --

5 **A. I have not reviewed it, but I believe I've**
6 **seen it.**

7 Q. Okay.

8 **A. Yes.**

9 Q. Titled Unit Level Allocations and Underlying
10 Data for the CSAPR for the 2008 oz.xls.

11 So this contains the allocations for 2017 and
12 2018 and beyond under Group 2. And just scrolling
13 down to Kentucky, I think, conveniently, Big Sandy
14 is actually the first facility listed under
15 Kentucky; is that right, looking at rows 842 and
16 843?

17 **A. Yes, I see them.**

18 Q. Okay. And at the time of these allocations,
19 there were allocations for BSU1. That's Big Sandy
20 Unit 1, right? That would be the -- the converted
21 gas portion of the -- the facility, right?

22 **A. Yes.**

23 Q. Okay. And there were also allocations for
24 BSU2. That's the former coal unit that has since
25 shut down, I think?

1 **A. Yes. It's been -- it's been retired.**

2 Q. Okay. And for BSU1, the allocations were
3 287 tons per ozone season, and BSU2, they were 758
4 tons per ozone season?

5 **A. Yes.**

6 Q. And once Unit 2 shut down, essentially all of
7 those allowances would have gone to -- to Big Sandy
8 generally, right? So Big Sandy would have had
9 somewhere on the order of a thousand allowances
10 annually?

11 **A. I'm not sure of that.**

12 Q. Subject to check --

13 **A. Yes.**

14 Q. -- adding -- yeah.

15 **A. Subject to check. I believe that's how it
16 works.**

17 Q. Okay. And then just really quickly, since
18 I'm already sharing, show -- this is the Group 3
19 allowances. Does this also look familiar?

20 **A. It does.**

21 Q. Okay. And at the bottom there's a sheet
22 titled Final Merged RCU Allocations. That would be
23 revised CSAPR update allocations, right?

24 **A. Yes, I believe.**

25 Q. And scrolling down to Kentucky again, at

1 Row 304, Big Sandy is the first unit. You actually
2 got a slight bump for BSU1 in 2021, but then it was
3 back down in 2022 and beyond, from 373 to - down to
4 270 -- 273 allowances for the ozone seasons.

5 And this, being the RCU, would be the
6 allowance allocation that is currently in effect
7 pursuant to that EPA stay, right?

8 **A. Subject to check again, yes.**

9 Q. Okay.

10 **A. I believe that's correct.**

11 Q. Sorry.

12 CHAIRMAN CHANDLER: Mr. Gary?

13 MR. GARY: Yeah.

14 CHAIRMAN CHANDLER: Before you pull that out
15 of your computer, do you plan on sharing any more?

16 MR. GARY: I believe I have one or two more.

17 CHAIRMAN CHANDLER: So Mr. Rhodes has
18 requested that you just leave it in your computer
19 and tell him when to turn it off.

20 MR. GARY: Okay.

21 CHAIRMAN CHANDLER: And he'll stop that.
22 Every time you unplug it, it resets itself, and it
23 takes longer to put up the next document.

24 MR. GARY: Okay. If he could stop sharing so
25 I could go back to my notes for a minute, that would

1 be great. Thank you.

2 Q. So you also -- you don't have your responses
3 to data requests in front of you; is that right?

4 **A. I thought I did, but I don't.**

5 Q. Okay. Maybe, then, it would be easier to do
6 this.

7 MR. GARY: All right. Mr. Rhodes, if you
8 could share my screen again. Thank you very much.

9 Q. You were one of two people who responded to
10 Joint Intervenor 1-20, which asked about allowances
11 and use, right? Do you recall that question?

12 **A. Yes.**

13 Q. Okay. The other was Mr. Haratym? Is that
14 how you say his name?

15 **A. Haratym.**

16 Q. Haratym.

17 MR. GISH: We can provide him with a copy.

18 MR. GARY: Okay. If you have that
19 spreadsheet, that would be great. Yeah, that works.

20 MS. GLASS: 1-20, Attachment 1?

21 MR. GARY: Attachment 1, yes.

22 THE WITNESS: Thank you.

23 MR. GARY: That's -- that's fantastic. I can
24 see my notes again. Mr. Rhodes, you can turn it
25 back off. Thank you.

1 Q. So this attachment, would this have been
2 something that you prepared or Mr. Haratym -- or
3 Haratym? I'm sorry.

4 **A. I don't know who put this together. It's**
5 **very possible somebody on my team generated this.**

6 Q. Okay. You'd be able to answer questions
7 about it, though?

8 **A. In general.**

9 Q. Generally?

10 **A. Yes.**

11 Q. And generally it looks like, just running
12 through what's there, there are a few different
13 columns, but the one I'm interested in, Column K,
14 ozone season NOx emissions.

15 So these would be the sum, essentially, of
16 those ozone season allowances under Group 2 and
17 Group 3 that you used, correct -- or that Big Sandy
18 used, and I think also Mitchell and Rockport are in
19 here, but specifically referring to Big Sandy at the
20 top?

21 **A. Yes, I see that.**

22 Q. Okay. So if we summed those five months in
23 that box, those would be the total ozone season
24 allowances used that would be comparable to -- to
25 those spreadsheets that we went through a second

1 ago?

2 **A. They look to be.**

3 Q. Okay. So, just really quickly, for 2017 it
4 looks like the sum would be around 180 allowances;
5 2018, 325; but 2019 and 2020, it looks like over
6 500 allowances? I don't expect you to do the math
7 quickly in your head --

8 **A. Yes.**

9 Q. -- but subject to check --

10 **A. No, that looks right. That looks right.**

11 Q. -- on the order of -- okay.

12 And so there is also a purchase price listed
13 over there that's -- that's consistently listed as
14 zero. I assume for those years that's because, as
15 we went through before, Big Sandy had not just the
16 270 whatever allocations for Unit 1, but it had the
17 full set of allocations for Unit 1 and 2 during
18 those first few years --

19 **A. Yes.**

20 Q. -- up to 2020? Okay. Because 519 allowances
21 wouldn't have been covered by the 278 or whatever
22 that were allocated?

23 **A. That's correct.**

24 Q. Okay. And then in 2021, the total would have
25 been comparable to the Group 3. That spreadsheet

1 that I just showed a minute ago for Group 3 was for
2 2020 and then 2021 and beyond, correct?

3 **A. Yeah, I believe so.**

4 Q. Okay.

5 **A. 2021.**

6 Q. But in -- or 2021 and then 2022 and beyond.
7 Sorry. Okay.

8 In 2021 Big Sandy used 235 tons and 175, just
9 referring to Attachment 1, that you're reviewing
10 there again, and all of this data is reported to EPA
11 on a regular basis, right?

12 **A. That's right.**

13 Q. Okay. And some of it is made publicly
14 available through Clean Air Markets Program Data.
15 Are you familiar with the CAMPD data webpage
16 generally?

17 **A. Yes, I am.**

18 Q. Okay. So just really quickly, and hopefully
19 this may be the last time that I have to share my
20 screen, but in one second I am going to pull up --
21 here it is.

22 MR. GARY: All right. Mr. Rhodes, if you
23 could share one more time. Thank you very much.

24 Q. This is -- generally does this format look
25 familiar? Have you downloaded data from CAMPD

1 before?

2 **A. I have not.**

3 Q. Okay.

4 **A. But I know my -- some of my team works with**
5 **that regularly.**

6 Q. Okay. And you're familiar with sort of
7 what's included in that when you download it?

8 **A. Generally.**

9 Q. Okay. So, just scrolling over a little bit,
10 the facility downloaded here is Big Sandy, and then
11 in Column F, the years are 2017 through 2023,
12 correct?

13 **A. Yes.**

14 Q. Okay. And scrolling over a little further,
15 Column O is NOx mass short tons, right?

16 **A. Yes.**

17 Q. Okay.

18 MR. GISH: Byron, can I ask which of the
19 documents you forwarded this --

20 MR. GARY: Yes. I'm sorry. This one is
21 labeled Ozone -- Ozone Emissions 6938, yadda, yadda.

22 CHAIRMAN CHANDLER: I think Mr. Gary should
23 have to read the whole title.

24 MR. GISH: It's at your discretion,
25 Mr. Chairman.

1 Q. And going through those, these generally,
2 those NOx mass short tons line up through 2022, at
3 least, with what was in Attachment 1 there, right,
4 that --

5 **A. I mean, I didn't do the math, but they look**
6 **like similar magnitudes.**

7 Q. About the same magnitude --

8 **A. Yes.**

9 Q. -- right?

10 And then in 2023, it looks like Big Sandy
11 Unit 1 emitted 400 tons of NOx?

12 **A. Yes.**

13 Q. Okay. And the -- the next row. Or next
14 column. I'm sorry. I still always mix those two
15 up. Is the -- it says NOx rates in pounds per
16 million Btu. Do you see that?

17 **A. I do.**

18 Q. Okay. And that stays relatively consistent,
19 right?

20 **A. Yes.**

21 Q. It's between .12 and .15 or so --

22 **A. Yes.**

23 Q. -- pounds per million Btu for Big Sandy?

24 So what changes really is how much that unit
25 is being operated, right?

1 **A. How much and whether it's full-load or**
2 **low-load operation. It's -- it's not a consistent**
3 **emission rate, so --**

4 Q. So if it's at a lower load, generally would
5 the NOx emissions be consistently higher or lower?

6 **A. It depends on the unit.**

7 Q. Okay.

8 **A. I think, in general, they're more efficient**
9 **and operate more efficiently at higher load.**

10 Q. Okay. So if it's operating at a lower load,
11 it's more likely to have higher emissions --

12 **A. Yes.**

13 Q. -- because it's not operating as a
14 efficiently?

15 **A. Higher emission rate, right.**

16 Q. Higher emission rate, sorry. Not total
17 emissions, but the emissions rate would generally be
18 higher?

19 **A. Correct.**

20 Q. Okay. And it looks like, of course,
21 unsurprisingly, the highest heat input in Column Q,
22 in million Btu, appears to be in the years with the
23 highest emissions, right?

24 **A. Yes.**

25 Q. Okay. All right. Hopefully that is the last

1 screen share I have to go through here.

2 MR. GARY: Mr. Rhodes, you can take that back
3 down.

4 MS. GLASS: May I approach to grab the iPad
5 back?

6 CHAIRMAN CHANDLER: You may.

7 THE WITNESS: Thank you.

8 Q. So do you still have the response to Staff
9 231 with you, the -- that table of capacity factors?

10 **A. I do, yes.**

11 Q. Okay. And in that table, it looks like
12 Big Sandy was selected to dispatch at as high as 72
13 percent capacity factor; is that right?

14 **A. In '23 it was 72 percent.**

15 Q. Okay.

16 MS. GLASS: In 2024, it was 79 percent.

17 MR. GARY: Oh, I'm sorry. Yeah. So in 70 --
18 in '24 it's 79 percent.

19 Q. Generally, for the next five years or so,
20 it's operating, with the exception of 2028, at about
21 a 60 or -- a 50 or 60 percent capacity factor or
22 greater, right?

23 **A. Yes. It's much higher before 2028.**

24 Q. Okay. So, returning to the Group 2 and
25 Group 3 allowances that we just went through,

1 Group 2, Big Sandy, had significantly more
2 allowances each year than Group 3; is that right?

3 **A. Yes.**

4 Q. Okay. But your emissions haven't gone down
5 at all, right?

6 **A. That's correct.**

7 Q. Okay. And the capacity factor hasn't really
8 changed too much. In fact, it looks like it's going
9 to go up slightly over the next few years. Does
10 that sound right?

11 **A. That's what it looks like.**

12 Q. Okay.

13 MR. GARY: I'm just looking ahead to see what
14 else I might -- I realize I have one other thing to
15 share, and I think this might genuinely be the last
16 thing, so I want to make sure that I get through
17 everything at once. I apologize.

18 All right. Mr. Rhodes, if you could again,
19 and I'll try to make it through the last couple of
20 things here.

21 This is what I'd mark as -- I think I'm on
22 JI-5 now.

23 CHAIRMAN CHANDLER: Yeah. So let's go back
24 for a second.

25 MR. GARY: Sure.

1 CHAIRMAN CHANDLER: So this is JI-5, and I
2 need you to -- I get the naming, right, but, again,
3 we're talking about different -- different emissions
4 constituents, for lack of a better term. So JI-5
5 is -- is a document, I see it says Allowance
6 Compliance 82657b25. That's how it starts, at
7 least.

8 For the record, can you identify what the
9 document --

10 MR. GARY: Yes.

11 CHAIRMAN CHANDLER: -- purports to provide
12 allowance compliance numbers for?

13 MR. GARY: Yes.

14 Q. So, returning to CAMPD, Mr. Spitznogle,
15 you're aware -- so it provides emissions
16 information; it also provides allowance information
17 in that database, correct?

18 **A. Right. That's right.**

19 Q. And that's available for download for
20 individual units.

21 And on the -- the first column here, if you
22 can see the program code, does that look familiar to
23 you?

24 **A. I'm not familiar with the codes.**

25 Q. Okay. So it says CSOSG2, and then starting

1 on Row 6, CSOSG3. Would it make sense to you that
2 those are cross-state ozone season Group 2 and ozone
3 season Group 3?

4 **A. The acronym fits, so --**

5 Q. Okay. And -- well, next to that, the year is
6 2017 through 2022, so that would fit with Group 2
7 ending in 2020 and Group 3 starting in 2021?

8 **A. Yes.**

9 Q. Okay. So it would make sense that this would
10 be allowances under Group 2 and Group 3?

11 **A. It does.**

12 Q. Okay. And those would be NOx emissions
13 allowances, right?

14 **A. Those are NOx.**

15 Q. Okay. Which were the same as the emissions
16 that we were just talking about both from your
17 Attachment 1 and the CAMPD data, right?

18 **A. Yes, that's correct.**

19 Q. Okay.

20 MR. GARY: Does that help clear that up,
21 Chair?

22 CHAIRMAN CHANDLER: Well, it does on that
23 one. So I guess -- I need to make sure I identify
24 it for my records so that we can go back and see.

25 MR. GARY: Yes.

1 CHAIRMAN CHANDLER: You want to mark JI-5 as
2 being the cross-state ozone allowances.

3 MR. GARY: Allowances, yes.

4 CHAIRMAN CHANDLER: Okay. And JI-4 was the --

5 MR. GARY: Ozone season emissions for Big
6 Sandy.

7 CHAIRMAN CHANDLER: The CSO emissions. And
8 then I want to make sure I understand. You
9 identified 3 as what?

10 MR. GARY: I believe that would be the
11 Group 3 allowance allocations.

12 CHAIRMAN CHANDLER: Okay.

13 MR. GARY: And then JI-2 would be the Group 2
14 allowance allocations.

15 CHAIRMAN CHANDLER: Well, then we're on 6.

16 MR. GARY: We're on 6?

17 CHAIRMAN CHANDLER: Just so that you're aware.

18 MR. GARY: 1 would've been -- we are on 6
19 after this?

20 CHAIRMAN CHANDLER: No, this is 6.

21 MR. GARY: This is 6?

22 CHAIRMAN CHANDLER: JI-1 was the best systems
23 of emissions reduction fact sheet or at-a-glance.

24 JI-2 were Mr. Spitznogle's signed comments on
25 behalf of American Electric Power.

1 MR. GARY: I see.

2 CHAIRMAN CHANDLER: JI-3 are the Group 2
3 allowance allocations.

4 JI-4 are the Group 3 allowance allocations.

5 JI-5 are the CSO emissions.

6 And JI-6 are the CSO allowances.

7 MR. GARY: Are the allowances. Sorry. I
8 skipped the AEP comments in my notes. Thank you.

9 Q. Okay. So this would be JI-6. Apologize --
10 apologies for the confusion.

11 And then, scrolling over, it looks like there
12 are total allowances held in accounts, and -- sorry.
13 Column H, actually, is what I meant to look at. The
14 compliance year allowances allocated, do you see
15 that column?

16 **A. I do, yes.**

17 Q. Okay. And under those columns marked
18 Group 2 -- the row. Sorry. Rows 2 through 5, it
19 looks like the allocations were 1,045, right?

20 **A. Each year, yes.**

21 Q. And that -- and that generally lines up with
22 what was allocated under the Group 2 JI-3 spreadsheet
23 that we looked at, right?

24 **A. Yes, that's right.**

25 Q. Okay. Pardon me. And then, so under

1 Group 3, the emissions allocations went down to 379,
2 and now -- now annually Big Sandy is allocated 279
3 allowances; is that right?

4 **A. That's right.**

5 Q. Okay. And looking at Column J, emissions,
6 short tons, generally that lines up with both the
7 Attachment 1 to your response, JI-120, as well as
8 the JI-5 ozone season emissions, right?

9 **A. It looks that way.**

10 Q. Okay. And then those are equivalent to the
11 allowances deducted each year, right?

12 **A. Yes.**

13 Q. And then there's allowances carried over,
14 right?

15 **A. Yes.**

16 Q. So that would be what's left over, the
17 allocation minus the -- or rather the allowances
18 held at the trading deadline minus the emissions
19 results in the allowances left over?

20 **A. Yes.**

21 Q. And those are carried over to the next year?

22 **A. That's right.**

23 Q. Okay. And in the previous spreadsheet, the
24 ozone season emissions, we saw that emissions in
25 2023 were 400 tons, right?

1 **A. I believe that --**

2 Q. Does that sound familiar?

3 **A. Yeah, that sounds right. Yes.**

4 Q. Okay. And so this year, you -- or last year
5 you also would have been allocated 200 and --
6 Big Sandy would also have been allocated 279
7 allowances, correct?

8 **A. That's right.**

9 Q. Okay. And 279 plus 63 would be 200 -- or 340
10 something, right?

11 **A. Yes.**

12 Q. Okay. So Big Sandy wouldn't have had enough
13 allowances just based on what was allocated and left
14 over for last year, right?

15 **A. Yes.**

16 Q. Are you aware of whether allowances had to be
17 purchased or how those might have been obtained for
18 Big Sandy?

19 **A. I don't know what -- what they did to
20 overcome that shortfall.**

21 Q. Okay. But that was overcome some way, likely
22 through a purchase or a trade on the market?

23 **A. That would be the typical way, yes.**

24 Q. Okay. And then, looking at that capacity
25 factor again for 2024 and beyond, it looks like the

1 capacity factor is at least as much or greater than
2 what was historically the capacity factor, right?

3 **A. Yes.**

4 Q. So emissions are likely to be at or above
5 that 400 tons per ozone season going forward, right?

6 **A. That's what it looks like.**

7 Q. So allocations, if -- if the model is correct
8 in selecting Big Sandy for that sort of dispatch,
9 allowances are likely to have to be purchased going
10 forward for the next several years, right?

11 **A. Yes.**

12 Q. Okay. And turning back to the Good Neighbor
13 Plan where I started, finally, that set new
14 requirements, correct, for reaching compliance
15 downwind with the 2015 ozone standard, which is
16 lower, right?

17 **A. That's right.**

18 Q. Okay. And generally, those allowances, over
19 time, will continue to decrease, right?

20 **A. Yes.**

21 Q. Okay. Are you familiar with how EPA
22 determines what allowances would be allocated,
23 either on a state level or unit level?

24 **A. Yeah, I'm not --**

25 Q. In the generalist sense?

1 **A. Generally.**

2 Q. Without getting to the specific numbers so I
3 don't have to keep bringing up other things,
4 generally, it determined what a reasonable control
5 level for units would be, right?

6 **A. Yes.**

7 Q. And for uncontrolled coal units, it
8 determined that selective catalytic reduction should
9 be added by 2026 or 2027, right?

10 **A. Right.**

11 Q. And the same for uncontrolled gas units,
12 right?

13 **A. Yes.**

14 Q. Okay.

15 **A. I don't know what the technology options are,
16 but in the gas.**

17 Q. So, yeah, it doesn't -- yeah, it doesn't
18 specifically require installation of a specific
19 control, though, right?

20 **A. Right.**

21 Q. So it just determines statewide these are the
22 controls that would get us to the emissions level
23 that would meet the need, right?

24 **A. That's right.**

25 Q. And then it allocates this decreasing pool

1 amongst the existing units, right?

2 **A. Correct.**

3 Q. And -- and the pool is decreasing, so the
4 allocations to each individual unit within each
5 state would also decrease, right?

6 **A. That's right.**

7 Q. Okay.

8 MR. GARY: I think that is all I have to
9 share on my screen. I know I said that before, but
10 I mean it this time.

11 CHAIRMAN CHANDLER: We're still at 6?

12 MR. GARY: We are still at 6.

13 Q. Returning to the response to Joint
14 Intervenors 120. Do you have that in front of you?

15 MS. GLASS: Is that the spreadsheet?

16 MR. GARY: Not the spreadsheet this time,
17 actually, just the actual response.

18 MS. GLASS: I need to provide him with that.

19 MR. GARY: That's okay.

20 And while you're pulling that up, the other
21 spreadsheet attached to that as well, Attachment 2,
22 if you don't mind, when you have a moment. I'll
23 start with just the answers, though.

24 MS. GLASS: This is Joint Intervenors 120?

25 MR. GARY: Yes.

1 Q. Do you have that in front of you now?

2 **A. I do.**

3 Q. Okay. So in that response, in Part A you
4 were asked about the application of --

5 MR. GARY: Thank you very much.

6 Q. -- the new FIP. In this case that would be
7 the Good Neighbor Plan, right, if it were to come
8 into effect? You stated that -- and just to be
9 clear, Part A, this is that one that I think both
10 you and Mr. Haratym were indicated as witnesses for.

11 In Part A it states that the rule does not
12 appear to restrict Kentucky Power generating asset
13 availability or -- based on economic dispatch, right?

14 **A. That's correct.**

15 Q. Okay. But you're already having to purchase
16 allowances or trade for allowances based on the
17 dispatch right now, right?

18 **A. It looks -- from what we went through,
19 it's -- yes.**

20 Q. Okay. And the dispatch of that unit is
21 projected to go up or stay the same, at least in the
22 short term, right?

23 **A. Yes.**

24 Q. Okay. And the allowances are going to
25 continue to go down, right?

1 **A. Yes.**

2 Q. Okay. So the purchases, the amount, anyway,
3 of purchases would have to go up, right?

4 **A. That's -- yes, that's correct.**

5 Q. Okay. And if you have that spreadsheet now
6 too, that was in response to B.

7 MR. GARY: I don't need the spreadsheet.
8 It's okay. Thanks.

9 MR. GISH: Do you have the spreadsheet?

10 THE WITNESS: I do, yes.

11 Q. Okay. That was Attachment 2. And these are
12 the NOx costs for emissions, so I don't -- was this
13 something that you would have prepared for input
14 into the model --

15 **A. It is not.**

16 Q. -- for your team? You're not?

17 **A. No.**

18 Q. Okay.

19 **A. My team might have been consulted on this --**

20 Q. Okay.

21 **A. -- but I didn't have any role in preparing
22 this.**

23 Q. Okay. But just generally looking at that
24 really quickly, the price of emissions over time,
25 not -- not that -- the total cost to the company,

1 but the price per allowance in that, would you say
2 it goes up, goes down over time?

3 **A. I don't -- I don't know. I don't -- are you**
4 **pointing at a specific column in the spreadsheet?**

5 Q. Yes. Let me pull that up.

6 MR. GARY: I don't have to pull it up on the
7 screen this time. I have it.

8 Q. So looking at the average annual price per
9 short ton, the last column, Column D, generally, in
10 2023, it starts at \$71 per short ton, right?

11 **A. Yes, that's correct.**

12 Q. Okay. And then from there it goes down, 69,
13 65. Generally, over time, at least out till 2029,
14 it looks like those prices were forecast to go down
15 for the modeling?

16 **A. It looks like it was up in '29 and '30, then**
17 **back down.**

18 Q. Yeah. So generally starting at a high of 71
19 and then going down, varying a little bit, but then
20 going down?

21 **A. Yes, I agree.**

22 Q. Okay. We just went over the need at at least
23 Big Sandy is going to go up, the number of
24 allowances is going to go down. Generally, when the
25 availability of a good such as allowances goes down,

1 would the price to be expected to go down or up?

2 **A. I'm not an economist. I can't --**

3 Q. Okay.

4 **A. -- comment on price trend.**

5 Q. That's all right.

6 MR. GARY: And then do you have the 120 up?

7 Thanks.

8 Q. In response to JI-120D, the Company was
9 asked, I believe, whether, as a result of the Good
10 Neighbor Plan, additional control measures or
11 equipment will be needed, and you responded that
12 Kentucky Power does not anticipate additional
13 pollution control measures or equipment.

14 **A. Yes, I see that.**

15 Q. Okay. Would that still be the case, based on
16 what we just went over, the decreasing number of
17 allowances, the continued, at least, or increased
18 use of the Big Sandy unit?

19 **A. Well, again, that gets into economics and
20 what -- and what -- what those emission costs do to
21 the cost to operate the unit and that's not my --**

22 Q. So either you have to install controls or
23 purchase an increasing number of allowances, right?

24 **A. That's right.**

25 Q. Okay. That's a -- you're not an economist,

1 but generally are you aware whether that is an
2 evaluation that AEP or Kentucky Power have -- have
3 done?

4 **A. I don't know what analyses were done.**

5 Q. Okay.

6 MR. GARY: Your Honor, we might request
7 post-hearing whether any evaluation of the effects
8 of the Good Neighbor Plan have been done now that
9 it's final.

10 CHAIRMAN CHANDLER: That would be fine.

11 MR. GARY: Thank you.

12 MR. GISH: Can I ask you to repeat that?

13 MR. GARY: Whether any evaluation of the
14 either need for allowances or the need to install
15 control equipment economically is more favorable at
16 Big Sandy.

17 MR. GISH: Okay.

18 MR. GARY: I don't have any further
19 questions, Your Honor.

20 I would move to admit JI-1 through 6 as we
21 went over, JI-1 being the BSER table; 2 being AEP's
22 comments; 3 and 4 being the Group 2 and Group 3
23 allocations; and then 5 and 6 being the emissions
24 and allowances from Clean Air Markets Program Data.

25 CHAIRMAN CHANDLER: Mr. Gish?

1 MR. GISH: No objection.

2 CHAIRMAN CHANDLER: All right. So moved.

3 We'll admit JI-1 through 6.

4 (JI Exhibit 1 thorough JI Exhibit 6 admitted.)

5 MR. GARY: Thank you.

6 CHAIRMAN CHANDLER: Mr. -- have we gone to
7 you yet, Mr. Kurtz?

8 MR. KURTZ: Yeah, I had no question.

9 CHAIRMAN CHANDLER: Ms. Koenig, any questions
10 for this witness?

11 MS. KOENIG: We have no questions for this
12 witness.

13 CHAIRMAN CHANDLER: Staff?

14 MR. VAN ZYL: Just very few.

15 CROSS-EXAMINATION

16 By Mr. van Zyl:

17 Q. Good morning, Mr. Spitznogle.

18 **A. Spitznogle.**

19 Q. Spitznogle.

20 **A. Yes.**

21 Q. I apologize.

22 **A. That's okay. Good morning.**

23 Q. Very brief questions. Far less exciting in
24 nature than what we've just been discussing.

25 I really just want to have an understanding a

1 little bit of what your role is with the -- with the
2 IRP process. So you advise, generally speaking, on
3 all the environmental regulations that the team
4 considers and then implements in the IRP, and just
5 more generally speaking, for AEP?

6 **A. That's correct. We discuss the rules and the**
7 **interpretation of those rules and how they would**
8 **apply.**

9 Q. So when you do that, what are the kind of
10 things that you look for? Do you -- when you advise
11 them, specifically, say, for this IRP, do you only
12 advise them on regulations currently in effect? Do
13 you -- how far ahead are you looking, right? So you
14 started this process -- let me -- let me start this
15 back.

16 When did you start advising on the IRP
17 process for this application, or for this -- for
18 this filing?

19 **A. I don't remember when those conversations**
20 **started.**

21 Q. Sometime in 2022?

22 **A. I don't -- subject to check, that sounds**
23 **reasonable.**

24 Q. And when you were -- when you-all were having
25 those discussions, what were the regulations,

1 broadly speaking, that you were concerned about that
2 you thought would have an impact on the long-term
3 planning?

4 **A. It would have -- it would have been the**
5 **regulations in place at the time.**

6 Q. So when you say "the regulations in place at
7 the time," would you have thought to consider the
8 Good Neighbor Plan at all during that period?

9 **A. I don't recall when the Good Neighbor Plan**
10 **was originally proposed, so --**

11 Q. So, I mean, broadly speaking, and we'll
12 subject to check this, but the comment period for it
13 was open till summer of 2022, and then the final
14 rule was implemented March 15 of 2023?

15 **A. That's right.**

16 Q. And so I guess all I'm trying to -- and
17 there's no gotcha here. I'm just trying to
18 understand. When you were looking, that rule wasn't
19 in place yet, but when you were doing the IRP and
20 you were looking at that, was the team aware of the
21 Good Neighbor Plan? Was it considering it in its
22 mind -- you know, were you advising that it consider
23 it in its modeling?

24 **A. So the -- I know we've -- we probably**
25 **discussed that it was proposed language. It wasn't**

1 **final.**

2 Q. Uh-huh.

3 **A. So there was no certainty on the outcome of**
4 **that rulemaking. So we gave that guidance, that**
5 **these are proposed -- this is a proposed rule.**

6 Q. So how does the proposed -- how does your
7 discussions regarding proposed rules function for
8 your long-term planning, right? I mean, you
9 certainly have some leeway. You don't wait for the
10 rule to be finalized before you look at it for the
11 first time and go, "All right. What do we do here?"

12 So what is that -- can you just walk me
13 through what that planning process looks like, just
14 so I have some appreciation of it?

15 **A. Sure. So we certainly provide guidance on**
16 **the rules that are on the books at the time. When**
17 **something is proposed, obviously people hear about**
18 **it, they look into it and ask questions.**

19 So we help interpret the -- the proposed
20 language, but because it's proposed and not final,
21 and the fact that in the rulemaking process between
22 proposed and final there is generally significant
23 changes in that language and the requirements, we
24 don't advise proposed language to be considered in
25 this type of activity.

1 Q. So when does that -- when does a rule become
2 actionable for you, sort of as an organizational
3 matter? So like when -- when do you start taking
4 action based on what you think the rule is or will
5 be or --

6 **A. We take action when it's in the -- in a**
7 **federal regu --**

8 Q. Okay.

9 **A. -- the federal regs.**

10 Q. And so at that time -- I mean, I'm assuming
11 just in your general role as being the environmental
12 person, you look much farther ahead, right, than
13 what you just advise the team to do, right? You're
14 constantly looking at what is in the comment section
15 or what's coming down the pipeline from EPA or state
16 regulations?

17 **A. Yes, that's -- I mean, as soon as that**
18 **process begins at the EPA level, we engage in**
19 **commenting and the opportunities to sit with EPA**
20 **staff and explain our perspective on things.**

21 **So to that extent, we're -- we're involved**
22 **from the first we -- we hear of a pending new rule.**

23 Q. And organizationally, how does that
24 information -- how do those meetings with the EPA
25 filter back to whoever's doing your modeling or

1 whoever's sort of doing your operations at AEP, or
2 in this case Kentucky Power?

3 How long does it take for you guys to sort of
4 filter that information back to them?

5 **A. I'm not sure I understand what you're asking.**

6 Q. Oh, I'm just trying to get an understanding
7 for -- you know, you said you're involved from the
8 first week that the EPA is announcing it. You sit
9 down and you talk with them.

10 All I'm trying to understand is like -- so
11 for Good Neighbor Plan here, right, just to be very
12 specific, when would the team at Kentucky Power have
13 been aware of its likely impact or anything of that,
14 or likeness to be finalized? How far in advance of
15 the final rule are they made aware of that?

16 **A. Typically once a rule is proposed, so
17 there's -- that's usually a year before it's final.**

18 Q. Uh-huh.

19 **A. At that point we begin briefing operating
20 company leadership on what's been proposed, what our
21 reaction to that is, and how we're going to comment
22 on it, and we seek guidance from opco leadership and
23 others around the company as to their perspectives
24 on what that would look like and how we ought to
25 comment on it.**

1 Q. I appreciate that. And again, nothing, you
2 know, strange, I just wanted to understand --

3 **A. Yeah.**

4 Q. -- when we're looking at this.

5 Do you also help file like permits and other
6 things with EPA when you guys are doing -- when
7 you're proposing to build something new? Are you a
8 part of that process?

9 **A. Yes.**

10 Q. And again, coming from a place of ignorance,
11 can you walk me through what the permitting process
12 looks like for say the two CTs proposed here, what
13 the -- kind of steps you have to take are and what
14 the timeline for that is?

15 So you-all proposed two new CTs in this IRP,
16 correct?

17 **A. That's correct.**

18 Q. From your perspective, from the environmental
19 perspective, can you walk me through the permitting
20 process a little bit, just from a high level, and
21 sort of the timeline involved?

22 **A. Yeah. I don't get deep into the nuts and
23 bolts of that process. I --**

24 Q. Okay.

25 **A. So our team is consulted on when -- when a --**

1 when, say, Kentucky Power is looking at potentially
2 building something, a project team is formed, and we
3 assign one of -- an environmental expert to that
4 team to consult on what the time frame would be
5 if -- if such a project was to be moved forward.

6 So they get involved at the beginning of that
7 planning process, and -- and then when it -- once
8 the project gets clarity that it's -- it's likely to
9 go forward, then they begin the process working with
10 the state or the federal agencies on -- on permit --
11 starting a permit process.

12 So I think it really varies depending on
13 what -- which permit it is, air permit or -- or
14 others.

15 Q. So for a new source, I mean, they would need
16 quite a few permits, right? They would need the air
17 permit, they would need the environmental pro -- the
18 thing for the land use, and they would need some of
19 the other waste permits, right?

20 So there's like three or four sections; is
21 that right?

22 A. Yes. There would be surface water discharge,
23 stormwater. There's a number of permits that would
24 be involved.

25 Q. Each of those is individual, and each is

1 their own process?

2 **A. Yes. And they're all on different time**
3 **frames from -- from the initiation to -- to**
4 **acquiring the permits.**

5 Q. Have you ever been part of the team that has
6 done something like that from start to finish?

7 **A. I personally have not.**

8 Q. Okay. So you wouldn't be able to tell me,
9 based on your experience, how long of a process that
10 is?

11 **A. No. Like I said, it's -- each type of permit**
12 **is kind of -- has a different time horizon.**

13 MR. VAN ZYL: I actually think that is, after
14 everything else that's been done, all the questions
15 I have currently.

16 CHAIR CHANDLER: No questions?

17 Ms. Regan, any questions?

18 COMMISSIONER REGAN: No.

19 CHAIRMAN CHANDLER: Any redirect, Counsel?

20 MR. GISH: No, not at this time.

21 CHAIRMAN CHANDLER: Thank you very much,
22 Mr. Spitznogle.

23 MS. GLASS: Your Honor, we'd like to ask that
24 Mr. Spitznogle be excused from the hearing.

25 CHAIRMAN CHANDLER: That will be fine. Thank

1 you.

2 THE WITNESS: Thank you.

3 CHAIR CHANDLER: We will take a recess. We
4 will come back at -- we'll do almost 20 minutes.
5 We'll come back at our normal time of 10:45.

6 (Recess from 10:24 a.m. to 10:53 a.m.)

7 MS. SACRE: Okay. You're on, Chairman.

8 CHAIRMAN CHANDLER: We're back on the record
9 in Case Number 2023-00092.

10 Ms. Glass, would you like to call your next
11 witness?

12 MS. GLASS: Yes. Kentucky Power calls Brian
13 West.

14 CHAIRMAN CHANDLER: Mr. West, please raise
15 your right hand. Do you swear or affirm the
16 testimony you are about to give is true and correct
17 under penalty of perjury?

18 THE WITNESS: I do.

19 CHAIRMAN CHANDLER: Please have a seat.
20 Please state your name and address for the record.

21 THE WITNESS: My name is Brian West. My
22 address is 1645 Winchester Avenue, Ashland, Kentucky
23 40112.

24 CHAIRMAN CHANDLER: Ms. Glass?

25 * * *

1 BRIAN K. WEST, called by Kentucky Power
2 Company, having been first duly sworn, testified as
3 follows:

4 DIRECT EXAMINATION

5 By Ms. Glass:

6 Q. Mr. West, can you state your business
7 position and your employer, please.

8 **A. Yes. I am employed by Kentucky Power as the**
9 **vice president of regulatory and finance.**

10 Q. And did you sponsor responses to data
11 requests and portions of Kentucky Power's IRP report
12 in this case?

13 **A. Yes.**

14 Q. Do you have any corrections to that
15 information?

16 **A. I do not.**

17 Q. Based on the information you knew at the
18 time, if you were asked those same questions today,
19 would the information you provided be the same?

20 **A. Yes.**

21 MS. GLASS: The witness is available for
22 cross-examination.

23 CHAIRMAN CHANDLER: All right. Mr. West?

24 MR. MIKE WEST: Yes, sir.

25 * * *

1 CROSS-EXAMINATION

2 By Mr. West:

3 Q. Hi, Mr. West. How are you doing?

4 **A. Good. How are you?**

5 Q. I want to start out talking about the
6 resources in the proposed plan. The proposed plan
7 calls for 480 megawatts of CT gas in '29; is that
8 correct?

9 **A. That's my recollection, yes.**

10 Q. So we're approaching, I guess, four and a
11 half years from 2029. Can you just give me an idea
12 of the timeline that the Company is going to go
13 through and when it'll start taking initial steps
14 towards construction of those assets or planning of
15 those assets?

16 **A. Sure. It's a process. It takes a while. I
17 believe in discovery we were estimating somewhere
18 around six years, and that was when we, you know,
19 began the IRP process in 2022 to bring an asset like
20 that online.**

21 I would expect that the timeline would -- as
22 Mr. Spitznogle had talked about, there's permitting
23 that has to be done. You know, there's things with
24 PJM that have to be done.

25 I'm not familiar with all of those timelines.

1 **Mr. Spitznogle said a lot of those permits have**
2 **different time horizons, I believe. And I'm not**
3 **sure about how long the PJM process would take. So**
4 **it's difficult to give you a definitive timeline at**
5 **this time.**

6 Q. Okay. You mentioned six years. Are you
7 saying that it's a six-year period from the first
8 step being taken until the plant coming online?

9 **A. In general, that's the best estimate that we**
10 **had at the time.**

11 Q. Have any of those steps been taken at this
12 time?

13 **A. At this time, no.**

14 Q. So given that we're four and a half years
15 from 2029, should we assume that the 2029 projection
16 for bringing those resources online is outdated at
17 this point?

18 **A. I'm not sure I would say it's outdated because**
19 **the -- the options to self -- or the, you know,**
20 **opportunities to purchase an existing asset also**
21 **exist.**

22 Q. Okay.

23 **A. And that could bring an asset online sooner**
24 **than that.**

25 Q. Let's talk about peak demand just briefly, a

1 couple questions. I believe it's in an exhibit to
2 the IRP report, but is it -- ballpark, your summer
3 peak demand is, can I say a thousand megawatts, and
4 your winter is 1,200 to 1,300? Is that roughly
5 correct?

6 **A. I think that's roughly correct, yes.**

7 Q. Okay. And your IRP plan for nine percent
8 reserve margin on a summer peak; is that correct?

9 **A. I'm not confident about that. Any planning
10 questions would be probably -- or would be better
11 directed to Witness Soller or Witness Haratym to
12 verify that.**

13 Q. So are you aware that the IRP report was
14 planning to meet your PJM capacity requirements, or
15 are you not aware of that?

16 **A. Yes, I am aware of that.**

17 Q. Okay. And your PJM capacity requirements
18 relate to your summer peak or your winter peak or
19 both?

20 **A. The summer peak, yes.**

21 Q. Okay. So if you plan to meet your summer
22 peak, would that leave you uncovered for a portion
23 of your winter peak?

24 **A. It does not. In this IRP we did a winter
25 sensitivity analysis, and our contractual**

1 relationship with PJM is a resource to us, just like
2 Big Sandy, Mitchell, other contractual bilateral
3 contracts that we have.

4 PJM is a resource. It's a contractual
5 resource that we use to serve our customers and
6 provide safe and adequate capacity.

7 Q. Are you familiar with the RFPs that were
8 issued -- I don't have the date on the tip of my
9 tongue, but somewhat recently by the Company?

10 A. I'm aware of those. They were issued in
11 September of 2023.

12 Q. Okay. And would I be recalling those
13 correctly to say that they solicited 875 megawatts
14 of resources in the summer and 1,300 megawatts in
15 the winter?

16 A. That sounds roughly correct.

17 Q. Okay. So I guess my question is: Are those
18 solicitations consistent with the plan in the IRP,
19 or are you trying to do something different to meet
20 that winter peak through that solicitation?

21 A. I think they're consistent with the plan in
22 the IRP. There is a -- as most people, I think, are
23 aware, there's a possibility of a winter requirement
24 in PJM, so it was a prudent thing to do to issue an
25 RFP in that manner to see what resources would be

1 **available.**

2 Q. Okay.

3 **A. There is no require -- winter requirement at**
4 **this time, though.**

5 Q. Okay. Are you familiar with the -- I think
6 it was six or seven portfolios that were modeled in
7 the IRP?

8 **A. Generally, yes.**

9 Q. Okay. Are you aware that only one of those
10 portfolios included a combined cycle unit?

11 **A. Yes, I'm aware of that.**

12 Q. And I'm not going to make you read this.
13 I'll just read it to you and you can confirm if you
14 think this is correct, but the IRP states, (Reading)
15 In this portfolio, a CC was assumed to be built in
16 2029 in place of the CT from the reference portfolio
17 and optimization was performed around that
18 assumption.

19 Does that language sound consistent with
20 what's in the IRP at page 159 --

21 **A. It does.**

22 Q. -- subject to check?

23 **A. Or is your -- when you say page 159, are you**
24 **meaning the page number at the bottom or at the top?**

25 Q. It's the PDF.

1 **A. The PDF page. Okay.**

2 Q. On my -- on mine the headers are kind of
3 obscured by some of the language, so --

4 **A. I -- yeah, on mine too.**

5 Q. -- I use the PDF.

6 MR. GISH: But it's the --

7 Q. It's under Figure 74, Annual Resource
8 Additions in CC Portfolio.

9 **A. Yes.**

10 Q. And it's the second sentence after that
11 figure, (Reading) In this portfolio a CC was assumed
12 to be built.

13 **A. Yes.**

14 Q. So --

15 **A. I see that.**

16 Q. My question is just: Do you know what that
17 optimization entailed?

18 **A. Again, those modeling questions need to be
19 directed to Witness Soller --**

20 Q. Soller?

21 **A. -- and Witness Haratym.**

22 Q. Do you have any information about whether
23 combined cycle plants are generally less expensive
24 than CT units on a levelized cost basis?

25 **A. I don't have that information off the top of**

1 **my head, no.**

2 Q. Okay. Different line of questions. The
3 proposed plan called for 700 megawatts of wind, all
4 of which will be transmitted from outside Kentucky,
5 correct?

6 **A. I believe that is correct, yes.**

7 Q. And if you're looking for reference within
8 the document, I think it's on PDF page 169. It kind
9 of summarizes the preferred plan.

10 But -- and then it also included 800
11 megawatts of solar, I believe 25 percent of which
12 will be transmitted from -- and I want to clear this
13 up. I believe -- my notes said outside of Kentucky.
14 That leaves 600 megawatts of solar.

15 Will that be in service territory or just
16 somewhere within Kentucky generally? Do you have
17 any information about that?

18 **A. I do not, and the IRP is -- it -- when they
19 look at resources, they look at generic resources
20 that are, I believe, in the PJM footprint. They
21 don't necessarily -- you know, it's not
22 location-specific analysis.**

23 **So we made assumptions that a certain
24 percentage would be located in Kentucky, perhaps in
25 our service territory, perhaps not, but then a**

1 **certain percentage in the PJM footprint.**

2 Q. Does that mainly have to do with suitability
3 of terrain for the placement of those resources,
4 things like that? That's why you assumed that the
5 wind and --

6 **A. As far as solar goes, and I think everyone**
7 **knows, it's tough to find flat land in our service**
8 **territory --**

9 Q. Okay.

10 **A. -- for that.**

11 Q. Okay. And so that -- that was kind of my
12 question is: I think I had in my notes at some
13 point that 600 of the 800 megawatts of solar would
14 be within Kentucky, but then I thought elsewhere I
15 saw that it said within the service territory, so I
16 just wanted to clear that up, that the 600 megawatts
17 of solar might be placed elsewhere in Kentucky in
18 places perhaps more suitable on a terrain basis
19 than -- than the service territory?

20 **A. That -- that's certainly possible. You don't**
21 **really know what's available until you, you know, do**
22 **an RFP.**

23 Q. So, just a very broad question: Would it not
24 be more efficient for Eastern Kentuckians to meet
25 their energy needs by producing their own energy

1 within their own service territory?

2 **A. Could -- could you ask that one more time,**
3 **please?**

4 Q. Would it not be more efficient for Eastern
5 Kentuckians to meet their own energy needs by
6 producing their own energy within their own service
7 territory?

8 **A. Not necessarily. The -- the way that Kentucky**
9 **Power serves its customers with owned resources -- a**
10 **mixture of owned resources, contracted-for resources,**
11 **and our contract PJM provides us with access to**
12 **PJM's diverse resource portfolio, which is both**
13 **geographically diverse as well as resource-type**
14 **diverse. And that provides us a lot of flexibility,**
15 **a lot of opportunity, a lot of access to that**
16 **generation that an owned resource wouldn't**
17 **necessarily have.**

18 Q. Would you agree that a comparison between the
19 cost of using owned resources and other resources
20 such as those that you were just referencing could
21 only be fully analyzed if you accounted for the
22 transmission costs associated with getting those
23 electrons from where they were generated to where
24 they were needed?

25 **A. I think it would probably be better to direct**

1 **that question to Witness Vaughan.**

2 Q. So, just to close that loop, do you have any
3 knowledge about whether transmission costs were
4 included in the models for selecting these 700
5 megawatts of wind and 800 megawatts of solar?

6 **A. I believe there was something in here about**
7 **transmission and distribution costs that were**
8 **assumed to be -- I forget the exact language, and I**
9 **don't know -- I don't have a page number reference.**

10 They weren't specifically included in any of
11 the analysis that I'm aware of. Again, I think it
12 goes back to the IRP looks at generic resources and
13 not location-specific, and if you get into
14 location-specific, then is when you have to start
15 looking at transmission costs and things.

16 Q. So --

17 **A. That could be -- that could be verified,**
18 **again, by Witness Soller or Haratym.**

19 Q. Okay. Did Kentucky Power consider whether --
20 well, let me take a step back.

21 Are you familiar -- did you read the Attorney
22 General's comment in this case?

23 **A. Yes. It's been some time ago, but I did read**
24 **it.**

25 Q. Are you familiar with the references that we

1 made to resource adequacy concerns expressed by PJM
2 leadership at times, such as before the Kentucky
3 Legislature?

4 **A. I remember reading that.**

5 Q. Given those resource adequacy concerns that
6 have been articulated by various individuals, did
7 Kentucky Power give any consideration to whether the
8 utility being self-sufficient when it comes to
9 energy generation and kind of being -- not totally
10 siloed, but more siloed off would be appropriate or
11 not?

12 **A. Well, I think what the Company does is look**
13 **at all options. If -- if a self-build makes sense,**
14 **we would look at that. If purchasing an asset makes**
15 **sense, we would look at that. It's not restricted**
16 **to only PPAs, for instance, or bilateral contracts.**
17 **We look at everything, and if it makes sense and**
18 **it's reasonable cost for our customers, then it's**
19 **something that we would look at and bring to the**
20 **Commission for consideration.**

21 MR. MIKE WEST: That's all I have.

22 CHAIRMAN CHANDLER: Mr. Kurtz?

23 MR. KURTZ: Thank you, Your Honor.

24 * * *

25

1 CROSS-EXAMINATION

2 By Mr. Kurtz:

3 Q. Good morning, Mr. West.

4 **A. Good morning.**

5 Q. You would agree that since the IRP was filed
6 in March of 2023, there have been a lot of
7 significant developments in the industry? For
8 example, the new -- the new final CO2 rules, for
9 example?

10 **A. I certainly agree there's been a lot of**
11 **changes.**

12 Q. Okay. The IRP did not model the capacity
13 factor limitations in the final CO2 rule on new
14 natural gas plants, did it, because it -- you
15 couldn't have because it didn't exist.

16 **A. That would be my assumption, yes.**

17 Q. Okay. The IRP assumed between a 10 and a 43
18 dollar per megawatt hour CO2 tax or penalty or cost,
19 did it not?

20 **A. I'm not familiar with the specific numbers.**
21 **Again, Witness Soller or Witness Haratym would know**
22 **that.**

23 Q. Okay. But are you aware that there was a CO2
24 cost modeled in every scenario?

25 **A. I believe that there was a portfolio that was**

1 **a no-carbon portfolio, but I think that there was a**
2 **carbon burden included in all the others.**

3 Q. In your preferred plan?

4 **A. Subject to check.**

5 Q. Okay. And we know now that EPA did not
6 propose any kind of CO2 costs, instead they proposed
7 these capacity factor limitations on new gas
8 generation, correct?

9 **A. I believe that's correct. That may have been**
10 **a good question for Witness Spitznogle.**

11 Q. Okay. One last thing in terms of the major
12 changes, probably more than this. ELCC, are you
13 familiar with that?

14 **A. Yes.**

15 Q. Okay. That's the effective load carrying
16 capability. It's sort of the capacity value PJM
17 puts on different resources?

18 **A. Yes, sir.**

19 Q. Okay. Since the IRP was filed, the ELCC for
20 solar in PJM has gone way, way down. Are you aware
21 of that?

22 **A. That's my understanding, yes.**

23 Q. That means you have to have more megawatts of
24 solar to get the same capacity value?

25 **A. That would be my understanding, yes.**

1 Q. The 700 megawatts of out-of-state wind, do
2 you know how -- do you know that the IRP assumes a
3 cost of about \$2,100 a kW for wind?

4 **A. I don't know the exact number.**

5 Q. Okay. Assume that. So the capital cost of
6 this out-of-state investment would be approximately
7 \$1.47 billion, correct?

8 **A. I don't know that for certain.**

9 Q. 700,000 times -- times 2,100.

10 **A. Are you assuming that we would build it, when
11 you say the capital cost?**

12 Q. Well, somebody would build it, whether it's
13 AEP or a third party, but it would cost approximately
14 \$1.4 billion, whether it -- you have to spend it or
15 somebody else.

16 **A. Well, that could be, but the RFPs that were
17 issued were for PPAs, not building wind.**

18 Q. If -- do you know the effective property tax
19 rate that Kentucky Power used in its last rate case?

20 **A. No, sir; I don't.**

21 Q. It was approximately 0.66 percent. Just
22 assume that. So if you -- if you spent -- if
23 Kentucky Power spent \$1.4 billion in Lawrence County
24 at the existing Big Sandy 1 site, local government
25 would get approximately \$9.7 billion in --

1 9.7 million annually in tax revenue on a -- on a
2 \$1.4 billion investment.

3 **A. Assuming your math is correct, sir.**

4 Q. And local government will get zero tax money
5 if the wind is built out of state. You know that,
6 correct?

7 **A. I would assume it would be a lesser number,**
8 **yes.**

9 Q. It would be zero if it's built out of state.

10 **A. I assume so, yes.**

11 Q. Okay. And if something is built out of
12 state, there won't be any local construction jobs,
13 would there?

14 **A. No, there would not be if it's built out of**
15 **state. Yes.**

16 Q. There would be no local permanent jobs if
17 it's built out of state?

18 **A. That's correct.**

19 Q. Mr. West asked you this. The -- the IRP
20 assumed no transmission expense because, as you
21 explained, it's a generic modeling, not
22 location-specific; is that correct?

23 **A. That's my understanding. Again, Witness**
24 **Soller or Haratym can verify that.**

25 Q. Do you know that at your Big Sandy site, the

1 existing site in Lawrence County -- what's the name
2 of the city? I forget now.

3 **A. Louisa?**

4 Q. Louisa.

5 **A. Louisa.**

6 Q. Do you know that there's transmission already
7 at the site?

8 **A. There is, but there -- it's my understanding**
9 **that we don't have the interconnection any longer at**
10 **that site.**

11 Q. But there's transmission there because it --
12 there was transmission that served the 800 --

13 **A. Yes.**

14 Q. -- megawatt Big Sandy 2 plant that was retired
15 about a decade ago, correct?

16 **A. That's correct. There's transmission there.**

17 Q. And there's gas pipeline capacity already
18 going to that site?

19 **A. Yes, there's a gas line.**

20 Q. Is it one or two gas lines?

21 **A. There's one.**

22 Q. Okay. Do you know who the supplier is?

23 **A. I do not.**

24 Q. Okay. Just real quick, let me hand you --
25 these are all -- I guess we can just mark it real

1 quickly as KIUC Exhibit 1.

2 CHAIRMAN CHANDLER: This is just an excerpt
3 from the IRP?

4 MR. KURTZ: Yeah. So if we could just have
5 it marked for convenience.

6 THE WITNESS: Thank you.

7 MS. SACRE: Mr. Kurtz?

8 MR. KURTZ: Oh, sorry.

9 MS. SACRE: You always leave me out.

10 Q. Okay. This is -- this is the rate -- part of
11 the rate aspect of the plan. This is --

12 MS. GLASS: Mr. Kurtz, can I just ask that
13 you applied this yellow highlighting, it's not meant
14 to indicate confidential information is my
15 understanding.

16 MR. KURTZ: Correct.

17 Q. Okay. This just discusses the preferred plan
18 which you discussed with Mr. West, but let's go to
19 the very end where you rank -- where you rank these
20 plans.

21 Do you have that? It's page 4 of KIUC
22 Exhibit 1, which is page 176 of the IRP.

23 **A. Yes.**

24 Q. Okay. Am I reading this correct that CC
25 portfolio is combined cycle?

1 **A. Yes.**

2 Q. Okay. And compared to your proposed plan,
3 the combined cycle is slightly less expensive on a
4 present value basis, correct?

5 **A. And where are you looking for that, sir?**

6 Q. Long-term 15-year CPW. It's highlighted.
7 The combined cycle case versus the preferred plan,
8 64.6 versus 64.8, slightly -- slightly less
9 expensive, basically the same. Is that how I -- is
10 that the right way to read this?

11 **A. I believe that is, yes.**

12 Q. Okay. It's also slightly -- well, less
13 risky, cost risk, 56.8 versus 58.3, correct?

14 **A. Yes.**

15 Q. Okay. The final, this is the local impacts,
16 the capex installed inside service territory, the
17 combined cycle would be one -- 1.528 billion versus
18 1.355 billion for the preferred plan, correct? And
19 that's really just --

20 **A. Yes.**

21 Q. -- showing the capital costs of the combined
22 cycle is more than the capital costs of a peaking
23 unit because everything else in the two plans were
24 exactly the same, right?

25 **A. I believe that's correct, yes.**

1 Q. Okay.

2 MR. KURTZ: One more handout.

3 CHAIRMAN CHANDLER: Mark this as 2?

4 MR. KURTZ: Yes, sir.

5 MS. SACRE: Thank you.

6 CHAIRMAN CHANDLER: This is the excerpt
7 starting on page 180, Mr. Kurtz?

8 MR. KURTZ: Yes.

9 Q. Okay. This is -- this is the rate impacts of
10 the preferred plan; is that correct?

11 **A. Yes, it appears to be.**

12 Q. Tell me, on page 2 of KIUC Exhibit 2, how
13 should I read this? The nominal dollar per kilowatt
14 hour, in 2023 it's -- it's 16.5 cents a kilowatt
15 hour. What does that represent?

16 **A. I believe it represents the approximate rate
17 impact of implementing the plan as it is presented
18 in the IRP.**

19 Q. The -- the --

20 **A. I would really like for Witness Soller and
21 Witness Haratym, who developed this table, to weigh
22 in on that, though. I think that you should ask
23 them for sure.**

24 Q. Okay. Well, let me -- a couple just basic:
25 Do you know if this is a residential number or an

1 average across all your customers?

2 **A. I do not.**

3 Q. Okay. And the footnote says it doesn't
4 include increases in transmission or distribution
5 that may occur over the years. So -- okay. I'll
6 ask them.

7 **A. Yes, please.**

8 Q. Let me -- let me -- let me ask you this: Do
9 you know how Mitchell was modeled in this?

10 **A. It -- it was assumed that Mitchell would no
11 longer be available to serve Kentucky Power
12 customers after 2028 is my understanding.**

13 Q. Is it -- is it 12-31-28 or June 1, 2028,
14 which is the PJM planning year?

15 **A. It's my understanding that we would have --
16 the difficulty with that is that you'd have the
17 energy until the end of 2028, but because the PJM
18 planning year begins on June 1st of the year and
19 goes to May 31st of the following year, spanning
20 past the end of December, you have to have something
21 in place beginning on 1-1 of '29.**

22 **And again, Witness Soller and Witness Haratym
23 would be able to explain exactly how they modeled
24 that.**

25 Q. Okay.

1 MR. KURTZ: I do want to -- I just have one
2 more exhibit and one more set of questions around
3 how Mitchell was modeled.

4 There you go, the yellow.

5 MS. GLASS: You need one for Mr. West.

6 MR. KURTZ: Oh. All right. The most
7 important guy.

8 THE WITNESS: Thank you.

9 MS. GLASS: And again, you applied this
10 yellow highlighting, Mr. Kurtz?

11 MR. KURTZ: Right.

12 Q. Okay. So this says that the replacement
13 capacity was modeled to begin June 1, '28, but
14 then -- but you testified that Kentucky Power would
15 have the energy available to it until the end of
16 the -- until the end of 2028?

17 **A. I believe that's correct.**

18 Q. Okay.

19 **A. But I'm not the witness for this question.**

20 Q. Okay. That's helpful.

21 Let me ask you to turn to page 3 of this
22 exhibit. The -- this is the dollar amount of
23 capacity purchases. In 2028 it's 15,688,000. Do
24 you know if that is -- that's just for the
25 seven-month period June 1 of 2028 till 12-31-28?

1 **A. I do not know if that's the period or not.**

2 Q. Do you know if the modeling assumed that all
3 the Mitchell costs were going to come out of rates
4 and be replaced with this capacity purchase cost
5 instead?

6 **A. I do not know how that was modeled.**

7 Q. Well, you would agree that it would -- well,
8 let me ask you: Would it be reasonable to charge
9 customers for the capacity purchased as well as
10 continue charging them for Mitchell?

11 **A. Well, I -- for purposes of this IRP, it was**
12 **assumed that, as I said, Mitchell would be no longer**
13 **servicing customers after 2028, and I don't think we**
14 **should confuse that with what happens to the**
15 **ownership of Mitchell after 2028. That's a separate**
16 **matter.**

17 Q. Kentucky Power will still retain ownership
18 unless and until it's sold or transferred, correct?

19 **A. That -- that's correct. But like I said,**
20 **that's not modeled in this IRP.**

21 Q. Let me ask you: This is a data response that
22 Staff asked you in sort of a companion case, the
23 adequate service investigation, and talking about
24 the remaining net book cost.

25 MR. GISH: Mr. Chairman, we would object to

1 reference to the investigation case as a companion
2 case to this one. It's an entirely separate matter.

3 MR. KURTZ: I'll rephrase.

4 MR. GISH: Thank you.

5 Q. To the entirely separate noncompanion case.

6 But do you know how the remaining net book
7 cost of Mitchell was modeled in the rate impacts?

8 In other words --

9 **A. In the IRP?**

10 Q. Yeah. Well, we have these rates impacts
11 showing what the rates on consumers will be, and
12 I'll ask the other witnesses how they did that. But
13 do you know if this rate impact, KIUC Exhibit 2,
14 assumed that consumers would continue paying for the
15 fixed costs of Mitchell after 2028 when they're not
16 getting any of the capacity or energy from it?

17 **A. Again, I -- I did not do the modeling, I
18 don't know how that was modeled, and the ownership
19 of Mitchell is a completely separate matter.**

20 Q. So if Kentucky Power continues to own it,
21 would it be your expectation that you would seek to
22 recover the remaining net book costs even if you
23 were getting -- even if consumers were getting no
24 energy or capacity from the power plant?

25 **A. That hasn't been determined yet, but something**

1 **has to be done with the net book value, yes.**

2 MR. KURTZ: Thank you, Mr. West. No further
3 questions.

4 CHAIRMAN CHANDLER: Mr. Gary? Mr. Cmar?

5 I'm sorry. Before we move on to you,
6 Mr. Cmar, would you like to move to introduce these
7 exhibits, Mr. Kurtz?

8 MR. KURTZ: Yes, sir. I move to introduce
9 KIUC 1 -- 1, 2, 3.

10 CHAIRMAN CHANDLER: Ms. Glass?

11 MS. GLASS: Well, Mr. Kurtz did not ask any
12 questions about pages 7, 8, or 9 of this exhibit,
13 nor do we know what it is or where it came from.

14 CHAIRMAN CHANDLER: Which exhibit, I'm sorry,
15 the third one or the --

16 MS. GLASS: KIUC 3.

17 MR. KURTZ: Well, I will say this: 7, 8, and
18 9 all came from this case. 9 is the -- where the
19 reference KIUC 1-20 -- K -- AG/KIUC 1-23, and the
20 remaining net book value of Mitchell at current of
21 518 million, that was also from this case.

22 MR. GISH: From -- you mean from --

23 MR. KURTZ: I don't have a reference to it.
24 I mean, obviously it's the Company's work product.

25 MR. GISH: This case in the IRP? The IRP

1 case?

2 MR. KURTZ: Yes, the IRP case.

3 MS. GLASS: I'm not sure that's correct for
4 number 7 -- for page 7, but I don't know.

5 MR. GISH: Is it the -- is it Attachment 1 to
6 the --

7 MR. KURTZ: Mr. Chairman, it's clearly a
8 Kentucky Power document. I actually don't --

9 CHAIRMAN CHANDLER: I take it, Ms. Glass,
10 that 7 is an attachment to the data request that's
11 4.

12 MS. GLASS: I think that --

13 CHAIRMAN CHANDLER: It says, (Reading) Please
14 see KPSC 3 2 Attachment 1 for the net book value.

15 That's the initial Response a.

16 MR. KURTZ: Right.

17 CHAIRMAN CHANDLER: They seem to all be the
18 same. 4, 5, 6, and 7 seem to all be the same thing.

19 MS. GLASS: I think that sounds logical. I'd
20 just like to confirm that if I can.

21 CHAIRMAN CHANDLER: That would be fine. So
22 we'll come back to this --

23 MS. GLASS: Okay.

24 CHAIRMAN CHANDLER: -- and give you an
25 opportunity to make sure.

1 MS. GLASS: Thank you. And then --

2 CHAIRMAN CHANDLER: So I'll -- any objection
3 to 1 and 2?

4 MR. GISH: Just with the note that the
5 highlighted yellow information is for highlighting,
6 not for confidentiality.

7 CHAIRMAN CHANDLER: Yeah. At this point I've
8 gotten used to the difference between normal
9 highlighting and Mr. Kurtz's hand highwriting --
10 highlighting.

11 MR. GISH: By agreement letter or something.

12 CHAIRMAN CHANDLER: All right. So no -- so
13 moved for KIUC 1 and 2, and we'll come back to
14 Mr. -- come back to 3, Mr. Kurtz.

15 (KIUC Exhibit 1 and KIUC Exhibit 2 admitted.)

16 CHAIR CHANDLER: Mr. Cmar.

17 MR. CMAR: Thank you, Your Honor.

18 CROSS-EXAMINATION

19 By Mr. Cmar:

20 Q. Good morning, Mr. West.

21 **A. Good morning.**

22 Q. Good to see you again.

23 You had mentioned earlier the all-source RFP
24 that was issued in September 2023, correct?

25 **A. Yes.**

1 Q. And that was posted on Kentucky Power's
2 website; is that right?

3 **A. I think so, yes.**

4 Q. And there was a schedule posted on the website
5 with a timeline for the RFP process, correct?

6 **A. I think so. I don't recall specifically.**

7 Q. Do you recall that that schedule said that
8 there would be initial resource selection by
9 January 31, 2024?

10 **A. It may have said that, yes.**

11 Q. Now, I don't -- without revealing anything
12 that you would consider confidential, are you able to
13 say whether that stage of the process has occurred?

14 **A. I think in general, analysis is continuing,
15 is ongoing.**

16 Q. And that would be analysis of the responses
17 to the RFP?

18 **A. That is correct.**

19 Q. And then also as part of that schedule, it
20 said that definitive agreements were supposed to be
21 executed by June 1. Do you remember that?

22 **A. That sounds correct.**

23 Q. Again, without revealing anything you would
24 consider confidential, are you able to say if that
25 part of the process has occurred?

1 **A. At this point I can just say that analysis is**
2 **ongoing.**

3 Q. Has Kentucky Power made any decisions yet,
4 based on the responses to the RFP, as to whether to
5 move forward with any of the -- the responses?

6 **A. That would be confidential information.**

7 Q. Are you able to share whether any regulatory
8 filings --

9 CHAIRMAN CHANDLER: I'm sorry.

10 MR. CMAR: Okay.

11 CHAIRMAN CHANDLER: Counsel?

12 MS. GLASS: That information is commercially
13 sensitive. We're going through the process now.
14 He's indicated it's confidential, not that he can't
15 respond.

16 CHAIRMAN CHANDLER: Right.

17 MS. GLASS: If we wanted to go into
18 confidential session --

19 CHAIRMAN CHANDLER: That's why I wanted -- I
20 wanted to have an appreciation. That's why I was
21 confused of, you know, asking them what decision you
22 make is certainly confidential. Whether a decision
23 has been made, that's what I was sort of making sure
24 that you-all -- you-all assert that whether a
25 decision has been made is confidential.

1 MR. GISH: Whether final documents have been
2 executed and the nature of the negotiations, but --

3 CHAIRMAN CHANDLER: See, that's -- see,
4 that's why I'm asking.

5 MR. GISH: But that's an easy whether --

6 CHAIR CHANDLER: That's why I'm asking.

7 So --

8 MR. GISH: Yeah, because of the -- yeah.

9 CHAIRMAN CHANDLER: So you-all would like to
10 move into confidential session?

11 MS. GLASS: If Mr. Cmar requires details in
12 an answer more than what Mr. West has responded,
13 then yes, we do need to go into confidential session.

14 MR. CMAR: I may seek to do that, Your Honor,
15 but I might want to ask just a few more questions in
16 the public session first.

17 CHAIRMAN CHANDLER: That'll be fine.

18 MR. CMAR: Thank you.

19 Q. Are you able to share whether any regulatory
20 filings are planned at this time based on the RFP
21 responses?

22 **A. Assuming -- I mean, we would plan to make a**
23 **regulatory filing assuming that we contract with a**
24 **particular resource, but I don't have timing for**
25 **that right now.**

1 Q. Can I ask you to turn to -- do you have your
2 data responses that you sponsored with you?

3 **A. Yes.**

4 Q. Could I ask you to turn to the response to
5 Joint Intervenors 2-13?

6 **A. Yes.**

7 Q. And you see there that this response relates
8 to whether there's been any specific plans or
9 documents developed to construct a new gas resource,
10 including at the Big Sandy site. Do you see that?

11 **A. I do.**

12 Q. Are you able to say whether that's still true
13 today?

14 **A. The Company, as I stated, looks at all
15 resources, all types, whatever we determine is most
16 reasonable and best for our customers. As far as
17 any analysis regarding the Big Sandy site, that's
18 privileged information and I cannot get into that.**

19 Q. Is the -- is the data response, the public --
20 this is a public data response. Is it still accurate
21 today?

22 **A. At the time it was written, it was accurate.**

23 Q. Is it still accurate today?

24 **A. As I said, sir, that's privileged information
25 and I can't get into it.**

1 CHAIRMAN CHANDLER: I'm sorry, Counsel. Do
2 you want to clarify the -- I don't -- I don't know
3 that the wit -- so here -- and I only ask this --

4 MS. GLASS: He can.

5 CHAIRMAN CHANDLER: -- because I don't think
6 the witness' -- I don't know that a lay witness is
7 able to assert privilege, technical privilege. So I
8 just want to make sure that -- that you-all -- that
9 you're on the same page as your witness about the
10 concern being the confidential status of the
11 response, not necessarily asserting a certain
12 privilege.

13 MS. GLASS: I'll let Mr. Garcia-Santana
14 address that.

15 MR. GARCIA-SANTANA: Yeah. Can I sit down
16 for a second, just to make sure that --

17 MS. GLASS: Sure.

18 MR. GARCIA-SANTANA: -- I've got a good
19 information set.

20 Yeah. The witness is instructed not to
21 reveal the content of privileged information that
22 may be related to the subject matter of the -- the
23 question.

24 The fact that information or a request has
25 been done would be the type of information that

1 would show up in a privilege log, but I don't think
2 that the witness is at liberty to be specific about
3 whether that would relate specifically to the answer
4 to the question.

5 I think that that's the -- the point where
6 the witness is finding that the information that is
7 being requested he cannot answer without revealing
8 confidential information.

9 CHAIRMAN CHANDLER: Well, that's why I want
10 to be distinct. Confidential information or
11 privileged information?

12 MR. GARCIA-SANTANA: Well, at the request of
13 counsel, sir, the witness cannot disclose the
14 contents of the communications, and I think that
15 the -- the problem here is that he cannot be
16 specific about the answer without revealing the
17 content of the communications with counsel.

18 CHAIRMAN CHANDLER: Okay. So --

19 VICE CHAIR HATTON: So it's attorney-client
20 communications --

21 MR. GARCIA-SANTANA: Correct.

22 VICE CHAIR HATTON: -- that you're asserting?

23 CHAIR CHANDLER: Okay. So I --

24 MR. GARCIA-SANTANA: So to the extent that he
25 can answer the question without referring to

1 confidential information, then -- or privileged
2 information.

3 CHAIRMAN CHANDLER: Yeah, and that's what I
4 want to be -- so there's a question. So the data
5 request -- basically the question, as I understand
6 it, from counsel is, is -- are the answers to the
7 response with passage of time still accurate, not as
8 it relates to then, but as of today.

9 And the initial question is: Is Kentucky
10 Power developing, and then -- then there are two
11 follow-up questions with A and B, of which I take it
12 that you're asserting privilege as it relates to
13 A and B, not the initial question, or are you
14 asserting privilege as to all three questions?

15 MR. GARCIA-SANTANA: No. To anything that's
16 specific to -- to actual plans.

17 CHAIRMAN CHANDLER: Okay. Thank you very
18 much.

19 MR. GARCIA-SANTANA: Thank you, Your Honor.

20 CHAIRMAN CHANDLER: Mr. Cmar?

21 MR. CMAR: Thank you, Your Honor. I think,
22 just to streamline the process, maybe we could go --
23 if we could go into confidential session now and
24 just ask a couple questions to see if --

25 CHAIRMAN CHANDLER: That'll be fine.

1 MR. CMAR: -- how that goes.

2 CHAIRMAN CHANDLER: Move into confidential
3 session, Candace.

4 MS. SACRE: Yes, sir.

5 CHAIR CHANDLER: Let us know when we are.

6 (Confidential testimony heard from 11:40 a.m.
7 to 11:51 a.m.)

8 MS. SACRE: We're on normal, Chairman.

9 CHAIRMAN CHANDLER: Mr. Cmar?

10 MR. CMAR: Thank you, Your Honor.

11 Q. I hope -- I have some more questions that are
12 appropriate for the public session, and hopefully we
13 won't be -- need to go into confidential information.

14 **A. Sure.**

15 Q. But if at any point confidential information
16 is implicated, please don't hesitate to let us know.

17 I'd like to refer you to Kentucky Power's
18 response to Joint Intervenors Request Number 2-34.

19 **A. Yes.**

20 Q. And this response shows Kentucky Power's
21 capacity purchases through PJM delivery year
22 '25-'26; is that correct?

23 **A. Yes.**

24 Q. And this response is dated -- well, it's --
25 on the page here it says dated July 24th. I believe

1 that was the date the request was made. I believe
2 the response was provided September 8th, 2023. Does
3 that sound correct?

4 **A. That sounds correct, subject to check.**

5 Q. Since September 2023, has Kentucky Power
6 entered into any other contracts for capacity
7 purchases?

8 **A. Not to my knowledge.**

9 Q. Does the Company anticipate needing to make
10 any capacity purchases for PJM delivery year
11 '26-'27?

12 **A. I haven't seen that analysis yet. I'm trying
13 to think when that might be available, but I don't
14 believe I've seen the analysis yet.**

15 Q. Do you know when -- relative to a PJM
16 delivery year, by when would the Company need to be
17 going through that process of determining whether
18 capacity purchases need to be made and -- and making
19 those purchases?

20 **A. Well, those -- those dates kind of move
21 around a lot with PJM anymore with various things
22 being delayed. Witnesses Pearce and Vaughan may be
23 able to provide more detail around that timeline.
24 But I think in general, if -- if you have a -- you
25 know, you have to do something by a certain date,**

1 that the analysis needs to be, you know, looked at
2 several months in advance to, you know, fully --
3 fully analyze it and vet it through Kentucky Power
4 and decide.

5 That -- that's my general recollection of the
6 timeline.

7 Q. But this is not something that's on your
8 radar currently?

9 A. Like I said, I don't believe I've seen any --
10 any analysis related to the next delivery year.

11 Q. Thank you.

12 Could you -- Mr. Kurtz helpfully passed out
13 as part of --

14 MR. CMAR: Is this -- Mike, is this KIUC 1?

15 MR. KURTZ: No, I think what you're looking
16 at is --

17 MR. CMAR: Oh.

18 MR. KURTZ: Sorry. Yes. Yes, it is.

19 Q. Could you refer to KIUC 1, page 2?

20 MR. GISH: This is page 174?

21 MR. CMAR: Page 174 of 1182 of the IRP, yes.

22 A. Yes.

23 Q. There's two figures there, Figures 80 and 81,
24 and these -- these figures show Kentucky Power's
25 capacity and energy positions under the preferred

1 plan in the IRP; is that right?

2 **A. Yes, that's what they appear to show.**

3 Q. And for the year 2026 they show Kentucky
4 Power adding a hundred megawatts of new wind
5 resources; is that correct?

6 **A. I believe so, yes.**

7 Q. Do you know if that's the Company's current
8 plan is to add a hundred megawatts of new wind in
9 2026?

10 **A. Well, it's part of the preferred plan, as you**
11 **pointed out, but, you know, as I said, the IRP is**
12 **done at a point in time with all of the best**
13 **information that is available at that time and the**
14 **best analysis.**

15 **Where the rubber actually meets the road is**
16 **when the Company does an RFP and finds out what**
17 **resources are actually available, how do they -- how**
18 **do they score in the analysis that's done, are they**
19 **the most reasonable cost and economic for the**
20 **customer.**

21 **So these resources were selected as part of**
22 **the modeling. Witnesses Soller and Haratym could**
23 **talk about the modeling at length. But when it**
24 **comes to what's available, that's what you get with**
25 **your RFP analysis and what's -- what we're going**

1 **through now.**

2 **So does that help?**

3 Q. Yes. So is it fair to say that -- that this
4 100-megawatt capacity need will be filled based on
5 the responses to the 2023 RFP?

6 **A. I would say so, yes.**

7 Q. Back to Figure 80. It shows for the year
8 2027 250 -- a 250-megawatt solar addition, and then
9 it says 100/100. Do you see that? The wind.

10 **A. Yes.**

11 Q. Could you clarify, what does the 100/100
12 mean?

13 **A. I believe what that means -- and again,**
14 **Witness Soller could answer or verify this for me.**
15 **But where it says after wind T1 and T2, I think**
16 **that's like Tranche 1 and Tranche 2, if I understand**
17 **that correctly, if I'm remembering that correctly.**

18 Q. So is that 200 total, 100 from each tranche?

19 **A. I believe so, yes.**

20 Q. With respect to those capacity needs for
21 2027, would your answers be the same as for 2026,
22 that it's something that's part of the review
23 process for the RFP?

24 **A. Part of the review process, yes.**

25 Q. I'd like to ask you a few questions about the

1 Inflation Reduction Act. Are you familiar with the
2 Energy Community Tax Credit Bonus in the energy --
3 that was enacted in the Inflation Reduction Act?

4 **A. I'm really not close to that. I know that**
5 **some of that analysis was prepared in the IRP.**
6 **Again, Witness Soller or Witness Haratym could**
7 **probably provide more detail around that.**

8 Q. Are you aware, broadly speaking, that this
9 tax credit bonus, it was a bonus for both the
10 production tax credit and the investment tax credit?

11 **A. I think so, but again, I'm not the -- I'm not**
12 **the expert witness on that.**

13 Q. Is there someone here today who could speak
14 to what analysis the Company has done since the IRP
15 to evaluate these tax credit bonuses?

16 **A. I'm honestly not sure which witness. We can**
17 **take that under advisement, see if we can get a --**
18 **an answer for you.**

19 Q. Are you aware of whether the U.S. Department
20 of Energy has developed maps of which communities
21 might be considered energy communities for purposes
22 of the tax credit bonus?

23 **A. I remember hearing something about that, but**
24 **I'm not aware of or have seen anything, just hearing**
25 **about it.**

1 Q. Do you know if anyone at Kentucky Power has
2 looked into this issue?

3 **A. I do not know.**

4 Q. And so you wouldn't have a sense of what
5 percentage of Kentucky Power's service territory
6 would be considered an energy community by the
7 Department of Energy?

8 **A. I would not know.**

9 Q. I have one last topic for you. Do you know
10 the anticipated timing of Kentucky Power's next IRP?

11 **A. Well, typically the Commission will put
12 something in in the order at the end of the IRP that
13 says when they expect us to file the next one.**

14 **But in general, since we filed in March of
15 '23, it should be about three years after that,
16 so -- 'cause they're on a three-year cycle, so March
17 of '26.**

18 Q. Has Kentucky Power begun any work towards its
19 next IRP?

20 **A. Not to my knowledge. Normally the process
21 would start -- I mean, if -- if we're assuming March
22 of 2026, normally you'd start nine, ten months prior
23 to that with, you know, initial discussions
24 regarding assumptions to use in the IRP, that kind
25 of thing. That's how we've typically done them.**

1 Q. Did you say nine to ten months?

2 **A. Yeah, roughly. Roughly.**

3 MR. CMAR: I think that's all the questions I
4 have. Thank you, Mr. West.

5 THE WITNESS: Thank you.

6 CHAIRMAN CHANDLER: Ms. Koenig, any
7 questions?

8 Do you-all have --

9 MR. VAN ZYL: We have some.

10 CHAIRMAN CHANDLER: Yeah. All right. So
11 let's take a recess for lunch. We'll come back
12 at -- come back at 12:55 and Staff can do your
13 cross-examination. So we'll be in recess until
14 12:55.

15 (Recess from 12:03 p.m. to 1:06 p.m.)

16 CHAIRMAN CHANDLER: Please have a seat.

17 Back on the record in Case Number 2023-00922.
18 Mr. West, you're still under oath. Counsel, would
19 you like to go --

20 MS. GLASS: Your Honor?

21 CHAIRMAN CHANDLER: -- begin
22 cross-examination.

23 MS. GLASS: Mr. Chairman, I just wanted to
24 state for the record that we were able to review
25 KIUC Exhibit 3 and confirm that page 7 of that

1 exhibit is the attachment that corresponds to the
2 previous data request in the packet and that the
3 last two pages are from the record of this case, so
4 we have no objection.

5 CHAIRMAN CHANDLER: Okay. Any other position
6 on that? All right. So we'll admit KIUC 3 as well.
7 All right. Thank you, Ms. Glass.

8 MS. GLASS: You're welcome.

9 CROSS-EXAMINATION

10 BY MR. VAN ZYL:

11 Q. Good afternoon, Mr. West.

12 **A. Good afternoon.**

13 Q. Again, this should be relatively brief and
14 far less exciting than what we've had so far. I
15 just have a couple questions that I want to through
16 clarification, just so that I understand them.

17 In your discussion with I believe Mr. West
18 from the Attorney General's office, you were saying
19 that Kentucky Power is going -- or the intention in
20 the IRP is for Kentucky Power to stop receiving
21 energy from the Mitchell plant in 2028.

22 Is that the end of the calendar year that
23 you're going to stop -- that Kentucky Power is going
24 to have like an divestiture in the energy is
25 receives from the Michigan plant or is that in June?

1 **A. As for the energy portion, it's my**
2 **understanding that it would be the end of the year.**

3 Q. The end of the year, okay. So you're going
4 to receive all of the benefits that you have of it
5 through the end of the calendar year; it's just
6 because you're planning because of how PJM is that
7 that's different?

8 **A. Yes, yes.**

9 Q. So based on what was stated in the IRP, the
10 proposed -- the preferred plan proposes to build
11 MGCTs in service as of 2029, correct?

12 **A. That's what's in the preferred plan, yes.**

13 Q. Could you tell me, is that just by the end of
14 the year 2029 when it's proposing to have that
15 built?

16 **A. Witness Soller could verify this, but I was**
17 **thinking that there was a discovery response that's**
18 **-- that answered this question that like all new**
19 **resources were assumed to be like on 1/1 of a given**
20 **year.**

21 Q. Okay.

22 **A. I -- and, again, I'm going from a bad memory,**
23 **but that's my recollection, that there was a**
24 **discovery response similar to that.**

25 Q. And there might be, and my ability to forget

1 things is great, so we'll find that. But the
2 assumption is just for our conversation today, 1/1
3 of 2029 is --

4 **A. I --**

5 Q. -- is the sort of --

6 **A. Yes.**

7 Q. -- the expectation subject to a lot of other
8 things?

9 **A. Subject to check, I -- I believe that's**
10 **correct.**

11 Q. And so it's fair to say that you don't expect
12 there to be a gap between when you're receiving
13 energy from Mitchell ends, when the divestiture
14 happens and when the new resources are brought
15 online?

16 **A. No. I don't expect there to be a gap. Now,**
17 **whether it's from a self-built CT as in preferred**
18 **plan or something else comes up. It's, you know,**
19 **purchasing an existing asset. It's a contract.**
20 **There would be no gap.**

21 Q. And okay. No, I just wanted to clarify that.
22 Thank you so much.

23 And we're going to go back to this, and I
24 know you've answered that it's -- in testimony
25 throughout today that it's difficult to provide a

1 timeline, right --

2 **A. Yes.**

3 Q. -- for a lot of different reasons? But I do
4 believe it was either in your conversation with
5 Mr. Cmar or Mr. Kurtz that you did suggest, as far
6 as at least the MGCTs are concerned, about a
7 six-year timeline to bring those online; is that
8 correct?

9 **A. Well, that was the assumption at the time
10 when we were putting the IRP together.**

11 Q. Okay.

12 **A. That was the best estimate we had at the
13 time, yes.**

14 Q. Okay. And are you still operating generally
15 speaking on that position that six years is about
16 right?

17 **A. I haven't heard any -- I'm trying to think.
18 I think in general six years is -- is a reasonable
19 estimate.**

20 Q. Okay.

21 **A. It could be a little longer. It just depends
22 on a number of factors; right?**

23 Q. Right, and we've had that discussion. As a
24 follow-up to that, just in the event that there is a
25 significant delay, let's say six months or a year is

1 a significant delay, does the company prepare any
2 contingency plans for what to do because, again,
3 assuming now Mitchell goes off.

4 So we're assuming for the purposes of this
5 question that Mitchell is gone at the end of 2028.
6 You expect an in-service date of 1/1/29, but
7 something happens, you don't have access to
8 whatever, to build that, and it doesn't go in
9 service until 1/1/2030.

10 Do you have a contingency plan in place for
11 providing that capacity or providing that energy
12 between 1/1/29 and 2030?

13 **A. Well, I wouldn't say that there is a, you**
14 **know, hard and fast contingency plan right now for**
15 **six years from now or five or six years from now,**
16 **but the fact that we're a member of PJM, and they**
17 **are a valuable resource to providing low-cost**
18 **service to our commerce, I think that speaks a lot**
19 **for a contingency plan that's currently in place.**

20 **As far as the capacity goes, that -- you**
21 **know, it could wind up being a bilateral contract**
22 **that we would enter into at some point.**

23 Q. As far as the bilateral contracts are
24 concerned, what is the lead time for that? When,
25 generally speaking, do you have to prepare to look

1 for available capacity or look for available energy
2 to enter into such an agreement for a period of a
3 year or six months, let's say?

4 **A. The ones that we had done, you know, in the**
5 **very recent past I'm wanting to say, you know, it**
6 **was at least two months and perhaps four.**

7 Q. Okay. But a relatively short time frame?

8 **A. It's a -- it's a short period of time, yes,**
9 **relatively.**

10 Q. Is there anybody available today who has
11 experience -- if it's not you, who has experience
12 discussing sort of the particulars of environmental
13 permitting or of just getting, you know -- start to
14 finish the process for building something like an
15 MGCT or procuring the solar?

16 **A. Well, our first witness, Mr. Spitznogle, was**
17 **the environmental witness.**

18 Q. Right. And then he informed us that he
19 hasn't done that process. I'm just wondering if
20 there's somebody more familiar perhaps with the
21 particulars.

22 **A. I'm not aware --**

23 Q. Okay.

24 **A. -- if there is.**

25 Q. And you do not have experience in --

1 **A. No, I do not.**

2 Q. Could you just -- and this is from a very
3 high level organizational standpoint. What is the
4 process once -- so we know that from your testimony
5 that you have issued an -- you have issued RFPs
6 already, you know, and that you've presumably
7 received some of them and are in the process of
8 reviewing them. I don't think that's controversial.

9 Can you tell us from an organizational
10 standpoint what happens when the RFP comes through
11 your door right when you receive it? Is there a
12 team responsible for collating that information and
13 making a determination as to recommendations for
14 that?

15 MS. GLASS: And, Mr. Van Zyl, you're just
16 saying generally --

17 MR. VAN ZYL: Generally.

18 MS. GLASS: -- in the IRP process?

19 MR. VAN ZYL: Yeah. I just want to know --
20 yes, I just want to know how the organization
21 approaches this; right?

22 **A. Yeah.**

23 MS. GLASS: Thank you.

24 Q. I just want to understand -- I don't need to
25 know anything about anything that we have discussed

1 already.

2 **A. Yeah.**

3 Q. I'm just trying to get an understanding of
4 how Kentucky Power and AEP process this.

5 **A. Yeah. So there's a team at the AEP Service
6 Corp. I believe their department is like commercial
7 operations that this is what they do, this is what
8 they specialize in.**

9 So they worked with myself and Company
10 President Wiseman. I remember having -- you know,
11 like we had calls every Friday morning for a long
12 period of time where we would, you know, discuss
13 different options and putting the RFPs together and
14 making -- making decisions about, you know,
15 different scoring metrics and things like that.

16 So there's definitely a group, and we worked
17 with them, contract -- or not contracted with them
18 but contacted them to seek their, you know,
19 expertise on doing this because this -- like I said,
20 this is what they do. They're experts at it.

21 Q. Who ultimately directs that review process;
22 right? Is it -- is it you at Kentucky Power, or is
23 it AEP, that team at AEP that ultimately directs the
24 recommendation?

25 **A. They would typically -- and when I say**

1 "they," that commercial operations group would,
2 after they have gathered a lot of information from
3 myself and Company President Wiseman, they would
4 typically put different analyses together or like
5 PowerPoint decks together, and we would go through
6 them.

7 And then Kentucky Power would be the one
8 making the final decision on what to include or
9 whatever the decision was, but we would -- we would
10 certainly -- myself and Ms. Wiseman would, you know,
11 take their expertise into consideration and their
12 recommendations into consideration and then make our
13 final decision.

14 Q. And in making that final decision is largely
15 speaking just a business decision, right, based on
16 all the information and analyses you received?

17 A. That's right. That's right.

18 Q. And speaking hypothetically, very
19 hypothetically, what is the -- you receive an RFP,
20 or you receive a proposal based on the RFP that you
21 have. At what point --

22 A. Well, a quick --

23 Q. Oh sorry.

24 A. Candace? Yeah.

25 MR. VAN ZYL: Yeah, the mics are having a

1 moment.

2 CHAIRMAN CHANDLER: It's not the mics. It's
3 the whole system.

4 THE WITNESS: It's red again.

5 MR. VAN ZYL: Well, we will hold off for just
6 a second.

7 CHAIRMAN CHANDLER: So we are just -- off the
8 record now.

9 (Off the record)

10 CHAIRMAN CHANDLER: All right. Back on the
11 record.

12 Counsel, would you like to ask your question
13 again?

14 MR. VAN ZYL: Thank you, Chairman.

15 Q. Just before -- I was just asking.
16 Hypothetically speaking when your team does review,
17 right, from the time when the RFP comes through the
18 doors -- or the proposal comes through the doors
19 until it is ready for a recommendation, do you have
20 a general timeline as to what amount of time that
21 takes to get to that point of a recommendation?

22 **A. Well, this is the first time I've been**
23 **through it --**

24 Q. Okay.

25 **A. -- with the commercial operation's group, and**

1 I know they had put together a timeline that
2 Mr. Cmar had said was posted on our website, but as
3 I explained, things happen that can cause the
4 timeline to stretch, and it's difficult to give you
5 a general idea of how long it takes. I'm sorry I
6 can't be more specific than that.

7 Q. No, and I'm not looking for like a month or
8 day or, you know, I think I'm just trying to have an
9 understanding of how long, you know, the lead way is
10 before that and the decision is made and you still
11 have to build it and get permits and all that;
12 right?

13 A. Well --

14 Q. I'm just trying to have an understanding of
15 the full process here.

16 A. Yeah.

17 Q. So let me just ask it perhaps that way and
18 just give the game away and just?

19 A. Well, I believe the bids were originally due
20 in November of '23, and somewhere in the June time
21 frame, so that would be, you know, six months
22 roughly, a little more, a little less after they
23 were in for that analysis period to take place for,
24 you know, contracts to be negotiated.

25 Q. Sure.

1 **A. And then it takes a little bit of time, a**
2 **month or two at the most maybe to put together a**
3 **filing to be submitted to the commission or review.**

4 **So in general I --**

5 Q. Yeah.

6 **A. That's roughly --**

7 Q. No, I appreciate that.

8 **A. -- how long.**

9 Q. Thank you for explaining that. I just am
10 ignorant as to that process. I just wanted some
11 education.

12 Moving away from that and turning to
13 Big Sandy specifically, I know you were not the
14 modeling individual, right, but the original plan as
15 I understand from the IRP is that Big Sandy was
16 expected to retire in 2031, correct?

17 So do you have some understanding of that?

18 **A. Yeah, the assumption in the IRP was 2031, but**
19 **it -- it's my understanding that there's like a**
20 **misunderstanding with that; that 2031 was based on**
21 **-- I'm trying to remember -- I think it was the**
22 **15-year recovery period of the gas line or something**
23 **like that --**

24 Q. Okay.

25 **A. -- that -- that caused us to use this number**

1 of 2031. That may not be exactly right, but it --
2 it was something like that. But I believe in --
3 that it's actually being depreciated through 2036.

4 So using that, 2036, through its depreciation
5 life, you're really only looking at a four-year
6 extension instead of ten.

7 Q. I see. And so that's actually very helpful.
8 I appreciate that.

9 Sort of a non sequitur question but based on
10 that, was the model -- do you have any information
11 as to whether the model was allowed to retire at, I
12 guess, then, before the 2036 period, or, like, was
13 it a manual input to extend it to 2041 or was it
14 something that was an economic decision that the
15 model spit out?

16 **A. My recollection was that it was an economic
17 decision, the model selected it.**

18 Q. And I supposed that was based on the
19 environmental regulations in place; that was, like,
20 the 2015 max and all that?

21 **A. At the time, yes.**

22 Q. Okay. Regarding the -- and I apologize if
23 this is in the record. And just direct me
24 generally, you know, if you believe it's in the
25 record.

1 Regarding the solar and wind that Kentucky
2 Power is proposing, like the 700 of the wind and 800
3 of solar that they are proposing to get, is that --
4 is the company considering both, like, self-owned
5 solar and wind or is it just PPAs? What is -- what
6 is the company evaluating when it wants to do that?

7 **A. Well, as I may have mentioned, the RFPs that**
8 **were put out in September of last year were for PPAs**
9 **only.**

10 Q. Okay.

11 **A. At this time.**

12 Q. Okay. Is the company -- generally speaking,
13 is there any consideration for self-own or any
14 consideration for building that capacity at the
15 time?

16 **A. I think that there's always consideration for**
17 **it. The -- it's something that based on the**
18 **company's financial position at the time, that the**
19 **decision was made to just go for PPAs only. But**
20 **certainly the company would like to own in some --**
21 **in some respect, whether it's a self-build or it's a**
22 **purchase of an existing asset, at some point in the**
23 **future.**

24 So it's something that, you know, we look at
25 to see if it makes sense at the time, if it makes

1 **sense for our customers. It's something we always**
2 **look at.**

3 Q. Right. And the reason -- part of the reason
4 I ask that is the preferred plan also includes a 50
5 megawatt-hour battery, and I was wondering if part
6 of that is to be paired with an intermittent
7 resource like solar and wind, or if the battery as a
8 standalone was just added on?

9 **A. Witness Soller can verify this, but I think**
10 **it was a standalone. I don't think it was paired**
11 **with anything.**

12 Q. Okay.

13 MR. VAN ZYL: Mr. Chairperson, I believe
14 that's all the questions. Thank you.

15 CHAIRMAN CHANDLER: Vice chairperson.

16 VICE CHAIR HATTON: Thank you.

17 EXAMINATION

18 BY VICE CHAIR HATTON:

19 Q. Hello.

20 **A. Hi.**

21 Q. Can you hear me okay?

22 **A. Yes.**

23 Q. So this IRP was filed a little over a year
24 ago, I know some things have changed, lots of things
25 have changed about regulations. The three-year

1 action plan that was included in the IRP, as far as
2 you know, is that still being followed or still a
3 general plan?

4 **A. Yes.**

5 Q. Page 183.

6 **A. Page 183.**

7 Q. They're pretty general.

8 **A. Yes, I would say in respect to Number 1 that**
9 **that's something that we -- a priority for this**
10 **company, economic development.**

11 Q. And I'll just go ahead and ask a question
12 about that one, then --

13 **A. Yeah.**

14 Q. -- Number 1.

15 So when KIUC's counsel and Attorney General's
16 Office counsel were asking about whether Kentucky
17 Power has plans to build new generation within the
18 service area, it seems like that would go along with
19 goal Number 1 there as well, that it would create
20 economic development. Do you see it that way?

21 **A. It could, you know. I -- my traditional, you**
22 **know, definition of economic development would be**
23 **to, you know, bring new industries into our service**
24 **territory that would have, you know, jobs, tax base,**
25 **construction jobs that would be long standing,**

1 right. But I'm not saying that, you know, that
2 couldn't fall in there, sure.

3 Q. Yeah. I mean, it would create some jobs;
4 right?

5 A. It would. It would. That's fair.

6 Q. And then Number 2 there, initiate all source
7 for RFPs --

8 A. Yes.

9 Q. -- to add cost-effective market capacity.
10 Any particular emphasis on seeking RFPs or choosing
11 RFPs that are in the service region?

12 A. Well, the RFPs that were issued in September
13 of last year were for -- they were all source RFPs.
14 So there was thermal, renewable, and storage. And
15 they were for resources that were in Kentucky or if
16 not in Kentucky, in our service territory somewhere
17 in Kentucky, or they were in the PJM footprint in
18 general.

19 So to the extent that those resources
20 existed, we were seeking any and all.

21 Q. And since it's been over a year, how far
22 along are you in that process?

23 A. Well, it's been over a year since we
24 submitted the IRP, but we submitted the RFP --

25 Q. In September.

1 **A. -- in September of last year.**

2 **And as I've discussed here earlier that it's**
3 **a process and, you know, a number of things have**
4 **changed and perhaps extended the timeline a little**
5 **bit. But it's something that we're considered -- or**
6 **continuing to vigorously work on.**

7 Q. Okay. And then same thing with Number 5
8 there, the refining cost estimates and developing
9 plans to extend the life of Big Sandy. That's
10 ongoing --

11 **A. That's correct.**

12 Q. -- that goal hasn't changed?

13 **A. That's correct. We're continuing to look at**
14 **that and discuss what improvements might be needed.**

15 Q. So I noticed in a ton of the public comments
16 that were submitted that people were asking for
17 expanded opportunities to have rooftop solar or
18 various DERs. Is that something that the company is
19 listening to?

20 **A. Sure. I think that customers currently have**
21 **plenty of opportunities for rooftop solar based on**
22 **our net metering service tariff.**

23 Q. And just --

24 **A. I apologize, what was the other one you**
25 **mentioned?**

1 Q. DERs distributed.

2 **A. Just in general DERs -- are you asking if we**
3 **look at that like --**

4 Q. Well --

5 **A. -- distributed generation?**

6 Q. It looks like your customers are asking for
7 it, and I just wondered if the company is giving
8 that some weight.

9 **A. In what respect are they asking for it? Do**
10 **they -- I guess I don't understand what --**

11 Q. That's okay. I can get --

12 **A. -- what they means exactly, when they're**
13 **asking for it.**

14 Q. I can give some specifics.

15 One of the customers who submitted a public
16 comment was saying that the company is free to
17 continue its net metering even after the 1 percent
18 cap is met and that there's nothing to stop you from
19 doing that. You're just not required to offer it
20 past the 1 percent.

21 Is that something the company has considered?

22 **A. I'm trying to think. I thought that it was**
23 **in the law that it was at 1 percent.**

24 Q. And you're not required to after that?

25 **A. Not required to after that. I haven't been**

1 in any recent discussions. We're so far below that
2 1 percent that it would be quite a few years before
3 that discussion would need to happen.

4 Q. And then just lots of more general comments
5 where your customers are asking if the company would
6 consider doing the sort of company-financed seller
7 programs where the company would pay for
8 installation of solar on rooftops and then take the
9 cost back off or charge the cost back in future
10 billing.

11 Is that something Kentucky Power is
12 considering?

13 **A. Not to my knowledge, no.**

14 VICE CHAIR HATTON: That's all the questions
15 I have.

16 EXAMINATION

17 BY COMMISSIONER REGAN:

18 Q. Good afternoon.

19 **A. Good afternoon.**

20 Q. One question, and I don't know if you can
21 answer this. If it's confidential and you can't, I
22 understand. When you look at the RFPs and the
23 responses coming back in, is a -- resources that is
24 located in Kentucky, does that have a higher
25 weighting than someone out of state?

1 MS. GLASS: I don't know if that is
2 confidential or not. I'd like to -- I just want to
3 pause and make sure --

4 COMMISSIONER REGAN: Yeah. No, that's fine.

5 MS. GLASS: -- it's not.

6 MR. GISH: The criteria that goes into
7 evaluating the bids internally would be
8 confidential, I believe.

9 MR. GARCIA-SANTANA: Correct.

10 COMMISSIONER REGAN: Yeah, okay.

11 MR. GISH: So to the extent that is part of a
12 confidential -- we can go into confidential session
13 to discuss that --

14 COMMISSIONER REGAN: No, that's okay.

15 MR. GISH: -- or we can -- and we'd be happy
16 to, I mean, to make sure your question is answered,
17 but that specifically --

18 CHAIRMAN CHANDLER: Candace, if you wouldn't
19 mind, let's go into the confidential session.

20 THE CLERK: Okay. You're in private,
21 Chairman.

22 CHAIRMAN CHANDLER: Are we good?

23 THE CLERK: I said you're in private,
24 Chairman.

25 (Confidential testimony heard from 1:34 p.m.)

1 to 1:35 p.m.)

2 THE CLERK: All right. You're on public,
3 Chairman.

4 CHAIRMAN CHANDLER: We're back on the public
5 record.

6 I'll give Mr. Vaughn an opportunity to get
7 back to his viewing room.

8 EXAMINATION

9 BY CHAIRMAN CHANDLER:

10 Q. Did you provide input or participate in the
11 company's responses to intervenor's comments in this
12 case?

13 **A. The company's responses to the intervenor
14 comments, yes, I would have reviewed them.**

15 Q. Okay. There's -- one of those comments, and
16 let me know if this sounds familiar to you, and if
17 not, we'll make sure you get a copy of them, but one
18 of the statements on page 2 of those comments says,
19 quote, Contrary to the AG's arguments, the RFP --
20 this is referring to that September RFP -- but the
21 RFP will evaluate all the resource proposals it
22 receives on a reasonable and nondiscriminatory
23 basis.

24 Does that sound about right?

25 **A. Yes.**

1 Q. Okay.

2 **A. Yeah.**

3 Q. Further on on the same page comments say,
4 Kentucky Power also agrees with the Joint
5 Intervenors's comment indicating that Kentucky
6 Power's initiation of an all-source RFP competitive
7 procurement process is a positive development.

8 It goes on to say, Furthermore, the
9 all-source RFP is publically available to all
10 potential resource providers, including Louisville
11 Gas and Electric and Kentucky Utilities, LG&E/KU,
12 and East Kentucky Power Cooperative, EKPC, to bid
13 any resources into the RFP, making many of the
14 criticisms from the AG and KIUC moot.

15 Do you remember -- do those comments sound
16 familiar?

17 **A. Yes, I'm looking at them right here.**

18 Q. Great. Are you generally aware of the
19 integrated resource planning regulation?

20 **A. Generally, yes.**

21 Q. Okay. And are you involved in ensuring that
22 a proposed Integrated Resource Plan meets those
23 regulatory requirements?

24 **A. Yes. I mean, myself and the IRP group that**
25 **works on it, I mean, we, you know, strive to make**

1 **sure that we have each part of it addressed.**

2 Q. Okay. The integrated resource planing
3 regulation, or 807 KAR 5-058, Section 8, which is
4 the resource assessment acquisition plan requires
5 that, A utility describe and discuss all options
6 considered for inclusion in the plan, including
7 assessment of nonutility generation, including
8 generating capacity provided by cogeneration,
9 technologies relying on renewable resources and
10 other nonutility sources.

11 And then separately, there's a requirement
12 that you engage with other utilities or at least
13 have discussions with other utilities.

14 Are you generally aware of that requirement?

15 **A. I am generally aware of it.**

16 Q. Okay. Is the -- is the -- in furtherance of
17 the requirement that you engage or have
18 conversations with or whatever exact term that the
19 regulation is, in furtherance of that requirement,
20 what actions did Kentucky Power take to engage with
21 other utilities in the state?

22 **A. I'm not aware of any discussions that I was**
23 **personally involved in. I'm not saying that any**
24 **didn't happen, but I don't believe that I was**
25 **involved in any that I can recall. I understand**

1 what the regulation says, but in going back to the
2 way that an IRP is conducted and the analysis is
3 done, the resources are modeled as generic.

4 And you -- in my mind, if I -- if I
5 hypothetically would contact another utility and be
6 like, Hey, you know, are you interested in co-owning
7 a plant, they might say yes, and that co-ownership
8 agreement could take the form of many different, you
9 know -- yeah, we want to co-own it, but we only want
10 10 percent or, yeah, we told you 10 percent when you
11 started working on the IRP but now we want 25.

12 So I don't really see a lot of value in
13 trying to insert things into the model that are
14 highly speculative based on a few conversations with
15 a few people.

16 Q. Okay. So I just want to make sure I have an
17 appreciation for your response. Is it -- is it your
18 position that that provision or requirement of the
19 regulation has outlived its usefulness?

20 A. I'm not sure I would go that far. I just
21 feel that the -- as I was talking about with
22 Mitchell, that -- that's kind of a separate matter.
23 It's like, what are we -- you know, what about the
24 ownership of Mitchell after 2028. It really doesn't
25 have any bearing on how the IRP was -- was conducted

1 and modeled, and I don't think that, you know,
2 individual ownership pieces and parts of different
3 resources would have any impact on the modeling,
4 either.

5 MS. GLASS: And, Your Honor, I just want to
6 address like the legal aspects of your question as
7 far as what's contained in the regulation. Part C
8 of Section 8, Subsection 2 says that, Expansion of
9 generating facilities including assessment of
10 economic opportunity for coordination with other
11 utilities in constructing and operating new units.

12 I think earlier you were discussing more --
13 forgive me if I'm not, you know, repeating this
14 correctly, but it sounded like you were implying
15 there is an obligation for the company to discuss
16 and coordinate with other utilities in the
17 preparation of the IRP, and I don't believe that
18 that requirement is within the regulation as it's
19 currently written.

20 CHAIRMAN CHANDLER: That's fine for you-all
21 to brief, but the question is: Has there been any
22 assessment of economic opportunities for
23 coordination with other utilities in constructing
24 and operating new units?

25 **A. Not to my knowledge.**

1 Q. You've been -- I mean, the IRP's a thousand
2 pages, and I've tried to read absolutely -- over a
3 thousand pages. I've tried to read absolutely every
4 bit of it I could in anticipation -- well,
5 throughout this case.

6 Are you aware of a provision in this
7 regulation that discusses and describes all options
8 for expansion of generating facilities including the
9 assessment of economic opportunities in coordination
10 with other utilities?

11 **A. Which one is that, do you know? Is that --**

12 Q. What, what the regulation is?

13 **A. Yeah.**

14 Q. It's Section 8-2 (c).

15 And you-all have a table of contents that
16 seems to purports the different areas of the -- of
17 the IRP that would indicate compliance with that;
18 right?

19 **A. Yeah, Section 5.2.1.**

20 Q. Yeah, and then there -- do you have the IRP
21 in front of you?

22 **A. I do.**

23 Q. Do you mind to go to that section? I think
24 that section is -- or best I have it is page 87 of
25 1,182, and it's called "Natural gas combined cycle."

1 **A. Yes.**

2 Q. So could you please take a look at that and
3 if you could point me to where in that section the
4 utility described and discussed all options
5 considered for inclusion of the plan, including
6 expansion of generating facilities including
7 assessment of economic opportunities for
8 coordination with other utilities in constructing
9 and operating new units?

10 **A. I don't see where it's addressed.**

11 Q. Okay. And so in the comments -- the
12 responses to the intervenor's comments, what I read
13 a second ago to you and you said reflected the
14 version you had in front of you, specifically
15 you-all note that the RFP's public. If other
16 utilities want to respond, they can respond.

17 Is that -- is that a fair characterization of
18 what the response is?

19 **A. Yes.**

20 Q. To the -- are you aware of any further
21 communication -- strike that.

22 In conducting this Integrated Resource
23 Plan -- well, so take it a step back.

24 This RFP was issued after the Integrated
25 Resource Plan was filed; correct?

1 **A. Yes.**

2 Q. And the fact I believe was issued at the very
3 end of the discovery of this case; right?

4 **A. That -- yeah, that sounds about right.**

5 Q. So even insofar as the idea is, Look, if we
6 put a public RFP out, if some other utility in the
7 state might want to respond, that wouldn't
8 necessarily -- you would agree that given the timing
9 of that, that could not be evidence of an argument
10 that the utility actively engaged other -- that
11 Kentucky Power actively engaged other utilities in
12 doing things jointly? Would you agree, just by
13 virtue of the fact that it -- the IRP came after the
14 RFP?

15 **A. I would agree with that, yes.**

16 Q. Okay. And are you aware of any other section
17 in the RFP other than 5.2.1 that would purport to
18 indicate evidence of compliance with Section 8 2(c)
19 we were referring to earlier?

20 **A. I apologize, but I can't point to anything
21 right now.**

22 Q. Okay. Help me out here, Mr. West. You
23 participate in one form, either formally or
24 informally, in effectively all the cases that
25 Kentucky Power has in front of the Public Service

1 Commission; right?

2 **A. That's correct --**

3 Q. Okay.

4 **A. -- in some way or form.**

5 Q. Given the issuance of -- the timing of the
6 issuance of the RFP relative to the rate case and
7 this case, are you aware of in any case whether or
8 not Kentucky Power has been asked to provide the
9 responses to the RFP?

10 **A. Yes, I believe in the investigation case --**

11 Q. That's the --

12 **A. -- 2021-370.**

13 Q. And that's the wholly unrelated case that
14 Mr. Kurtz was asking you about earlier; correct?

15 **A. Yes, it is.**

16 Q. Okay. And you-all provided those in that
17 case; right?

18 **A. Yes, we did, in discovery, sir.**

19 MS. GLASS: On a confidential basis.

20 Q. Page 4 of those responses to intervenor's
21 comments, about halfway down the first paragraph,
22 let me know when you have that.

23 **A. Okay.**

24 Q. Okay. There's a sentence five lines down
25 that starts with "apart," the line and the sentence

1 starts with "apart"?

2 **A. Mm-hmm.**

3 Q. It says, Apart from the fact that the IRP
4 process is forward looking, KIUC's accusations about
5 the present state of Kentucky Power Service to its
6 customers and about the resources the company uses
7 to provide that service are simply not true.

8 The company through a combination of owned
9 and contracted resources, including its
10 contract-based membership in PJM Interconnection,
11 LLC, PJM, has the power supply resources necessary
12 to serve its customers' present and anticipated
13 needs much more than adequately and with a high
14 degree of reliability.

15 Do you see that?

16 **A. I do.**

17 Q. Okay. I want to make sure I have an
18 appreciation for what the assertion is there. I
19 understand -- let's just skip past "owned." I think
20 I adequately understand what owned is referring to
21 there in that it's the 50 percent undivided interest
22 in Mitchell and Big Sandy 1; correct?

23 **A. Mm-hmm, yes.**

24 Q. The contracted resources, this would have
25 been filed at the Commission in -- November the 3rd

1 of 2023.

2 **A. Okay.**

3 Q. Okay. When it says "contracted," since this
4 was filed in November of 2023, that would not
5 include the unit power agreement with Rockport,
6 correct?

7 **A. That's right.**

8 Q. Okay. In November of 2023, did you-all have
9 any formally contracted-for resources?

10 **A. Yes.**

11 Q. And what resources were those?

12 **A. Through the power coordination agreement, we**
13 **would have had, oh, there was a discovery response**
14 **Mr. Cmar, I think, was asking about that listed**
15 **them, one of the JI responses. The level of**
16 **capacity.**

17 **But for this -- and I'll refer to it as the**
18 **stub period. After the Rockport EPA expired until**
19 **the end of that current PJM delivery year, what I'm**
20 **calling the stub year, say '22-'23 and then '23-'24,**
21 **we were obtaining capacity from the power**
22 **coordination agreement, meaning our affiliates. And**
23 **then after that for two periods, two years, we have**
24 **bilateral contracts with third parties.**

25 Q. Okay.

1 MS. GLASS: Just for the record, that
2 response is Joint Intervenor's 2-34 that he's
3 referencing.

4 CHAIRMAN CHANDLER: Okay.

5 Q. So how much energy are -- is associated with
6 the capacity under the power coordination agreement?

7 **A. It's for capacity only.**

8 Q. Okay. That's different than the bilateral
9 contracts?

10 **A. No. It's not.**

11 Q. Okay.

12 **A. They're capacity only as well.**

13 Q. So you're only buying the capacity product as
14 defined by PJM, correct?

15 **A. That's my understanding, yes.**

16 Q. Okay. And then you're buying energy through
17 the day ahead or realtime markets in PJM; is that
18 right?

19 **A. Yes.**

20 Q. Okay.

21 **A. I mean, that's how this company has satisfied**
22 **its customers' requirements for decades, whether it**
23 **was part of PJM or it was part of a different power**
24 **pool, and it has benefitted the customers greatly in**
25 **that period of time.**

1 Q. Okay. So how -- how are those power plants
2 that you've bought capacity from serving customers'
3 needs?

4 **A. They are unit-specific resources that we have**
5 **contracted for that are submitted into PJM to**
6 **satisfy the PJM summer-peaking requirements, and**
7 **they serve to support the entire PJM footprint that**
8 **way. And I guess the beauty of it is that PJM is**
9 **summer-peaking, a company is winter-peaking, we only**
10 **have to supply enough capacity for that summer peak,**
11 **and we have access to the full resources of PJM to**
12 **satisfy our winter peak without paying for**
13 **additional capacity. And that's what has benefitted**
14 **customers for decades.**

15 Q. Okay. So you are buying the capacity but you
16 don't have access to the energy from those very
17 specific units, correct?

18 **A. No.**

19 Q. Okay.

20 **A. But we have it through the PJM energy market.**

21 Q. When the sentence says, "contract-based
22 membership in PJM," do you know what contract that's
23 referring to?

24 **A. Well, I don't know that I'd say I've seen it,**
25 **but it's always been described to me as we have a --**

1 **you know, we have a contractual relationship with**
2 **PJM as a member of PJM.**

3 Q. Okay. So insofar it's like a membership
4 agreement, that's what it's referring to?

5 **A. I --**

6 Q. Let me --

7 **A. I assume so that --**

8 Q. Let me withdrew that.

9 **A. Okay.**

10 Q. Let me just refuse any -- let me just ensure
11 that there's no miscommunication.

12 So I'd like to ask in a post-hearing data
13 request specific to the intent that it is used in
14 that response, when it says "contract-based
15 membership," what contract or contracts that is
16 specifically referring to.

17 **A. Okay.**

18 Q. You've participated in at least one, I think
19 maybe two, Kentucky Power rate cases, correct?

20 **A. Yes.**

21 Q. Okay.

22 **A. Two.**

23 Q. And in each of those cases as part of the
24 revenue requirement, Kentucky Power has sought, to
25 some degree, the cost recovery for executive

1 compensation, correct?

2 **A. Yes.**

3 Q. Okay. Are you aware that -- and that's for
4 both at the AEP level and the allocated -- or both
5 at the Kentucky Power level and the allocated
6 compensation from the AEP parent company, correct?

7 **A. Yes.**

8 Q. Okay. Are you aware that the AEP executive
9 compensation methodology includes provisions related
10 to the type of capacity built and owned by AEP and
11 its affiliates?

12 **A. I am not aware of that.**

13 Q. So it would be a surprise to you to know that
14 10 percent of the executive compensation at AEP,
15 from 2023 to 2025, is based off the megawatts of
16 carbon-free emitting generation?

17 **A. As I've said, I'm not aware of how their
18 compensation is calculated.**

19 Q. Well, I'm not asking you how they're -- I'm
20 asking are you aware --

21 **A. I am not --**

22 Q. -- that that is a factor in how their
23 compensation is calculated?

24 **A. I am not aware.**

25 Q. Okay. So is there anybody that you're aware

1 of that is here today that would have an
2 appreciation for the degree to which the executive
3 compensation considerations are taken into account
4 in doing Integrated Resource Plan insofar as those
5 -- that methodology is based in part on a megawatt
6 basis of a type of generation?

7 **A. Well, I think I can answer that. I'm not**
8 **sure what discovery response it was. I believe it**
9 **was KIUC's question that we answered that that had**
10 **no bearing. Whether it existed or not, it had no**
11 **bearing on this IRP. And in no discussion that I**
12 **have ever had did an executive at AEP get on the**
13 **phone and say, you need to do this because I need to**
14 **get paid. That never happened.**

15 Q. That you're aware of?

16 **A. That I'm aware of.**

17 Q. I'm saying, are you speaking for yourself --

18 **A. Yes.**

19 Q. -- in that regard?

20 **A. Yeah. In every call that I was on, it never**
21 **happened.**

22 Q. So does that happen with -- for instance, on
23 the other side, just so I have an appreciation
24 there, there are three weights: Earnings per share,
25 total shareholder return of AEP versus a peer group,

1 and carbon-free generation capacity additions.

2 You in your current position, in finance --
3 on the finance side, have you had -- have you had
4 conversations about Kentucky Power's contribution to
5 EPS, for instance, and your-all's individual
6 earnings between quarters and years?

7 **A. Oh, yes.**

8 Q. Okay. So that part, at least on that side,
9 insofar as it is one of the things that goes into
10 executive compensation, you do have -- you have had
11 conversations about earnings and earnings per share?

12 **A. That is correct.**

13 Q. Okay.

14 **A. Yes.**

15 Q. How about the total shareholder return? Is
16 that something that in your daily job your
17 implicated or your work is implicated insofar as
18 it's a consideration for the executive compensation
19 to AEP?

20 **A. No, it's not. It's really around, you know,
21 performance month to month, quarter to quarter,
22 what's our current earnings per share, those kind of
23 things.**

24 Q. Okay. So -- just so I have an appreciation.
25 Insofar as those are the three things that are taken

1 into account, it's only EPS that you think are
2 implicated by your-all's individual decision making
3 and the directions that you get from AEP?

4 **A. That's all that I've been involved in.**

5 Q. Okay. And then finally on Mitchell, and I
6 know that -- well, I took it from one of your
7 responses that you preference is that somebody else
8 can answer it better.

9 But if you-all can't use -- if your position
10 is that you can't use -- and I'm taking a lot of
11 things at face value, I'm just skipping past it for
12 the -- just trying to be considerate of time here.
13 If the concern is or the position is that you-all
14 can't use Mitchell as a capacity, I'm doing air
15 quotes here because capacity doesn't keep the lights
16 on, energy does, but capacity for that 2028-2029
17 delivery year because you-all are under the -- and,
18 again, I don't want to retread stuff that doesn't
19 really relate to this, but the presumption that
20 you're, quote, out of Mitchell at December 31 of
21 2028, okay, just taking that at face value. If that
22 is your-all's position, that it can't be used for
23 your-all's benefit as a capacity resource because
24 you only have it for the first seven months of the
25 delivery year, does that by definition mean that no

1 one gets the benefit of that capacity? Because even
2 if somebody gets it for the past -- for the last
3 five months of that delivery year, January,
4 February, March, May, that since they don't have it
5 for the first seven, that's a waste of 750, 800
6 megawatts of capacity for that delivery year?

7 **A. So it is my understanding that no one should**
8 **have the value after '28 of the capacity, is that --**
9 **was that part of your question?**

10 Q. I'm not -- what I'm trying to find out is
11 does anybody get the value of Mitchell, the
12 undivided half interest of Mitchell, as a capacity
13 resource in 2028.

14 So I understand from your responses that
15 you-all feel like you can't use it as your capacity;
16 you're going to have to procure your need --

17 **A. Right.**

18 Q. -- for the capacity for the whole year --

19 **A. Right.**

20 Q. -- because you only have it for the first
21 seven months.

22 **A. Right.**

23 Q. Well, somebody else is going to have it --
24 again, taking everything at face value.

25 **A. Right.**

1 Q. I don't necessarily agree with it, but taking
2 everything at face value, someone else is going to
3 have it but only for the last five months. They
4 can't use it for capacity, because they don't have
5 it for the first seven; you-all can't, apparently,
6 because you don't have it for the last five. Does
7 that mean that in the AEP zone, there is going to be
8 a capacity resource that exists at 700-something
9 megawatts in which no one gets to use for that
10 delivery year?

11 **A. I don't -- I don't think that would be**
12 **accurate because to the extent that -- and I'm just**
13 **thinking logically here. To the extent that we**
14 **would need to have something after '28 and the other**
15 **part-owner of Mitchell needs to have something**
16 **before '28, those two things could easily happen and**
17 **the resource could continue.**

18 Q. Yeah, I'm not -- it's not about the resource
19 continuing. It's about the inclusion of that in
20 somebody's FRR plan, in the FRR plan.

21 **A. Yeah, I'm saying that I think that we could**
22 **include it in our FRR plan.**

23 Q. Well, I find that to be distinguishable from
24 the responses that you've previously given, that you
25 can't count on it for that 28-29 delivery year, and

1 that you're going to have to -- well, let me -- one
2 second, Mr. West.

3 **A. Sure.**

4 Q. KIUC 3, would you look at that, which is
5 the --

6 **A. 1-3 or --**

7 Q. AG KIUC -- well, I'm sorry it's KIUC 3 here.

8 **A. Oh.**

9 Q. It's their exhibit. It's the packet of data
10 request responses you were handed earlier by
11 Mr. Kurtz --

12 **A. Yes.**

13 Q. -- that starts off with AG KIUC 1-43.

14 **A. Yes.**

15 Q. Let me know when you get there?

16 **A. Yes, I have it.**

17 Q. So the question is, Kentucky Power's
18 entitlement to Mitchell capacity runs through at
19 least December 31, 2028. Did the modeling assume
20 that replacement capacity for Mitchell would be
21 needed beginning January 1, 2029? Please explain
22 the response. The modeling assumed the replacement
23 capacity would be needed for the PJM planning year
24 2028-2029 that begins June 1, 2028.

25 Wouldn't that response indicate that Mitchell

1 was not used by the company as a capacity resource
2 in that June 1, 2028, to May 31st, 2029, delivery
3 year?

4 **A. That's what it seems to indicate.**

5 Q. Okay.

6 **A. I -- I would -- Witness Soller could probably**
7 **explain exactly how that modeling was done. That**
8 **was my understanding, how I was responding earlier.**

9 Q. What do you mean that's your understanding?
10 You were trying to respond consistent with --

11 **A. Well --**

12 Q. -- Mr. Haratym?

13 **A. Yes. I was trying to respond consistent with**
14 **that, yes.**

15 Q. So you think the company does not get any
16 value of Mitchell as a capacity resource from
17 June 1, 2028, to January -- to December 31, 2028?

18 **A. Well, I guess what I'm -- what I'm thinking,**
19 **I'm not sure exactly how it was modeled, I**
20 **understand what this says.**

21 **What I -- what my understanding was is that**
22 **even if we had the capacity through the end of 2028,**
23 **okay, let's just say we do, that don't get it**
24 **through the entire PJM planning year. All I'm**
25 **saying is there's a gap there that we have to fill**

1 **somehow. That's all I know.**

2 Q. So that may be true. On the next page,
3 KPSC 1-39, response A, explain -- or question A,
4 Explain why significant amounts of capacity
5 purchased 450 megawatts are required in 2028.

6 Response: Because the Mitchell plant capacity would
7 not be available for the entirety of the '28-29 PJM
8 delivery year, it was excluded from the portfolio
9 for that PJM planning year.

10 And then on the next page, you'll see
11 Item 51, Attachment one, page of one, this is the
12 capacity purchases, and you see that in 2028,
13 there's capacity purchase of \$15.668 million.

14 **A. Yeah, I see.**

15 Q. Okay.

16 **A. I see that.**

17 Q. So, again, if you -- if the company's
18 position is that you-all are modeling it -- that's
19 just what we're talking about right now -- modeling
20 it for being wholly unavailable as a capacity
21 resource for the company in that year, then that
22 would mean that that's not being used by the company
23 as a capacity resource and should be available,
24 assuming it's operating, to someone else as a
25 capacity resource.

1 And what I'm asking is: If it's available to
2 someone else as a capacity resource, do you believe
3 that that should be taken into account in offsetting
4 the capacity purchase that you-all are modeling?

5 **A. If that is the case, then, yes, I would**
6 **agree --**

7 Q. Okay.

8 **A. -- that there should be some value to that.**

9 Q. If somebody else is getting your-all's first
10 seven months, they shouldn't be getting it for free,
11 would you agree?

12 **A. I agree with you, yes.**

13 Q. Or maybe you-all should be able to buy
14 somebody else's, whoever it's going to -- and just
15 again, I'm taking a lot at face value here, but I'm
16 just talking about the distinction between real life
17 and what was modeled.

18 **A. Yeah.**

19 Q. You-all should be able to buy in the last
20 five months for something cheaper than full capacity
21 for a whole delivery year. Would you agree that
22 might be reasonable?

23 **A. It might be reasonable. It's hard to tell**
24 **that far out, but it might be reasonable, yes.**

25 Q. Okay. Would you agree that given the

1 assumption is that Mitchell is not just going to
2 disappear come December the 1st, 2028, that there
3 may be more reasonable ways to consider it in
4 modeling what the company's options are as it
5 relates to that '28-29 delivery year?

6 **A. There may be some other options, yes.**

7 Q. Okay. And do you know whether Mr. -- is it
8 Haratym?

9 **A. Haratym.**

10 Q. Haratym.

11 **A. Haratym.**

12 Q. It's like a 50/50. It was either --

13 **A. Yes.**

14 Q. Mr. Haratym doesn't work for Kentucky Power;
15 correct? He's not an employee of Kentucky Power?

16 **A. He's not. He's a consultant.**

17 Q. And he's not an employee of AEP or any of its
18 affiliate, correct?

19 **A. That is correct.**

20 Q. He's somebody on behalf of Kentucky Power
21 that was hired from Charles River Associates; right?

22 **A. Yes.**

23 Q. Okay.

24 **A. Yes.**

25 Q. And did you give direction to him in what to

1 do with Mitchell in that '28-29 delivery year?

2 **A. Not directly.**

3 Q. Okay.

4 **A. I mean, I'm sure I was in conversations**
5 **around it, just don't remember those specifically.**
6 **My main contact was Witness Soller throughout this**
7 **whole IRP process.**

8 So I'm sure I had discussions, you know, with
9 the IRP team, including Witness Soller, and then
10 that information was ultimately provided to CRA for
11 their modeling.

12 Q. Okay. Final question, and then I'll go back
13 here -- final line of questioning -- I'm never going
14 to limit myself, but the final line here.

15 To the questions asked you earlier, just
16 taken at face value, assume that I'm not lying to
17 you on this, final, and assume that 10 percent of
18 AEP's executive compensation is tied to increasing
19 the megawatts of zero or carbon-free emitting
20 resources, just assume that, was that taken into
21 consideration in creating the scoring rubric in
22 evaluating the RFP?

23 **A. No, it was not.**

24 Q. Did you directly create the scoring rubric to
25 evaluate the RFP?

1 **A. I didn't directly create it, but once it was**
2 **drafted, myself and Company President Wiseman had**
3 **reviewed it, and that's not on there, to my**
4 **knowledge, never was.**

5 Q. Okay. Who did create that scoring rubric
6 that you're aware of?

7 **A. It would have been in our commercial**
8 **operations group that is working with us on that**
9 **whole RFP process. I don't have a name specifically**
10 **who developed it.**

11 Q. Was Mr. Vaughn involved in that?

12 **A. Not to my knowledge, no.**

13 Q. Okay. And to be clear, finally, you've been
14 referring to the RFP, a RFP, but you clarified
15 earlier, I believe, there are at least three
16 separate requests for proposals, correct?

17 **A. That's right, there were three of them.**
18 **There was --**

19 Q. A thermal, a wind and solar and a battery,
20 correct?

21 **A. Yeah, thermal, renewable and storage.**

22 Q. Right. And I do -- actually I want to
23 clarify something.

24 The RFPs indicate -- and if you have a copy
25 of them, that's fine. I can bring it up if you need

1 to, but they say -- and I've just got this from your
2 website. But they require -- all three of them
3 require, quote, Projects must be interconnected to
4 PJM.

5 Does that sound right?

6 **A. Yes.**

7 Q. Does that indicate that they -- they must be
8 interconnected to PJM as like a -- they will be
9 interconnected to PJM, or is your anticipation that
10 they have to be in order to be accepted as a
11 conforming response?

12 **A. I think Witness Pearce could answer**
13 **definitively, but it was my recollection that they**
14 **had to have a cued position, that they could not be**
15 **like a speculative project.**

16 Q. And you believe Mr. Pearce?

17 **A. I believe Mr. Pearce.**

18 Q. And the reason I ask is that they do require
19 to have a cue position, but what is not clear is
20 whether or not they already have -- whether the must
21 be interconnected refers to will be, shall be
22 eventually, or whether it's a prerequisite they
23 already have to be interconnected.

24 Does that make sense?

25 **A. It does make sense. I mean, I think it was**

1 **they needed to have their application for the cued**
2 **positions submitted. Again, Dr. Pearce would be**
3 **able to answer that.**

4 Q. Okay. And then just ask you, and you can
5 kick it to Mr. Pearce, they also have to have a
6 completed SIS, a system impact study, that remains
7 active in the PJM cue. Does that sound right?

8 **A. Yes, that sounds right.**

9 Q. And so would that indicate to you that they
10 could still be a -- they could still be a possible
11 resource but not necessarily a connected and
12 operating resource?

13 **A. I'm not sure about that.**

14 Q. I'm trying to ask it this way, Mr. West.

15 **A. Okay.**

16 Q. Of those three, all of them have almost
17 identical language in this regard. Was it the
18 intent to include it this way in the RFP so that
19 only interconnected, you know, with a signed
20 interconnection agreement resources met the
21 threshold for being included, or could resources
22 that were not yet built or not yet completely built
23 and connected compete in the resources or compete in
24 the RFPs?

25 **A. I honestly don't know the answer to that.**

1 Q. Okay.

2 **A. I don't want to waste your time . I think**
3 **Dr. Pearce would be able to answer that.**

4 CHAIRMAN CHANDLER: Ms. Glass?

5 MS. GLASS: I do have just have a couple of
6 redirect questions.

7 REDIRECT EXAMINATION

8 BY MS. GLASS:

9 Q. So, Mr. West, when the Chairman was
10 questioning you about the IRP regulation and
11 specifically Section 8-2(c) of that regulation, do
12 you recall your discussion?

13 **A. Yes.**

14 Q. Would you agree that Mr. Soller would be the
15 best witness to discuss how the IRP took that
16 particular section of the IRP regulation into
17 account in how it complied with that regulation?

18 **A. I would agree with that, yes.**

19 Q. And Mr. Soller is the resources planning
20 manager of APSE and had direct involvement, heavy
21 direct involvement, in the preparation of the IRP;
22 correct?

23 **A. Yes, that's correct.**

24 Q. Okay. And as far as the discussion of how
25 Mitchell is reflected in Kentucky Power's FRR plan,

1 would you agree that Mr. Vaughn or Dr. Pearce would
2 be the better witnesses to discuss that information?

3 **A. Yes. They can certainly clarify and correct**
4 **anything that I have misstated.**

5 Q. Okay. I mean, would you agree that they have
6 more knowledge on those subjects than --

7 **A. Yes, they do.**

8 Q. -- perhaps you do?

9 **A. Yes, they do.**

10 Q. And finally, going all the way back to when
11 Mr. Kurtz was cross-examining you, he was
12 cross-examining, I think, generally about the kind
13 of readiness of the Big Sandy site for a generation
14 being cited there just generically, and he talked
15 about a transmission already being there, a gas line
16 already being there.

17 And you had stated that we don't have
18 interconnection there. And I was wondering if you
19 could clarify what you meant by that?

20 **A. Sure. We would -- we would have to file**
21 **another application for interconnection with PJM.**

22 Q. And then is it your understanding that
23 currently that would be a multi-year process?

24 **A. Yes, a multi-year process.**

25 MS. GLASS: That's all I have. Thank you.

1 CHAIRMAN CHANDLER: Anything else for this
2 witness? Thank you very much, Mr. West.

3 MS. GLASS: May Mr. West be excused from the
4 hearing?

5 CHAIRMAN CHANDLER: Is there a
6 particularly -- of all the -- to be just -- and I'm
7 not being mean to Mr. West, but of all the
8 witnesses, I think that Mr. West, being the person
9 on the ground, for lack of a better term, I think
10 I'd like Mr. West to stay unless there's a
11 compelling reason for him to be excused.

12 MS. GLASS: No, there's not.

13 CHAIRMAN CHANDLER: Okay. Thank you.

14 MR. VAN ZYL: First time for everything,
15 Mr. Chairman.

16 CHAIRMAN CHANDLER: Would you like to call
17 your next witness?

18 MS. GLASS: Yes. Kentucky Power calls Reid
19 Newman. He'll be presented by Mr. Gish.

20 CHAIRMAN CHANDLER: Please raise your right
21 hand. Do you swear or affirm that the testimony
22 you're about to give is true and correct under
23 penalty of perjury?

24 THE WITNESS: I do.

25 CHAIRMAN CHANDLER: All right. Please state

1 your name and address for the record and have a
2 seat.

3 THE WITNESS: My name is Reid Newman. My
4 business address is One Riverside Plaza, Columbus,
5 Ohio.

6 CHAIRMAN CHANDLER: Mr. Gish.

7 MR. GISH: Thank you, Mr. Chairman.

8 REID NEWMAN, called by Kentucky Power
9 Company, having been first being duly sworn,
10 testified as follows:

11 DIRECT EXAMINATION

12 BY MR. GISH:

13 Q. Mr. Newman, could you please state your job
14 title for the record?

15 **A. Senior economist for AEP Service Corporation.**

16 Q. Thank you.

17 And were you involved in the preparation of
18 the Integrated Resource Plan report?

19 **A. Yes.**

20 Q. And did you provide responses to data
21 requests in this matter?

22 **A. I did.**

23 Q. And based on the information that you knew at
24 the time, would you answer the same questions the
25 same way?

1 **A. I would.**

2 MR. GISH: Mr. Chairman, the witness is
3 available for cross-examination.

4 CHAIRMAN CHANDLER: Mr. West?

5 MR. WEST: No questions.

6 CHAIRMAN CHANDLER: Mr. Kurtz?

7 MR. KURTZ: No questions.

8 CHAIRMAN CHANDLER: Mr. Gary, Mr. Cmar,
9 please.

10 CROSS-EXAMINATION

11 BY MS. LOCHAN:

12 Q. Good afternoon, Mr. Newman. My name is Hema
13 Lochan. I represent joint intervenors. I'll be
14 asking you a few questions. If at any point I need
15 to speak up or talk slower, let me know.

16 One thing I wanted to clarify in your
17 discovery responses, some discovery responses have
18 Glenn Newman. I'm just verifying, that is you?

19 **A. It's still me, yes.**

20 Q. Great.

21 What was your role in the IRP process?

22 **A. My role was twofold. I participated heavily**
23 **in the short-term portion of the load forecasting**
24 **process that we document, and then also overseeing**
25 **discovery responses and the completion of the**

1 **section that we cover for the load forecast.**

2 Q. And when did you develop the load forecast?

3 **A. The load forecast was developed in the first**
4 **quarter of 2022.**

5 Q. And were you involved throughout the whole
6 process?

7 **A. Yes, I was.**

8 Q. Thank you so much. I just have a few
9 follow-up questions about the load forecast.

10 To your knowledge, the company did not
11 include an analysis of the IRA or Integrated
12 Resource -- sorry, not integrated resource, the
13 Inflation Reductions Act in regards to
14 electrification in its load forecasting, correct?

15 **A. That's correct.**

16 Q. And the same goes for DER?

17 **A. The same goes for DER?**

18 Q. As in the company did not include an analysis
19 of the IRA in regards to the DER in its load
20 forecasting?

21 **A. So we do implicitly incorporate a lot of DER**
22 **activity and capture that within our modeling**
23 **process, so I would say DER is included.**

24 Q. But the IRA wasn't included?

25 **A. Correct, yes.**

1 Q. And were you able to listen in on the
2 previous conversation with Mr. West?

3 **A. I did, yes.**

4 Q. Mr. West mentioned that the next IRP might be
5 filed -- or he thinks it'll be filed in 2026. Do
6 you agree with that timing?

7 **A. I wouldn't -- I would have to take his word
8 for that.**

9 Q. For the next IRP, do you know if the company
10 has plans to consider the IRA in its electrification
11 assumptions for its load forecast?

12 **A. Yes. Yes, those will be incorporated and
13 considered.**

14 Q. Thank you. Just a few more questions.

15 The company did not adjust the load forecast
16 for DSM programs, correct?

17 **A. The company did not adjust the load forecast
18 for new company-sponsored DSM programs. We do
19 capture the effects of ongoing DSM within our
20 modeling methodologies.**

21 Q. Are you aware that since the filing of this
22 IRP, the company has filed an application with this
23 Commission proposing new DSM programs?

24 **A. I am somewhat aware of that, yes.**

25 Q. To your knowledge, do you know if the company

1 will be including these programs in its next IRP
2 filing?

3 **A. As of right now, I do not know the level at**
4 **which those will be incorporated. But we work**
5 **closely with Kentucky Power in developing their load**
6 **forecast, and that will certainly be part of the**
7 **discussions that we have with them as to -- as to**
8 **which programs we will put in there.**

9 Q. Thank you.

10 MS. LOCHAN: Those are my questions.

11 CHAIRMAN CHANDLER: Ms. Koenig, any
12 questions? Mr. Bellamy?

13 MR. BELLAMY: We just have a couple
14 questions.

15 CROSS-EXAMINATION

16 BY MR. BELLAMY:

17 Q. I'm just looking at page -- do you have the
18 IRP report with you?

19 **A. I do.**

20 Q. You may not even need to reference it.

21 **A. Okay.**

22 Q. But I was looking at page 43 through 45 which
23 discussed the various load forecast scenarios.

24 **A. Okay.**

25 Q. I think you talked -- well, I guess first,

1 I'll let you find it.

2 **A. Okay.**

3 Q. It starts on page 43 there with the load
4 forecast scenarios. Is that a section that you
5 worked on, I'm assuming?

6 **A. Yes.**

7 Q. Okay. So you're familiar with that?

8 **A. Yes, sir.**

9 Q. On -- I believe it's page 44, there's kind of
10 a chart and there's six load forecast scenarios. I
11 might be miscounting. There's actually seven, I
12 guess.

13 **A. Yes.**

14 Q. So there's the energy requirements base, high
15 economic forecast, low economic forecast, energy
16 efficiencies to 2022, energy efficiencies extended,
17 no DSM, and then there's the weather extreme
18 forecast; is that correct?

19 **A. That's correct.**

20 Q. And then if you turn to page 45, the last
21 paragraph before the next section, it starts out
22 with all of these. It says: All of these
23 alternative scenarios fall within the boundaries of
24 the company's low and high economic scenarios. The
25 company's expectations are that any reasonable

1 scenario developed will fall within this range of
2 forecasts.

3 Are you familiar with how the load forecast
4 was then taken forward into the production cost
5 model, or I'm sorry, into the capacity expansion
6 modeling, the Aurora model?

7 **A. No, that would -- that would be a better**
8 **question for Witnesses Soller and --**

9 Q. Okay. So you don't know if these load
10 forecasts -- you kind of had three and say, you
11 know, it could be within this range. You had the
12 base, the high, and then the low and then the other
13 four kind of all were in between the high and the
14 low.

15 **A. I do know that the high and low economic**
16 **forecast, which is sort of the bound as you've**
17 **stated all of those scenarios, is taken into**
18 **consideration in those models and kind of used as**
19 **high and low options for that modeling, but that's**
20 **probably about as far as I can go with that.**

21 Q. Okay. So there were five scenarios, I
22 believe, that were modeled as part of the capacity
23 expansion step. Would you be able to say where
24 those high and low economic forecasts were included
25 in each of those scenarios -- or which scenario --

1 you know, which load forecast was included in which
2 scenario?

3 **A. I wouldn't be comfortable trying to address**
4 **that. I'd like to...**

5 Q. Who would be the proper witness to answer
6 that?

7 **A. I would -- I would probably ask Witness**
8 **Soller.**

9 Q. Okay. Just one quick follow-up.

10 I'm looking at page 36 of your -- or of the
11 IRP report. I'm honestly -- I was going to look at
12 page 43 also. Page 36 talks about manufacturing
13 energy sales at the top, and the second-to-the-last
14 sentence of that section, it says: Based on
15 information from customer service engineers, there
16 may be load added or subtracted from the model
17 results to reflect plant openings, closures, or load
18 adjustments.

19 And then again, on page 43, there's a section
20 talking about large customer changes, and it sort of
21 indicates something similar there.

22 I guess my question is, could you just kind
23 of describe that process where you're getting
24 information from the customer service engineers
25 regarding large customers or large manufacturers and

1 how you're incorporating that into the load
2 forecast?

3 **A. Sure. The customer service engineers at the**
4 **various operating companies prepare reports for us**
5 **on a quarterly basis that would help to inform us or**
6 **give us an idea of the projects that they have sort**
7 **of in the queue, if you will.**

8 **And then when we go to present the initial**
9 **load forecast, once we've completed that with**
10 **Kentucky Power, at that time we meet with those**
11 **individuals and Kentucky Power, and we make an**
12 **agreement on which large loads we have not already**
13 **incorporated just through the underlying economic**
14 **data that we incorporate in our models.**

15 **And to the extent that we have large loads**
16 **that are above and beyond what we feel like the**
17 **model has captured, we risk adjust those loads in**
18 **most occasions and incorporate those into the load**
19 **forecast.**

20 **Traditionally, those have been large**
21 **industrial loads. However, those have recently**
22 **started to take on the form of commercial loads and**
23 **crypto currency and data warehouse-type customers.**

24 **Q. Okay. Just as a follow-up, you said you kind**
25 **of get together and agree. I'm assuming you get**

1 together and talk about what's already included.
2 How do you make the determination as to whether or
3 not a particular new large load customer, you know,
4 is already captured in the general -- the more
5 general economic forecasting?

6 **A. Yeah. In the case of Kentucky Power, you**
7 **know, the general economic data is not great, and**
8 **our forecasts tend to show that in the lack of load**
9 **growth. So when we came upon a large commercial**
10 **customer, we felt like that that was certainly**
11 **outside the bounds of what our model was capturing.**
12 **So in this case, we felt like that that was a**
13 **customer that we needed to capture. And in talking**
14 **with Kentucky Power and their customer service**
15 **engineers, at that time they were comfortable enough**
16 **with the discussions with that customer to put them**
17 **into the load forecast.**

18 **So it's sort of that approach where we have**
19 **to think about, what does the economic model show**
20 **the load behaving like, and then assess whether**
21 **these new loads are above and beyond what that**
22 **economic growth is capturing.**

23 **Q. And the customer service engineers, you said**
24 **that they prepare these reports. How**
25 **forward-looking are they? How far out are these**

1 reports looking?

2 **A. Generally, they will go out two to three**
3 **years on occasion. But for the most part, it's**
4 **probably shorter than that.**

5 Q. So they might be approached by large
6 customers, you know, through I guess whatever
7 mechanism you have at Kentucky Power for customers
8 to approach those engineers, and it would typically
9 be, I guess, two to three years out or less, and so
10 they'll start talking to get an idea of when they
11 might come and what their load might be.

12 And then you mentioned kind of a risk
13 analysis -- or I can't remember the term you used,
14 but I guess you're potentially laying the
15 probability that that load won't come and then
16 potentially downgrading the load? Is that --

17 **A. That's -- that's correct. So just to be**
18 **clear, these loads that we're adding to the load**
19 **forecasts are loads that we have a -- that are**
20 **pretty far down the line as far as negotiations. We**
21 **have letters of agreement, we have assurances that**
22 **these customers intend to connect and take power.**

23 We don't include speculative load or loads
24 that are early on in the process, but there are,
25 just based on our historical observations and

1 **dealings with these load additions, we found that**
2 **these loads often don't come in exactly like they**
3 **claim they're going to come in, or they come in on a**
4 **different time frame than they say they are. And so**
5 **we found it prudent to risk adjust these loads**
6 **before incorporating them at their -- at their**
7 **stated levels.**

8 Q. And I understand why you would be hesitant to
9 include new large loads that -- in situations where
10 there aren't some assurance, but I know in some
11 other cases, and, you know, I don't want to bring in
12 every case, but I am interested in kind of your
13 perspective on this. You know, you're doing these
14 load forecasts, you know, trying to do planning out
15 10 or 15 or 20 years, depending on, you know, how
16 you're doing it. Is there any mechanism that you've
17 seen other utilities or load-forecasting experts use
18 to kind of capture the potential for that new large
19 customer, you know, five or ten years down the road?

20 And the answer may be no, but I was just
21 curious what your thoughts were on that, and if
22 you'd seen anything done to try to capture that.

23 **A. Yeah. I don't -- I know -- I know we are**
24 **being forced to think about loads further down the**
25 **line now, particularly with the nature of these**

1 **datacenter loads and things that are coming on. And**
2 **I know different utility companies address these new**
3 **loads differently.**

4 **I think that for the most part we do all**
5 **think of these new loads, you know, in terms of the**
6 **uncertainty around them and try to incorporate the**
7 **level of certainty to some degree. And I think it**
8 **-- in the few talks I've had, it's a very similar**
9 **process of considering what risks are around that**
10 **load.**

11 **I think the outlook's getting longer, but**
12 **it's also new, these types of loads, and so we're**
13 **continually developing and thinking about new ways**
14 **to think about how these loads are going to come on**
15 **and what the industry looks like for them and how**
16 **they're going to make their decisions connect or**
17 **expand.**

18 Q. I was just curious if there was any way -- I
19 recognize it would be hard if you -- you could never
20 predict, you know, in eight years if some customer
21 showed up that, you know, needs 300 megawatts, you
22 know, it would be kind of hard to predict that.

23 And I would just --

24 **A. Right.**

25 Q. And I guess the answer is that you're really

1 only looking at the ones that are more of a sure
2 thing at this point and kind of projecting them out
3 in the near future?

4 **A. Right. As we move along and we start to**
5 **incorporate these new loads into our history, and we**
6 **start to evaluate how these new loads relate to the**
7 **economic data and the data that we're trying to**
8 **relate to -- in our load forecast, I believe we will**
9 **begin to capture some of -- some of the differences**
10 **in how load is growing now compared to the economy**
11 **as opposed to before.**

12 Q. Thank you.

13 MR. BELLAMY: I don't have any other
14 questions.

15 CHAIRMAN CHANDLER: Thank you.

16 Any redirect for this witness, Mr. Gish?

17 MR. GISH: No, sir.

18 CHAIRMAN CHANDLER: Okay. You may step down.

19 MR. GISH: May he be excused?

20 CHAIRMAN CHANDLER: You may be excused.

21 MR. GISH: Thank you, Mr. Chairman.

22 CHAIRMAN CHANDLER: Would you like to call
23 your next witness?

24 MS. GLASS: Yes. Kentucky Power calls
25 Jeffrey Huber.

1 CHAIRMAN CHANDLER: Please raise your right
2 hand. Do you swear or affirm that the testimony
3 you're about to give is true and correct under
4 penalty of perjury?

5 THE WITNESS: Yes.

6 CHAIRMAN CHANDLER: Okay. Please have a
7 seat.

8 Please state your name and address for the
9 record.

10 THE WITNESS: My name is Jeff Huber. My
11 business address is 1850 Parkway Place, Marietta,
12 Georgia.

13 CHAIRMAN CHANDLER: Counsel?

14 MS. GLASS: Thank you.

15 JEFFREY HUBER, called by Kentucky Power
16 Company, having been first being duly sworn,
17 testified as follows:

18 DIRECT EXAMINATION

19 BY MS. GLASS:

20 Q. Mr. Huber, can you please state your employer
21 and your business position?

22 **A. My employer is GDS Associates, and I'm a**
23 **principal at the firm.**

24 Q. Okay. Did you sponsor responses to data
25 requests and portions of Kentucky Power's IRP

1 report?

2 **A. Yes.**

3 Q. And do you have any corrections to that
4 information?

5 **A. No.**

6 Q. Based on the information you knew at the
7 time, if you were asked those same questions today,
8 would the information you provided be the same?

9 **A. Yes.**

10 MS. GLASS: The witness is available for
11 cross-examination.

12 CHAIRMAN CHANDLER: Mr. West?

13 MR. WEST: No questions.

14 CHAIRMAN CHANDLER: Mr. Kurtz?

15 MR. KURTZ: No questions, Your Honor.

16 CHAIRMAN CHANDLER: Ms. Lochan, Mr. Cmar?

17 CROSS-EXAMINATION

18 BY MS. LOCHAN:

19 Q. Good afternoon, Mr. Huber. My name is Hema
20 Lochan, again, with the joint intervenors. I just
21 have a few questions for you.

22 Well, first and foremost, good afternoon.
23 What was your role in the preparation of the IRP?

24 **A. So my firm was tasked with providing the**
25 **energy efficiency inputs that would into the IRP**

1 **modeling.**

2 Q. And could you expand a little bit more how
3 you worked with the energy efficiency -- how you
4 used energy efficiency inputs?

5 **A. Sure. We did a benchmarking analysis. Given**
6 **timing of the needs of the IRP, we decided that was**
7 **going to be the most efficient approach. We are**
8 **conducting -- or we did conduct a market potential**
9 **study subsequent to that, but for the IRP, it relied**
10 **on a benchmark analysis of publically available data**
11 **that other utilities filed to the EIA, as well as**
12 **two other market potential studies that were done in**
13 **the region.**

14 Q. And the purpose of the benchmarking study was
15 to look at energy efficiency measures to determine
16 potential energy savings from these efficiency
17 programs?

18 **A. That's right. We wanted to look at what**
19 **other utilities that have had programs for several**
20 **years, what they have been able to achieve so that**
21 **those could be reasonable inputs into the IRP.**

22 Q. And then you used those inputs to identify, I
23 believe you called them bundles of energy efficiency
24 resources to be fed into the model?

25 **A. Yeah. The bundling was important because the**

1 IRP model needs the savings at an 8760 level, so we
2 needed to rely on those other studies that we had
3 done to give us some insight as to what might be in
4 -- make -- consist those bundles so we could apply
5 load shapes and get an 8760 output, 8760 being an
6 hourly output for the year.

7 Q. Thank you. The benchmarking analysis did not
8 look at potential savings from demand response
9 programs?

10 A. It did not. We were not tasked with doing
11 that.

12 Q. And the reason for that was because you were
13 not tasked for it?

14 A. It wasn't part of our scope.

15 Q. So just to tie that up, the benchmark
16 analysis does not speak to whether demand response
17 programs could increase energy savings?

18 A. Could increase -- generally, demand response
19 doesn't impact energy savings, but it doesn't impact
20 capacity savings -- or demand savings.

21 Q. Thank you. I have a few more questions about
22 the bundles that we just discussed. These bundles
23 contain different service lines?

24 A. Like, sectors? Customer sectors? Correct.
25 They do residential, commercial, and then a specific

1 **bundle for, you know, qualified.**

2 Q. Did you look at the cost of -- the cost over
3 service life of these different energy efficiency
4 measures?

5 **A. We provided -- usually the cost for**
6 **efficiency programs is incurred on a first-year**
7 **basis, but there are lifetime savings associated**
8 **with those savings, and we provided the full**
9 **lifetime impacts to the IRP team.**

10 Q. Could you explain what the -- what you meant
11 by "full lifetime impacts"?

12 **A. If you install a measure in one year, it has**
13 **a useful life. So let's say it has a useful life of**
14 **ten years, those savings will continue on for ten**
15 **years. And if you have a next-year programs, you**
16 **get new installations and those savings occur. So**
17 **they stack, they become cumulative at some point.**
18 **And we gave the full lifetime accumulative impacts.**

19 Q. And just for -- just for my understanding,
20 those -- all of those lifetime impacts were included
21 in the IRP analysis?

22 **A. It is my understanding. Witness Soller can**
23 **attest to that. I didn't want to be the only one**
24 **not to kick something to Witness Soller.**

25 Q. Sounds good.

1 MS. LOCHAN: Those are my questions. Thank
2 you.

3 THE WITNESS: Okay. Thanks.

4 CHAIRMAN CHANDLER: Counsel?

5 CROSS-EXAMINATION

6 BY MR. VAN ZYL:

7 Q. I think I may actually just have one or two
8 questions for you, which I think may be a record.

9 On page 83 of the IRP, you talked about the
10 benchmarking exercise you did and the potential
11 studies. He is telling me -- are those potential
12 studies, as pertaining to Kentucky Power,
13 individually or sort of more generally based on
14 other inputs from the market -- or other inputs from
15 AEP or other service groups?

16 **A. The potential studies that are referenced**
17 **here --**

18 Q. Yeah.

19 **A. -- are not Kentucky Power specific --**

20 Q. Okay.

21 **A. -- market potential studies. The Kentucky**
22 **Power study was not done in time for this IRP, so we**
23 **had to leverage studies done by GDS in neighboring**
24 **jurisdictions.**

25 Q. And were those neighboring jurisdictions, can

1 you be slightly more specifically just to --

2 **A. Another AEP company in a neighboring state.**

3 Q. Oh, okay. I see.

4 MR. VAN ZYL: I think that is actually the
5 only thing I wanted to clarify. Thank you, Chair.

6 CHAIRMAN CHANDLER: Any redirect for this
7 witness?

8 MS. GLASS: No, Your Honor.

9 CHAIRMAN CHANDLER: Thank you very much.

10 MS. GLASS: May Mr. Huber be excused?

11 CHAIRMAN CHANDLER: He may.

12 MS. GLASS: Thank you.

13 CHAIRMAN CHANDLER: Let's go ahead and get
14 started on Mr. Soller.

15 MS. GLASS: I saw you looking at the clock.
16 Does that mean we should wait to request a break?

17 CHAIRMAN CHANDLER: My preference is to break
18 at three if we can. Would you all like to take a
19 break now?

20 MR. GISH: I don't. I just thought
21 Mr. Soller, as we've picked up on, has received a
22 lot of referrals and is going to maybe be here for a
23 while, but that's not up to us.

24 CHAIRMAN CHANDLER: Yeah, let's go ahead and
25 get started with Mr. Soller.

1 MS. GLASS Okay.

2 CHAIRMAN CHANDLER: And then if we can take a
3 break at three, that will be fine.

4 MS. GLASS: Sure. Kentucky Power calls
5 Gregory Soller, and he'll be presented by
6 Mr. Garcia-Santana.

7 CHAIRMAN CHANDLER: Please raise your right
8 hand. Do you swear or affirm that the testimony
9 you're about to give is true and correct under
10 penalty of perjury?

11 THE WITNESS: I do.

12 CHAIRMAN CHANDLER: Please state your name
13 and address for the record.

14 THE WITNESS: My name is Gregory Soller,
15 address is 1 Riverside Plaza, Columbus, Ohio.

16 CHAIRMAN CHANDLER: Mr. Garcia-Santana,
17 please, at your convenience.

18 MR. GARCIA-SANTANA: Thank you, Your Honor.

19 CHAIRMAN CHANDLER: Take your time.

20 GREGORY SOLLER, called by Kentucky Power
21 Company, having been first being duly sworn,
22 testified as follows:

23 DIRECT EXAMINATION

24 BY MR. GARCIA-SANTANA:

25 Q. Mr. Soller, what's your employment, and in

1 what capacity were you involved in this case?

2 **A. I'm a resource planning manager performing**
3 **IRPs. I was working on behalf of Kentucky Power for**
4 **their IRP -- '22 IRP.**

5 Q. Okay. And your job title and employer?

6 **A. Resource planning manager with the**
7 **AEP Service Corp. working for Kentucky Power.**

8 Q. Okay. And in that capacity, did you provide
9 services to Kentucky Power to prepare this IRP that
10 was submitted in this dates?

11 **A. Correct, for the 2022 IRP, I was working for**
12 **Kentucky Power for their IRP.**

13 Q. And did you also provide responses to
14 discovery requests?

15 **A. I did.**

16 Q. Okay. Do you have any corrections to either
17 the discovery responses or to information in the IRP
18 as it was submitted at the time that it was
19 submitted?

20 **A. No.**

21 Q. If I were to ask you the same questions
22 today, are you going -- to reflect the information
23 in the IRP today, would your answers be
24 substantially the same?

25 **A. Yes.**

1 MR. GARCIA-SANTANA: Your Honor, the witness
2 is ready for cross-examination.

3 CHAIRMAN CHANDLER: Mr. West?

4 MR. WEST: No questions.

5 CHAIRMAN CHANDLER: Mr. Kurtz?

6 MR. KURTZ: Thank you.

7 CROSS-EXAMINATION

8 BY MR. KURTZ:

9 Q. Good afternoon, Mr. Soller.

10 **A. Good afternoon.**

11 Q. Just to confirm, you did not include any
12 transmission expense for the wind or solar resources
13 in this case, other than a \$19 per KW month
14 interconnection fee?

15 **A. Yeah. That's what I was going to refer to,
16 yes, sir, just the \$19 per KW month. We didn't --
17 no other expenses were assumed.**

18 Q. Actually I think it's \$19 per KW year.

19 **A. Yeah. I'd have to look, but we're
20 referencing the similar without giving the precise
21 number if we'll tolerate that, please.**

22 Q. So it's a very small number, for resources
23 \$2,100 for KW, wind and solar?

24 **A. It wasn't a high number as far as an adder
25 for sure.**

1 Q. Okay. Now, there is electric transmission
2 service already at the Big Sandy site.

3 **A. I -- I -- I think so. I have to believe so.**
4 **I mean, we've got a unit there that's operating.**

5 Q. And there was an 800 megawatt coal unit
6 there, Big Sandy, too, that was retired about a
7 decade ago?

8 **A. It was roughly a decade or so ago, yes, sir.**

9 Q. And also there's gas transmission there?

10 **A. As I understand, we've got a gas service**
11 **there, yes, sir.**

12 Q. Okay. Do you -- I want to -- can you --

13 MR. KURTZ: Can counsel give you KIUC
14 Exhibit 2?

15 MS. GLASS: Yes. Exhibit 2, okay.

16 **A. Exhibit 2, okay.**

17 Q. Okay. This is the approximate rate impacts
18 of the preferred plan?

19 **A. Yes.**

20 Q. Did you assist in the preparation of this
21 table 23?

22 **A. I did.**

23 Q. Okay. At the end of 2028, the -- we know
24 that energy from Mitchell ends; correct?

25 **A. Correct.**

1 Q. Okay. Now, beginning 1/1/29, what did you do
2 with respect to the Mitchell let's just say
3 depreciation expenses currently in base rates? Did
4 you back that out, or is that -- or was that still
5 included?

6 **A. I believe that the remaining depreciation for**
7 **the Mitchell remained in the -- in the financial**
8 **analysis for that purpose.**

9 Q. So this assumes that Kentucky Power will
10 continue to collect depreciation expense on Mitchell
11 beginning or -- continue even through 2029, 2030,
12 2031, even when the plant is no longer providing
13 service to Kentucky?

14 **A. For our financial modeling, yes, sir. That's**
15 **what we assumed for the financial analysis.**

16 Q. What about fixed O&M including labor?

17 **A. The fixed O&M including labor, I'm trying to**
18 **visualize the workbook we had as far as the cost. I**
19 **know we removed all the ongoing capital and other**
20 **things. Those were excluded for sure.**

21 I cannot specifically recall all of the
22 expenses that were assumed from 20- -- I'll say
23 January of '29 on. I just can't recall the specific
24 detail.

25 Q. All right. Just one last -- do you recall if

1 property taxes, West Virginia property taxes were
2 backed out or excluded?

3 **A. I cannot specifically recall off of that**
4 **workbook on the stand here today.**

5 Q. Okay. Do you have --

6 MR. KURTZ: Can counsel provide KIUC Hearing
7 Exhibit 3?

8 MS. GLASS: Yes.

9 Q. If you can turn to page 3 of that exhibit.

10 **A. Yes, sir.**

11 Q. Do you see the 2028 capacity purchase,
12 \$15.668 million?

13 **A. Yes, sir.**

14 Q. Over what period of time does that cover?

15 **A. That -- for the purposes of our IRP planning,**
16 **those are -- the year column is representative of a**
17 **PJM planning year, so that would have run from the**
18 **June of 2028 to May 31st of 2029, the '28-29**
19 **planning year.**

20 Q. Okay. So from June of 2028 to December of
21 28, you did not remove any Mitchell fixed costs from
22 the prior exhibit?

23 **A. I -- I don't believe we would have removed**
24 **the fixed costs through the end of '28.**

25 Q. Okay. So if -- so to the extent that the

1 company sought to recover a portion of the
2 15.668 million, at the same time it was already --
3 it was still recovering Mitchell cost and base
4 rates, would that be a double recovery in your
5 opinion?

6 MR. GARCIA-SANTANA: Objection, Your Honor.
7 It's outside the scope of the IRP.

8 MR. KURTZ: Well, I just wanted -- if it was
9 included in the bill impacts, that would be KIUC
10 Exhibit 2, and this is their document, KIUC
11 Exhibit 3.

12 It's a big number, Your Honor. It's -- it's
13 a large number, and I think it's good to know how
14 they modeled it.

15 CHAIRMAN CHANDLER: If he knows, I think it's
16 relevant to the table that was presented in the IRP.

17 MR. GARCIA-SANTANA: Thank you, Your Honor.

18 CHAIRMAN CHANDLER: Overruled. Thank you.

19 **A. Okay. So if I could clarify just to make**
20 **sure, were you asking in my opinion if I think that**
21 **was a double bill?**

22 Q. Let me -- no. Let's take it this way.

23 **A. Okay.**

24 Q. For modeling purposes, did you include a
25 portion of the 2028 capacity purchased and the

1 Mitchell fixed costs that are currently in base
2 rates?

3 A. Yeah. For modeling purposes, we would have
4 assumed all of these costs because they would have
5 had to have incur for the entire PJM planning year.
6 And that -- I think these are -- would be a proxy
7 based on the amount of market capacity that we
8 purchased and we had to cover the full year.

9 If there was additional capacity that was
10 covered in the fixed cost of Mitchell through the
11 end of '28, you know, our perspective when we
12 modeled was we wouldn't have been able to claim that
13 capacity in the PJM planning year because it didn't
14 cover the full planning year. So that would go
15 outside of the capacity obligations that we would
16 have had to claim, so that would have been the
17 conflict for us.

18 Q. Okay.

19 MR. KURTZ: Your Honor, I would like to have
20 another exhibit and mark it as KIUC Exhibit 4.

21 CHAIRMAN CHANDLER: Identify this as KIUC
22 Exhibit 4. This is a number of however many pages.
23 These are resources accreditations, Mr. Kurtz?

24 MR. KURTZ: ELCC.

25 CHAIRMAN CHANDLER: Okay.

1 Q. Are you familiar with the term ELCC?

2 **A. Yes.**

3 Q. Okay. Did your scope of work include
4 modeling for that?

5 **A. Yes, sir, it did.**

6 Q. Okay. On page 1 of KIUC Exhibit 4, the
7 footnote says -- your footnote from this AEP
8 document, it reflects the ELCC results from PJM's
9 report delivery year 2024-2025.

10 What is the ELCC?

11 **A. ELCC is effective load carrying capability,
12 and it's a way for PJM to -- I'll try to be general
13 on this -- reflect how much of a particular resource
14 would contribute to their peak load obligations or
15 peak loads to serve.**

16 So in the context of renewables, which is
17 what this -- your exhibit is representing, the
18 challenge for PJM is to absorb all the renewables,
19 these intermittent resources, solar and wind that
20 aren't able to produce 24 hours a day but recognize
21 that they do add some capacity value to the overall
22 market.

23 Well, now they have to help through their own
24 loss of load studies analysis identify an effective
25 load carrying capability, which is the effective

1 **accredited capacity that would count towards their**
2 **total capacity needs.**

3 Q. Okay. So a generation resource that is more
4 reliable like nuclear would have a higher ELCC than
5 something like solar?

6 **A. Something that is -- is more controllable and**
7 **dispatched certainly would have a higher ELCC, yes,**
8 **sir.**

9 Q. Okay. Would you turn to page 2 of this.
10 This is simply the PJM document from which you made
11 the chart?

12 **A. Yes.**

13 Q. Okay. Page 3 is the most recent for the
14 2025-2026 ELCC?

15 **A. Yes, sir.**

16 Q. You're familiar with this new ELCC?

17 **A. Yes, sir.**

18 Q. Okay. So fixed tilt solar went from
19 33 percent to 9 percent; is that correct?

20 **A. In '25, yes, 33 -- two pages.**

21 Q. That's a 72 percent reduction?

22 **A. If that's the math of the difference between**
23 **9 and 33, I'll --**

24 Q. So --

25 **A. -- submit.**

1 Q. -- what PJM is saying now is if you bid into
2 their capacity market's 100 megawatts of fixed tilt
3 solar, you only get credit for 9 megawatts?

4 **A. For the fixed tilt for sure. And like you**
5 **said, even show here, you know, the tracking, the**
6 **single access tracking is at 14 percent; right?**

7 Q. Right. And so fixed -- the solar tracking
8 went from 50 percent ELCC to 14 percent, which is,
9 again, a 72 percent reduction?

10 **A. Yes.**

11 Q. So PJM is sending a price signal that these
12 solar products don't provide that much capacity
13 value?

14 **A. I think that's -- yes, I'll give you the idea**
15 **that they are adjusting how they're looking at the**
16 **market value of these resources.**

17 **So in addition to these class readings,**
18 **they're also looking at their -- their reserve**
19 **margin association. So there's also a relative**
20 **reduction on the associated forecast pool reserve**
21 **that these would also be associated with.**

22 Q. And with these ELCCs, you may not even want
23 to bid solar into the capacity auctions because then
24 you're subject to capacity performance penalties,
25 and you're getting so little capacity. That's an

1 aside, but...

2 **A. I -- I don't know -- I don't think I'm**
3 **comfortable --**

4 Q. I'll withdraw that.

5 **A. -- projecting.**

6 Q. Okay. Let's look at the bottom of page 3.
7 You see gas combined cycle is 79 percent?

8 **A. Yes, sir.**

9 Q. So PJM considers gas combined cycle a fairly
10 reliable generation resource?

11 **A. Yes, sir.**

12 Q. Okay. And then below that is a gas
13 combustion turbine at 62 percent?

14 **A. Yes.**

15 Q. Which is less than 79?

16 **A. Less than 79.**

17 Q. Okay. Okay. You answered some discovery
18 about modeling.

19 CHAIRMAN CHANDLER: Mr. Kurtz, you're -- I
20 have a -- I'd like to know after eight and a half
21 years, I have a feeling when you're about to get on
22 a roll.

23 MR. KURTZ: Oh.

24 CHAIRMAN CHANDLER: Let's -- I'm sorry to
25 interrupt you mid question.

1 MR. KURTZ: No, that's fine.

2 CHAIRMAN CHANDLER: Let's take a short
3 recess. We'll take about 15 minutes, and we'll come
4 back at 3:15.

5 MR. GARCIA SANTANA: Thank you, Your Honor.

6 (Off the record)

7 CHAIRMAN CHANDLER: Go back on the record.
8 Mr. Kurtz?

9 MR. KURTZ: Thank you, Your Honor.

10 Your Honor, at the break I handed out a
11 document that would be marked KIUC 5, if we could.

12 CHAIRMAN CHANDLER: Okay. Hang on one
13 second, Mr. Kurtz, so we have it on the audio
14 record.

15 The KIUC 5 will be the six-page document with
16 the first one being KPSC 1-38?

17 MR. KURTZ: Yes, sir.

18 CHAIRMAN CHANDLER: All right. Please
19 continue.

20 Q. Okay. Mr. Soller, a little background first.
21 The preferred plan has 500 megawatts of wind coming
22 on before the gas CT. If you have KIUC
23 Hearing Exhibit 1, could you turn to that, please?

24 **A. KIUC Hearing Exhibit --**

25 Q. Counsel will have to give it to you.

1 **A. I have to make sure I understand which one**
2 **Hearing Exhibit 1 is. I apologize.**

3 Q. Okay.

4 MS. GLASS: I have it. You have it. It
5 starts with the 7.5 preferred plan. Do you have
6 that one?

7 **A. Do I have that? I don't know that I have**
8 **that one.**

9 MS. GLASS: Okay.

10 **A. Okay. Thank you.**

11 Q. Okay. Will you turn to page 2 of that
12 hearing exhibit?

13 **A. Yes.**

14 Q. Okay. You have 500 megawatts of wind coming
15 online prior to the 480 megawatt CT; correct?

16 **A. That's correct.**

17 Q. Okay. And you also have solar coming online
18 700 megawatts before the gas CT; correct?

19 **A. That's correct.**

20 Q. Okay. Now, the characteristics of solar --
21 let's start with wind. This is page 95 of the IRP.

22 **A. Okay.**

23 Q. I'm just going to explain that the capital
24 costs of wind in 2026 on page 95 of the IRP is just
25 over \$2,000 a KW; is that correct?

1 **A. Yes.**

2 Q. And then the capital cost of utility scale
3 solar is on page 96 of the IRP, just under \$2,000 a
4 KW?

5 **A. That's correct.**

6 Q. Okay. But the good news is they produced
7 free energy essentially. I mean, there's no fuel
8 cost associated with them?

9 **A. That's correct.**

10 Q. And they get the heavy federal subsidies, at
11 least through like 2024?

12 **A. They get a 10-year series of PTCs.**

13 Q. Okay. Now, on the -- on page 87, this is a
14 description of combined cycle technology, and on
15 page 88 of the IRP, it has a capital cost it looks
16 like just over \$1700 of KW in 2029, the single
17 shaft, 41 megawatt unit?

18 **A. Right.**

19 Q. But it's got a low heat rate, 6,431?

20 **A. Right.**

21 Q. So it converts gas to energy very
22 efficiently, creating a low-cost energy?

23 **A. For -- for a gas resource, yes, sir.**

24 Q. Okay. And then the -- under what's called
25 the peaking alternatives, of course, would be a

1 simple cycle CT, which is just the front end of a
2 combined cycle --

3 **A. Yes.**

4 Q. -- without the heat recovery steam generator?

5 **A. Correct.**

6 Q. So it has a lower capital cost but a worse
7 higher heat rate, so it's less expensive to put in
8 service, but it produces more expensive energy?

9 **A. That's a fair characterization of it, yep.**

10 Q. Okay. Now, the IRP -- now I'm looking at
11 KIUC 5. You included a -- the 418 megawatt combined
12 cycle in your analysis?

13 **A. We ran a portfolio with that specifically,
14 yes, I signed, yes, sir.**

15 Q. Okay. Now, this exhibit, KIUC 5, the first
16 witness is Mr. Haratym, but I'm not going to -- he
17 used the word that the combined cycle portfolio
18 included a single 418 megawatt resource forced in
19 2029 to replace the 480 megawatt CT.

20 You essentially say the same thing in your
21 response on page 2, that the combined cycle resource
22 was forced in -- as a resource in 2029, and then on
23 page four of this, this is, again, a response from
24 you where you used the phrase in your response to A,
25 The combined cycle resource was swapped for a CT

1 resource.

2 So from that forced in or swapped,
3 essentially what you did was you kept everything the
4 same except you replaced the peaking CT with the
5 higher capital cost, lower fuel cost, combined
6 cycle; correct?

7 **A. In the combined cycle portfolio you're**
8 **asking --**

9 **Q. Yes.**

10 **A. -- specifically; right?**

11 **Correct. We -- we -- for all the portfolios**
12 **prior to our other stakeholder meeting, they were**
13 **all what we would call optimized, fully optimized.**
14 **We didn't start with any assumptions of resources in**
15 **there.**

16 **But from the stakeholder meeting, there was**
17 **interest to understand that because all of our**
18 **portfolios selected the CT as part of the least**
19 **costly optimized plan.**

20 **So to test that, we said we would -- we went**
21 **back and rather than leaving nothing forced in, we**
22 **assumed a starting point of a combined cycle in**
23 **2029. We saw all the plans were accepting a gas**
24 **resource in '29. That was common. That was a**
25 **common theme in all of our optimization analysis, is**

1 gas resources was preferred in '29 when it was first
2 available.

3 So because we didn't have anything
4 economically selected on its own, we forced it in in
5 '29 and then re-optimized the remaining balance of
6 that portfolio with the remaining resources
7 available.

8 Q. When you forced it in in 2029, you already
9 had 500 megawatts of wind and 700 megawatts of
10 solar, the free energy resources, so to speak, so
11 was it a surprise to you that the high capital cost,
12 low energy cost combined cycle did not perform well
13 when you already had a lot of high capital cost, low
14 energy cost resources?

15 A. I'm not sure I follow the question.

16 Q. Well, you had -- when you just swapped out
17 the combined cycle for the CT, you left in all of
18 the renewable resources?

19 A. No.

20 Q. You did not?

21 A. For -- for the optimization run, for the
22 combined cycle portfolio, we did not. Actually what
23 we did is we would have -- we would have started
24 from zero, just like we would have started from zero
25 for the reference case. The reference case

1 optimized by selecting the CT but also all of those
2 other renewables.

3 We started over except for we forced in -- we
4 started at zero plus the combined cycle, and then we
5 let the model select the balance of resources for
6 that portfolio.

7 Q. Okay. Well, I misunderstood, then.

8 A. Okay.

9 Q. So you started with a combined cycle, and
10 then you let the model select after that?

11 A. The rest of it.

12 Q. Okay.

13 A. Yes, sir.

14 Q. And when you did that, when you did that in
15 the scoring, which is KIUC 1, the last page we
16 looked at, the combined cycle resource portfolio was
17 just slightly less expensive, it still was slightly
18 less expensive than the preferred plan. This is
19 64.6 versus 64.8.

20 Even though you didn't select it, it was
21 slightly cheaper?

22 A. That's correct. When we looked at the entire
23 scorecard because, you know, there was a -- one of
24 the things we didn't do when we did the scorecard
25 and we tried to -- we wanted to try to impress this

1 with our stakeholders is we didn't really overvalue,
2 we didn't weight any of these metrics, one as higher
3 than the other, if you will.

4 So we wanted to look at the full spectrum of
5 metrics. Cost is important. It's important to the
6 rate payers, it's important to Kentucky Power, so
7 you're correct is there is a very slight benefit in
8 terms of the cost for the combined cycle.

9 In the -- in the terms of the other metrics,
10 when you start looking at the market exposures and
11 the resource diversity, the dispatchability, those
12 things, those start to add to our interpretation of
13 the results.

14 So that's -- that's what was leading to some
15 of this.

16 Q. I have not seen this, but is there in the
17 record in the combined cycle case when you started
18 fresh with the combined cycle at the bottom and then
19 built up from that, what were the renewables? What
20 renewable resources were chosen by the model when
21 you -- when you did that?

22 A. You can -- that's actually I believe in a
23 document. I'll see if I can find it for us. Page
24 159 of 1182 is a picture, a visual of that, and I
25 think the table of resources selected is in the

1 **appendix.**

2 Q. I don't have it in front of me. Can you just
3 read those --

4 **A. Certainly.**

5 Q. -- off, what kind of wind and what kind of
6 solar --

7 **A. Yeah.**

8 Q. -- did the model select?

9 **A. So I'll read it from -- it's in the appendix,
10 page 122 of 1182 for reference.**

11 **So the combined cycle started off at
12 418 megawatts in '29, and then the rest of the
13 optimization, we ended up with through '26 through
14 '28, we got five megawatts of wind, 3- --
15 700 megawatts of solar in -- by 2028. And then
16 there was -- we had a chunk of capacity purchased to
17 fill the -- fill the need in '28.**

18 Q. Okay. So compared to the preferred plan,
19 there's 200 megawatts less wind and 100 megawatts
20 less solar?

21 **A. Correct. I think in the preferred plan --
22 well, let's see. The preferred plan should have the
23 same amount of solar and wind as the combined cycle.**

24 Q. I thought -- wait a minute.

25 **A. I'm looking at -- the reference case or the**

1 **preferred plan?**

2 Q. The preferred plan.

3 **A. The preferred plan should have 500 megawatts**
4 **of wind through '28, 700 megawatts of solar.**

5 Q. That's the combined cycle case; correct?

6 **A. And -- and ultimately it's the preferred plan**
7 **as well.**

8 Q. But the preferred plan had 700 megawatts of
9 wind and 800 megawatts of solar?

10 **A. Oh, 7- - when you go out to 2030 and '31, we**
11 **get the additional 200 megawatts in the preferred**
12 **plan. I was saying prior to -- through 2028.**

13 Q. So --

14 **A. I'm sorry. I misunderstood.**

15 Q. Okay. So it's the same amount of wind and
16 solar, it just pushes out the wind and solar further
17 into the future? Because your preferred plan has
18 all the wind and solar going into service --

19 **A. If you'll -- maybe -- I feel like I maybe --**
20 **we might be crossing a couple things.**

21 Q. Okay.

22 **A. So maybe if I can return, and I think you**
23 **included it in your Exhibit 5, a detailed response**
24 **to KPSC 145.**

25 Q. Okay.

1 **A. And I'm hoping that -- that might be a bit**
2 **better to articulate. The preferred plan really is**
3 **the combined cycle portfolio, but I -- I -- I'd**
4 **suggested what it includes is the combustion turbine**
5 **resource as opposed to the combined cycle resources.**

6 **But it includes the other optimized resources**
7 **of renewables and storage, even capacity purchases**
8 **to that point, and we did that for a couple of**
9 **different reasons because of what the modeling**
10 **suggested to us.**

11 **So the short summary of this, to be concise**
12 **here, is that the preferred plan should have the**
13 **same number of renewable resources as the combined**
14 **cycle portfolio.**

15 **Q. Okay. So the combined cycle portfolio is**
16 **just a small amount less expensive than the**
17 **preferred plan or the CT, which -- correct?**

18 **A. Correct.**

19 **Q. Okay. And none of this really has any**
20 **bearing now because it doesn't model the capacity**
21 **factor limitations in the proposed CO2 rule. Your**
22 **modeling includes a CO2 cost between 10 and I think**
23 **like \$43 of megawatts, which the AEP did not do, it**
24 **included solar at the old ELCC, not the new ELCC, or**
25 **the more strenuous --**

1 **A. Well --**

2 Q. Regarding --

3 **A. Certainly -- certainly changes have happened**
4 **since we did this IRP --**

5 Q. Yeah.

6 **A. -- for sure.**

7 Q. Yeah.

8 **A. But I -- you know, I don't know how changes**
9 **would affect with these -- with these changes, if**
10 **it's directionally different than what the IRP did.**
11 **Especially, you know, we made our best attempt given**
12 **what we knew, right, with the carbon trying to**
13 **recognize that there's some pressures.**

14 Q. And there's always going to be changes from
15 when you start to when you have a hearing like this,
16 so that's unavoidable. If the commission were to
17 tell AEP through an order that when you come back
18 for CPCM or whatever, please don't come back with
19 out-of-state wind. You could put that as a
20 constraint in your modeling?

21 **A. With?**

22 Q. And just --

23 **A. Did you ask, Please come back with no**
24 **out-of-state wind, is that what you --**

25 Q. No out-of-state wind. You could model that?

1 **A. For the purposes of this analysis, we**
2 **effectively did, right?**

3 Q. No, no. I mean --

4 **A. We -- for the IRP.**

5 Q. No, no. When you come back for a CPCM --

6 **A. Oh.**

7 Q. -- to do something in light of where Mitchell
8 is or any other thing. You could model a scenario
9 that has a constraint, no out-of-state wind, just
10 exclude that as a resource.

11 **A. Hypothetically, you know, anything can be**
12 **modeled certainly, you know. We even modeled a no**
13 **wind solution or scenario or portfolio in this IRP;**
14 **right?**

15 **And what we saw on that was the model loaded**
16 **up a lot more solar, still selected the CT.**

17 Q. That I don't understand. The capital cost --
18 LG&E and KU have come in with their proposal --
19 different system, I understand -- where the combined
20 cycle is the preferred resource because the
21 additional capital cost is worth it because you get
22 so much lower cost energy.

23 So that's what I don't get when you load up
24 on so much renewables, free energy, but -- then you
25 want to balance it out with the peaking gas unit.

1 A. I'll offer some of the insights we saw during
2 the analysis. You know, one of the pieces of
3 feedback we got from the very first stakeholder
4 meeting was we wanted -- we were encouraged to do an
5 all-of-the-above approach. We didn't -- don't --
6 let's not exclude things that are reasonable for us
7 to consider to serve our needs and our customers.

8 So we did do that. Included in that were the
9 combined cycle alternatives, the combustion
10 turbines, the very smaller RICE units, arrows, the
11 solar and the wind, with all their tax credits, but
12 also the ability to lean on our PJM resource, more
13 for the -- to -- we have for energy; right?

14 But there's -- there's an opportunity as well
15 for some -- some capacity purchase to meet our
16 obligations. So we looked at -- we tried to look at
17 all of that.

18 We also put some boundaries on how much we
19 wanted to rely on a capacity purchase. We didn't
20 want to let the model just run away with that, so we
21 put some boundaries on the capacity purchase.

22 And what we found was that even with the
23 energy -- with the tax credits on that solar, along
24 with all the other resources available became that
25 part of that solution over even the combined cycle

1 **in that context.**

2 Q. What is the reliability situation in PJM?
3 What is PJM predicting for reliability going forward
4 with that system?

5 **A. For which system?**

6 Q. PJM.

7 **A. I don't actually know specifically the**
8 **numbers, so I would be troubled to even guess.**

9 Q. What is that report, the 3-R report or
10 something where you've got huge growth and demand
11 from data centers in AI, and then you've got the
12 dispatchable resources being retired.

13 2,000 megawatts were announced yesterday in
14 Illinois. Did you see that?

15 **A. I missed that recent announcement, no, sir,**
16 **but thank you.**

17 Q. But the dispatchable resources are not being
18 replaced with dispatchable resources, and PJM is
19 predicting reliability problems. You're aware of
20 that?

21 **A. I think all of the RTOs have a -- have a**
22 **heightened sense for the reliability for sure. PJM**
23 **is not immune to that.**

24 Q. I don't know how much this would weigh on
25 anybody's decision, but do you think PJM would

1 welcome Kentucky Power building a combined cycle
2 versus building more of the renewables?

3 **A. I don't know that I could project that. PJM**
4 **currently has been able to serve its energy. I**
5 **don't -- we don't see a lot of current immediate**
6 **pressures from an energy flow yet that I'm aware of,**
7 **but I can't speak specifically to how they would**
8 **view, you know, our CT versus a CC; right?**

9 Q. Yep. That's a fair point. Okay. Well,
10 thank you, Mr. Soller. Thank you for your
11 information.

12 MR. KURTZ: Thank you, Chairman.

13 CHAIRMAN CHANDLER: Mr. Kurtz, as it relates
14 to KIUC 4 and 5.

15 MR. KURTZ: I move their admission.

16 CHAIRMAN CHANDLER: Counsel?

17 MS. GLASS: No objection.

18 MR. GARCIA-SANTANA: We have no objection.

19 CHAIRMAN CHANDLER: All right. So moved.

20 KIUC 4, the resource accreditation
21 documentation, and then KIUC 5, the data requests
22 and documents starting at KPSC 1-38 in this case.

23 Ms. Koenig, any questions?

24 I'll go to that next, but any questions for
25 this witness? Okay.

1 Counsel?

2 MS. LEGGE: Thank you. Thank you,
3 Your Honor.

4 CROSS-EXAMINATION

5 BY MS. LEGGE:

6 Q. Hi. I'm Melissa Legge. I represent joint
7 intervenors in this proceeding. I have a couple
8 questions for you, but first I would like to follow
9 up just on Mr. Kurtz's line of questions.

10 He was just asking about KIUC Exhibit 4. I
11 assume you still have that handy?

12 **A. Mm-hmm.**

13 Q. Okay. So on page 3 of that exhibit, we're
14 looking at the ELCC class ratings for the 2025-26
15 base residual auction?

16 **A. Yes.**

17 Q. And down at the bottom of the list, you'll
18 see some resources. There's a gas combined cycle
19 listed there, gas combustion turbine, and those have
20 a 20 -- or excuse me, a 79 percent ELCC and a
21 62 percent ELCC.

22 If you turn to page 2, those resources are
23 not listed on the ELCC chart, the gas combustion
24 turbine and the gas CC.

25 **A. Correct.**

1 Q. And is that because before the 2025-26 base
2 residual auction year that PJM did not use ELCC for
3 those resources, to your knowledge?

4 **A. To my knowledge, yeah, they didn't apply a**
5 **thermal -- an ELCC to the thermal resources and at**
6 **the time that we did this IRP and what page 2 was**
7 **representing. So, you know, they're making a**
8 **transition like I commented. So, you know, in**
9 **addition to the shifts of ELCCs and that would now**
10 **include the thermal, there's also a shift in the**
11 **associated reserve margin obligations.**

12 Q. Do you know before this most recent year
13 where they did start applying ELCC for those
14 resources, PJM would have factored in certain
15 assumptions about the capacity performance of that
16 class of resources in UCAP; right?

17 **A. Correct.**

18 Q. And so there's a capacity factor assumption
19 that's baked into the UCAP.

20 Do you know -- I, you know, during the break
21 I was trying to find it in the IRP report or in the
22 discovery responses, and I couldn't track it down,
23 but do you happen to know what the capacity factor
24 assumptions for a CC and a CT would have been for
25 PJM in this same 2024-25 year?

1 **A. Yeah. Minor correction. It wouldn't have**
2 **been a capacity factor. That's a different metric;**
3 **right?**

4 Q. Right.

5 **A. So the accredited capacity for the**
6 **combined -- the gas resources, I can't -- I don't**
7 **know off the top of my head. I believe it would be**
8 **up in the -- probably the mid to upper 90th**
9 **percentile, though, in the relative terms.**

10 Q. So those have -- assumptions have also moved
11 downward --

12 **A. They did.**

13 Q. -- in the year --

14 **A. They did.**

15 Q. -- the past year?

16 Okay. Now, we've heard from -- a little bit
17 from Mr. West, and you shared earlier about your
18 role in the preparation of this IRP, so I'm just
19 wanting to follow up. Mr. West said that you had
20 heavy direct involvement in the preparation of the
21 IRP; is that accurate?

22 **A. Yes. I worked very closely with Mr. West**
23 **throughout this whole process.**

24 Q. And as between you and Mr. Haratym, what were
25 your respective roles?

1 A. So Kentucky Power, it was -- their IRP was
2 supported by not only myself but Mr. Haratym from
3 Charles River. Charles River was a consultant we
4 brought in to support our modeling efforts for this
5 particular IRP. So essentially Mr. Haratym and I
6 worked very closely together. As I worked to
7 provide the inputs of the analysis, Mr. Haratym
8 would be involved with all of our planning meetings
9 with Kentucky Power to make sure that we were all in
10 sync in terms of, you know, what are the objectives,
11 what are these metrics, how we're going to calculate
12 them.

13 And then when it came time for the analysis,
14 after we'd gotten all of that reconciled, you know,
15 about concurrence with Kentucky Power's insights,
16 our team would go back and actually do the analysis
17 with the computers and the Aurora modeling and all.

18 And that's where I worked very closely with
19 Mr. Haratym, looking at the initial analysis, making
20 sure things made sense. And then as we'd go through
21 that and interpret that, then he and I would go back
22 in and schedule time and work with Kentucky Power to
23 interpret that with them, help them understand what
24 the modeling is telling us.

25 Q. So if I have this correctly, as far as the

1 inputs into the Aurora modeling, that was largely a
2 determination by you and your team within AEP
3 Service Co.?

4 **A. No. I'd have to characterize that -- the --**
5 **there are inputs in terms of, you know, what are --**
6 **what are capital costs, what are the ongoing**
7 **capitals, what's our fixed O&M for existing**
8 **resources, what would be our limits. All those**
9 **conversations have to occur very tightly with**
10 **Kentucky Power. I would never do that. I can't do**
11 **that on my own. It's -- it's just not in my realm**
12 **to make those decisions.**

13 I need Kentucky Power in that conversation, I
14 need to be able to explain to them what the
15 information is, and then they can give me the
16 feedback with regards to, this makes sense, I
17 understand it, I need to understand more. We'll get
18 alignment on that, and that's the information that I
19 could then turn over. But I'll need Kentucky
20 Power's approval before I can do any of that.

21 Q. Okay. So in terms of, you know, the list of
22 supplies side, resource, additions, new ones, not
23 the existing resources, that would have been a --
24 your team would have come up with a list, gotten
25 approval from Kentucky Power and then --

1 **A. Correct.**

2 Q. -- sent it over to Mr. Haratym --

3 **A. That's right.**

4 Q. -- for filing?

5 **A. That's right.**

6 Q. That's all on that. Thank you.

7 Very briefly, I do want to follow up. Were
8 you listening earlier when my colleague, Ms. Lochan,
9 was asking questions of Mr. Huber about the costs of
10 the energy efficiency --

11 **A. Yes.**

12 Q. -- bundles?

13 And I believe Mr. Huber stated that the cost
14 of those bundles were modeled the year that they
15 were spent?

16 **A. That's correct, first year.**

17 Q. The first year that they were spent. And
18 then the bundles contain energy efficiency measures
19 with service lives that last for a number of years.

20 And is it accurate that the -- and Mr. Huber,
21 I believe, also stated that he provided that
22 information to your team for inputting into the
23 model.

24 Is it true that the savings were accounted
25 for in the modeling from those efficiency bundles

1 only to the end of the model period, only to the end
2 of the IRP period?

3 **A. No. It's --**

4 **Q. No?**

5 **A. -- it's not true.**

6 **Q. Okay.**

7 **A. So Witness Huber provided us a set of bundled**
8 **energy efficiency measures. So he had all that, it**
9 **was coordinated through his expertise. And it**
10 **provided a series of different bundles with**
11 **different lives of them, and those could be selected**
12 **at different points throughout the period.**

13 **If they were selected, then that -- the**
14 **entire savings, the energy savings, if it was a**
15 **10-year life, a 15- or 18-year life, that entire**
16 **18-year life of savings was actually captured within**
17 **our modeling. What we represented in the IRP was a**
18 **finite period relative to the rules for the 20-year**
19 **window, but the full life of any resource, including**
20 **the energy efficiency measures, but also even the**
21 **combustion turbines or even new solar or wind that**
22 **would have selected late in the period, that would**
23 **have also been financially evaluated through the**
24 **life of that -- the full life of that resource in**
25 **the financial modeling.**

1 Witness Haratym can provide more detail how
2 that actually was done, but that was actually
3 captured, the full savings, the full benefit, over
4 the entire life relative to the associated costs.

5 Q. But the costs, were they leveled over the
6 full year of service life of those efficiency
7 measures realized?

8 A. So effectively I would say that they were
9 leveled, but let me explain that, if you can.

10 So because we had the whole series of
11 savings, but when any -- so if it was -- I'm going
12 to say, for an example, there was a bundle that was
13 a 15-year life and it had an amount of savings every
14 -- every one of those 15 years of energy savings.
15 We've captured all of those energy savings. But in
16 terms of the cap- -- or it's not a capital cost, it
17 would have been an O&M cost that we realized, we
18 would have assigned that O&M cost at year one, but
19 it would have run through the financial model to be
20 applicable to the total energy savings for the full
21 15-year life.

22 So in that effect, it essentially is
23 levelized, if you will, because it's -- that's --
24 that cost is attributed to the total amount of
25 savings over the full 15 years.

1 Q. Even if it extends beyond the IRP planning
2 period?

3 **A. Because it did extend over the life, it was**
4 **not -- not in the matter -- I would say it was not**
5 **an even if. I would say because the way we did the**
6 **financial analysis on this, the -- all of the**
7 **savings for the energy efficiency was accounted for**
8 **for the associated cost for that 15 years, even when**
9 **the 15 years extended beyond 2037, you know, which**
10 **is what we represented in the IRP.**

11 **So Witness Haratym can provide more detail**
12 **how that was accounted for within the financial**
13 **modeling and the financial analysis, but we did**
14 **capture the full series of savings that Witness**
15 **Huber provided us for the associated cost of that**
16 **bundle.**

17 Q. Okay. At this point I have some questions
18 about the modeling of the renewable resources in the
19 IRP.

20 Now, just turning to the IRP page 94 -- I'll
21 get back into my computer here. So turning to
22 Section 5.4.1 about the modeling of the wind
23 resource, the second paragraph states that the wind
24 is made available in a configuration of 100
25 megawatts. So I take that to mean just in units of

1 100 --

2 **A. Correct.**

3 Q. -- for purpose of the modeling.

4 And that there are two pricing tiers. The
5 Tier 1 pricing, as I understand it, that's the
6 lowest cost wind resources, and then there's Tier 2,
7 which has higher cost assumptions. And it says here
8 that the maximum capacity -- annual capacity
9 addition is 100 megawatts for the lower cost Tier 1
10 sites, and 300 megawatts for Tier 2 sites. And then
11 the cumulative maximum is 1200 megawatts.

12 And do I understand that that's for both Tier
13 1 and Tier 2?

14 **A. The cumulative, yes.**

15 Q. The cumulative. Over -- and also cumulative
16 in terms of over the entire IRP modeling period?

17 **A. Through 2037, yes.**

18 Q. And then for solar, similarly there was a
19 Tier 1 and a Tier 2 for the solar resources and in a
20 configuration of 50 megawatts, but then the maximum
21 annual capacity for Tier 1 is 150 megawatts and for
22 Tier 2, it's 300 megawatts on an annual basis?

23 **A. Yes.**

24 Q. And cumulatively, 1800 megawatts. And,
25 again, that refers to both --

1 **A. Combined.**

2 Q. -- Tier 1 and Tier 2 combined?

3 **A. Tier 1 and 2 combined, and it would be**
4 **cumulative.**

5 Q. And also cumulative over the whole course of
6 the IRP period?

7 **A. You have that correct.**

8 Q. Okay. So in terms of the modeling runs, we
9 were talking earlier about the different portfolios,
10 and Exhibit E summarizes the results of the modeling
11 for the different portfolios; is that correct?

12 **A. Yeah.**

13 Q. And some of those modeling runs do actually
14 hit the maximums we were just discussing; is that
15 correct?

16 **A. I think so. I think wind, wind in particular**
17 **reached some of its peaks. I don't know if we**
18 **actually reached all the peaks on the solar, right?**

19 Q. I think -- well, let's look at the high --
20 the REHC portfolio in Exhibit 1.

21 **A. Okay.**

22 Q. Which I believe is on page 219.

23 **A. Yeah, I've got it.**

24 Q. Or that's where the exhibit starts.

25 And the HC -- that's the high cost --

1 **A. Yes.**

2 Q. -- portfolio?

3 **A. Yes.**

4 Q. And if you look down at the total under
5 wind --

6 **A. Yes.**

7 Q. -- it does reach that 1200 megawatts number?

8 **A. Yes.**

9 Q. And then if you go on the next page to the --

10 **A. ECR.**

11 Q. -- ECR portfolio, that's the Enhanced Carbon
12 Regulation portfolio?

13 **A. Correct.**

14 Q. And, again, you see 1200 megawatts for wind?

15 **A. Correct.**

16 Q. And some of the annual additions to -- let's
17 look at 2028. If you look at the solar column, that
18 says 150/300?

19 **A. Oh, I see. In '28 for the ECR portfolio?**

20 Q. Yes.

21 **A. Yes.**

22 Q. That's what it says?

23 **A. Yes, it is.**

24 Q. And those were the annual maximums we were
25 just discussing for the solar.

1 Sorry, I'm a bit hampered by the lack of a
2 stapler in our hotel office.

3 So when you were working on the IRP, did you
4 review comments from Commission Staff on the
5 previous IRP?

6 **A. Yes.**

7 Q. You did.

8 And if we turn now to page 113 of the IRP, I
9 know we're starting in the middle of things, but
10 this page comes from Section 5 response to
11 Commission Staff comments. I'll give you a minute
12 to get there.

13 **A. And that's 113 from the top numbering?**

14 Q. Yes.

15 **A. Okay. Yep.**

16 Q. So this appears to be from the response to
17 Staff comments. Let's look at Number 8 at the
18 bottom. So this bold text refers to the text of the
19 Staff comment; is that correct?

20 **A. Yes.**

21 Q. And it says: Kentucky Power should model
22 scenarios of different renewable constraints and no
23 constraints on the size or addition?

24 **A. Mm-hmm.**

25 Q. But as we were just discussing there, there

1 were constraints in the model on the size and
2 addition of renewables; is that correct?

3 **A. We did apply constraints on the renewables.**

4 Q. Okay. And in the response on the next page,
5 the last sentence, The company maintains the
6 benefits of running a model without constraints
7 would not provide any further insights, that's
8 correct?

9 **A. We had that comment. Were not generally
10 demonstrated as binding in the model.**

11 Q. The -- the -- and by not generally
12 demonstrating, that refers to the fact that in some
13 of the scenarios they did not hit the constraints?

14 **A. I mean, we could use the word "some" or
15 "most." I mean, like you pointed out, there were
16 two scenarios that reached the cumulative maximum on
17 the wind, there was -- was it one or two where we
18 had one annual period where it hit the constraints
19 on the different solars, and I don't know if that we
20 hit any -- well, the constraints on the wind as
21 well, potentially.**

22 So I think there were -- we had some points
23 of binding, I'll call it, and certainly on the
24 annual level. The wind was susceptible to reaching
25 its cumulative max in several of these portfolios,

1 **but not in all of these.**

2 Q. In those two portfolios, you don't know what
3 the model would have selected if those constraints
4 were not in place?

5 **A. I couldn't tell you. You're correct on that**
6 **one,**

7 Q. Okay.

8 **A. I don't know -- I think those were the ones**
9 **where we maxed out on the total amount of wind**
10 **available; right?**

11 Q. Yes.

12 **A. Yeah.**

13 Q. And the solar in some years.

14 **A. It -- there was a couple -- there was a**
15 **couple years on solar, yep.**

16 Q. I have some questions now about the cost
17 assumptions used for the new generation resources.

18 **A. Okay.**

19 Q. Those should also go to you, I'm guessing?

20 **A. Sure, yeah.**

21 Q. So on page 124 of the IRP, there's a figure
22 45.

23 **A. Okay.**

24 Q. 124 numbered at the top?

25 **A. Mm-hmm.**

1 Q. And this is the IRP scenario assumption
2 matrix. I understand it summarizes the -- the
3 assumptions that vary in each of the portfolios?

4 **A. Let me make sure we're talking at the right**
5 **levels here to be -- there's a couple of sections**
6 **here I want to make sure we're clear on it.**

7 Q. Okay.

8 **A. In Section 6, as we go through, which is --**
9 **is a big part of what we're talking about on the**
10 **scenario inputs, a lot of this is going to be on the**
11 **regional analysis first. And we -- you know,**
12 **Charles River did a regional analysis in the PJM to**
13 **understand different ELCC contributions, energy**
14 **pricing and all this. And then we also used that**
15 **regional analysis when we do the specific Kentucky**
16 **Power portfolio modeling as well.**

17 **But by and large, these would be the**
18 **variables that would change, both in the scenario,**
19 **but also the relative Kentucky Power portfolio.**

20 Q. So in terms of -- well, let's just compare
21 the reference and the reference high-cost scenario
22 in this chart. The base line assumptions for load,
23 natural gas and carbon are all the same between
24 those two -- those two portfolios?

25 **A. Yes.**

1 Q. And then what is different between those two
2 portfolios is slower decline under the column, New
3 Resource Cost?

4 **A. Correct.**

5 Q. And a slower decline means that the cost of
6 building new resources declined more slowly over
7 time in that specific scenario?

8 **A. That's right.**

9 Q. Were differing cost assumption used for all
10 new generation resources in that scenario?

11 **A. No. For that scenario, if you go back to**
12 **page 123, we'll describe it, we used the -- the --**
13 **is it the -- I can't remember the name of the**
14 **specific curve, the NREL curve for the capital cost**
15 **reductions, we applied that really for solar, wind,**
16 **and storage only. We left the other resources as**
17 **part of the base cost curve.**

18 Q. And on that, you know, now that we're on page
19 123, in that paragraph, it says, this is because
20 short-term shocks to the supply chain are not fully
21 resolved over the forecast period.

22 So as you're saying, the resources that were
23 subject to this were solar, wind, and storage?

24 **A. Mm-hmm.**

25 Q. But not the gas resources?

1 **A. Correct.**

2 Q. And not the Big Sandy extension-related
3 costs, those did not vary in this scenario?

4 **A. We -- no, we didn't adjust the Big Sandy
5 cost. I can talk more about that if you need.**

6 Q. Are costs for new gas resources also subject
7 to shocks to the supply chain?

8 **A. I think -- yes. I would answer yes. The
9 cost to the gas resources are subject to it. Our
10 premise for this particular one was what we have
11 been experiencing in the market in various
12 jurisdictions. Although we didn't have specific gas
13 costs, what we were seeing was much higher
14 escalations on the renewables than what maybe an
15 inflationary index might go.**

16 **So I think there were other market pressures
17 beyond just inflation indices that were being
18 imposed on -- that we were realizing on the
19 renewables. We weren't sure about that with the
20 thermals yet.**

21 Q. Have you looked into -- well, let me back up
22 for a second.

23 **Would, say, the cost of steel and the cost of
24 cement and concrete and the cost of construction
25 equipment, would those be costs that are relevant**

1 for the new gas construction cost inputs?

2 **A. Certainly. And as -- for that example**
3 **specifically, our base inflation index was a -- we**
4 **used a producer price index, which essentially**
5 **covers those different material costs increases that**
6 **are different -- usually a little bit higher,**
7 **certainly different than maybe a consumer price**
8 **index.**

9 So, you know, the producer price index, which
10 would be our normal inflationary index, is what our
11 base assumption was. But then when you apply that
12 but then you add the learning curves, we call them
13 learning curves, but that's essentially what the
14 technology cost declines in a real-dollar basis
15 would be, we got that -- we were informed through
16 that -- through NREL on those different curves
17 between a moderate and a conservative and an
18 aggressive type of a curve.

19 So, yes, to answer your question, the -- the
20 steel -- the commodity components of the resources
21 would certainly play a part into all of the
22 different resources.

23 Q. And have you looked at whether those types of
24 inputs have been subject to inflationary pressure
25 greater than the average inflationary pressure?

1 A. At the time we didn't have any information to
2 suggest that, you know, that a different PPI index
3 should be applied to solar versus wind versus the
4 thermals, from a PPI perspective, we didn't have any
5 insight to differentiate across those resources.

6 The concern on our side was really things
7 that were outside of a PPI reference, right. So
8 what are the other market pressures? And that's
9 really what was driving us to ask the question in
10 this particular sensitivity on the reference in the
11 high cost, because we were experiencing pressures in
12 the market, you know, I'm going to call them market
13 pressures, around the renewables, and the
14 competition for those renewables from all different
15 parties, we wanted to understand the sensitivity of
16 if these renewable costs didn't come in at the rates
17 we were expecting, and, in fact, they didn't decline
18 like some of the benchmark costs were suggesting,
19 what would that portfolio look like, that was the
20 premise for what we wanted to learn from that
21 sensitivity from Kentucky Power.

22 Q. But you didn't run a similar high-cost
23 scenario for the gas resources?

24 A. No.

25 Q. Were you here earlier -- this is on a

1 different topic.

2 Were you here earlier when my colleague,
3 Mr. Cmar, was asking Mr. West about the energy
4 community tax credit bonus?

5 **A. I recall that discussion.**

6 Q. And you're familiar with the energy community
7 tax credit bonus? I think he referred some
8 questions about it to you.

9 **A. Yeah. I'm happy to take questions around it.**
10 **I know that there are tax credit bonuses out there**
11 **at different levels. I may not know the specifics,**
12 **but I'm willing to entertain the dialog here.**

13 Q. And is it your understanding that the energy
14 community tax credit bonus is eligible for projects
15 that are located in communities that qualify as an
16 energy community?

17 **A. Right. As part of the IRA, the Inflation**
18 **Reduction Act, they have different tax credit**
19 **bonuses depending on, you know, different**
20 **thresholds, different qualifications of a project**
21 **and where it's located and, you know, how it's being**
22 **built and who's building it and various components,**
23 **yes.**

24 Q. And some of the relevant criteria for
25 determination of energy communities is coal closure,

1 if there's a coal mine or a coal plant closure in
2 that census tract or the neighboring census tract;
3 is that your understanding?

4 **A. I think so. I'm going to have to defer more**
5 **to you. I don't want to necessarily be the expert**
6 **to say that as yes or no specifically though.**

7 Q. But generally speaking --

8 **A. But something like that, yes.**

9 Q. Yeah. And there's also a metric -- we don't
10 have to get so specific, but there's also a metric
11 related to unemployment rates in that community; is
12 that correct?

13 **A. Okay.**

14 Q. Okay. You'll -- subject to check.

15 **A. Yeah.**

16 Q. And Mr. West was saying that the energy
17 community tax credit bonus was not modeled in the
18 IRP; that's correct?

19 **A. That's correct. We didn't assume an energy**
20 **tax credit -- energy community tax credit. We did**
21 **include the -- the -- the production tax credits,**
22 **you know, assuming -- with some other -- I'm trying**
23 **to remember the terminology.**

24 **But we did include production tax credits.**
25 **We just didn't include several of those community**

1 **bonuses in -- in the generic resource assumptions.**

2 Q. And the -- specifically the energy community
3 bonus, it's up to 10 percent on top of the
4 production tax credits?

5 **A. I think that's right, yes.**

6 Q. Since then, you know, as part of your role in
7 -- at AP Service Co, have you looked into how much
8 of Kentucky Power's service territory might qualify
9 for the energy community bonus?

10 **A. I don't have -- I haven't looked into it**
11 **specifically, no. I would suspect that there are**
12 **areas that are certainly eligible if -- if the sites**
13 **were supportive of them.**

14 Q. Would you say that's relevant to the resource
15 planning, whether or not a resource might be
16 eligible for that bonus?

17 **A. I would -- it would -- it would be**
18 **challenging for me to agree to that in terms of an**
19 **IRP, and the reason it's challenging for me to agree**
20 **to that comment is because we really can't assume a**
21 **specific location.**

22 **And I think if I did assume that specific**
23 **location and it didn't materialize, then I -- then I**
24 **serve the risk of misrepresenting what costs could**
25 **be because if the RFP that would go out didn't**

1 actually receive resources in those energy
2 communities that were ready to be developed to take
3 advantage of those extra bonuses, but yet I have an
4 IRP that was rooted in some of those assumptions,
5 then that starts to misrepresent what potentially is
6 reasonable.

7 Whereas in what we did was more of a generic
8 assumption, let's -- let's make sure we account for
9 some tax credits that some -- you know, useful tax
10 credits that are eligible for nearly all types of
11 projects.

12 And then should those types of projects come
13 in, then those further support what we identify in
14 the IRP, and it further benefits rate payers, both
15 in terms of cost because if we can get even lower
16 cost to rate payers for those resources.

17 But if it can be located within their
18 community, even better because now we have potential
19 resources and clean -- clean power being generated
20 for Kentucky Power, but we didn't do that as part of
21 the IRP because we needed to be much more generic in
22 nature.

23 Q. If you were able to assess, for example, that
24 a large percentage of the Kentucky Power footprint
25 would be eligible for a bonus, would it -- say in

1 the next IRP, would it be relevant to consider?

2 A. It would be a factor to consider, but I -- it
3 would have to be meshed up against what kind of
4 projects are actually being considered in the
5 communities as well.

6 We looked at -- when we started working with
7 Kentucky Power and we started looking at the limits
8 we talked about earlier, one of the things we had to
9 do was look at what projects are actually being
10 considered and we used the PJM cue, how much -- what
11 type of projects and how many projects are going
12 into that cue, and that informed us.

13 We saw that there were -- there was an
14 abundance of solar when we did this in the cue.
15 There was not a high level of wind, although there
16 was wind in the cue for PJM.

17 When you further parse down for the states
18 and you start to look at how much solar is in that
19 cue of the -- of the abundance in PJM, Kentucky
20 still had more solar resources than wind. I'm not
21 sure that Kentucky actually had wind in the cue, for
22 instance.

23 So for us to assume, for instance, if you had
24 an energy community bonus, but there's no wind in
25 the cue, how -- 10 percent of zero is still zero;

1 right?

2 So if I had a 10 percent community bonus on a
3 portion of solar, I would have to potentially --
4 maybe I could put a third tier in where we say maybe
5 a portion of that could be located, but then you
6 have to start looking at terrain, you have to start
7 looking at practicality of the sighting.

8 So there's other factors than just the
9 incentive bonuses that have to go into that
10 decision, and that adds the complication for
11 assumptions in an IRP.

12 Q. And just to clarify one thing I heard you
13 say: So the PTC and the ITC, both wind and solar
14 are -- I think there are different credits, but both
15 wind and solar are eligible for the energy community
16 bonus?

17 A. Both wind and solar, yes, as I understand it.

18 Q. Okay. Now I have some questions about how
19 distributed energy resources were modeled in the
20 IRP, and distributed energy resources were not
21 modeled as part of the economic selection of supply
22 side resources?

23 A. That's correct.

24 Q. How long have you been with AP just out of
25 curiosity?

1 **A. I think I'm around 19 years with AP.**

2 Q. A long time. So were you involved at all in
3 Kentucky Power Company's 2020 rate case in this
4 Commission?

5 **A. I was not, no.**

6 Q. You were not? Have you reviewed the order
7 from that -- from that case concerning net metering
8 tariffs?

9 **A. I did not review the order on that one**
10 **directly, no.**

11 Q. I do want to pull up that order because I do
12 think there's some -- there's a relevant passage to
13 the modeling of the supply side of DERs and supply
14 side resources. And my computer has gone to sleep
15 here.

16 MR. GARCIA-SANTANA: I'm sorry, Your Honor,
17 but I would like to highlight the objection that the
18 witness just indicated that he's not familiar with
19 that subject matter, so I think that lacks
20 foundation.

21 CHAIRMAN CHANDLER: I understand. I would
22 like to defer ruling on your objection until she
23 asks the specific questions, in which if you have a
24 further objection, I'll take it under consideration,
25 Mr. Garcia-Santana.

1 MR. GARCIA-SANTANA: Thank you, Your Honor.

2 Q. And I think my colleague has put this up on
3 the screen, and as I indicated, this is an order
4 from Case Number 2020-00174 from this Commission.
5 It's the -- related to the Kentucky Power general
6 rate case.

7 **A. Okay.**

8 Q. And this order is from May 2021, and as you
9 can see here, the first line here refers to the
10 tariff, NMS II.

11 So this order resolved the issues related to
12 the NMS II tariff. Do you know what NMS II tariff
13 refers to?

14 **A. I don't. I don't know, so...**

15 Q. You don't know what NMS tariff is? Is there
16 someone -- well, the testimony I think is relevant
17 to the modeling.

18 MR. GARCIA-SANTANA: I'm sorry, Your Honor,
19 what testimony?

20 Q. Sorry, excuse me. I misspoke.

21 The order -- the findings of the Commission
22 I'd like to highlight are relevant to the modeling
23 of supply side resources.

24 So if it's okay, I think I will just turn to
25 that position, and I won't ask you any questions

1 about that specific tariff, which you've said you
2 are not familiar with, but my understanding is that
3 this is the company's net metering tariff. They
4 refer to it as NMS II.

5 **A. Okay.**

6 Q. Now, if we could page 21 of the order, and
7 under the heading Principles for Compensation for
8 Eligible Customer-Generators. Are you familiar with
9 the term customer-generators?

10 **A. I can infer, maybe customer-sided generation,**
11 **meaning customer-owned and customer-installed**
12 **generation.**

13 Q. Customers that -- yes --

14 **A. That would install their own generation?**

15 Q. -- take service under the company's net
16 metering tariff?

17 **A. Okay.**

18 Q. And if you go about halfway down this next
19 paragraph under that heading, the sentence that
20 begins after footnote 67, While the Commission
21 declined in the January 13, 2021, order to adopt a
22 recommendation for a separate proceeding to
23 determine a NEM rate methodology, the Commission
24 concludes that many of the best practices supported
25 by the intervenors are reasonable and should be

1 incorporated into NMS II for the reasons set forth
2 below.

3 MR. GARCIA-SANTANA: Yeah. And, Your Honor,
4 I would like to again highlight that there's no
5 context for the witness that has indicated already
6 that he's not familiar with the order and is not
7 familiar with the case.

8 CHAIRMAN CHANDLER: I don't --

9 MS. LEGGE: I --

10 MR. GARCIA-SANTANA: So the reference is --

11 CHAIRMAN CHANDLER: Yeah, I guess -- I guess
12 what I'm asking from counsel is if we could get to
13 the actual question of the witness, that may be
14 helpful to determine the relevancy related to
15 Mr. Garcia-Santana's objection.

16 MS. LEGGE: Certainly, Your Honor.

17 Q. Let's go right there. These principles are
18 as follows: Bullet point 1: Evaluate eligible
19 generating facilities as a utility system or a
20 supply side resource. Because eligible customer
21 generators and their eligible generating
22 facilities -- on to the next page -- can meet power
23 system needs, they should be compared with other
24 energy resources using consistent methods, processes
25 and assumptions.

1 Would you say generally speaking that the
2 IRA -- or that the IRP compares energy resources
3 that on their -- excuse me -- that compares energy
4 resources according to their availability to meet
5 system needs for the capacity obligation into the
6 future?

7 **A. Yeah, that's part of what the IRP does.**
8 **We're going to compare different resources, supply**
9 **and demand side, and we did that. We looked at**
10 **energy efficiency, as the example, for the demand**
11 **side that has an energy savings that we've -- we've**
12 **been able to get forecasted values from, understand**
13 **what is a reasonable estimate to assume, and we**
14 **incorporate that.**

15 **And I think what Witness Reid would have**
16 **commented on is for the purpose of -- I'm going to**
17 **call it customer sided, meaning a distributed**
18 **generated resource, we'll realize those benefits as**
19 **the customers would install that, and their load is**
20 **modified accordingly because when Reid's looking at**
21 **his load forecast, he's going to recognize some**
22 **downward pressure hopefully if they're installing**
23 **customer generation and have the effect on that.**

24 **So we'll see that as a -- as implicit load**
25 **forecast, and then the load forecast inherently**

1 would come down, and then that's what we would use
2 as our fundamental input to our IRP.

3 Q. Yeah. I do that you understand, but as a --
4 in terms of the principle of evaluating
5 customer-sided DERs as a supply side resource as
6 referred to in this Commission order, that was not
7 done in this IRP?

8 A. We didn't -- we didn't specifically have a
9 customer-side DER in this because we didn't have any
10 forecast or potential out there. I don't know how
11 they estimate whether it's 10 megawatts, 100
12 megawatts, 1,000 megawatts, nor do I know how much
13 the cost of those megawatts would be for us to model
14 at this point.

15 So I'm still -- we're still looking to figure
16 that out. You know, if we could figure something
17 out on how to properly forecast it so that it has,
18 you know, something valuable for us, then we
19 wouldn't necessarily be opposed, but I don't know
20 what that forecast would look like.

21 Q. Did you review the energy futures group
22 report that was attached to joint intervenors'
23 comments in this proceeding?

24 A. I did.

25 Q. You did. And did you review their

1 recommendation on this point? Do you recall them?

2 **A. Yeah. I can't remember all of the details**
3 **exactly. I know there were several references, and**
4 **they brought up some comparisons to I think some**
5 **Vermont and Rhode Island growths of some sort, if I**
6 **recall, for DERs maybe growth.**

7 **And I would, you know -- there were some**
8 **concerns I had with that, although in a general**
9 **sense, I think their recommendations, I didn't have**
10 **a major problem to continue to look at and consider.**

11 **There wasn't anything yet there that I could**
12 **see that I would have been available to adjust what**
13 **we did for this IRP.**

14 **Q. Did you -- did you recall their discussion of**
15 **the example from the Northern Indiana Public Service**
16 **Company, also known as NIPSCO?**

17 **A. There was a couple references I think on**
18 **NIPSCO on that. Can you help me which -- or where**
19 **at exactly?**

20 **Q. Yeah. Well, I can give you a page number if**
21 **that's helpful, but that -- the discussion was in**
22 **reference to NIPSCO modeling DER supply side bundles**
23 **specifically for their impact on distribution costs,**
24 **different distribution investments. Do you recall**
25 **that?**

1 **A. Yeah, I -- not the specific detail, but I do**
2 **recall that there was a discussion in there for me**
3 **to continue looking at.**

4 Q. And your consultant, Mr. Haratym, in this
5 case is from Charles River Associates?

6 **A. Yes.**

7 Q. Is that correct?

8 **A. Yes.**

9 Q. Does he look to -- well, actually that's
10 probably a better question for him. I'll save that
11 question for him. Okay.

12 That's all my questions there. The last
13 topic I did want to address is --

14 CHAIRMAN CHANDLER: Let's go ahead and take a
15 short recess, and we'll come back.

16 MS. LEGGE: Sure.

17 CHAIRMAN CHANDLER: We'll do a 10-minute
18 recess and we'll come back at 4:45.

19 MR. KURTZ: I was just going to say, the
20 expectation is this finishes tonight?

21 CHAIRMAN CHANDLER: Yes. I don't -- maybe
22 it's just a roomful of attorneys, but I feel like we
23 all work better with a deadline in front of us, and
24 so by saying we're not leaving until we're done, it
25 usually ends up being more efficient that way,

1 Mr. Kurtz.

2 All right. We will be in recess until 4:45.

3 (Off the record)

4 CHAIRMAN CHANDLER: We're back on the record
5 in Case Number 2023-00092. Counsel.

6 MS. LEGGE: Thank you, Your Honor.

7 Q. I have just one last topic I wanted to
8 address, but I'm wondering if it's for you or for
9 Mr. Haratym. I want to ask some questions about the
10 input workbook for the modeling and the Aurora
11 outputs as related to the production tax credit and
12 the investment tax credit.

13 Is that something that --

14 **A. I can attempt.**

15 Q. Okay.

16 **A. But I can pass to Mr. Haratym.**

17 Q. Okay. Sure. We'll start there. And I'm
18 going to ask a couple questions -- I think we will
19 need to go into a confidential session for this, so
20 I just want to ask a couple questions first just to
21 make sure.

22 So we were -- gosh, I'm trying to remember
23 who was talking about the PTC and ITC report. An
24 earlier witness was discussing the PTC and ITC, and
25 if I refer to them as PTC and ITC, you'll know I'm

1 referring to the production tax credit and
2 investment tax credit?

3 **A. Yes.**

4 Q. Now, I do want to turn to that energy futures
5 group report that was attached to the joint
6 intervenor comments that I mentioned earlier.

7 Do you happen to have that with you?

8 **A. I don't have the copy with me. I do have
9 some recollection of it.**

10 Q. Okay.

11 **A. So -- but we can talk specifically --**

12 Q. We'll -- I want to get into the confidential
13 version, so I don't want to put it up on the screen,
14 but would you be able to provide the confidential
15 version of that report so that we --

16 MS. GLASS: I don't have it.

17 MS. LEGGE: You don't have it.

18 MS. GLASS: No.

19 MS. LEGGE: Okay.

20 Q. So maybe we will need to put it up in a
21 minute, but I want to ask some questions about the
22 -- about how those tax incentives are modeled, and
23 the company provided the parties -- provided the
24 parties in discovery a copy of that input workbook I
25 was just referencing.

1 **A. Yes.**

2 Q. Is that correct?

3 **A. That's right.**

4 Q. And I believe that was Joint Intervenor's
5 1-62, Attachment 1.

6 **A. Right.**

7 Q. And that input workbook shows the application
8 of something called a tax gross-up for the PTC and
9 ITC --

10 **A. Right.**

11 Q. -- is that correct?

12 **A. Right.**

13 Q. And could you explain what a tax gross-up is?

14 **A. Broadly it's -- it's ensuring the full amount
15 of the tax credit is recognized, you know. Tax
16 credits come back to the company as a revenue. In
17 order to realize the full amount, we need to gross
18 it up by our tax amount, our tax rate.**

19 **So we essentially multiply, I believe, the
20 base tax credit by we call it a gross-up factor.
21 It's just derived from, you know, various state tax
22 rates to get the amount that we need to account for
23 in our modeling.**

24 Q. Okay. And I just want to make sure, before
25 we go into confidential, I'm sticking to --

1 **A. And I might be able to save you a little**
2 **confidential with me.**

3 Q. Yeah.

4 **A. That -- because I think that discussion more**
5 **specifically, especially with regards to the exhibit**
6 **you referenced, the 162 --**

7 Q. Yes.

8 **A. -- is going to be something that Witness**
9 **Haratym will be better suited to talk directly to**
10 **because those are going to come straight from the**
11 **Aurora model and what Charles River had to do to**
12 **transform inputs into a model input.**

13 Q. Okay. Great. I will save the rest of my
14 questions for him --

15 **A. Okay.**

16 Q. -- in that case.

17 **A. All right.**

18 Q. Thank you very much.

19 CHAIRMAN CHANDLER: I've seen it before,
20 Counsel, some really claims that somebody else can
21 answer that. I think -- oh, well.

22 Ms. Koenig already indicated she didn't have
23 any questions.

24 Staff, questions for this witness?

25 MR. BELLAMY: Yes, we do.

1 CROSS-EXAMINATION

2 BY MR. BELLAMY:

3 Q. I just want to talk just generally about the
4 initial selection of the supply side resources that
5 were discussed in the IRP and how those resources
6 were chosen, just the process that was involved and
7 who was involved.

8 So I guess were you -- were you involved in
9 the process of choosing the supply side resources
10 that would be modeled?

11 **A. I was -- I was involved in the overall**
12 **process, yes.**

13 Q. Okay. How did it work? How did it start
14 out, and then how did you get from, you know, where
15 you started to the point where you had the list of
16 resources with the various constraints that you were
17 going to include in the model?

18 **A. Yeah. The core of our screening exercise**
19 **would be rooted with EIA's assessment. EIA does a**
20 **pretty thorough assessment on screening on different**
21 **technologies and types of resources. It's rooted in**
22 **AEO's outlook, Sargent & Lundy does a lot of the**
23 **detailed work behind all of the different -- a whole**
24 **series of different types of resources.**

25 **And it covers, you know, not only nuclear but**

1 various types of gas resources, solar, wind, and --
2 and many other additional types.

3 We'll start from there, and then we'll start
4 to look at it in terms of what the costs are. We'll
5 do some forward-looking projections, try to screen
6 out -- screen it in terms of what -- what do these
7 resources start to look like for eligible tax
8 credits.

9 So we can start to distill down types of
10 resources that are going to be potentially selected,
11 you know, some estimates. Some of the larger
12 resources that may not fit into the screening --
13 maybe the first level of screening such as a coal
14 plant where there's a large, you know, 8-, \$9,000
15 just base capital cost, and then you've got some
16 other costs to build new coal plants and all.

17 Those might actually -- those would be an
18 example of we would look at those, but then
19 ultimately we would distill that out and maybe not
20 carry that forward into the actual offering into the
21 model.

22 Other resources like the combined cycles, we
23 have -- there's options in there with combined cycle
24 with a carbon sequestration option on it. There are
25 other resources in there for different nuclear types

1 of alternatives.

2 We want to bring in a mix of resources that
3 gives us different sizes of block -- we'll call them
4 block sizes, but different sizes. So different gas
5 resources can be as small as 20 megawatts. You can
6 go as high as the 2-by-1 combined cycle. It could
7 be over 1,000 megawatts.

8 We've got the different solar, the wind. Now
9 storage has started to come into the picture, and
10 now we're getting to even -- for this IRP, we only
11 had a four-hour storage, for instance, and I think
12 we're evolving to start adding more hours of
13 storage.

14 So we're going to look at all that, look at
15 different tax credits, start to get a sense of where
16 they line up in terms of cost and performance, and
17 then build that up as a series of resources for the
18 model to select from.

19 Q. All right. And who is "we"? Is it just
20 particularly your group or are there multiple groups
21 involved?

22 A. There's multiple groups. We use -- we
23 have -- the service corporation also has an
24 engineering organization where I get a lot of
25 technical input and support. They start to provide

1 me further insights to different performance,
2 different heat rates, different -- different
3 detailed engineering analysis into that that help
4 into the analysis.

5 So as we leverage their expertise into the
6 different technology types, we look at EIA's
7 information. Charles River, in the case of this
8 IRP, also offered additional insights into other
9 third-party resources that offered information for
10 us to consider when we started looking at some of
11 the longer duration storage, for instance.

12 We would bring all that together, and then we
13 want to talk to Kentucky Power. And this goes back
14 to an early conversation I had, is I really can't
15 ask Charles River in this process to initiate any
16 modeling until I've got a real review and
17 concurrence with Kentucky Power so they understand
18 the potential for different resource selections that
19 could come out of this model and why we're
20 suggesting them and where the value is and what's
21 the give and take of each of the resources. They
22 all have a purpose and the values component to them.

23 So we'll do some screening and we'll talk
24 that over with Kentucky Power, and then that's how
25 that decision is made and then we proceed to the

1 **modeling.**

2 Q. And before you take it to Kentucky Power, do
3 you-all have specific screening criteria or is it
4 more like an ad hoc screening where you're kind of
5 removing some things for qualitative reasons and
6 other things because they're duplicative? How is
7 that process?

8 **A. It'll be -- primarily it'll be -- there's a**
9 **cost base on it, and there's a type base that we're**
10 **trying to make sure we can cover in the model. We**
11 **want the model to have a diverse set. We don't want**
12 **it to only have gas, we don't want it to only have**
13 **nuclear, we don't want it to only have renewals. We**
14 **need a diverse set of resources.**

15 So we are looking for a -- what I will call a
16 more typical type of a resource that is cost
17 effective, that is representative of what we are
18 most likely going to be able to find in the market
19 to transact on.

20 So that's going to be a foundational -- maybe
21 that's a qualitative perspective of what we think is
22 going to -- we can transact on.

23 Q. Would you ask specific, like, written
24 criteria or --

25 **A. I don't have a specific written criteria for**

1 **this.**

2 Q. Okay.

3 **A. No, sir.**

4 Q. And when you take it to Kentucky Power, what
5 is that like? You take them, I guess, more
6 resources than were ultimately placed in the IRP and
7 discuss those resources with them, and then there's
8 more, I guess, selection or culling of the list at
9 that point?

10 **A. Yeah. The list, it -- by the time we would**
11 **take it to Kentucky Power, there will be some -- you**
12 **know, for instance, we may actually present to them**
13 **a coal option, a coal with carbon sequestration**
14 **option. For Kentucky Power, we may talk actively on**
15 **that and suggest, you know, that that is something**
16 **we may screen out of the model input because of both**
17 **size and complexity and does it fit within the**
18 **portfolio and where we want it to go at this point.**
19 **So we might talk with Kentucky Power in that context**
20 **for the different types of resources.**

21 **For some of the gas resources, as an example,**
22 **different -- there's many different configurations**
23 **of combined cycles we can consider. All right? We**
24 **can consider two and three combustion turbines with**
25 **different steam to heat rate -- heat recovery**

1 generators. You can consider the one-by-one like we
2 did here with Kentucky Power because of the sizing
3 component of this. The aeroderivatives, there's a
4 slew of different alternatives in aeroderivatives.
5 We need to find something that is representative of
6 the broad market.

7 So we aren't going to try to be
8 vendor-specific, but we want to try to look at
9 different resources that are representative, both in
10 terms of size and cost and performance. And that's
11 where we use our engineering team to help us cull
12 down maybe three or four different aeroderivatives
13 and just say, this particular aeroderivative is
14 representative, and we can work with that one.

15 And then we'll represent that -- we'll
16 present that and talk with Kentucky Power
17 specifically, as an example.

18 Q. And who makes the ultimate decision regarding
19 what resources are included in the modeling?

20 A. It still has to come back to Kentucky Power.
21 Kentucky Power is relying on me to advise, much like
22 we do in the analysis, to advise and represent and
23 to provide them some suggestions. But ultimately,
24 the decision has to come from Kentucky Power to
25 concur for us to proceed.

1 Q. Thank you.

2 Just with respect to a couple specific
3 resources, I know the natural gas combined cycle,
4 they were limited to a 1,083-megawatt unit and a
5 418-megawatt unit. I know as you mentioned there's
6 various sizes. You know, there's a recent -- I
7 think LG&E's was about 600 megawatts.

8 Was there a particular reason why you limited
9 it to the 1,083 and the 418 as opposed to kind of
10 considering a broader range of sizes?

11 **A. I think the primary reason for this**
12 **particular IRP was, that was well supported in terms**
13 **of public information. That was vetted and**
14 **validated in terms of cost and performance as a base**
15 **set of assumptions.**

16 **There are other configurations that could be**
17 **considered. You know, they used an H class**
18 **combustion turbine, for instance, on the combined**
19 **cycles, which is the more advanced, larger-sized**
20 **combustion turbines. There are other combustion**
21 **turbines similar to the combustion turbines we**
22 **selected for this IRP, which we call the F class,**
23 **which are a little bit smaller. Maybe not quite as**
24 **efficient as the H class, but they also offer more**
25 **modularity, and they also have the flexibility to**

1 get converted to a combined cycle configuration as
2 well.

3 So that may come in instead of a thousand
4 megawatts, if it's 2-by-1, where you have two
5 combustion turbines and a heat recovery -- a HRSG,
6 we'll call it, generator, that two and -- 2-on-1
7 system for an F class may come in in a 7- to
8 800-megawatt range as opposed to a thousand-megawatt
9 for a H class.

10 So we didn't include that. We still felt
11 like in this IRP we had the larger one, we had the
12 418 as a good indicative case -- or resource to
13 select for Kentucky Power's needs.

14 Q. Would it add significant time to the modeling
15 runs to, say, add a 600-megawatt natural gas
16 combined cycle and an 800-megawatt natural gas
17 combined cycle and kind of just see, you know, if
18 the model selects, you know, those various sizes,
19 how much time would that add to the modeling run?

20 A. If we're only adding one resource or two, you
21 know, a couple resources, it likely doesn't impact
22 the modeling, and I think Witness Haratym could
23 verify that. I think it's when we get into adding
24 dozens of resources we begin to get concerned.
25 That's when you can get into multiple days for the

1 run because the model's really got to go through
2 those permeations to make those decisions.

3 So, you know, we need to try to keep that
4 down to a manageable size, and that's -- that's a
5 motivation for us to do a prescreen before we put
6 everything into the model.

7 Q. Thank you.

8 With respect to the simple cycle combustion
9 turbines, there was a constraint of 720 megawatts, I
10 guess, total that the model was allowed to select.
11 What was the, I guess, thinking behind placing that
12 constraint on the model?

13 A. Broadly speaking, when we looked at the
14 capacity needs assessments, the company didn't need
15 -- it was going to have to rebuild its portfolio out
16 over into the future to the tune of about a thousand
17 megawatts as Big Sandy would run its course and so
18 forth. We wanted to make sure a diverse portfolio,
19 we didn't want to necessarily have a portfolio that
20 was single fuel, single type. There are -- there
21 is, we believe, benefit in diversity.

22 We didn't find the 720 to be binding. My
23 instinct is if the model had run up against that --
24 that limit, we might have had some additional
25 conversations with Kentucky Power to test that a bit

1 **further.**

2 Q. I just wanted you to take a look. Do you
3 have the IRP in front of you?

4 **A. I do.**

5 Q. I was looking at page 90 of the IRP, and it
6 is the section that's talking about the simple cycle
7 combustion turbines.

8 **A. Okay.**

9 Q. I was looking at Table 6, which is at the top
10 of page 90, and the VOM -- and that's the variable
11 operation maintenance cost --

12 **A. Yes.**

13 Q. -- is that correct?

14 That cost of -- is that \$0.62 per megawatt --
15 or per megawatt hour?

16 **A. That's -- yeah, for the variable O&M, yes.**

17 Q. Okay. And what -- there's a footnote there,
18 and it says: Start cost of 79 megawatt as applied
19 additional to VOM for natural gas combustion
20 turbine.

21 What is that referring to?

22 **A. Yeah. To clarify, VOM, that's variable O&M.**
23 **The simple cycle combustion turbine, that is going**
24 **to most likely be dispatched economically with more**
25 **frequent starts and stops, which impacts the cost of**

1 this. So there's a base variable O&M associated
2 with -- it's -- I don't think it's necessarily fuel,
3 it's other consumables, I'll call it, but then there
4 also needs to be a recognition of the start-up costs
5 each time this combustion turbine starts up. And we
6 don't want to deny that. We need to recognize that
7 as part of the whole economic selection of different
8 resources.

9 So in the model, we apply an assumption of
10 \$79 per megawatt for each time the unit is actually
11 started up so that we capture that cost as well. As
12 compared to something like a combined cycle that
13 probably doesn't cycle much, it's going to stay on
14 and run more. You're not going to see that kind of
15 frequency start-up costs, so you won't have that
16 kind of a factor on the combined cycle.

17 Q. I want to look at Table 7, which is on the
18 next page, page 91, and the variable operation and
19 maintenance expense for -- I apologize. That's the
20 aeroderivative.

21 A. Yeah.

22 Q. I wanted to go the natural gas combined
23 cycle, which is on page 88.

24 A. Yeah.

25 Q. And the variable operation and maintenance

1 expense for that is -- for the single shaft is 267
2 per megawatt hour?

3 **A. Yes.**

4 Q. I guess I was curious why the variable O&M
5 for the simple cycle was so low. Because the
6 natural gas combined cycle is more efficient;
7 correct?

8 **A. It would be more efficient on an MMBTu, yes.**

9 Q. So would you typically expect that the
10 variable costs for the natural gas -- or for the
11 simple cycle combustion turbine would be higher than
12 the variable costs for the natural gas combined
13 cycle?

14 **A. I can't think through the details of all the**
15 **components on -- behind the variable O&M on this for**
16 **the combined cycle. What I can say is that the**
17 **variable -- the combined cycle still is going to**
18 **incur some costs as you bring it up online. There**
19 **will be a, you know, higher amount of -- well, on a**
20 **per-megawatt-hour basis, I'm trying to think through**
21 **all the details of what's behind the variable O&M,**
22 **and I can't come up with the details on it.**

23 I know that when we -- on the combustion
24 turbine, we extract out those start-up costs, which
25 if you were to try to make some assumption of number

1 of starts and embed that into a variable O&M, you're
2 going to see a much higher -- \$4, most likely, in
3 the 4 or \$5 range is my best guess, initial guess.

4 CHAIRMAN CHANDLER: Just so I have an
5 appreciation for what you're saying, so you have
6 start-up costs. Start-up costs are just incurred
7 once regardless of the number of hours it runs;
8 right?

9 THE WITNESS: That's correct.

10 CHAIRMAN CHANDLER: Okay. Then you have
11 variable O&M. And do you intend on conveying those
12 as being variable based on the number of starts,
13 variable based on the number of hours, or a
14 combination of the two depending on the unit's
15 operation?

16 THE WITNESS: For the simple cycle, it would
17 not be variable based on the number of starts. The
18 value we had is the -- the 64, \$0.63 is not variable
19 based on the number of starts, it's based on the
20 energy production; right? So now we've got a larger
21 start-up cost that gets imbedded when it gets called
22 on for economic dispatch, so that's 79 times 240,
23 I'll say. So that's a big slug right off the bat.
24 And then you've got this \$0.63 per megawatt hour of
25 variable expenses, costs associated with the

1 production from that combustion turbine.

2 Comparatively on the combined cycle, we
3 wouldn't -- we aren't really -- we aren't imposing a
4 start-up cost because the combined cycle is going to
5 most likely get up and run and stay running more
6 consistently and more stable.

7 So there's really not a start-up cost to
8 incur to recognize, but we've got this variable cost
9 that's a little bit higher.

10 CHAIRMAN CHANDLER: So insofar as there are
11 recurring capital costs based on the number of
12 starts, that's reflected in the start-up cost?

13 THE WITNESS: You said recurring capital
14 cost, I'm sorry.

15 CHAIRMAN CHANDLER: Yeah. So the --

16 THE WITNESS: It's not a capital cost.

17 CHAIRMAN CHANDLER: Well, so that's what I'm
18 trying to ask about.

19 THE WITNESS: Okay.

20 CHAIRMAN CHANDLER: So as a general matter,
21 steam units have recurring capital overhauls on --
22 like, a coal plant might do eight-year cycle.

23 THE WITNESS: Yeah.

24 CHAIRMAN CHANDLER: Is that your
25 understanding?

1 THE WITNESS: There's -- yes. And the gas
2 plants will have turbine overhauls and, yes.

3 CHAIRMAN CHANDLER: And that's what I want to
4 ask about, is that turbine overhauls are not
5 necessarily a reflection of the number of years that
6 have been past but are a reflection of how the asset
7 has actually been utilized. The number of starts,
8 the run time, the throttling, whatever it is, it's
9 basically -- it's far more about, with the CT, the
10 operation of the facility than it is the time that's
11 passed since the last time you looked at, would you
12 agree?

13 THE WITNESS: Yeah, it would be more on the
14 run hours.

15 CHAIRMAN CHANDLER: And that -- well, that's
16 what I'm trying to have an appreciation for, is
17 where in the modeling is that reflection of the
18 recurring capital costs of an overhaul based on run
19 hours? If it's not in VOM, which it's not O&M, so
20 it's not VOM; right?

21 THE WITNESS: That's what I'm -- I'm not
22 precisely clear where we were going to be
23 encompassing the additional costs related to those
24 gas turbine overhauls, those maintenance costs that
25 have to be incurred at the -- on a run-hour basis,

1 right.

2 CHAIRMAN CHANDLER: Okay. Are you sure that
3 it's not in the start-up costs?

4 THE WITNESS: I'm not -- I'm not entirely
5 sure it's not. I don't think it is, but I'm not
6 entirely sure.

7 CHAIRMAN CHANDLER: Okay. So if it's not in
8 the start-up costs, it's not in the VOM, because
9 it's not an O&M expense, where would you have
10 included it?

11 THE WITNESS: Well, that's the question, is
12 it -- I'd have to go back in and look at the work
13 paper to find out if they've embedded that, even
14 though they -- the turbine overhaul may have been
15 considered maybe a capital maintenance project, you
16 know, decide -- to figure out if they included that,
17 you know, those types of costs, if that levelized
18 out into part of the variable O&M or not, I don't
19 know --

20 CHAIRMAN CHANDLER: Okay.

21 THE WITNESS: -- when I'm sitting here
22 talking to you now.

23 CHAIRMAN CHANDLER: Okay. So separately --
24 and I'll let Mr. Bellamy take over here in a second.

25 Separately with the combined cycle, when you

1 model those, the CTs, there's a turbine involved
2 that; right?

3 THE WITNESS: Yes, sir.

4 CHAIRMAN CHANDLER: And there's also a steam
5 cycle?

6 THE WITNESS: Yes.

7 CHAIRMAN CHANDLER: Okay. Does the steam
8 portion, is that recurring based on the number of
9 years, the overhaul?

10 THE WITNESS: Does the overhaul -- what is
11 the cycle of the overhaul for the steam generator
12 versus the turbine -- the gas turbine?

13 CHAIRMAN CHANDLER: Yeah. I guess what I'm
14 asking is, are both of them included separately
15 insofar as there's consideration to the ramping of
16 the unit on an economic basis and the ramping's
17 impact on -- the same thing we talked about a second
18 ago, the impact that has on a turbine and its need
19 for recurring capital maintenance.

20 THE WITNESS: Yeah. I -- I am very uncertain
21 how to articulate the details of what's in the
22 variable O&M, just to be expressly direct on that.

23 I know there's a good narrative that I can
24 refer back to, Sargent & Lundy's discussion on
25 what's baked into this and going back and looking at

1 some other resources, but as I'm sitting here
2 talking to you, I can't give you a great definition.
3 I don't know if Witness Haratym can give you a
4 better backup for that, unfortunately.

5 CHAIRMAN CHANDLER: Okay. So my last
6 question on this is, the operating of facilities
7 once chosen by -- like, you-all put in, these are
8 the, please go and see how this thing operates and
9 what its cost is over a 15-year time frame; is that
10 right?

11 THE WITNESS: Mm-hmm.

12 CHAIRMAN CHANDLER: It's my understanding
13 from the testimony here that you-all permit the
14 units to be dispatched economically as if -- as if
15 it's just an energy resource in the PJ market; is
16 that right?

17 THE WITNESS: I mean, we let the model
18 economically dispatch it to the -- to the Kentucky
19 Power load.

20 CHAIRMAN CHANDLER: Well, that's what I want
21 to make sure I have an appreciation for.

22 THE WITNESS: Okay.

23 CHAIRMAN CHANDLER: Is it being run as if
24 it's part of the PJM universe or is it being run as
25 if it's part of exclusively the Kentucky Power

1 universe?

2 THE WITNESS: No. It would be -- it would
3 essentially be run as part of the PJM universe. So
4 as part of the economic dispatch, it's also looking
5 at what is the market energy cost versus our own,
6 you know, maybe that self-schedule -- or not
7 schedule but the combustion turbine or the gas --
8 the specific gas resource. You know, if the market
9 energy is more favorable for rate payers, then the
10 model would go to the market energy for those hours.

11 CHAIRMAN CHANDLER: Yeah, but I think about
12 it -- as a Kentucky Power system, for instance, if
13 you had 800 megawatts of solar and it got to be
14 8:30, 9 o'clock at night this time of year, you
15 would have less production in solar and you would
16 need to ramp up, necessarily, units to meet that;
17 right?

18 THE WITNESS: You would have to -- yes.

19 CHAIRMAN CHANDLER: But that would require
20 your units that can ramp to ramp at that exact time.
21 But if it's part of -- if you're -- instead of doing
22 it on a standalone utility basis, if you're doing it
23 as the PJM universe, you would still need the
24 ramping once 800 megawatts of solar and the whole
25 scheme of 155,000 megawatts -- the whole 155,000

1 megawatts of PJM, if the 800 megawatts of solar
2 stopped production, there will need to be a
3 corresponding amount of megawatts or megawatt
4 ramping, correct?

5 THE WITNESS: There would need to be a
6 corresponding amount of megawatts to fill the 800
7 that dropped. Whether or not it comes from the
8 combustion turbine --

9 CHAIRMAN CHANDLER: Yeah.

10 THE WITNESS: -- or the market, I don't know
11 that answer.

12 CHAIRMAN CHANDLER: And that's what I want to
13 make sure. The fact that you do it in a PJM
14 universe means that that is very different than if
15 it was dispatched on a standalone Kentucky Power
16 basis, correct?

17 THE WITNESS: It would be different because
18 we have that other potential for low-cost energy for --

19 CHAIRMAN CHANDLER: There are other economic
20 alternatives other than the fictional system you've
21 created for Kentucky Power?

22 THE WITNESS: Other than the system that -- a
23 hard resource that Kentucky Power might own, yes.

24 CHAIRMAN CHANDLER: Okay.

25 THE WITNESS: There's other alternatives as

1 part of PJM, yeah.

2 CHAIRMAN CHANDLER: Mr. Bellamy.

3 BY MR. BELLAMY:

4 Q. And I might follow up with the next witness
5 about that question.

6 **A. Okay.**

7 Q. But if he's not able to answer, I think I
8 will probably do just a post-hearing --

9 **A. Okay.**

10 Q. -- data request and kind of ask for an
11 explanation of the difference in what's in both of
12 those columns.

13 **A. Sure.**

14 Q. I'll give you a chance to look at it.

15 Looking at page 144 of the IRP, and I was
16 looking at Figure 66, which is sort of just a table,
17 kind of a flowchart showing how the modeling was
18 conducted. And I just wanted to point you to that
19 for reference because I just had some questions
20 about that -- the process.

21 So you've got the Aurora portfolio module
22 here on the left, that left cylinder. And my
23 understanding is that that's effectively referring
24 to the capacity expansion modeling or what you refer
25 to as the optimization or capacity optimization; is

1 that correct?

2 **A. Yeah. I can say I can talk generally to this**
3 **and Witness Haratym can add --**

4 Q. Okay.

5 **A. -- additional details, just to make sure**
6 **we've managed.**

7 Q. Okay.

8 **A. But, yes, to your -- what your question was**
9 **is that Aurora model would do the original capacity**
10 **expansion and identify those different portfolios of**
11 **resources, yes.**

12 Q. And there was kind of some discussion of
13 reference portfolios or, you know, the five
14 portfolios. But it started out as five scenarios;
15 is that correct?

16 **A. Yes, there's two components. We do a**
17 **regional analysis that Witness Haratym can further**
18 **explain. And then once we understand that regional**
19 **analysis, we want to move that in more towards what**
20 **I'll call the local analysis, the Kentucky Power,**
21 **where we assess it relative to the Kentucky Power**
22 **loads. And that's more what this image would be**
23 **representing.**

24 Q. Okay. So I actually did have that question.
25 I wasn't clear if the regional analysis and the

1 Kentucky Power specific optimization were done
2 together, but they were done separately?

3 **A. They were done separately, actually.**

4 Q. And Mr. Haratym would have more -- be able to
5 explain the PJM optimization?

6 **A. Yes. He can provide you more details as far
7 as the -- how the PJM market was modeled and the
8 relative resource mix in the PJM that's behind the
9 associated energy capacity prices.**

10 Q. Okay. So at this point, you've already got
11 that -- the PJM optimization complete --

12 **A. Yes.**

13 Q. -- and that's an input at this point?

14 **A. That's correct.**

15 Q. And so you've got the five scenarios: The
16 reference case, the reference high cost, the clean
17 energy technology advancement, enhancement carbon
18 regulation, and then no carbon regulation?

19 **A. Yes.**

20 Q. And those kind of start out as the scenarios
21 that you're going to put into the Aurora capacity
22 optimization model, correct?

23 **A. That's correct.**

24 Q. And then you've run that, and then that spits
25 out the five portfolios that go by the same name?

1 **A. That's correct.**

2 Q. The reference case portfolio --

3 **A. That's correct.**

4 Q. -- and so on.

5 And then I think those were the five you
6 started with, and then you had two more that were
7 run at the request of stakeholders that were sort of
8 discussed earlier, was the natural gas combined
9 cycle where you locked that in and then ran the
10 capacity optimization?

11 **A. Yes.**

12 Q. And then you had the no wind and then ran it
13 at capacity optimization; is that correct?

14 **A. That's correct.**

15 Q. And with respect to the natural gas combined
16 cycle, you explained that to Mr. Kurtz, where you
17 locked in the natural gas combined cycle and then
18 let the model fill in everything else. Was it
19 effectively the same with the wind -- or, wait, let
20 me go back.

21 With the -- with the natural gas combined
22 cycle run, was it essentially the reference case
23 with natural gas combined cycle locked in?

24 **A. That's exactly what it was, yes, sir.**

25 Q. Okay.

1 **A. Yes, sir.**

2 Q. And the wind was the reference case with --
3 where you basically prohibited it from selecting
4 wind?

5 **A. Yeah. We -- we did not allow the wind to be**
6 **an option for selection in the model. Like we**
7 **talked earlier, could we add more resources for the**
8 **optimization model to select. We could, right? But**
9 **at the same time, we could also remove them.**

10 **And in this case we removed wind to see what**
11 **the optimization would look like if we didn't have**
12 **wind as an alternative.**

13 Q. Okay. There's a couple questions here about
14 PJM. I'll skip those and save them for Mr. Haratym.

15 With respect to the optimization or the
16 capacity optimization that was done on this first
17 step of the Aurora model, can you just kind of give
18 me an explanation in general terms what it was
19 solving for?

20 **A. Well, I'll do my -- I'll give you a**
21 **discussion, and then Witness Haratym can verify with**
22 **me and back me up on this or -- or adjust anything I**
23 **might tell you.**

24 Q. Sure.

25 **A. So I'll put it that way. So the -- when we**

1 offer -- we have a set number of -- we have our
2 resources. We know what the cost -- the V O&M and F
3 O&M, and we'll have some assumed capacity factors
4 and some other analysis on there.

5 And the model is going to try to look at all
6 the different permutations, be able to forecast out
7 over the full life of these resources
8 simultaneously, so that's -- that's really part of
9 the benefit of these complex molds. It can have we
10 call it perfect -- perfect foresight, so it can add
11 all these different permutations together to solve
12 for a least-cost portfolio.

13 So our objective -- we call it an objective
14 function, and really it's the mathematical analysis
15 that's going on within the computer to solve the mix
16 of different resources that actually can meet the
17 capacity obligations, meet any energy constraints
18 that we have and any other boundaries we'll call
19 them that we put in and apply within the model.

20 So taking into account or subject to any
21 resource limits, any -- any dispatch limits, any
22 other items we want -- we want or identify as needed
23 in the model.

24 So that's what the model is trying to solve
25 for at a least-cost basis selecting solar, wind,

1 **different gas resources, storage, taking into**
2 **account the federal tax credits, taking into account**
3 **the marginal value of any energy and coming up with**
4 **a portfolio of resources.**

5 Q. And that's basically what I understood. I
6 understand there were other constraints placed on it
7 and it had to obviously meet those conditions, but
8 ultimately it's solving for, I guess, least cost --

9 **A. Yes.**

10 Q. -- based on the constraints that were placed
11 on the various resources in the model itself?

12 **A. That's correct.**

13 Q. The question that I have, and you kind of
14 alluded to this, you said it looked at the cost of
15 the resources over the life of the resources.

16 Is it solving for the least cost within the
17 planning period?

18 **A. No. It's solving it with the assumption of**
19 **each resource can run for its full life from the**
20 **moment that it would be added, so if a resource gets**
21 **added in 2034, so if -- well, I'll use the gas**
22 **resources.**

23 **A new gas resource -- the combustion turbines**
24 **would get added in 2029, and in this particular**
25 **plan, that gas resource is going to be looked out**

1 for 30 years, it's a 30-year resource, so it's not
2 looking at -- so it's -- it's trying to calculate
3 the least cost, assuming that it's going to run for
4 the full 30 years.

5 Q. And I understand that. Like when it's --
6 when it's -- it's basically looking at the revenue
7 requirement effect of each resource; is that
8 correct?

9 **A. I think that's a good characterization.**

10 Q. And so when it's looking at a particular --
11 like a gas resource and you're talking about a
12 30-year resource, you know, it's going to include
13 depreciation based on a 30-year useful life which
14 would, you know, essentially divide the capital cost
15 by 30 and then each year you have that, and then --
16 is that correct?

17 **A. It is. It also has other components put into**
18 **it for, you know -- we would call it a carrying**
19 **charge. It's a -- it's a value we put in, so it**
20 **includes the depreciation, it includes rates of**
21 **return, taxes and other things in it.**

22 Q. Yeah. And I understand that.

23 **A. Right.**

24 Q. It has the carrying charge and I was kind of
25 getting to that. The carrying charge for a -- for

1 a -- for a high capital cost asset, you know, in the
2 beginning of its life, it's going to be more
3 expensive but as it goes on in its life, it will get
4 cheaper; is that correct? Because of the carrying
5 cost and because the balance of the rate base
6 associated with that asset is decreasing over the
7 life of the asset?

8 **A. From a cost-to-service perspective, you're**
9 **right. There is a declining -- I think you're --**
10 **would be -- would you say that's the declining rate**
11 **base as it depreciates -- is that what -- I don't**
12 **know if that's what you're referring to, but --**

13 **Q. Yes.**

14 **A. -- in our modeling, I don't think we -- we do**
15 **that entirely. It would be more of a simplified**
16 **depreciation assumption, so our carrying charge is**
17 **going to be a fixed value that -- that would go for**
18 **the life.**

19 **So your depreciation component of a carrying**
20 **charge would be, you know -- call it a straight line**
21 **depreciation, you know.**

22 **Q. Oh --**

23 **A. -- when divided by the number of years of a**
24 **life.**

25 **Q. And I understand the depreciation will be**

1 straight line, but the -- you're saying that the
2 carrying cost, like the cost of capital each year is
3 not decreasing based on the decreasing net plan
4 service associated with that asset?

5 **A. In the optim- -- in the initial optimization,**
6 **I don't think we have the -- I'll say the**
7 **reassessment of year two or year three, what's the**
8 **current, you know, capital basis to depreciate from.**
9 **I don't think it's incorporating that into the whole**
10 **mix.**

11 **The carrying charge would be more of a**
12 **simplifying component, factor that we apply for each**
13 **of the different resources, so each resource is**
14 **going to have a different carrying charge, right,**
15 **based on its life.**

16 **So a longer life resource is -- its carrying**
17 **charge rate is going to be likely lower than**
18 **something that's going to have a shorter life but a**
19 **cost, so your rate would be a higher rate, even**
20 **though maybe your number -- your base number that it**
21 **would be applied by is smaller.**

22 **Q. So are you averaging the carrying cost over**
23 **the life of the asset to get a flat carrying cost to**
24 **use for the modeling?**

25 **A. Yeah. We have a single carrying charge rate**

1 that we apply to each resource type for each
2 resource. I want to be careful about saying average
3 and make sure because we just use a single -- we use
4 a single value.

5 Q. Do you mean a percentage --

6 A. A percentage, a percentage.

7 Q. -- that you're applying?

8 A. A percentage that's applied that incorporates
9 the -- the depreciation over the life and then the
10 return and taxes and some other things in it.

11 Q. And is that single value being applied to the
12 same capital costs each year so that that carrying
13 cost would be the same each year --

14 A. Yes.

15 Q. -- in the model?

16 A. As I understand it, yes.

17 CHAIRMAN CHANDLER: So I want to clarify: I
18 know that counsel used the average, but is levelized
19 a more accurate description since you take issue
20 with the idea of average? No, I --

21 THE WITNESS: Yeah. No, I -- I didn't mean
22 to laugh at you. It's -- when you look at -- we
23 would end up doing a levelized number once we looked
24 at the whole series of cost over the 30 years, for
25 instance.

1 So each year we've got your costs, and then
2 we would look at it at the -- you know, what's the
3 sum total after 30 years and what the associated
4 energy and levelized -- that's how we get to our
5 levelized number.

6 CHAIRMAN CHANDLER: So is your total
7 nominal -- you take your total nominal costs --

8 THE WITNESS: Yep.

9 CHAIRMAN CHANDLER: -- throughout the entire
10 time period. You've got your initial upfront costs,
11 and then you've got your costs in between; right?
12 Is that correct?

13 THE WITNESS: The cost in between, let me --
14 let's break down parts for me if you don't mind.
15 The total nominal is -- if it's, I don't know,
16 \$1,000 per KW times -- if I use that number, times a
17 carrying charge, and there's your -- there's a
18 capital -- capital component of the total cost we
19 have to incorporate.

20 We also have fixed O&M that we have to incur
21 every year, right? And then the variable cost, and
22 we would do that over the life, so your carrying
23 charge -- your capital cost would be the same for
24 the full 30 years each year, so -- because it's a
25 fixed value.

1 CHAIRMAN CHANDLER: Your return and -- your
2 return of and return on is levelized over the
3 entirety of the period?

4 THE WITNESS: I think so. I think -- I think
5 that's right.

6 BY MR. BELLAMY:

7 Q. Would Mr. Haratym have more details on this?

8 **A. I think Mr. Haratym can add more depth to --**
9 **to how that -- how all that was represented and the**
10 **associated carrying charges as well.**

11 Q. So I'll ask him, and then to the extent that
12 we need a follow-up --

13 **A. Follow-up.**

14 Q. -- I might do a post-hearing --

15 **A. Okay.**

16 Q. -- so thank you for that. I do have a couple
17 more. I'm almost finished. At the resource
18 optimization step, so this first Aurora step, if --
19 did -- the model counted for the possibility that
20 Kentucky Power wouldn't have sufficient native
21 generation or, you know -- own generation or
22 generation under contract to serve their load. And
23 in that instance it would -- it would go to the
24 market to purchase the energy needed; is that
25 correct?

1 A. I want to make sure, there's two -- I think
2 there were two questions.

3 So the optimization is going to be looking
4 first for the capacity obligation and then -- and
5 for the capacity obligation, we have -- we've got a
6 -- we've got to bring resources to the -- to our --
7 to meet our PJM obligations.

8 And that could mean firm resources, and in
9 this case and especially in the early years, it
10 could mean contracted resources in some context.

11 Then in addition to that, we're also trying
12 to make sure we can solve to -- to serve our energy
13 requirements as well, and to serve that energy,
14 that's where the economic dispatch happens, so the
15 model's economically dispatching Kentucky Power's
16 own resources or supplying it from the PJM set of
17 resources that were -- that the Kentucky Power rate
18 payers can be served from to meet its loads as well.

19 Q. And that's all taking place in this first
20 part, the first cylinder here on figure 66, correct?

21 A. Um --

22 Q. And it's selecting the portfolio along with
23 the market purchases that would be the least cost,
24 is that --

25 A. Yes, I think so, and I think -- I'm going to

1 **have to ask Mr. Haratym to give a little more**
2 **detail --**

3 Q. Okay.

4 **A. -- as far as how much is done during the**
5 **capacity optimization verse -- and then we would**
6 **transition over to the financial analysis --**

7 Q. Okay.

8 **A. -- for the rest of it. He -- I'll need to**
9 **have him explain a bit more, you know, resolution --**

10 Q. Okay.

11 **A. -- to that, to the details.**

12 Q. And I've got more questions. If any of these
13 questions should go to him --

14 **A. Sure.**

15 Q. -- please just tell me.

16 But the question I had with respect to the
17 modeling of the energy purchases, if -- you know, if
18 you had solar and the model knows that your winter
19 load is going to be X and it's going to the market
20 to make market purchases, does that -- during this
21 Aurora resource optimization step, is the model
22 adjusting market energy prices based on projected
23 demand and resource availability within PJM?

24 **A. I don't know if I can answer that entirely.**

25 Q. If you want to defer to Mr. Haratym, that's

1 fine.

2 **A. I might need to defer to Mr. Haratym on this**
3 **because of, you know, all of the wheels that are**
4 **getting meshed within Aurora, that's where I'm**
5 **starting to get a little uncomfortable how much is**
6 **actually happening in the Aurora model, so I**
7 **apologize, but I appreciate your tolerance.**

8 Q. Oh, it's fine. I'm just trying -- I'm just
9 trying to understand --

10 **A. Yeah.**

11 Q. -- how the model is working, and so I'll ask
12 him that question.

13 Just -- at this point, I just want to assume
14 we're beyond that first Aurora resource
15 optimization --

16 **A. Okay.**

17 Q. -- step, and we now have the portfolios for
18 the various scenarios, and at that point we're
19 moving to the financial model and also applying
20 the -- this -- the assessment criteria.

21 And do you have -- it was KIUC Exhibit 1?

22 **A. Uh-huh.**

23 Q. I was just going to point to this just as a
24 quick reference. And the fourth page on that is a
25 table. It's from page 76 of your IRP.

1 **A. Okay.**

2 Q. But it's just the table showing the
3 evaluation and the performance of the various
4 portfolios --

5 **A. Right.**

6 Q. -- you know, with the assessment criteria.
7 And I'm really looking at the first two, the
8 short-term five-year cost and the long-term
9 five-year CPW.

10 **A. Mm-hmm.**

11 Q. And those costs are essentially coming from
12 the revenue requirement calculations in that
13 financial module step here, the second cylinder on
14 figure 66, correct?

15 **A. That's correct.**

16 Q. Okay. So number 1, I think I know the answer
17 to this because I'm now looking at the set. Those
18 are both done on the reference case?

19 **A. Yes.**

20 Q. Okay. I hadn't seen that earlier. And
21 that --

22 THE CLERK: Chairman, I just lost my screen.
23 It just went out.

24 (Off the record)

25 Q. With respect to the 5-year cost calculation

1 and the 15-year calculation, my understanding is
2 those are done more like traditional revenue
3 requirement calculations showing the expected
4 revenue requirement effect of each portfolio in each
5 year and then manipulating those numbers in some
6 way, which you're doing in each year.

7 So the first year you have the full capital
8 costs, you know, with the carrying costs and the
9 depreciation. The next year the capital costs are
10 slowly declining; is that correct?

11 **A. I think that's true, and Witness Haratym can**
12 **speak more to the specific work papers behind these,**
13 **but I believe what you're describing is accurate.**

14 Q. Okay. And with the 15-year if, you know, for
15 a -- for a large -- or for a unit that, you know,
16 does have a high capital costs, you know, that's
17 going in 2030, and you're going out 15 years from
18 2023, that would only have about seven or eight
19 years to depreciate, you know, by the end of this
20 analysis; is that correct?

21 **A. If, in fact, it was only -- if we were**
22 **truncating the full depreciation at -- or truncating**
23 **the depreciation at the end of the planning horizon**
24 **in the IRP, I don't believe that's actually what**
25 **happened in this revenue requirement.**

1 **So I believe that the financial analysis -- I**
2 **believe the financial analysis encompasses the full**
3 **life of the resource and the full depreciation, but**
4 **I think Witness Haratym will be able to talk more**
5 **specifically about the work papers behind these**
6 **values.**

7 Q. Okay. Because my impression -- my
8 understanding was that it was -- they just did the
9 revenue requirement calculation each year for 15
10 years and then stopped at that point --

11 **A. Yeah, I don't --**

12 Q. -- and then kind of added those values up,
13 but you're saying you think it went out further?

14 **A. I think they assessed the full depreciation**
15 **of the resource into the -- the -- the total CPW**
16 **here. Even though we're talking about a 15-year**
17 **CPW, I think we're still assessing the full value of**
18 **the -- of the -- or the full depreciation of each**
19 **resource.**

20 Q. I'll ask Mr. --

21 **A. Yeah.**

22 Q. -- Haratym that.

23 This question was sort of asked of another
24 witness to some extent, and I think I know the
25 answer, but, you know, with respect to -- going back

1 to like looking at resources, in this case there
2 was -- you know, you-all didn't reach out to, you
3 know, any other utilities in Kentucky Power's
4 service area or adjacent to it regarding, you know,
5 potentially, you know, going together on any
6 particular resource; is that correct?

7 **A. We didn't have a specific dialogue with any**
8 **other utility partner to prescribe a particular**
9 **resource, if that's -- if that was -- was that your**
10 **question?**

11 Q. Yeah. Did you kind of investigate either
12 with those utilities or through just your own
13 investigation the possibility of, you know,
14 partnering with them regarding a particular
15 resource?

16 **A. We didn't do anything direct because we just**
17 **don't know where those might actually be, both in**
18 **terms of location and potential, so -- and I think**
19 **it got referred to earlier, like you said, you know,**
20 **to establish that, one of the options was, in fact,**
21 **you know, using that one-by-one as a proxy for a**
22 **shared ownership for, say, maybe a 1,000-megawatt**
23 **combined cycle where Kentucky Power doesn't**
24 **necessarily need 1,000 megawatts to meets its**
25 **capacity obligation on a combined cycle, but the**

1 one-by-one can serve as a proxy for that if you did
2 a shared ownership, you know, 50 percent partnership
3 on that -- that size of a unit, for instance.

4 So that's what we did. That was the
5 assumption we made for the purposes of this IRP, but
6 we didn't have anything -- a specific partner that
7 we had engaged on.

8 Q. Do you, as part of either planning for this
9 IRP or other IRPs for Kentucky Power, review the
10 IRPs and/or IRP reports for other utilities in
11 Kentucky?

12 A. Occasionally we do. I haven't read them
13 specifically ahead of this particular IRP.

14 Q. And I guess would it surprise you that
15 several other, you know, I guess smaller utilities
16 in Kentucky -- I don't want to say smaller but
17 utilities that might have less of a need, you know,
18 have indicated in their IRPs that, you know, they
19 might have some interest in partnerships with other
20 entities?

21 A. You had asked me, would it surprise me. At
22 this point, I don't -- with our industry and the
23 transformation that we're going through in our
24 industry, it's hard to say, you know -- suggest that
25 anything doesn't surprise me anymore, what we get to

1 **recognize now.**

2 Q. With respect to -- you know, one of the costs
3 that you talked about was the carrying cost, and
4 obviously within Kentucky Power or any investor in a
5 utility you're going to have the debt cost and the
6 cost of equity, you know, together in that carrying
7 cost, and for a large resource, that can be
8 relatively significant, would you agree with that?

9 **A. Yes.**

10 Q. And obviously -- well, are you familiar with
11 the financing opportunities available to electric
12 gen -- sorry -- electric generation and transmission
13 cooperatives?

14 **A. I'm not familiar with them --**

15 Q. Okay.

16 **A. -- in any detail no, sir.**

17 Q. Are you familiar with the fact that they
18 typically do have lower financing costs?

19 **A. Not directly. If that's what you're telling
20 me, then I'd have to -- you know.**

21 Q. Do you know where East Kentucky Power is
22 located in relation to Kentucky Power Service
23 territory?

24 **A. Specifically I can't visualize the map of
25 their -- their territory, no.**

1 Q. And I'm almost finished. I was going to page
2 240 of the IRP, and there's a table on that page --

3 **A. Okay.**

4 Q. -- that I had just a couple quick questions
5 about. There's a column, and it just says energy
6 surplus. It's the fourth column from the right.

7 **A. Yes.**

8 Q. And it's positive in some and then negative
9 in others.

10 **A. Yes.**

11 Q. And this was the preferred plan in the
12 reference scenario. I guess I was wondering, would
13 it be possible to break that energy surplus out by
14 month based on the way that this table was produced
15 to determine, you know, when it occurred and whether
16 it was occurring in winter versus summer and how
17 they were netting out?

18 **A. Yeah, I don't -- I'd have to look at the work
19 paper behind this. Witness Haratym might be able to
20 offer more details. He helped compile -- his team
21 helped compile this, so I don't know in terms of the
22 complexity associated with breaking it out by month
23 to understand where the --**

24 Q. I'll ask him --

25 **A. Okay.**

1 Q. -- and then to the extent that it's possible,
2 I'll do a post-hearing data request for that.

3 **A. Okay.**

4 Q. And just one more series of quick questions.
5 When -- the IRP at page 40, and this had to do with
6 the load. I don't know if you heard that earlier,
7 you know -- there's -- around page 43 or 45, there's
8 a discussion of seven load scenarios, and then
9 there's discussion of the high, the low, and then
10 the base?

11 **A. Mm-hmm.**

12 Q. And an indication that the load would be in
13 between the high and the low. Do you know where the
14 high and the low or if the high and the low load
15 scenarios as well as the base load scenario, where
16 they tie in to the five scenarios that you-all ran?

17 **A. Yes. The reference case and everything with
18 the reference case would have been the base.**

19 Q. Okay. That's what I --

20 **A. That makes reasonable sense. Then we have
21 the -- there's the -- the enhanced carbon
22 regulation, and the CETA, we call it, the clean
23 energy technology, would -- would use the other --
24 the high and the low loads as the -- as the
25 measures.**

1 Q. So which one used -- do you know which one
2 used which?

3 **A. Let's see. I think -- I believe at the --**
4 **the enhanced carbon regulation actually had the**
5 **higher loads, the high load, and then the clean air**
6 **technology had the low loads I believe is what we**
7 **modeled under.**

8 Q. That was all the questions I had.

9 **A. Okay.**

10 Q. Thank you very much.

11 EXAMINATION

12 BY CHAIRMAN CHANDLER:

13 Q. Are you the best person to ask about the --
14 and that was a loaded question because every witness
15 you asked that says, no, somebody else is definitely
16 the best person to ask that.

17 But are you the best person to discuss the
18 determination or consideration of, quote, rate
19 stability in choosing the best plan to achieve
20 Kentucky Power's IRP objectives?

21 There were four categories that were used on
22 a scorecard for the preferred plan results. Do you
23 remember that?

24 **A. Yeah, but we actually only had three. I**
25 **think in the IRP I think I found an error where we**

1 had -- the narrative said there were four, but, in
2 fact, we had three rate stability metrics in the --

3 Q. Oh yeah. No, there were three rate stability
4 metrics --

5 **A. Okay.**

6 Q. -- but there are four metrics overall.
7 Customer affordability, rate stability --

8 **A. Yes.**

9 Q. -- maintaining reliability and load impact
10 and sustainability?

11 **A. Yes.**

12 Q. All right. So for rate stability, scenario
13 range was the high minus the low, the delta of the
14 two bookends; right?

15 **A. That's correct.**

16 Q. Okay. The second was cost risk. It says RR,
17 that's revenue requirement?

18 **A. Yes.**

19 Q. Okay. Revenue requirement increase in
20 reference case, 95th minus 50th percentile?

21 **A. Yes.**

22 Q. Walk me through that for a moment.

23 **A. Yeah. I'll start walking you through it, and**
24 **if we need details, then Mr. Haratym can maybe back**
25 **up.**

1 But that is really the stochastics, the -- we
2 did a stochastics analysis. Charles River did a
3 simulation where there were 250 different
4 iterations, where they changed different variables,
5 gas, market prices, I think solar and wind curves,
6 just -- and through that simulation, came out with
7 different portfolio costs. And this is the result
8 analysis between the median cost of all those 250
9 runs and the 95th percentile of those runs. This is
10 the associated cost risk, what we could potentially
11 realize.

12 Q. Great. The next one is market exposure?

13 A. Yes.

14 Q. And it's described as net sales as percentage
15 of portfolio load scenario average?

16 A. Yes.

17 Q. So that is the reference of 2037, a summer
18 and a winter percentage; is that right?

19 A. That's correct.

20 Q. Okay. The scenario reference are the 250
21 scenarios you were just discussing?

22 A. In the market exposure, it's not the 250, no,
23 sir.

24 Q. Okay. What universe of scenarios does the
25 market exposure represent?

1 **A. So Charles River ended up, they ran -- I**
2 **believe they dispatched it under each portfolio**
3 **against each scenario set of conditions. So the**
4 **reference case would have been dispatched under**
5 **reference, the base, been under a ECR future and**
6 **under a future you know, regional position where**
7 **clean energy technology was the case.**

8 **So we have those five different futures that**
9 **we would dispatch the portfolios. And then we're**
10 **looking at the average of the -- how much we're**
11 **leaning on the sales relative to portfolio load. So**
12 **that's the net sales as the portfolio load, the**
13 **average across all five of those dispatches.**

14 **Q. Okay. A portfolio in -- which results in a**
15 **positive percentage is one in which the utility is**
16 **selling more energy than it's consuming; right?**

17 **A. That's correct.**

18 **Q. And the negative numbers are a portfolio in**
19 **which the utility is consuming -- is a net purchaser**
20 **of electricity?**

21 **A. It could be a net purchaser.**

22 **Q. And that's relative to -- it's not relative**
23 **to anything, it's just relative to its own internal**
24 **demand; right?**

25 **A. It's relative to its internal demand, yes.**

1 Q. Okay. So if it's 30 percent winter, then
2 it's selling 30 percent more energy than it's
3 consuming in winter in 2037?

4 **A. On an average basis, yes, sir.**

5 Q. On an average basis across those scenarios?

6 **A. Yes.**

7 Q. Just so I have an appreciation, I think I
8 understand the scenario range, I think I have an
9 appreciation for the cost of risk.

10 Given the scenario range and the cost of
11 risk, what's the purported benefit of looking at the
12 market exposure?

13 **A. So our -- our position is that we want to be
14 able to rely on PJM as a resource, but we don't want
15 to over rely on PJM as a resource. There is --
16 there's upside and downside for an overreliance, but
17 it does serve our customers well from being able to
18 rely on them to serve energy.**

19 So we're trying to balance and mitigate risk,
20 if you will, from an overreliance on the market,
21 both in terms of purchases but also in terms of
22 sales. Sales could be misrepresenting to the
23 context of maybe we're recognizing too much energy
24 value margin from an overabundance of sales into the
25 market that may not be able to absorb it, or maybe

1 the prices aren't where we modeled them to
2 materialize.

3 So we want to mitigate some of that risk in
4 the portfolio, so that's why we're -- it's important
5 for us to stay focused on this. We want to rely on
6 the market, but we don't want to have -- you know,
7 I'll call it -- again, this becomes subjective --
8 but an overreliance on the market.

9 Q. Yeah. Well, I -- you know, I -- so do
10 you-all have a rule of thumb in this regard as it
11 relates to market exposure for what is an
12 unreasonable risk both ways, either the revenue
13 requirement is reflective of far too many -- far too
14 much excess sales, you turn into a competitive
15 generator, effectively, or the other side of your --
16 I'm trying to use your terms here, you're too
17 dependent on purchases, net purchases.

18 Do you-all have a rule of thumb of what may
19 be a reasonable collar there for what may exceed the
20 risk tolerances of Kentucky Power or other AEP
21 entities that do this?

22 A. Yeah, I -- for this -- for this IRP, we look
23 to keep it within a 30 percent net sales of our
24 purchases. We were looking to trying to keep our
25 modeling within that 30 percent range.

1 **So that was a -- that was a number, and I**
2 **don't know if it's fully substantiated yet,**
3 **admittedly, but we needed to have a number here and**
4 **know that we want to model some flexibility. Again,**
5 **this is also some balance of, we don't want a model**
6 **to be too constrained, but we don't want to just let**
7 **it run free.**

8 Q. Okay.

9 **A. So we use 30 percent net in this analysis.**
10 **We continue to look at it.**

11 Q. So just so I have an appreciation here, would
12 you-all put that constraint on it to say, every
13 dollar in excess of 30 percent that's reflected in
14 net sales at 33 percent, that incremental 3 percent
15 should not be a credit back to the revenue
16 requirement. Is that you're saying, that you would
17 consider that and make sure that -- like, if your
18 preferred portfolio is the cheapest but it's at
19 33 percent for both summer and winter, okay, would
20 it be reasonable to, then, if 30 percent is your
21 risk tolerance to say, what's the revenue
22 requirement relative to the other options if we
23 carve off that extra 3 percent of revenues from
24 off-system sales to get within our risk tolerance?
25 Is that what --

1 **A. No, I don't --**

2 Q. Would that not be reasonable?

3 **A. I don't think we would have done it that way,**
4 **you know, for the purpose of an IRP. I think if we**
5 **didn't want it to go beyond 30 percent, we would**
6 **have to make sure it didn't go beyond 30 percent so**
7 **we get a result in an IRP.**

8 **Is it reasonable, though, is I don't know if**
9 **I can -- I don't know how to answer that --**

10 Q. Okay.

11 **A. -- whether that's reasonable.**

12 Q. So let me ask. Do you know what Kentucky
13 Power's market exposure is today?

14 **A. I don't know the number off -- right now.**
15 **I'd have to look at the FERC forms.**

16 Q. But that's something that should be readily
17 available based on the FERC Form 1; right?

18 **A. I think so.**

19 Q. It's just a -- it's just a subtraction and
20 division problem; right?

21 **A. I think -- I think it's a FERC Form 1 set of**
22 **information.**

23 Q. Okay. And then this -- the Mitchell capacity
24 mid-year situation, are you the best person to talk
25 to about that, the questions I had for Mr. -- I

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1 guess a continuation of the questions I asked
2 Mr. West as it relates as to how it was modeled?

3 **A. The mid-year, yeah. I think Mr. -- maybe.**
4 **Maybe we can -- ask the question --**

5 Q. Okay.

6 **A. -- and I'll see if I can help you.**

7 Q. Okay. So you-all -- the model made Kentucky
8 Power buy enough capacity to replace Mitchell in
9 2028 -- the 2028-2029 delivery year; right?

10 **A. That's correct.**

11 Q. Okay. But let's just assume somebody --
12 let's just assume Mitchell stayed part of the AEP
13 zone. If Kentucky Power didn't get to use that and
14 instead had to purchase the entirety of that year
15 but stayed in the AEP zone --

16 **A. Yeah.**

17 Q. -- did the model assume nobody got that
18 700-plus megawatts of Mitchell, or they just got the
19 first seven months free?

20 **A. Well, the model didn't make any assumptions**
21 **as far as who got that other 700 megawatts. We**
22 **didn't make any assumptions in the modeling, right.**

23 Q. Well, it's someone other than Kentucky Power
24 had the other 700 megawatts. That's what the model
25 represented, that Kentucky Power did not get any of

1 those megawatts in the '28-'29 delivery year; right?

2 **A. We --**

3 Q. Right?

4 **A. We did agree -- yes. We agree that the model**
5 **did not assign those 700 megawatts to Kentucky**
6 **Power.**

7 Q. And so what I'm trying to ask is, it's not a
8 modeling problem as much as it is a -- this is --
9 let me withdraw that.

10 This is a worst-case scenario for the cost of
11 the replacement capacity in '28 and '29 for Kentucky
12 Power customers in that the IRP assumes no value for
13 that capacity for the first seven months of
14 delivery, would you agree?

15 **A. I'd agree to that, yes.**

16 Q. All right. So directionally, it's -- it
17 should at least be better than, assuming all else
18 equal, a \$15 million cost for capacity that year?

19 **A. I mean, directionally, I think so.**

20 Q. Yeah.

21 **A. I think in terms of how it actually gets**
22 **accounted for, I think Witness Vaughn could talk a**
23 **little better on that one.**

24 Q. I think Witness Vaughn is the right person,
25 but it's is it your understanding that -- well, no.

1 **A. Yeah.**

2 Q. I'll withdrew that.

3 **A. Okay.**

4 CHAIRMAN CHANDLER: Counsel?

5 MR. GARCIA-SANTANA: Yeah, Your Honor. Thank
6 you. Much appreciated. Just a few redirect
7 questions.

8 REDIRECT EXAMINATION

9 BY MR. GARCIA-SANTANA:

10 Q. Let me go back to questions that you were
11 asked a while ago, Mr. Soller. Let's -- let's start
12 with the value of transmission costs as they are
13 representing in the modeling.

14 Do you recall being asked by KIUC counsel
15 about whether the model took into consideration any
16 particular transmission costs for resources being
17 modeled?

18 **A. I do.**

19 Q. Okay. And if I recall correctly, you
20 explained that the resources are generic, and that
21 there is a value associated with the resources that
22 it's counted for. And I wanted to find out, how is
23 that value determined? I think that was \$79?

24 **A. Which --**

25 Q. How is that transmission cost determined?

1 **A. The transmission cost that we included was**
2 **based on a PJM report that Brattle had developed for**
3 **a generic resource within their territory. So**
4 **that's -- that was the basis of what we used.**

5 Q. And now, is that appropriate for purposes of
6 the IRP modeling as opposed to the variation that
7 you would have in a specific RFP?

8 **A. For all things that -- the types of**
9 **assumptions, yes, it's appropriate. We used a**
10 **generic set of resources, and we don't have**
11 **location-specific resources. So we don't know where**
12 **these are, we don't know any other challenges.**

13 **So for the purposes of an IRP, we included**
14 **some costs. We thought it was important. We think**
15 **it was a reasonable assumption for the purposes of**
16 **this IRP.**

17 Q. Would you read your -- would it be your
18 expectation that as to specific resources, not in
19 the context of the IRP but in the context of the
20 selection of specific resources, I mean, like in
21 practical terms, would those costs show up in the
22 cost of the resources all in? Would that be your
23 expectation, if you know?

24 **A. Any other transmission costs, would they show**
25 **up in the all-in cost?**

1 Q. Correct.

2 **A. I think there would be some costs that would**
3 **show up, but I don't know that it would be so**
4 **material that it would change the direction of what**
5 **we concluded here.**

6 Q. Right. And for the IRP purposes, the purpose
7 of the analysis is not actually to select any
8 specific resources, but directionally, to figure out
9 what are the optimal resources to provide service to
10 Kentucky Power's customers; is that correct?

11 **A. Correct.**

12 Q. Okay. I think that you were also asked a
13 couple times about the collaboration with other
14 utilities. And I think that, again, you indicated
15 that the IRP analysis analyzes -- it evaluates
16 generic resources. So does the IRP analysis exclude
17 resources that would be jointly owned?

18 **A. I don't -- no, not directly. The IRP -- we**
19 **made an assessment and a reference, I guess, for**
20 **a -- I'll say a shared ownership type of resource.**
21 **I think that -- and most of that comes in terms of**
22 **very large resources. So in that context, the**
23 **combined cycles really fit in that role.**

24 **So for this IRP, we let the one-by-one**
25 **combined cycle serve as a proxy as what it would**

1 cost to do a shared ownership and maybe a large
2 combined cycle. I think if -- if, in fact,
3 something were to come where it was a shared
4 resource directionally, you know, maybe that
5 benefits, you know -- works to a positive, you know,
6 effect to the overall cost, but I think
7 directionally, we still select the same type of
8 resources and type in the amount of resources, which
9 is what the optimization is first doing.

10 Q. Right. Regardless of whether they are
11 jointly owned or they are owned only by Kentucky
12 Power --

13 **A. Regardless, yes.**

14 Q. -- am I understanding correctly? Okay.

15 And there is one more thing. The IRP did not
16 include, other than the ownership of Mitchell, which
17 is co-owned with another utility, but it's an
18 affiliate, other the Mitchell, the model, you did
19 not have a hard assumption about any specific shared
20 resources?

21 **A. That's correct.**

22 Q. Okay. You were asked about the costs of
23 Mitchell as they are reflected in the IRP. And just
24 to understand correctly, the IRP modeling
25 necessarily doesn't reflect how those costs would be

1 treated in reality but it's simply for the purposes
2 of making a determination of the needs of Kentucky
3 Power. Am I understanding that correctly?

4 **A. That's correct.**

5 Q. Okay. Is there another witness that could
6 address, on a practical basis, how those costs would
7 be treated? So not within the context of the IRPs
8 but in practice.

9 **A. In practice, yeah, Witness Vaughn would be**
10 **able to elaborate much more clearly on that, that**
11 **topic.**

12 Q. Okay. And you were asked about ELCC -- I'm
13 sorry, ELCC changes in PJM after the assumptions of
14 the IRP essentially were determined and the IRP was
15 performed. Do you recall that line of questioning?

16 **A. Yes.**

17 Q. And if I recall correctly, counsel for the
18 joint intervenors asked you, and you clarified, that
19 those changes in capacity values did not -- were not
20 constrained to only wind resources or any particular
21 one type of resource, but it also applied to
22 lowering shift in the value accredited to, for
23 example, gas generation.

24 Did I read that accurately?

25 **A. That's correct.**

1 Q. Okay. Does the IRP take into consideration
2 those fluctuations? Is that something that is
3 reflected in the analysis so that fluctuations like
4 the ones that actually occurred would be taken into
5 consideration in selecting the multiple plans?

6 **A. I think -- yes, I think they do. I think the**
7 **IRP does do that, you know. The fact that PJM is**
8 **changing their ELCC methodology and their obligation**
9 **methodology, that definition, you know, as it stands**
10 **today, is different than what it was back in 2022**
11 **when we did the analysis.**

12 **But everything shifted both on the supplies**
13 **and the demand side, as well as the resource side,**
14 **down from where we were in 2022. So directionally,**
15 **I don't expect a significant or material change to**
16 **the resources that got selected in the IRP because**
17 **it was -- it was I'll call it a tide effect.**
18 **Everything was rise and lower so it shifted down.**
19 **Maybe not in the same percentages, but in general,**
20 **it would be the same.**

21 Q. Okay. And just to clarify, would that be
22 similar to the effect that in the IRP, the high
23 carbon -- the high -- intermittent control cost
24 scenario would be relative, for example, to changes
25 in the environmental rule? Is that something that

1 the IRP is built to account for because we cannot
2 predict the future?

3 **A. In similar context, the -- our ECR case that**
4 **had a higher carbon burden was there to account for**
5 **the unknown rules promulgation that we anticipate,**
6 **we just don't know what they are. So we wanted to**
7 **capture that.**

8 So where we're heading with these current EPA
9 rules, we've got the ECR case to offer as some
10 insight and proxy to inform us for our decision
11 making in some of the risks.

12 Q. So for the purposes of the selection of the
13 proposed plan, this is actually what the IRP does.
14 It accounts for things that are unknown in the
15 future, looks at multiple scenarios, and then tries
16 to find the set of resources that are the lowest
17 cost to provide reliable service to customers; is
18 that correct?

19 **A. Yes. And especially as we look at all the**
20 **different portfolios and the risk around each of**
21 **those different portfolios and scenarios.**

22 MR. GARCIA-SANTANA: Thank you, Your Honor.
23 That's it.

24 CHAIRMAN CHANDLER: Is there anything else
25 for this witness?

1 MR. BELLAMY: No, sir.

2 CHAIRMAN CHANDLER: Thank you very much.

3 MR. GARCIA-SANTANA: We request that -- Your
4 Honor, can he be excused?

5 CHAIRMAN CHANDLER: This witness, Mr. Soller,
6 can be excused.

7 MR. GARCIA-SANTANA: Thank you, Your Honor.

8 CHAIRMAN CHANDLER: We'll take a short
9 recess. So what I plan on doing is we'll take a
10 short one now, we'll come back, we'll go for a short
11 period of time. Then we'll take, I don't know, 30,
12 40 minutes for dinner, we'll come back and we'll
13 keep going. But at this time of evening, we'll take
14 much shorter breaks but more often just because it's
15 already been a long day.

16 MR. CMAR: Your Honor, can I ask, do you have
17 any anticipation of when we might take dinner break,
18 just so we can plan to order in?

19 CHAIRMAN CHANDLER: Yeah, probably about
20 7:15.

21 MR. CMAR: Okay. Thank you very much.

22 MR. GARCIA-SANTANA: Thank you, Your Honor.

23 CHAIRMAN CHANDLER: All right. We'll be in
24 recess until -- we'll come back at 6:20.

25 (Off the record)

1 VICE CHAIR HATTON: Thank you. We're back on
2 the record in Case Number 2023-00092, Electronic
3 2022 Integrated Resource Planning Report of Kentucky
4 Power Company.

5 Counsel, you may call your next witness.

6 MR. GARCIA-SANTANA: Thank you, Your Honor.

7 MS. GLASS: Thank you. Kentucky Power calls
8 Thomas Haratym. He'll be presented by
9 Mr. Garcia-Santana.

10 VICE CHAIR HATTON: Mr. Haratym, will you
11 raise your right hand, please. Do you swear or
12 affirm the testimony you're about to give is true
13 and correct under penalty of perjury?

14 THE WITNESS: Yes.

15 VICE CHAIR HATTON: Please state your name
16 and address for the record and then be seated.

17 THE WITNESS: Yeah. Thomas Haratym.
18 Business address is 401 Beach Street, Toronto,
19 Ontario, Canada.

20 VICE CHAIR HATTON: Please be seated.
21 Counsel.

22 MR. GARCIA-SANTANA: Thank you, Your Honor.

23 * * *

24

25

1 THOMAS HARATYM, called by Kentucky Power
2 Company, having been first being duly sworn,
3 testified as follows:

4 DIRECT EXAMINATION

5 BY MR. GARCIA-SANTANA:

6 Q. Mr. Haratym, by whom are you employed and in
7 what capacity?

8 **A. Charles River Associates, CRA International,**
9 **and my title is associate principal there.**

10 Q. And in that capacity, did you provide
11 services to Kentucky Power in association with this
12 Integrated Resource Plan?

13 **A. Yes, that's correct.**

14 Q. And what were those services?

15 **A. So there's a few different modules. We**
16 **helped them prepare the assumptions for the IRP, we**
17 **did some modeling, report preparation and a**
18 **stakeholders' report. So I'd say probably those are**
19 **the four key modules.**

20 Q. And did you have a participation in the
21 preparation of the IRP, either yourself or under
22 your supervision?

23 **A. Yes. Yeah -- so...**

24 **Okay, I'm sorry.**

25 Q. Yeah. And did you also provide discovery

1 responses that were prepared either by you or under
2 your supervision?

3 **A. Yes.**

4 Q. And either as to the IRP or as to the
5 discovery responses, if I were to ask you the same
6 questions today or you were to prepare the same
7 content, would your answers be the same?

8 **A. Yes.**

9 MR. GARCIA-SANTANA: Your Honor, the witness
10 is ready for cross-examination.

11 VICE CHAIR HATTON: Okay. Who wants to go,
12 is it Mr. West?

13 MR. WEST: Yes.

14 CROSS-EXAMINATION

15 BY MR. WEST:

16 Q. Hi, how are you? Do you have the IRP
17 available to you?

18 **A. Yes, I do.**

19 Q. Okay. Can you turn to page 133.

20 **A. My page numbers might be different than what
21 you have, so do you have a section number maybe?**

22 Q. It's 6.5.2, and it's page 133 of 1182. It's
23 ELCC results.

24 **A. Yes, 6.5.2. Okay. Yep. Got it.**

25 Q. Okay. Just read the second paragraph there.

1 A. Sure. Under the reference, reference high
2 cost, and ECR scenarios, solar ELCC values decline
3 from the current 54 percent value to levels near
4 26 percent by 2037, falling over time in line with
5 the increments of new solar added in each case.

6 Less solar is added in the NCR driven by
7 lower commodity and energy prices, hence ELCC
8 declines to around 28 percent value by 2037.

9 While the NCR scenario represents an upper
10 bound, the CETA case sets the lower bound at 23
11 percent. Under the CETA scenario, capital costs are
12 lower for renewable resources, leading to more and
13 earlier additions. Similar to solar, storage ELCC
14 values vary across scenarios, ranging from 66 to
15 80 percent by 2037.

16 For wind, ELCC varies -- sorry. Yeah, ELCC
17 varies the least with a uniform level of 11 percent
18 across scenarios for onshore, and a narrow range of
19 22 to 25 percent for offshore wind by 2037. The
20 resulting solar, storage and wind summer ELCC values
21 are summarized in figure 54 through 57.

22 Q. I know we've already talked to -- others have
23 already talked a little bit about ELCC, but I want
24 to dig in here a little bit more.

25 The 54 percent current value, is that -- what

1 is that number? Is that a PJM number or is that
2 fixed tilt, or is that a tracking? Do you have any
3 specifics on that?

4 **A. Yes. I believe that's -- tracking as of the**
5 **time of this IRP was the PJM -- PJM guidance as of**
6 **the latest option at that point in time.**

7 Q. Okay. And are you familiar with what's
8 happened to those ELCC values since the IRP was
9 filed?

10 **A. I believe the latest guidance is a decline**
11 **for solar.**

12 Q. Okay.

13 MR. WEST: Approach the witness.

14 VICE CHAIR HATTON: Yes.

15 Have you seen, this, Counsel?

16 Would you like to have this marked,

17 Mr. West?

18 MR. WEST: Yes, as AG 1.

19 MR. GARCIA-SANTANA: Your Honor, in response
20 to this question, no, we have not received this
21 document in evidence.

22 VICE CHAIR HATTON: Okay. We'll wait to see
23 if he moves to admit it, if you have any objections
24 when he begins questions.

25 Q. Have you seen this document before?

1 **A. I'm sure I have come across it on the web at**
2 **some point but --**

3 Q. Okay.

4 **A. -- not recently.**

5 Q. All right. Can you turn to page 5. And
6 table 3 talks about some of the changes that we were
7 just referencing regarding the ELCC class values for
8 solar. Can you see that?

9 **A. Yep.**

10 Q. And the -- go on to page 8. This is a
11 graphical representation of some of the same data
12 and a little bit of additional data. The IRPs said
13 that solar ELCCs were projected to decline to levels
14 near 26 percent by 2037; correct?

15 **A. I'll just confirm that here. Yeah, that's**
16 **right, yeah.**

17 Q. Okay.

18 **A. 26 percent.**

19 Q. And what is this graph showing those values
20 to do?

21 **A. They're declining to where the graph ends at**
22 **2033 at 17 percent.**

23 Q. Okay. So you would agree that 17 percent is
24 substantially lower than the 27 percent that ELCC
25 valued for 2037 that was referenced in the IRP;

1 correct?

2 **A. It's lower, correct.**

3 Q. And I understand that those dates don't line
4 up exactly.

5 Does this effectively mean that by PJM's
6 analysis, you would need to install more solar in
7 the 2030s to achieve the same level of service?

8 **A. I'm not sure -- when you say more, what is
9 that relative to? I'm not following that question.**

10 Q. Relative to the assumptions made in the IRP I
11 guess?

12 **A. Okay. So what's the --**

13 Q. The assumptions in the IRP --

14 **A. -- this IRP to get to a --**

15 Q. -- was that you have a 27 percent capacity
16 value whereas this is projecting a lower capacity
17 value.

18 **A. Yeah, I would say -- I would use the word
19 implying. I think the PJM numbers perhaps are
20 implying higher storage value, but also the
21 methodology which they used might be slightly
22 different.**

23 Q. Okay.

24 **A. Could be various factors.**

25 Q. Okay. And so you would agree that this curve

1 is a declining curve over time; right?

2 **A. Right.**

3 Q. What -- what does that imply to you? What do
4 you draw from that?

5 **A. That solar saturation in general or**
6 **penetration in the market as a portion of all**
7 **supplies increasing, and hence the peak where solar**
8 **in earlier years, when there's not enough solar, it**
9 **was adding more contribution to the peak, meaning it**
10 **was more aligned to the peak.**

11 **But as more solar is added, then the peak**
12 **starts slightly shifting over time, and since all**
13 **solar pretty much comes on at a similar time of day,**
14 **then hence less of that output is targeted at the**
15 **new -- let's call it the quote, unquote, new peak,**
16 **as that shows.**

17 Q. So is it related to the fact that it's
18 intermittent in nature?

19 **A. I think it's related to the fact that it is**
20 **rather concentrated in its output of time of day in**
21 **that respect, yeah.**

22 Q. And is the same true for traditional
23 dispatchable resources like coal and natural gas and
24 nuclear? Would they also have a declining ELCC
25 curve like this?

1 A. Well -- well, until very recently there
2 really was no ELCC, you know -- again, in quotes,
3 guidance for thermal resources because those --
4 they're supposed to dispatch when they're called on.

5 So they were really de-rated in the past
6 based on forced outage rates. Recently PJM has
7 recognized that maybe at certain times of the year,
8 those resources have some issues in terms of, you
9 know, dispatch and being available.

10 So they've started applying ELCC. However, I
11 think the concept is a bit different where the solar
12 and the wind, they're not really controllable, so
13 hence, it's -- this is a probabilistic type of
14 approach where PJM says, look, I don't know, we
15 can't tell the solar or the wind to be there, so
16 we'll de-rate at some probabilistic level where we
17 think it will contribute to peak, but with a gas
18 turbine, theoretically you call it, and you tell it
19 to start, and it starts.

20 So I think those concepts are a little bit
21 different.

22 Q. They're distinguishable because the
23 traditional resources, as long as you have fuel,
24 which is a controllable condition, they show up?

25 A. Yeah, and the plant's in good condition,

1 **yeah.**

2 Q. Yeah. Okay. I have something else to hand
3 out here.

4 This is AG 2, please.

5 VICE CHAIR HATTON: Thank you.

6 Q. I recognize that this is a fairly new
7 document. It's a presentation from just June 4th,
8 but it relates to the same concepts, ELCC updates
9 for classes, and it's published by PJM regularly.

10 Are you aware that they routinely publish
11 preliminary ELCC values as required in FERC docket?

12 **A. Yeah.**

13 Q. Okay. So, again, let's just -- if you'll
14 flip to page 5 of this document. It's, again,
15 showing ELCC values over a period of time out to
16 2034 - 2035. This table includes values in addition
17 to solar and wind, and it talks about gas combined
18 cycle, gas combustion turbine, coal and nuclear.

19 Do you see that?

20 **A. Yep.**

21 Q. Okay. So what is -- what are these
22 preliminary ELCC class ratings showing for tracking
23 solar?

24 MR. GARCIA-SANTANA: Your Honor, and if I
25 may, I was letting it go until the question was

1 specific about the content of the document, but
2 there's no foundation about whether the witness is
3 familiar with this particular document or how it was
4 prepared.

5 MR. WEST: My question of him was, was he
6 aware that FERC routinely publishes preliminary ELCC
7 data, and he responded that he was, and so that was
8 the basis that I was asking him questions about it.

9 CHAIRMAN CHANDLER: Yeah. I'm going to
10 overrule. This is the -- this is Patricio's slide
11 deck, so it's one of those things,
12 Mr. Garcia-Santana. I appreciate it, but I'm going
13 to overrule the objection.

14 MR. GARCIA-SANTANA: Thank you, Your Honor.
15 Q. So if you can just take a look at -- can you
16 just summarize what's going on with tracking solar
17 over the period referenced in the chart?

18 **A. Yeah, it looks like it's declining over time.**

19 Q. From what value to what value?

20 **A. Yeah, from -- in '26-27, they have it here at**
21 **11 percent, down to 4 percent in '34-35.**

22 Q. So a 4 percent value in 2034-35 is
23 substantially different than the 26 percent in 2037
24 that was referenced in the IRP; correct?

25 **A. That's different.**

1 Q. All right. And if you look at the nuclear,
2 coal, gas combined cycle and combustion turbine line
3 items there and the values listed for those, I think
4 some reference was made earlier that the ELCCs for
5 those have been declining over time. Do you find
6 that to be the case looking at the values listed
7 there?

8 **A. Overall, the ones you mentioned closer to the**
9 **bottom of the table look fairly, I'd say, stable**
10 **over time. Some fluctuation but fairly stable.**

11 Q. So one last question: If Kentucky Power was
12 proposing to install 700 megawatts of solar but that
13 now they would need to install some multiple of
14 that, maybe nine or ten times as much to procure the
15 same amount of capacity value in PJM, would that
16 dramatically affect the cost feasibility of that
17 plan?

18 **A. The cost of that plan? Yes, however, if I**
19 **could add, I believe the wind values are actually**
20 **now more robust than -- you know, over some of the**
21 **horizons, so...**

22 Q. Okay. Thank you.

23 MR. WEST: That's all I have for this
24 witness, Chairman. I would ask that these two
25 documents be admitted as evidence in the record.

1 CHAIRMAN CHANDLER: Mr. Garcia-Santana?

2 MR. GARCIA-SANTANA: Your Honor, these are --
3 documents are provided by PJM publically, so I don't
4 know if the Commission would be inclined to admit
5 them on some other basis than the knowledge of
6 Mr. Haratym, but my understanding is that he did not
7 provide a foundation for their admission.

8 MR. WEST: I believe that I did provide a
9 foundation, and given that these are documents that
10 are routinely relied on in the space, I believe he
11 said that -- with regard to the first document, he
12 had reviewed it before, but not recently.

13 And with regard to the second document, he
14 was aware that this information was routinely
15 published.

16 CHAIRMAN CHANDLER: All right. I'm going to
17 admit AG 1 and 2 noting your objection,
18 Mr. Garcia-Santana.

19 MR. GARCIA-SANTANA: Thank you, Your Honor.

20 MR. WEST: Thank you, Your Honor.

21 (AG Exhibit 1 and AG Exhibit 2 admitted)

22 CHAIRMAN CHANDLER: Mr. Kurtz?

23 MR. KURTZ: Thank you, Your Honor.

24 * * *

25

1 CROSS-EXAMINATION

2 BY MR. KURTZ:

3 Q. Can you have counsel give to you KIUC
4 Exhibit 1, please.

5 MS. GLASS: Sure.

6 Q. Do you have that -- is it Mr. Haratym?

7 **A. Yes, Haratym is fine. Yeah.**

8 Q. Okay. Thank you. Will you turn to page 4 of
9 this -- the scorecard that we've been looking at?

10 **A. Yes.**

11 Q. Okay. I want to ask you about the no wind
12 portfolio compared to the preferred plan.

13 **A. Yes.**

14 Q. The short-term cost of the no0wind portfolio
15 is less than the preferred plan; is that correct?

16 **A. Sir, was that short-term or long-term?**

17 Q. Short-term is the first column.

18 **A. Yes.**

19 Q. Okay.

20 **A. Yes.**

21 Q. And the next column, the no wind portfolio is
22 less expensive than the preferred plan over the
23 15-year term, correct?

24 **A. It looks to me like the preferred plan has a
25 lower long-term CPW, unless I'm mistaken.**

1 Q. The preferred plan is higher, 64.8 versus
2 68 -- oh, you're right. 64.8 versus 68.4, you're
3 correct. On the cost risk is -- the no wind
4 portfolio has a lower risk?

5 **A. Yeah, the cost risk column is lower for the**
6 **no wind; correct.**

7 Q. Okay. Let's go to the very end, the local
8 impact. Am I reading this correctly that the no
9 wind portfolio would invest 2,088,000,000 in
10 Kentucky versus the preferred plan would invest
11 1.355 billion?

12 **A. Yeah. Yeah, that's right. Those numbers are**
13 **correct. Yep.**

14 Q. Okay. So the no wind portfolio would invest
15 733 million additional dollars in Kentucky versus
16 the preferred plan?

17 **A. Correct, yeah, that's how I would read it.**

18 Q. Okay. So what accounts for the \$733 million
19 of additional investment in Kentucky?

20 **A. Yeah. So in -- in the no wind portfolio,**
21 **more install capacity has to be deployed, so since**
22 **there's more -- since we're not allowed or this**
23 **portfolio -- the no wind portfolio does not allow**
24 **wind. Therefore, the optimization model relies more**
25 **heavily on solar, which has a lower UCAP value.**

1 **Hence, the total install capacity is higher. Hence,**
2 **the Capex is higher, and that's why we see that**
3 **difference.**

4 Q. Okay.

5 **A. I mean, amongst other drivers, but I'd say**
6 **that's a key one.**

7 Q. Okay. Does that mean more construction jobs
8 in Kentucky, more permanent jobs, and more ongoing
9 property taxes compared to the preferred plan?

10 **A. I would say directionally that's fair, but**
11 **it's difficult for me to opine on that just, you**
12 **know, offhand, yeah.**

13 Q. Thank you, sir.

14 **A. Yeah.**

15 MR. KURTZ: No further questions.

16 CHAIRMAN CHANDLER: Mr. Gary? Ms. Legge?

17 MS. LEGGE: I do have a few questions.

18 CROSS-EXAMINATION

19 BY MS. LEGGE:

20 Q. So first off, I do want to briefly ask about
21 AG Exhibit 2 we that were just discussing, the
22 preliminary ELCC class ratings for period 2026 to
23 2027, and I want to turn to page 6 -- actually slide
24 No. 6.

25 We've been talking a lot about the

1 assumptions related to the solar and fossil
2 resources. You said just very briefly wind is more
3 robust in these figures as compared to the
4 assumptions that were in the IRP.

5 So do you -- I think I recall from page 133,
6 it's 11 percent was the assumption, or roughly
7 around 11 percent; is that accurate?

8 **A. Yeah. I'm just looking at it here now.**

9 Q. For onshore wind? I think offshore wind, we
10 can leave out for now, but for onshore wind.

11 **A. Yeah. I mean, onshore it started at around**
12 **15 but declined to, yeah, around 11 or so, yeah, it**
13 **looks like it.**

14 Q. And now PJM is looking at about 35 percent
15 and declining to 15?

16 **A. That's right.**

17 Q. And Mr. West also asked you a question about
18 fossil resources, and I think the question was along
19 the lines of, as long the fuel's there, the resource
20 shows up. Do you recall that?

21 **A. Yes, I recall that.**

22 Q. And I believe -- I am not a court reporter
23 but I believe the response was something along the
24 lines of, yeah, as long as the plant is in good
25 condition?

1 **A. Well, yeah, the plant can have fuel, but it**
2 **still has to fire up, yeah.**

3 Q. Right. So fuel availability is not the only
4 cause of a forced outage?

5 **A. Yeah, yeah, definitely. That's, yeah, one**
6 **of.**

7 Q. Okay. I think that's -- be done with ELCC
8 for everyone's relief, but I do want to return to
9 another favorite topic, which is levelized costs.

10 Were you here earlier when Mr. Soller was
11 talking about the levelized costs of the energy
12 efficiency bundles?

13 **A. Yes, I was.**

14 Q. And as I understood it from what Mr. Soller
15 said, the costs are modeled as spent in year one but
16 the model takes into account the full life, service
17 life of the efficiency measure even if it extends
18 beyond the IRP window; is that correct?

19 **A. That's right.**

20 Q. Can you tell us where in the -- we were
21 looking for it in the discovery files. Can you tell
22 us where in the files that is -- we can find that
23 information?

24 **A. Do you mean the spreadsheet format, the**
25 **financials, or --**

1 Q. Well, yeah.

2 **A. -- or just the text?**

3 Q. Where is it depicted, noted that those full
4 service -- the energy efficiency savings over the
5 full service life of the measures is considered in
6 the model?

7 **A. Yeah. Offhand I don't have a specific
8 reference for you.**

9 Q. Okay.

10 **A. So I would have to look through the text and
11 perhaps the discovery as well to see if we did
12 mention that. I believe we did mention it
13 somewhere, but like I said, offhand I can't point to
14 something specific, yeah.**

15 Q. And would you be amendable to a post-hearing
16 data request?

17 **A. I'd have to check with my attorneys, yeah.**

18 MS. GLASS: Yes, we would be.

19 MS. LEGGE: And my apologies, in this
20 Commission, do I also have to ask you, Commissioner?

21 CHAIRMAN CHANDLER: Oh, yeah, I'm sorry. So
22 as a matter of practice, we -- I'm just going to be
23 straightforward here.

24 If you ask a some question and the witness
25 doesn't know it, you just say, I'm going to ask it

1 in a post-hearing data request.

2 And at the end of the hearing, we will have a
3 discussion about the post-hearing process, and we'll
4 set a date by which post-hearing discovery should be
5 sought and responded to.

6 And the fact that you asked it on -- while
7 here at the hearing basically gave an indication to
8 the company to go ahead and start preparing the
9 responses, which is why I just want to be clear,
10 Mr. Gish, you know, asked earlier, can you say it
11 again.

12 It's not that he -- Mr. Gish is going to get
13 that data request in written form, but ordinarily
14 they go ahead and get started on getting that
15 together.

16 So just the fact that you asked it, you'll
17 have an opportunity to seek it formally in written
18 form.

19 MS. LEGGE: All right. I appreciate that.
20 Thank you, Chairman.

21 Q. Okay. I think that's all my questions about
22 that. Last -- hopefully last topic, which we just
23 started to get into with Mr. Soller related to the
24 production tax credit and investment tax credit. Do
25 you recall?

1 **A. Yep.**

2 Q. And I would also like to refer you to the
3 energy futures group report that was attached to
4 joint intervenors' comments. Did you review that
5 report?

6 **A. I saw at it one point in time, but I don't
7 have it with me. I can't recall it that well, no.**

8 Q. Okay. But you did review it in the course of
9 your work on this proceeding?

10 **A. Yeah. It might have been, you know, quite a
11 long time ago, but I think I did at some point,
12 yeah.**

13 Q. Okay. And as we were discussing earlier, the
14 input workbook reflects the application of something
15 called a tax gross-up?

16 **A. Correct.**

17 Q. And, Mr. Soller explained what that was.

18 MS. LEGGE: I would like -- I think this is
19 where we would need to move to a confidential
20 session.

21 CHAIRMAN CHANDLER: And do you-all plan on
22 sharing?

23 MR. GARY: I will share it.

24 CHAIRMAN CHANDLER: So while we're switching,
25 I want to make sure that there's not a problem doing

1 that while we're on the confidential session, so...

2 MS. LEGGE: Okay.

3 CHAIRMAN CHANDLER: Candace, do you want to
4 go ahead and move us onto confidential session?

5 MR. GARY: Do you want me to go ahead and
6 plug in so you can check?

7 CHAIRMAN CHANDLER: Dinner and a show here,
8 folks. One second, counsel. Don't move on from
9 that page.

10 MR. GARY: Yeah, nothing confidential up yet.

11 (Confidential testimony heard from 6:56 p.m.
12 to 7:03 p.m.)

13 CHAIRMAN CHANDLER: Counsel?

14 MS. LEGGE: I have no more questions on the
15 public record as well.

16 CHAIRMAN CHANDLER: And the document that you
17 just referred to is the report that you-all included
18 as part your report?

19 MS. LEGGE: Mm-hmm.

20 CHAIRMAN CHANDLER: Okay. Ms. Koenig, do you
21 have any questions for this witness?

22 MR. KOENIG: No, thank you.

23 CHAIRMAN CHANDLER: Counsel?

24 MR. BELLAMY: Yes.

25

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1 CROSS-EXAMINATION

2 BY MR. BELLAMY:

3 Q. Do you have a copy of the IRP in front of
4 you?

5 **A. Yes.**

6 Q. I was going to see if you could maybe answer
7 this question. The -- on page 9 of the IRP, table
8 6, which is the cost for the simple cycle combustion
9 turbine.

10 **A. Yeah. Let me just go to that. Yep. Well,**
11 **sorry, I have, yeah, table 6. I see it, yeah.**

12 Q. Okay. I'm looking at the variable operation
13 and maintenance cost, which is the acronym VOM,
14 there's \$0.62 per megawatt hour for the, I guess,
15 natural gas combustion turbine is how it's listed
16 there.

17 And then on the page 88, which is -- if you
18 flip back one, you've got the variable operation and
19 maintenance for the natural gas combined cycle, and
20 it's 267 per megawatt hour.

21 Can you explain or do you have any
22 explanation for why the variable operation
23 maintenance for the simple cycle combustion turbine
24 would be lower than the natural gas combined cycle?

25 **A. Yes. So first off, on this we took guidance**

1 from the Sargent & Lundy EIA report in terms of how
2 they differentiate the costs between these machines.

3 The VOM for the combined cycle machine is an
4 all-in number. It includes all consumables, major
5 maintenance, all rolled into one, whereas the VOM
6 for the single cycle, the headline point or \$0.62
7 includes mostly consumables, and on top of that in
8 addition, there is a start cost of offsetting \$79
9 per megawatt.

10 And that -- rolled into that is more of the
11 major maintenance, overhauls and, you know, I think
12 where that stems from is that -- well, first of all,
13 the single cycle since it runs on lower efficiency
14 is going to be dispatched more often or starting and
15 stopping.

16 And a lot of the wear and tear on the machine
17 is incurred at start and stop, similar to a car
18 engine where you have a thermal expansion traction,
19 that's occurring more often before the lubrication
20 gets to the moving parts. So a lot of the -- so the
21 point is a lot of these longer-term maintenance
22 costs are based on how many times you start and stop
23 the machine.

24 So, again, just to review, the CC includes it
25 all rolled into one number, and it's not starting

1 **and stopping as much.**

2 Q. Okay. And the simple cycle has the
3 79-megawatt hour taken out and is included
4 elsewhere, I guess?

5 **A. Yeah. So it's included -- in addition to**
6 **that, it's included in the modeling. Actually as a**
7 **-- as a separate line item, so it's being accounted**
8 **actually during start to stops.**

9 Q. Okay. Thank you.

10 **A. Yep.**

11 Q. Going to page 144 of the IRP again, this is
12 just a chart that kind of shows the flow of the
13 modeling.

14 **A. Yeah. Could you give me the miniature number**
15 **because --**

16 Q. It's page --

17 **A. -- my page numbers are different.**

18 Q. -- 144.

19 **A. Oh, my page numbers are different.**

20 MR. GISH: Figure 66.

21 **A. 66. Oh, okay. Got it. Yeah, the cylinder**
22 **diagram.**

23 Q. Yeah. Yes. Yes. So it's figure 66. Do you
24 have that?

25 **A. Yeah, got it.**

1 Q. Okay. That first cylinder there, that's the
2 resource optimization modeling in which the
3 Aurora model is selecting resources for the five
4 scenarios that Kentucky Power put into the model; is
5 that correct?

6 **A. Correct.**

7 Q. Okay. And there was a discussion -- there
8 was an indication that the model -- you have all of
9 the constraints that are put in there obviously and
10 in the model has to follow those constraints, but
11 ultimately it's solving for the lowest cost
12 portfolio in the scenario -- within the scenario and
13 meeting the various conditions; is that correct?

14 **A. Correct.**

15 Q. How is it determining what is lowest cost?
16 It's running it over 15 years, but is it the cost
17 within that 15 years, or is it a longer period of
18 time?

19 **A. Yeah. It's similar to the DSM discussion we**
20 **had earlier. It's over the life of any given asset,**
21 **so I think the longest period we had from starting**
22 **an asset, let's say, in the last year of the -- of**
23 **the window, 2036-37, to the end of its life would**
24 **have been up to 2070, I believe.**

25 **So it has a view, for every asset it's**

1 looking at it, okay, if I'm going to make this -- if
2 I'm going to buy this machine or buy this resource,
3 what kind of value to re-payers would it provide
4 over its entire life relative to all other options
5 that I have. So it's taking that long-term view.

6 Q. So is it comparing that resource over
7 30 years against multiple different resources at any
8 given time?

9 A. Yes, because the -- whenever there's a
10 shortfall in the model relative to peak demand to
11 the obligation, then the model has to make a
12 decision, what do I -- what do I -- how do I fill
13 that shortfall, effectively.

14 And it could even exceed that shortfall a bit
15 so that it defers buying another asset later on, so
16 it's making that decision on that basis.

17 Q. So is there load projected out within the
18 model all the way out through the end of the life --
19 the longest life unit that's being selected?

20 A. Well, the load is not. The load only goes
21 out to 2037, but it's able to determine if -- which
22 asset at any given -- any given point in time would
23 be the best value for rate payers from that point on
24 forward.

25 So it's not -- it's not trying to optimize

1 for let's say beyond 2037, but it is saying, okay,
2 I'm -- I have a capacity shortfall, I have to make a
3 decision today, what do I do, which asset will bring
4 me more greater NPV, let's say, or greater net cost
5 over the long run.

6 Q. That's I guess what I'm a little bit confused
7 about is how it's -- how it's doing that over that
8 longer period if it's not projecting out load
9 optimizing over that period.

10 A. I mean, let me see if I can bring a different
11 angle to that. Well, like I said, it's -- I mean,
12 imagine there is no load. It's just a matter of, I
13 need 10 -- I need whatever it is, 100 megawatts, and
14 I have two options that'll give me 100 megawatts of
15 UCAP, which one will have the lowest net cone or
16 lower net cost.

17 I mean, I don't know if that clarifies it,
18 but in my mind, there doesn't really have to be a
19 load in that -- in that kind of situation as long as
20 you know what -- at that point in time what -- how
21 much capacity that you need.

22 Q. Okay. I might send a post-hearing data
23 request just asking for a little clarification on
24 that point, and to the extent that you're able to
25 answer it --

1 **A. Sure.**

2 Q. -- we could try that.

3 With respect to the assessment of the various
4 portfolios, kind of the second part of the analysis,
5 the long-term 15-year -- so customer portability,
6 long-term 15 years CPW reference case, that was --
7 is that just calculating the revenue requirement
8 effective of each portfolio over that -- in each
9 year over that 15-year period and then essentially
10 determining which one would have the total overall
11 lowest revenue requirement effect and then on
12 average per year the lowest revenue requirement
13 effect?

14 **A. Are you asking what is the -- what is the**
15 **CPW, the first column in the scorecard, what does**
16 **that represent or --**

17 Q. The second one, the long-term.

18 **A. Oh, yeah, sorry. The long-term, yeah.**
19 **That's the -- yeah, that's the all-in cost to the**
20 **portfolio for the 15-year period, so, yeah, it only**
21 **takes the first 15 years.**

22 Q. Okay. So that is only looking at first
23 15 years, then?

24 **A. Yes, yeah.**

25 Q. Okay. And that's the same with the

1 short-term, it's looking just at -- it's -- the
2 initial step in the short-term is calculating the
3 revenue requirement effect of each portfolio for the
4 first five years; is that correct?

5 **A. Yes, right.**

6 Q. And then determining how it's escalating over
7 each year?

8 **A. Right, yeah.**

9 Q. Okay. With respect to the resource
10 optimization step, again, in the Aurora model, the
11 model is able to select between building a resource
12 that would be able to produce energy and making
13 short-term energy purchases from the market; is that
14 correct?

15 **A. Well, the model is trying to achieve**
16 **resource -- or resource adequacy from a capacity**
17 **standpoint. Energy can be thought of as a secondary**
18 **consideration or -- well, within the bounds that we**
19 **set in terms of the net sales and purchases, which**
20 **Witness Soller mentioned was 30 percent, plus or**
21 **minus.**

22 **So really the primary objective is capacity**
23 **adequacy at the lowest cost.**

24 Q. Yeah. It's solving for capacity, but -- or
25 it has to meet the capacity requirements that you

1 input in, but it's solving for lowest cost, and in
2 order to achieve that lowest cost, it will check to
3 see if building a natural gas combined cycle unit,
4 for instance, is lower than, you know, building
5 other resources and relying in part on market
6 purchases; is that correct?

7 **A. Yeah. So from that perspective, the energy**
8 **is taken into account in that it -- the model**
9 **understands or knows the market price in AEP zone,**
10 **and if there's any energy being produced by the**
11 **resource, it can sell to the market at that price.**

12 **And then if the portfolio is short on energy,**
13 **then it would have to purchase at that price. So**
14 **that is taken into account.**

15 Q. And my question about that is, when the
16 model's applying that, with respect to the PJM price
17 that's being reflected in the model at any given
18 point, is it -- is it taking into account -- like is
19 it an hourly price? Is it, you know, a daily price?

20 I guess you shook your head. Is it an hourly
21 price?

22 **A. Yeah, hourly over the entire horizon.**

23 Q. Okay. And is that hourly price changing
24 every hour based on the expected load within all of
25 PJM and the projected resource availability within

1 PJM?

2 **A. Yes.**

3 Q. Okay.

4 **A. Yes.**

5 Q. Thank you. Just one more quick question.

6 There was a discussion of kind of a two-part
7 analysis with respect to -- first I guess the figure
8 66 is the two-part analysis, but before you get to
9 figure 66, there was -- you were projecting, I
10 guess, resource decisions within PJM.

11 And my first question on that has already
12 been answered. That was all done before you do the
13 Kentucky Power resource -- resource optimization in
14 Aurora; correct?

15 **A. That's right. That's an earlier step, an
16 earlier module where we saw all the PJM come up with
17 a price in AEP zone and then provide that price
18 to -- to the optimization or the local -- what's
19 called a local KP optimization model.**

20 Q. Just a last question on this. Was the -- the
21 resources that were available within PJM when you
22 ran the optimization for PJM, was all of PJM limited
23 to the same resources that Kentucky Power was
24 limited to when it -- when the Kentucky Power
25 resource optimization was run?

1 **A. Yes.**

2 Q. Thank you very much.

3 EXAMINATION

4 BY CHAIRMAN CHANDLER:

5 Q. I have just a few, so we'll try to get them
6 in before we break here.

7 ELCC, let's just go back to this. Do you
8 still have the documents that Mr. West gave you on
9 behalf of the AG's office?

10 **A. Yes.**

11 Q. Big change between page 4 of what they ran in
12 -- for the -- as indicative for the '24-25 year
13 verse indicative starting the '26-27 planning
14 period; right?

15 **A. Right.**

16 Q. So there's not -- apparently this is a very
17 fun stakeholder meeting on June 4th trying to get an
18 idea of what's the underlying assumptions for this
19 slide show here in the second item, AG 2, where like
20 fixed tilt guess from 7 percent in the '26-27
21 delivery year down to 3 percent.

22 Do you see that?

23 **A. Yeah, fixed tilt.**

24 Q. All right. Work with me here just for a
25 second on some conceptual -- you have a good

1 appreciation for ELCC as a -- as a concept; right?

2 **A. Yeah.**

3 Q. If -- if a model that produced ELCC, and the
4 only thing changed in that model was to weight
5 winter risk days higher than the base model, and
6 those winter risk days were at 4:00 a.m. across
7 winter mornings, would that, all else equal, reduce
8 the ELCC for fixed tilt solar and tracking solar?

9 **A. Well, if it was at 4:00 a.m., then I -- yeah.**
10 **It would be almost like effectively zero you could**
11 **say; right?**

12 Q. Well, I --

13 **A. If it was at 4:00 a.m., but...**

14 Q. Not put all the weight on winter.

15 **A. Yeah.**

16 Q. But if you just directionally increase the
17 risk weighting of those winter days, that would tend
18 to reduce the ELCC for solar resources, correct?

19 **A. Yeah, general terms, yes.**

20 Q. Okay. And then opposite direction, if you
21 were to increase the weight of risk, risky hours, if
22 you were to increase the weight of noon in the
23 summer, all else equal, that would increase the
24 ELCC --

25 **A. Mm-hmm, agreed.**

1 Q. -- right?

2 **A. Yeah.**

3 Q. Okay. If the model takes into account risk
4 to correlated outage based off unavailable fuel
5 transportation, let's assume an ELCC model took that
6 into account, and you continued to add combined
7 cycles and CTs to the exact same pipeline without
8 any additional capacity or redundancy in that
9 pipeline, all else equal directionally, what would
10 that result in for ELCCs for those current
11 resources, gas resources?

12 **A. Well, likely it would be lower for a fuel
13 risk, yeah.**

14 Q. Okay. Now, we're not -- we're not touching
15 the supply side for a second; right? We have an
16 ELCC. Let's say that customers tend to, all else
17 equal, in the future start increasing their demand
18 of power in the middle of the afternoon on hot days
19 or on whatever days -- days in which there's sun
20 out, and they start increasing -- shifting the
21 kilowatt hours, megawatt hours, total in the year
22 doesn't change, they just start shifting their
23 usage, though, from other hours to those, let's say,
24 noon hours in the summer.

25 All else equal, is that going to increase or

1 decrease the ELCC of solar?

2 **A. Well, if the load is increasing during those**
3 **hours, it would increase the probability that the**
4 **solar is getting to be serving that peak -- well,**
5 **assuming that the peak is occurring in those hours,**
6 **then --**

7 Q. Assuming that the increase in demand in those
8 hours increases the likelihood of a loss of load
9 probability?

10 **A. Yeah. Yeah. I agree it would get higher,**
11 **yeah.**

12 Q. So I guess what I'm really asking for is how
13 much weight or stock would you put into forecasting
14 ELCCs over a 15-year period in conducting an
15 Integrated Resource Plan for resources that cost in
16 excess of a billion dollars given the number of
17 variables that go into it, period -- question mark?

18 **A. Yes. So let me think about that for a**
19 **second, how to express that. So, yes, this is a --**
20 **the value that any resource can bring to the system**
21 **from a peak adequacy standpoint can shift over time.**

22 So I think, though, that the approach that we
23 took is probably -- you know, it's fairly robust for
24 the information we had at that point in time, and
25 for the other scenarios, by the way, CRA actually

1 forecasted the ELCC based on the total combination
2 of reserves in PJM.

3 So we went to extra lengths to -- to make
4 sure that the ELCC that we're using actually
5 reflects market realities in our model.

6 Q. Yeah.

7 A. Now, things can change over time like, you
8 know, we've seen PJM do here. However, this is --
9 this is just guidance, so, yes, this is something
10 that can shift.

11 However, you know, in the same respect,
12 energy prices can shift, gas prices can shift,
13 carbon legislation can shift, like we see from the
14 EPA, so a lot of things can change.

15 Q. Capacity is not -- capacity is not consumed
16 to keep lights on and heat warm and air-conditioning
17 cool; correct?

18 A. Well, at the very peak, but let's say in any
19 given hour, it -- well, it's utilized. The capacity
20 generated is utilized.

21 Q. It's utilized to produce --

22 A. In every hour.

23 Q. -- energy --

24 A. Yes.

25 Q. -- right?

1 **A. Yes.**

2 Q. It's energy that we care about in each and
3 every hour, correct, electricity?

4 **A. Right.**

5 Q. Not the ability to correct it -- or ability
6 to produce it, but the actual production of it,
7 correct?

8 **A. Yeah, I -- I would -- personally I would take**
9 **it from a bit of a different angle. The capacity to**
10 **produce the electricity is what enables the energy,**
11 **but I see your distinction but, yeah.**

12 Q. I --

13 **A. More or less agreed.**

14 Q. What I'm trying to make sure I have an
15 appreciation for is how much value the Commission
16 should give an Integrated Resource Plan to the
17 capacity accreditation to meet a systemwide resource
18 adequacy construct verse the ability of those
19 facilities to actually produce energy for the
20 utility that owns them and built them for the
21 benefit of their consumers?

22 **A. I think at the snapshot in time they were**
23 **producing the IRP, I think it's a pretty robust**
24 **analysis. However, yes, things can change, so if**
25 **we're -- you know, if we're saying what's going to**

1 happen 20 years out, I agree, there's a lot of risk,
2 but if we have to do an analysis today, I think the
3 way we perform this is fairly robust.

4 Q. Yeah. Let me ask you --

5 A. Yeah.

6 Q. -- from your perspective. Was -- are
7 these -- okay. Was the Integrated Resource Plan
8 conducted with an eye towards meeting Kentucky
9 Power's portion of its required -- of its
10 requirements to PJM or separately to meet Kentucky
11 Power's obligation to serve native load?

12 A. I think it's both --

13 Q. Okay.

14 A. -- because --

15 Q. And -- go ahead. You can explain.

16 A. So Kentucky Power's obligation is -- from
17 PJM's standpoint is to beat PJM, and the way the
18 relationship works is Kentucky Power brings the UCAP
19 that PJM asks for, for its peak, which is -- right
20 now it's targeted towards the summer.

21 And PJM, in return in that relationship,
22 says, look, I'm -- the control room is going to
23 cover everything else and make sure that frequency
24 and voltage and power quality stays adequate for the
25 consumers and rate payers of Kentucky Power.

1 **So I believe -- I think it would be both in**
2 **that respect.**

3 Q. And what I'm trying to ask is, as it relates
4 to things like ELCC capacity accreditation, specific
5 to that, is that an entirely meeting the PJM's
6 requirements consideration, or is that -- should
7 this be taken into account in both meeting the
8 capacity requirements of PJM and meeting its own
9 native retail customers' demand?

10 **A. Well, I guess, yeah, we use it for both, so**
11 **it's -- it's -- I think it's applicable to both.**

12 Q. Well, you're using -- you're applying it to
13 the resources you're using for the latter, but
14 you're not running -- you're not running ELCCs on a
15 LDA-specific basis, correct?

16 **A. Yeah. ELCCs are -- from the report that**
17 **we're looking at here, it's from PJM's global**
18 **standpoint.**

19 Q. Sure. There's not a locational aspect of
20 ELCC; right?

21 **A. Yes, yes. Putting it that way, yes, agreed.**

22 Q. Okay.

23 **A. Yeah.**

24 Q. But there's a locational aspect of -- there's
25 certainly a locational benefit to having generation

1 within the LDA and specifically within the node,
2 correct, or within -- within the zone -- not the
3 zone -- within the footprint of Kentucky Power,
4 correct?

5 **A. Well, sir, can you say it one more time, just**
6 **the beginning?**

7 Q. Yeah. There's certainly a locational benefit
8 of having the generation within Kentucky Power's
9 territory, correct?

10 **A. I don't fully agree with that.**

11 Q. If there's a -- let me ask it differently.
12 If there's a massive imbalance within a subzone or a
13 small area within a zone between demand and load,
14 does that risk anomalous energy pricing outcomes?

15 **A. If there are transmission constraints between**
16 **the sub area and the rest of system, yes. However,**
17 **in the case of Kentucky Power being part of**
18 **AEP zone, which is -- which is large and broader**
19 **Western PJM, then I think the transition system is**
20 **robust enough in that it can transmit power to the**
21 **areas that -- that are needed.**

22 Q. Including a retirement of the magnitude and
23 the addition of the magnitude outside of that sub
24 area of the type envisioned in the preferred plan?
25 Let me withdraw that question.

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1 Does the IRP -- the question, it was about
2 transmissional, but does the IRP look at all as to
3 whether or not the retirement of local generation to
4 be replaced in large part by generation that's not
5 local, for lack of a better term, that's not --
6 any -- any price impact of that is not looked at in
7 this Integrated Resource Plan. Would you agree?

8 **A. It is not a nodal analysis.**

9 Q. Okay.

10 **A. It's a zonal analysis.**

11 Q. It's an ELCC-specific analysis?

12 **A. Yeah. It's not -- yeah, I call it a zone. I**
13 **don't -- yeah, it's not LDA-specific let's call it.**
14 **It's -- it's zone. It's AP that the pricing and the**
15 **supply/demand balance conditions that are valued in**
16 **the IRP, as they pertain to Kentucky Power are on**
17 **the AEP zone basis. That's the main granularity**
18 **that we're looking at.**

19 Q. Okay.

20 **A. Yeah.**

21 Q. All right.

22 CHAIRMAN CHANDLER: We'll take a recess for
23 dinner. Let's -- does anybody have an objection to
24 30 minutes? Okay. So we'll come back at 8.

25 (Off the record)

1 CHAIRMAN CHANDLER: Back on the record in
2 Case Number 2023-00092.

3 Before I turn it back over to you,
4 Mr. Garcia-Santana, for your redirect, I do want to
5 note we should plan to be taking our next break in
6 about 50 minutes. The reason for that is we're that
7 going to reboot the system and stop the YouTube
8 feed, and then start a new one because it only goes
9 12 hours.

10 So we apparently --

11 VICE CHAIR HATTON: Once again.

12 CHAIRMAN CHANDLER: If you're ever like, hey,
13 do I have a leg up on Google, in this single
14 instance, we can go later than Google.

15 Mr. Garcia-Santana, do you have any redirect
16 of this witness?

17 MR. GARCIA-SANTANA: I don't, Your Honor.

18 CHAIRMAN CHANDLER: Okay. Thank you very
19 much.

20 MR. GARCIA-SANTANA: And can he --

21 CHAIRMAN CHANDLER: He may be excused.

22 MR. GARCIA-SANTANA: Thank you, Your Honor.

23 CHAIRMAN CHANDLER: Yep. All right. So at
24 this point we've gone through Witnesses West,
25 Newman, Huber, Soller, Haratym, phonetically right,

1 Haratym and Spitznogle.

2 MS. GLASS: Correct.

3 CHAIRMAN CHANDLER: Okay. Ms. Glass?

4 MS. GLASS: Kentucky Power calls Stephen
5 Blankenship.

6 CHAIRMAN CHANDLER: Please raise your right
7 hand. Do you swear or affirm that the testimony
8 you're about to give is true and correct under
9 penalty of perjury?

10 THE WITNESS: I do.

11 CHAIRMAN CHANDLER: Please have a seat.
12 State your name and address for the record.

13 THE WITNESS: My name is Stephen Blankenship,
14 address 12333 Kevin Avenue, Ashland, Kentucky,
15 41102.

16 CHAIRMAN CHANDLER: Ms. Glass?

17 MS. GLASS: Thank you.

18 STEPHEN BLANKENSHIP, called by Kentucky Power
19 Company, having been first being duly sworn,
20 testified as follows:

21 DIRECT EXAMINATION

22 BY MS. GLASS:

23 Q. Can you please state your business position
24 and your employer?

25 **A. Yes. I'm the distribution regional support**

1 **manager for Kentucky Power Company.**

2 Q. And did you sponsor data requests and
3 portions of Kentucky Power's IRP report?

4 **A. Yes.**

5 Q. Do you have any corrections to that
6 information?

7 **A. No.**

8 Q. Based on the information you knew at the time
9 at that time, if you were asked those same questions
10 today, would the information you provided be the
11 same?

12 **A. Yes.**

13 MS. GLASS: The witness is available for
14 cross-examination.

15 CHAIRMAN CHANDLER: Mr. West?

16 MR. WEST: No questions.

17 CHAIRMAN CHANDLER: Mr. Kurtz?

18 MR. KURTZ: No questions, Your Honor.

19 CHAIRMAN CHANDLER: Mr. Gary?

20 MR. GARY: No questions, Your Honor.

21 MR. KOENIG: No questions.

22 MR. VAN ZYL: We don't have any questions.

23 CHAIRMAN CHANDLER: Thank you very much. You
24 may be excused.

25 THE WITNESS: Thank you very much.

1 MS. GLASS: Thank you.

2 CHAIRMAN CHANDLER: Would you like to call
3 your next witness?

4 MS. GLASS: We would. Kentucky Power calls
5 Kamran Ali.

6 CHAIRMAN CHANDLER: Mr. Ali, please raise
7 your right hand. Do you swear or affirm that the
8 testimony you're about to give is true and correct
9 under penalty of perjury?

10 THE WITNESS: I do.

11 CHAIRMAN CHANDLER: Please have a seat.
12 State your name and address for the record.

13 THE WITNESS: Kamran Ali. The address is
14 8500 Smith's Mill Road, New Albany, Ohio 43054.

15 MR. GARCIA-SANTANA: Thank you, Your Honor.

16 CHAIRMAN CHANDLER: Mr. Garcia-Santana?

17 KAMRAN ALI, called by Kentucky Power Company,
18 having been first being duly sworn, testified as
19 follows:

20 DIRECT EXAMINATION

21 BY MR. GARCIA-SANTANA:

22 Q. Mr. Ali, by whom are you employed and in what
23 capacity?

24 **A. I'm employed by American Electric Power**
25 **Service Corporation as vice president of**

1 **transmission and telecommunication planning.**

2 Q. And in that capacity, do you provide services
3 to Kentucky Power?

4 **A. Yes, I do.**

5 Q. Okay. And specifically in this case, did you
6 provide input that was provided by you or under your
7 supervision for the preparation of the Integrated
8 Resource Plan that was submitted in this case and
9 discovery responses that were provided in this case?

10 **A. Yes, I did.**

11 Q. Do you have any corrections to that evidence?

12 **A. No, I don't.**

13 Q. If I were to ask you the same questions
14 today, substantially your answers would be the same?

15 **A. Yes, they would be.**

16 MR. GARCIA-SANTANA: Your Honor, the witness
17 is ready for cross-examination. Thank you.

18 CHAIRMAN CHANDLER: Mr. West?

19 MR. WEST: No questions.

20 CHAIRMAN CHANDLER: Mr. Kurtz?

21 MR. KURTZ: A couple.

22 CROSS-EXAMINATION

23 BY MR. KURTZ:

24 Q. Mr. Ali, good evening. The transmission
25 system at the Big Sandy power plant, what voltage is

1 it? Can you describe it, the condition it's in,
2 that type of thing?

3 **A. Yes, absolutely. So the substation, the**
4 **Big Sandy substation, it's 138 KV voltage station.**
5 **It steps up to 345 and then 765, but that is a**
6 **bigger substation.**

7 **You know, the condition of that station, it**
8 **meets all the current standards and criteria as well**
9 **as the internal guidelines at AP, yeah, so it meets**
10 **all those requirements.**

11 Q. That plant, that facility used to have an
12 800-megawatt coal plant, and it retired about ten
13 years ago?

14 **A. That is correct.**

15 Q. So can that site accommodate 800 megawatts of
16 new gas generation, whether it be CT or combined
17 cycle?

18 **A. I really you cannot answer that without**
19 **actually analyzing that because, you know, a lot has**
20 **changed since then, and so we'll have to analyze the**
21 **injection of an 800-megawatt plant to see if it's**
22 **going to cause any kind of constraints on the grid,**
23 **you know.**

24 **Any such project would have to go through a**
25 **PJM interconnection process, you know, regardless of**

1 whether -- what our findings are, there are issues
2 or no issues.

3 For the FERC tariff, the -- you know, they
4 will have to go through the PJM process, for PJM to
5 be the final authority in the determination of any
6 transmissional upgrades or local upgrades that may
7 be required to connect it.

8 Q. Okay. One last question. Would you describe
9 the condition of the transmission system at the
10 Big Sandy facility as in good condition?

11 A. Yes. Like I mentioned earlier, you know, the
12 assets there meet all standards, criteria, when it
13 comes to the planning criteria.

14 In essence what that means is, you know, the
15 analysis we do, you know, we look at the
16 contingencies that NERC has stipulated in the NERC
17 TPL standards, and that system meets that.

18 Now, you've got to remember that when we do
19 that analysis, that plant is assumed retired in that
20 analysis, so we haven't done any analysis where we
21 have 800 megawatt of duration.

22 There is a possibility that when you do that,
23 it may not meet the -- those standards, but we
24 haven't done any such analysis this point.

25 MR. KURTZ: Thank you, Chairman.

1 CHAIRMAN CHANDLER: Mr. Gary?

2 MR. GARY: Just one question, following up on
3 that question from Mr. Kurtz just now regarding the
4 transmission system at Big Sandy and in that general
5 area.

6 CROSS-EXAMINATION

7 BY MR. GARY:

8 Q. Would it matter whether that 800 megawatts
9 came from, say, a new combustion turbine, a combined
10 cycle or, say, a renewable resource or a battery, or
11 is it resource agnostic essentially is what I'm
12 asking?

13 **A. It really does matter at the end of the day**
14 **what type of resource you're going to connect to a**
15 **transmission grid because the different types of**
16 **resources have a different profile during different**
17 **times of year; right?**

18 **So from a light load perspective, one**
19 **resource may not create any constraints, but it may**
20 **create constraints during peak conditions and vice**
21 **versa.**

22 **So, yes, it does matter at the end of the day**
23 **what type of resource you would connect to that.**

24 Q. Okay. With regard to the Big Sandy
25 transmission system specifically, would that be

1 capable of hosting a 800-megawatt battery, for
2 instance?

3 **A. Yeah. Like I said earlier, I haven't**
4 **performed or my organization hasn't performed any**
5 **analysis recently to confirm any such options, so I**
6 **really cannot say yes or no to that answer without**
7 **having done any analysis there.**

8 Q. And the analysis would be essentially the
9 same as the analysis for a CT -- I mean, not the
10 results, but the analysis you would have to do would
11 be essentially the same as for a CC or a CT?

12 **A. Yeah. So let me clarify something before I**
13 **answer it. So I think you're trying to compare a CC**
14 **and CT with a battery storage system; right?**

15 Q. Essentially.

16 **A. Yeah. So battery storage analysis is a**
17 **little different in a sense because battery also**
18 **needs to be charged, so it's not only just a**
19 **generation injection, it's a load injection or**
20 **consumption, I should say.**

21 **So in essence that analysis is slightly**
22 **different, it's more involved. But, again, at the**
23 **end of the day, we haven't really performed any such**
24 **analysis where we do opine on the feasibility of**
25 **that system being able to handle, whether it's a CC**

1 **or a PESS, portable energy storage system.**

2 MR. GARY: Okay. No further questions.

3 CHAIRMAN CHANDLER: Ms. Koenig?

4 MR. KOENIG: I don't have any.

5 CHAIRMAN CHANDLER: Counsel?

6 MR. BELLAMY: No questions.

7 EXAMINATION

8 BY CHAIRMAN CHANDLER:

9 Q. Good afternoon -- good evening, Mr. Ali.

10 **A. Good evening.**

11 Q. You said you haven't -- you were asked a lot
12 of questions about, can the Big Sandy substation
13 accommodate this or accommodate that, I think -- I
14 take it from your responses that it's just -- maybe,
15 but it hasn't been studied.

16 Is that a function of whether the actual
17 substation can take it or whether the system will
18 have violations if that type of facility connects to
19 that substation? Is there a distinction between
20 those two things?

21 **A. Your Honor, my answer is for both. We have**
22 **not analyzed it for -- at least my organization,**
23 **myself, I'm not familiar with any analysis we have**
24 **performed to see if physically we can accommodate a**
25 **CC, CT, or battery energy storage system or from a**

1 **system performance perspective, from a capacity**
2 **availability perspective, so I'm not --**

3 Q. But those are two completely different
4 analyses, would you agree? Whether the substation
5 is in the shape and whatever that you could actually
6 add that verse what the impact on the system is from
7 that type of injection?

8 **A. That is correct.**

9 Q. Okay. Ordinarily you would do the latter
10 study when somebody puts in for -- into the cue,
11 right? You would see what is the effect of this
12 generator connecting and injecting their energy?

13 That's -- that's the type of study that's
14 done as a result of somebody seeking to interconnect
15 into the system as a resource, correct?

16 **A. Yes. Your Honor, let me clarify it so that**
17 **I'm responsive there and responding to it --**
18 **accurately to your question.**

19 **So I think your question is, would you do the**
20 **physical feasibility whether a new resource can**
21 **physically connect to the substation first versus**
22 **the capacity analysis; is that your question?**

23 Q. No. What I'm asking is, you agree there are
24 two -- at least two distinct studies that have to be
25 done. The first is like, can you physically

1 connect, and the second is, what's the -- what
2 violations may occur from me connecting on the
3 broader system; correct?

4 **A. That is correct.**

5 Q. Okay. The second type of study is the type
6 of study that like if a competitive generator showed
7 up in your territory anywhere in the AEP zone and
8 wanted to connect, the latter is the type of study
9 you would do -- it would be the same type of study
10 that's done or set of studies, frankly, that's done
11 for that new interconnection request, regardless of
12 whether it's owned by an AEP affiliate; right?

13 **A. Not -- not entirely correct. We would still**
14 **-- we would still analyze how the physical**
15 **interconnection of that generator is going to take**
16 **place because that's the injection point; right?**

17 So now it's a possibility that the developer
18 may propose the new CC or CT or BESS is going to be
19 right there on the substation. That's a more
20 involved analysis because in this case, I'm assuming
21 AEP has that, you know, station and the land around
22 it, whereas it could be farther away from a
23 substation.

24 And in that case it's only a genti (phonetic)
25 coming into the substation and, again, either case,

1 we need to make sure that physically it's going to
2 be able to connect to a certain spot on the grid.

3 So that analysis happens in parallel with the
4 analysis as to when the injection happens, what
5 capacity constraints are caused on the grid and what
6 are the solutions to resolve those capacity
7 constraints, if any.

8 Q. Here's what I'm trying to make sure I have an
9 appreciation for. Is AEP or Kentucky Power in a
10 position to study on their own the feasibility or
11 the impact of that type of interconnection, separate
12 from and without necessarily seeking to enter the
13 cue?

14 A. Your Honor, maybe let me phrase this question
15 so that maybe I can answer it more appropriately.

16 Are we in the ability to estimate exactly
17 what it's going to take to interconnect that
18 facility to the PJM grid? The answer is not really
19 because you really need to know what other
20 generation is connecting; right?

21 So you have to handle that as a cue because
22 it's a possibility that a single generator may not
23 create any concerns on the grid, but when there are
24 two of them they may, so really that's why we need
25 to rely on the PJM cue process to -- to exactly and

1 **accurately estimate as to what the transmission**
2 **upgrades may be if a facility is connected to the**
3 **grid at some point.**

4 Q. Yeah. That's why I was trying to make a
5 distinction between those two types of studies, the
6 one where the impact of a connection -- the impact
7 that a connection has on the broader system verse
8 the physical ability to actually connect to that
9 facility.

10 About what I'm curious about is it doesn't
11 sound unreasonable, what you're saying is given the
12 idea of the cue is how everything interacts
13 together, that study of the broader impact is
14 probably going to be hard to do with any -- with any
15 certainty as to saying, this is the impact or this
16 may be the cost of it.

17 What I want to make -- what I want to ask
18 about, though, is -- what I'm trying to ask is, is
19 there a -- is there that still -- is there still
20 that same lack of certainty with relation to,
21 without necessarily entering the cue, studying the
22 physical capability of attaching to that individual
23 substation?

24 **A. Yeah. The physical connection could be --**
25 **could be analyzed without entering the cue, but,**

1 Your Honor, at the end of the day, if you're looking
2 at the feasibility, and that feasibility is based on
3 overall cost, right, of a product, then I think
4 that's a very important characteristic that you need
5 to understand as to how much is the network upgrade
6 cost of that interconnection because that could be
7 significant, you know, depending on what else is in
8 the cue.

9 Q. Right. But I take from all the testimony in
10 this case the idea is that as it relates to an IRP,
11 you just sort of ignore transmission costs for the
12 purposes of doing some of these things.

13 But insofar as you can reduce the risk of a
14 transmission interconnection cost, there's a benefit
15 to that of using what are effectively brownfield
16 sites where the utility already owns interconnection
17 equipment, correct?

18 A. Like I said, Your Honor, I mean, definitely
19 there is maybe some cost saving if there is already
20 existing substructure like a substation, but really
21 you cannot take that and assume that a given project
22 is more cost effective because the network upgrades
23 required to interconnect that product may be a lot
24 more than a greenfield interconnection station you
25 need for another project somewhere else on the

1 **system.**

2 **So, again, this --**

3 Q. And that's a directional aspect similar to
4 what I was asking Mr. Haratym earlier, right --
5 Haratym, about the locational aspect of facilities
6 and load and generation?

7 **A. That is correct. And, again, I think that is**
8 **why, Your Honor, like if you look at our RFP**
9 **process, the projects that bid into the RFP process,**
10 **they are projects that already have at least an**
11 **impact study completed.**

12 MR. GARCIA-SANTANA: It just perked my ear
13 for confidential information, Your Honor, that's
14 all.

15 CHAIRMAN CHANDLER: Oh, okay. I'm
16 understanding now. Thank you. I'm sorry, it's --
17 I'm not as quick as you are, Mr. Garcia-Santana.

18 Q. All right. So let's -- what I want to
19 have -- a final question on this. Can -- when
20 something enters the cue -- and I'm oversimplifying
21 this for a second, but when somebody enters the cue
22 and it's on your-all's system, on the AEP system,
23 PJM depends on you-all to do a significant amount of
24 the leg work on what the impact of that additional
25 generation might be in connecting to your grid,

1 correct?

2 **A. Your Honor, I won't call it significant.**
3 **It's a bottom-up-and-top-down approach, so really we**
4 **are analyzing the underlying sub transmission grid**
5 **and see if there is an impact to the underlying sub**
6 **transmission grid.**

7 **And PJM is doing a top down where they're**
8 **looking at the extra-high voltage and bulk electric**
9 **system, and then we kind of meet in the middle where**
10 **we see and tell you where the upgrades are needed.**

11 Q. Yeah.

12 **A. So it's a collaboration. And, again, PJM is**
13 **the transmission planner for the AEP zone, so they**
14 **are doing most of the analysis in that case.**

15 Q. And if needs are identified, you-all
16 determine the appropriate solutions to meet their
17 needs; is that right?

18 **A. Yes we do.**

19 Q. Do you-all have different methodologies that
20 you use to meet those needs if it's a nonaffiliated
21 generator verse if it's an affiliated generator?

22 **A. No. We are agnostic to -- as to who owns the**
23 **generator.**

24 Q. Okay. And do you allow -- if it's an
25 affiliated generator, do you allow that operating

1 company to determine the upgrade that they would
2 like to make, the type of upgrade, or do you give
3 them options and say, which one of those do you
4 want?

5 **A. So Your Honor, can I just make -- repeat the**
6 **questions --**

7 Q. Sure.

8 **A. -- you're asking? If it's a nonaffiliate,**
9 **would we --**

10 Q. It's an affiliate?

11 **A. If it's an affiliate, we would -- we would**
12 **reask the operating company as to which upgrades**
13 **they want to make.**

14 Q. No, no, not which upgrades they want to make.

15 **A. Right.**

16 Q. Okay. I want to be very clear. The need's
17 identified. Do you work with the operating company
18 on identifying the -- getting their input on what
19 their proposed or what their position is on that
20 appropriate solution?

21 **A. I mean, like I said, the solutions that we**
22 **identify are purely technical solutions, so they**
23 **will be more technical solutions and alternates,**
24 **just like we would do for nonaffiliates, and then we**
25 **would work with PJM, first to see if those solutions**

1 are going to work at the end of the day because PJM
2 is the one performing the analysis.

3 And once that happens, then we would, at the
4 end of the day, since the -- in this case, it
5 depends. Like maybe the operating company is going
6 to own the transmission solution. So of course,
7 you've got to make sure that the financing and the
8 budgeting piece are aligned.

9 So after that, once PJM has confirmed that
10 the solutions are working and if there are more than
11 one, that's when that discussion takes place.

12 Q. Yeah, but so the solution could be
13 reconductoring or the solution could be complete
14 reconfiguration and rebuild a line; right? Those
15 are two possible options given an identified need,
16 correct?

17 A. That is correct.

18 Q. And so if it's -- if it's Kentucky Power
19 seeking to interconnect, and it's Kentucky Power's
20 transmission system, they get a significant input, I
21 would assume, on which one of those options they
22 would like to go with, correct?

23 A. Your Honor, that wouldn't be any different
24 for a nonaffiliate, so both solutions -- if both
25 solutions are viable, we would put both solutions in

1 the impact study report for nonaffiliates also.

2 So you can look at any impact study or
3 facility study reports that AEP has put together or
4 groups, for that matter, and every viable solution
5 that works, we put it up there.

6 And then at the end of the day, you know, in
7 some solutions, they may only live for a few years
8 before you like are reconductoring, whereas if you
9 do a rebuild, that may give you 10, 15 years.

10 So at the end of the day, PJM works with the
11 developer to determine the cost allocation to figure
12 out if that solution is viable just for that project
13 or it's going to be viable for the cue.

14 And, again, PJM does the cost allocation for
15 all projects across the cue; right? It could be
16 more than one generator paying for it. So at the
17 end of the day, you know, the solutions that I give
18 are the same whether it's affiliate or nonaffiliate.

19 Q. And do you-all have the final call as to what
20 solution to go with as long as it meets PJM's -- as
21 long as it solves the identified problems of PJM?

22 A. Your Honor, I would say, you know, in these
23 cases, it's the generator that is paying for the
24 solutions, whether it's an affiliate or
25 nonaffiliate.

1 So they have lot of say in what solution they
2 want to go with because at the end of the day, if
3 that solution is not fully complete, it's them at
4 the end of the day who are at risk of curtailment;
5 right?

6 So we do work with our developers to say,
7 look, here's a solution that's reconductoring, it's
8 cheaper, but it can -- it has -- it can only get the
9 loading to 98 percent, whereas any solution that is
10 rebuild, it will get the loading down to 60 percent.

11 And so we do a lot of discussions with the
12 developer and the owner who's impacted, whether it's
13 an affiliate or nonaffiliate, to figure out which
14 solution is the right solution.

15 Q. Okay. I just want to be very quick, whose
16 call is it at the very end? I mean, of course, they
17 can withdraw and just choose not to build, but whose
18 call is it as to the proposed solution, the final
19 say?

20 A. Yeah. I mean, we -- like I said, we work
21 with PJM in determining what the right solution is.
22 I mean, I don't think there is a hard call there
23 because if a solution is cost-effective and cheap,
24 we as the transmission owner cannot come in and say,
25 look, we're going to impose a more expensive

1 solution on that unless we have good rationalization
2 for that, right, unless there are other benefits.

3 And if there are other benefits that we can
4 demonstrate, then we need to make sure that the cost
5 differential is taken and put it in a supplemental
6 bucket somewhere, and that does happen in some cases
7 where, you know, you have a project that is
8 reconductoring and it solves it, and we know that we
9 really need to go and rebuild it because there's a
10 load showing up.

11 In that case, we would work with the
12 developer. We would look at the cost differential,
13 and the cost differential will go into a separate
14 bucket because we really can't charge developers
15 more cost than is needed for them to address the
16 constraints on the grid.

17 Q. And that by definition is your call?

18 A. Yes, that is.

19 Q. Every year in advance of -- I say every year.
20 This is going to be a dumb-sounding question. In
21 advance of capacity options, insofar as they're
22 actually conducted every year, there are certain
23 risk parameters that are studied, including
24 determining the CETO then the subsequent CTCL,
25 correct?

1 **A. That is correct.**

2 Q. Okay. The CETO is not necessarily your --
3 not necessarily within your purview, but the CTEL
4 certainly is. Would you agree?

5 **A. That is correct.**

6 Q. It's a trans- -- it's a function of
7 transmission capability and available capacity,
8 right, generation capacity?

9 **A. Yes. So, Your Honor, the CETO is the**
10 **capacity emergency transmission objective, that is**
11 **as to how much power needs to be imported in a given**
12 **LDA or a zone, and the CTEL is the capacity**
13 **emergency transmission limit.**

14 Q. Yeah. So with CTEL, that is a LDA or sub-LDA
15 determination, correct?

16 **A. Yes.**

17 Q. Okay. So in any given year, if there is --
18 I'm oversimplifying this, but any given year that
19 there's a mismatch between the obligation, the
20 demand with an LDA or a sub-LDA, a subzone, and the
21 either generation available within the zone, given
22 the timing of the load, or the transfer limitation
23 with transmission being able to bring generation in,
24 insofar as there's a threshold.

25 But -- insofar as there becomes a mismatch,

1 that is reflected in an increased capacity price for
2 that zone or LDA, correct?

3 **A. Your Honor, unfortunately I don't think it's**
4 **that simple.**

5 Q. I know. Like I said, I was oversimplifying
6 it.

7 **A. That's fine.**

8 Q. Go ahead.

9 **A. I mean, at the end of the day, it's not a**
10 **mismatch. I mean, the CTEL has to be 115 percent or**
11 **less of the CETO for that to happen -- actually it's**
12 **130 percent or less of the CETO, but if it's less**
13 **than 115 percent, then it becomes a reliability**
14 **constraints, and typically the RTO would look -- you**
15 **know, there's a load deliverability analysis that we**
16 **PJM does, and they will try to address that before**
17 **that issue shows up.**

18 **And even if CTEL is 130 percent, let's say,**
19 **in this case of CETO, that doesn't necessarily mean**
20 **that there will be price separation. What it means**
21 **is that the RTO would look at that LDA or sub-LDA**
22 **separately to see if there is going to be a binding**
23 **constraint at the end of the day, but that doesn't**
24 **mean it's going to be a binding constraint; right?**

25 Q. That's fine.

1 **A. So that analysis is done. Now, for AP's**
2 **case, Your Honor, our CETO is minus 2200 megawatts.**

3 Q. This is the question. So this is why I asked
4 this, so I appreciate you anticipating.

5 My direct question is, at -- how close is the
6 AEP zone -- the AEP zone from being able to not meet
7 its obligation?

8 **A. Your Honor, that's a very difficult question**
9 **to answer because that has not been analyzed and**
10 **partly because we are -- I think right now we are**
11 **the only zone that has a negative CETO, meaning we**
12 **have minus 2200 megawatt of CETO. So we have that**
13 **negative CETO and then, of course, once a CETO gets**
14 **positive, that's when you do the CTEL analysis.**

15 **So for AP, a CTEL analysis has never been**
16 **done because we're negative already, right? So...**

17 Q. Let me ask the question, a very direct
18 question. If all of a sudden tomorrow you have
19 3,000 megawatts of demand at the appropriate time of
20 year, right, because that's very important, I get.

21 But if you have 3300 or 4000 megawatts,
22 whatever they are, well in excess of that negative
23 amount, that study won't be conducted; correct?

24 **A. Your Honor, maybe let me put it this way. I**
25 **don't know if it's 2,000, 3,000 or 4,000 CETO is**

1 going to drive a study because that -- like I said,
2 CETO is one number. You've got to look at the
3 relation between CETO and CTEL.

4 And we and PJM has never determined
5 AP's CTEL, that CTEL may be very high, but -- but I
6 think to simply answer your question, if there comes
7 a time down the road, which is something that I have
8 not anticipated or analyzed because of where we are
9 from a capacity perspective as a zone, if there
10 comes a time where, you know, let's say,
11 hypothetically that AP CTEL and CETO ratio is below
12 that threshold, then, yes, it would be studied as a
13 separate LDA, but we haven't seen that historically,
14 and we don't expect that in the near future.

15 Q. Well, that's why I want to ask about the
16 expect that because we're expecting thousands of
17 megawatts of retirement of generation across the AEP
18 zone between now and 2028, ten of thousands maybe,
19 but thousands of megawatts.

20 And within the AEP zone specifically, we're
21 seeing thousands of megawatts of requests for new
22 interconnections for demands for load, correct?

23 **A. Your Honor, that is correct.**

24 Q. Okay. So those two things combined,
25 thousands or tens of thousands of megawatts of

1 retirements, much of which is in the zone -- or a
2 significant amount will probably be in the AEP zone
3 plus -- and thousands of megawatts of additional
4 interconnection requests for demand between now and
5 2028 in the AEP zone, correct?

6 **A. Yes, Your Honor, that is correct.**

7 Q. Okay. Given that those two things seem to be
8 -- seem to go both ways in degrading that -- the
9 calculation that you were referring to, when is the
10 appropriate time to start looking at that in the
11 context of an Integrated Resource Plan and
12 necessarily taking into consideration the location
13 of generation, not just within PJM, but within the
14 specific zone?

15 **A. Yeah. So, Your Honor, there is a third**
16 **parameter that goes into that equation, and that is**
17 **how much generation is planning on interconnecting**
18 **to the AEP zone, and so there is a lot of generation**
19 **also that is planning on interconnecting to the AP**
20 **grid. If you look at the PJM cue stacks, you know,**
21 **recently, just in Ohio there's 35,000 megawatts of**
22 **just solar; right?**

23 **So all of that goes into that equation. Like**
24 **I mentioned earlier, PJM calculates that on a very**
25 **regular basis, and we work very closely with their**

1 planning organization to see if we're going to get
2 anywhere close to that CETO CTEL limit.

3 And if we do, of course, we'll be doing
4 analysis to see what is the right mitigation for
5 that. Is transmission the right mitigation for
6 that, or is that something that going forward, you
7 know, needs to be considered in their analyses.

8 But at this point, like I said, we -- even
9 with all the projections, you know, we -- we see
10 ourself as a negative CETO LDA.

11 Q. ELCC is not locational. We talked about that
12 earlier -- I talked about that earlier with one of
13 your witnesses, correct?

14 A. Yes, I heard that --

15 Q. Yeah.

16 A. -- discussion.

17 Q. And AEP -- the AEP zone is a winter-peaking
18 zone or is it a summer-peaking zone?

19 A. So, Your Honor, there are some companies
20 within AEP that are summer-peaking, and then there
21 are some companies within AEP that are
22 winter-peaking.

23 Q. Do you know what it is on a zonal -- Kentucky
24 Power, for instance, is winter-peaking?

25 A. Yes, Kentucky is winter. Appalachian is

1 **winter-peaking. Ohio is summer-peaking.**

2 Q. You don't know what that peak is on the zonal
3 -- with -- for the zone of which season?

4 **A. Yeah, Your Honor, I don't recall that.**

5 Q. I ask this from the perspective of, if the
6 CETO CTEL -- so you're aware of the DPo South issue
7 that occurred last year with the study parameters
8 and the anomalous results and the changing the rules
9 of the capacity market?

10 Are you generally aware of that because --

11 **A. No, I'm not.**

12 Q. -- capacity was -- indicated they were going
13 to be there, but they actually weren't going to be
14 there in time for delivery?

15 **A. Not -- not familiar with that.**

16 Q. All right. Let me ask it this way: Insofar
17 as the CETO CTEL, the oversimplified mismatch that I
18 was discussing earlier; right? Insofar as that's a
19 winter phenomena, okay? So an individual zone or
20 subzone's LDA requirements are on a winter-peaking
21 basis. That's when their highest risk is, okay?

22 Does the -- regardless of what the ELCC is
23 systemwide, class ELCC, the addition of solar,
24 regardless of how many thousands of megawatts it may
25 be may not necessarily benefit that mismatch. Would

1 you agree? It may not alleviate that binding
2 constraint?

3 **A. Your Honor, that's what I think I would**
4 **struggle in answering it because you really --**
5 **you've got to understand what that constraint is**
6 **because many times the CETO constraint can be a**
7 **riser or a transformer, which is a very small issue**
8 **to fix versus, you know -- again, you're not going**
9 **to see a 765 Kv line as a constraint because those**
10 **lines carry a lot more -- they have a lot more**
11 **capability than the terminal equipment of the**
12 **substation; right?**

13 **So a lot of time, you know, those constraints**
14 **are very easy to fix compared to a generation**
15 **solution, which will be, of course, a lot more**
16 **expensive; right?**

17 **So I think it really -- in my view it's hard**
18 **to sit here and speculate on, you know -- unless**
19 **you -- unless I know exactly, here is the constraint**
20 **and here is what the generation mix in at that point**
21 **within AEP zone where the load is exactly located.**
22 **It may be very cost effective to just fix the**
23 **transmission constraint overall.**

24 **Q. That's not taken into account at all in the**
25 **Integrated Resource Plan, is that your**

1 understanding, or at least as it relates to your job
2 as -- on the transmission side?

3 **A. Yes. As far as my job is concerned so far,**
4 **no, for the reasons I mentioned earlier because, you**
5 **know, we are at minus 2200 megawatt, and at least in**
6 **our forecast, we don't see that changing in the near**
7 **future.**

8 Q. Okay. The -- have you heard my questions
9 earlier to Mr. West about the outstanding requests
10 for production, that they exist?

11 **A. To be honest with you, Your Honor, I was in**
12 **and out, so...**

13 Q. Okay, that's okay. Are you generally aware
14 that Kentucky Power issued three requests for
15 proposals and -- RFPs in September for thermal, wind
16 and solar, and then for batteries?

17 **A. Yeah, generally aware of that.**

18 Q. Okay. I was reading to Mr. West earlier from
19 the Kentucky Power website provisioning to those
20 related to the interconnection of those facilities,
21 like what the request is, like a -- for a -- to meet
22 the requirements of the RFP.

23 And one of them, I'm just reading here from
24 the thermal one, said that, the project must be
25 interconnected to PJM. This is section 3.1. And

1 then, bidder must have a completed PJM system impact
2 study which remains active in the PJM cue.

3 There are a number -- and as I remember maybe
4 three, but there are a number of studies that have
5 to be conducted, ordinarily conducted for a
6 generator to fully interconnect into PJM, correct?

7 **A. Yes, Your Honor, that is correct.**

8 Q. Okay. One is a system impact study; right?

9 **A. Your Honor, it is one of -- one of them.**

10 Q. Okay.

11 **A. Yes.**

12 Q. Do you know how far along the path the system
13 impact study is?

14 **A. Yes, Your Honor. Typically -- and, again,**
15 **the process has now changed. As you know, the**
16 **cluster process as it -- the FERC policy change**
17 **there, but really typically the feasibility study is**
18 **the first study that the RTO would perform.**

19 You know, historically it has taken six
20 months to complete that, and the next study is the
21 impact study, and then the last one is the facility
22 study.

23 Q. Okay.

24 **A. That's historically the designation of those**
25 **cases.**

1 Q. So assuming -- just assume all three are the
2 RFPs say this, which I believe they do, that would
3 indicate a generator that has -- that is -- well, is
4 it accurate to say that they're halfway through the
5 cue if they at least have a system impact study,
6 given that, for instance, feasibility study seems to
7 take a very short amount of time and a facility
8 study and a system impact study may necessarily take
9 longer, is -- is a generator that has a system
10 impact study where on average -- just order of
11 magnitude kind of thing, where are they along in the
12 cue interconnection process or the interconnection
13 process?

14 **A. Your Honor, this kind of -- it will be hard**
15 **for me to speculate on that, to be honest with you.**
16 **I have seen where generators can combine feasibility**
17 **and impact studies where then they've opted for it,**
18 **and RTO has allowed it where they've combined them**
19 **into one study because the interconnection was very**
20 **simple and small.**

21 **And I have seen it where impact studies have**
22 **taken over a year to complete, so it's kind of hard**
23 **for me to speculate, Your Honor.**

24 Q. Yeah, and I'm sorry. This is -- what I'm
25 asking is, once they have a, quote, completed PJM

1 system impact study, how far along after that's
2 completed are they along in this process?

3 **A. Yeah. I think maybe what I can -- what I can**
4 **tell you is this, what is the value of that impact**
5 **study for us; right?**

6 **The value of that impact study is that we**
7 **know to a very good, you know, extent as to what are**
8 **the transmission constraints that our generator may**
9 **or may not be causing, and what are the fixes,**
10 **transmission upgrades that are needed to address**
11 **those constraints, and in most cases also the cost**
12 **as well as, in some cases, the allocation of that as**
13 **well.**

14 **So that's why the impact study is very**
15 **important for us because we can look at it and have**
16 **a good idea -- a reasonable idea, I should say, of**
17 **what the transmission interconnection costs and the**
18 **timeline may be.**

19 **Q. Does a completed system impact study mean**
20 **that the entity has already conducted, if PJM**
21 **indicates it's necessary, affected system studies**
22 **with other entities in the electrically connected**
23 **area?**

24 **A. Within PJM, that is correct.**

25 **Q. Okay.**

1 **A. But there is coordination that PJM also needs**
2 **to do with neighbors like MISO in New York, so that**
3 **may not be completely -- it may not be completed an**
4 **impact study in some cases.**

5 Q. But I asked you for like the perspective of
6 the LG&E and KU systems; right?

7 **A. Yes, sir.**

8 Q. Someone had conducted a system impact study
9 to connect to, you know -- connect to the AEP
10 system, right, and they, quote, had a completed SIS,
11 a completed system impact study, does that
12 necessarily mean that they, because it's completed,
13 have already done an effective system study insofar
14 as PJM indicated it was necessary to do so?

15 **A. Okay. Your Honor, so a completed system**
16 **impact study means PJM has looked at all the impact**
17 **of a project within PJM, so that would include all**
18 **of the zones within PJM.**

19 Q. Right. What I'm saying is, I've seen studies
20 that say, our models show that there may be problems
21 on the LKEE system, you should go get an affected
22 system study from them?

23 **A. Right.**

24 Q. Okay. Is that done after -- is that done --
25 the ordering to go get an affected system study by

1 somebody else, is that done in the context of an
2 SIS?

3 **A. Yes, it is.**

4 Q. So just because an SIS is done doesn't mean
5 that that same entity might have already necessarily
6 gone and sought and received back an affected system
7 study from an affected system identified in the SIS?

8 **A. Well, so Your Honor, that's what I'm getting**
9 **at. If that affected system is outside PJM, your**
10 **presumption is correct, that may not be completed.**

11 **But if that affected system is within PJM,**
12 **then PJM would have coordinated the upgrade with all**
13 **the RTOs in that -- in the --**

14 Q. They treat all PJM as a single system?

15 **A. Yes.**

16 Q. Yes.

17 **A. Yes.**

18 Q. Okay. I'm going to ask someone else about
19 it, but I want to make sure I have an appreciation,
20 do you have any input into the rubric or -- the
21 rubric or scoring for request for proposals as it
22 relates to related transmission costs?

23 **A. You're talking about request for proposals or**
24 **you're talking about the IRP?**

25 Q. I'm talking about -- I'm talking about

1 objective. So I was told earlier to ask, I think,
2 Mr. Pearce about rubric scoring.

3 **A. Yeah, no.**

4 Q. Like do they bring somebody in on the
5 transmission side to say, this is the weight or
6 consideration we should give to the risk or the cost
7 or whatever it may be of related transmission of
8 responses to RFPs?

9 MR. GARCIA-SANTANA: Yeah, if I can
10 facilitate for the witness, you can refer to whether
11 you have provided input for such a thing without
12 disclosing confidential information or about it is.

13 Q. Yeah. And I'm not even asking about the
14 specific rubrics. I'm saying is -- do you lend
15 somebody -- have you personally participated,
16 whatever, in creating rubrics or the -- is there a
17 transmission-related portion of scoring rubrics
18 across the AEP system or, frankly, the AEP system
19 generally for responses to RFPs so that you can take
20 into account the cost, the risk, whatever of related
21 transmission from all of those individual responses?

22 **A. Yeah. So, Your Honor, for the IRP portion,**
23 **of course, that's more of a zonal analysis that I**
24 **think the witnesses in the past mentioned also, so**
25 **it's not models, so transmission is really not fully**

1 **represented.**

2 **So we, of course, don't have a lot of input**
3 **into that process because more generic resources,**
4 **but when you get into RFP and it's more specific**
5 **resources, my team does provide, you know,**
6 **transmission parameters that are either available or**
7 **calculated.**

8 Q. Okay. So there would arguably -- you would
9 have -- you would have -- somebody would be on maybe
10 the scoring team, or somebody would have helped put
11 together the metrics that should be used in a rubric
12 to score things, that -- that level of involvement
13 or just like, if you have questions about what
14 connecting a certain type of resource might look
15 like, you can come and ask those questions?

16 What's the level of involvement generally of
17 having someone from the transmission side of the
18 business involved in RFP responses?

19 **A. The level of involvement is really threefold.**
20 **There are three things that we are looking at.**

21 **Number 1, is, you know, what are the direct**
22 **connect-to-network upgrades, and in most cases we**
23 **are really relying on PJM for that because it's a**
24 **publicly available system impact study that you can**
25 **go through and look at what the upgrades mean. Of**

1 course, it's easy for a transmission person to look
2 through that and understand that is.

3 The second thing we're looking at is
4 congestion because now that we know the location,
5 are there any congestion profiles that we need to
6 think about.

7 And then, you know, of course, in PJM, it
8 doesn't matter as much as, but in other
9 jurisdictions we would look at deliverability
10 because in PJM, they do a generation delivery
11 already as part of the impact study, but in some
12 other regions they don't, so we look at that.

13 Q. They just do load deliverability?

14 A. They actually -- in some regions they don't
15 do either, so...

16 Q. Aren't we happy we live in PJM. All right.
17 Thank you, Mr. Ali.

18 CHAIRMAN CHANDLER: Any redirect of this
19 witness?

20 MR. GARCIA-SANTANA: No redirect.

21 CHAIRMAN CHANDLER: Thank you, Mr. Ali.

22 THE WITNESS: Thank you, Your Honor.

23 CHAIRMAN CHANDLER: You may be excused.

24 Would you like to call your next witness?

25 MS. GLASS: Yes. Kentucky Power calls Kelly

1 Pearce, and he'll be presented by Mr. Gish.

2 CHAIRMAN CHANDLER: Okay. Please raise your
3 right hand. Do you swear or affirm that the
4 testimony you're about to give is true and correct
5 under penalty of perjury?

6 THE WITNESS: I do.

7 CHAIRMAN CHANDLER: Please have a seat.
8 Mr. Gish.

9 MR. GISH: Thank you, Mr. Chairman.

10 KELLY PEARCE, called by Kentucky Power
11 Company, having been first duly sworn, testified as
12 follows:

13 DIRECT EXAMINATION

14 BY MR. GISH:

15 Q. Dr. Pearce, could you please state your full
16 title and your business address for the record. Or
17 you already did your business address. Your full
18 title for the record.

19 **A. Managing director, Integrated Resource**
20 **Planning and Strategy.**

21 Q. Okay. And did you have -- were you involved
22 in the preparation of the Integrated Resource
23 Planning report that's the subject of this case?

24 **A. I was.**

25 Q. Okay. And because I know people will ask,

1 are you involved -- or were people under your
2 direction involved in the review of responses to
3 Kentucky Power's September 2023 request for
4 proposal?

5 **A. Yes, we are.**

6 Q. Okay.

7 MR. GISH: Mr. Chairman, the witness is
8 available for cross-examination.

9 THE COURT: Mr. West?

10 MR. WEST: No questions.

11 MR. KURTZ: No questions, Your Honor.

12 MR. CMAR: I have a couple, Your Honor.

13 Thank you.

14 CHAIRMAN CHANDLER: All right. And I'm not
15 limiting you, I'm just -- but I mentioned earlier,
16 we need to take a break before -- a short break,
17 before 5 o'clock --

18 VICE CHAIR HATTON: No.

19 MS. GLASS: It's 5 o'clock somewhere, Your
20 Honor.

21 CHAIRMAN CHANDLER: I don't know why -- I
22 don't know where I'm getting 5 from. This is water
23 in here.

24 Do you believe you'll have your
25 cross-examination done before 9, or should we take

1 that short break now so that we can reset our
2 system?

3 I don't want to limit you. That's why I want
4 to --

5 MR. CMAR: I'm guessing 5 to 10 minutes.

6 CHAIRMAN CHANDLER: Okay. So if we get to
7 five till, we'll just go ahead and take a break.

8 MR. CMAR: Okay.

9 BY MR. CMAR:

10 Q. Good evening, Mr. Pearce.

11 **A. Good evening.**

12 Q. I just have a couple of questions for you
13 that came up earlier in the discussion with
14 Mr. West. Were you here for that cross-examination?

15 **A. I was listening, yes.**

16 Q. Okay. Great. One question I had related to
17 the PJM -- procurement of capacity for PJM delivery
18 year '26-'27. Do you remember that discussion? I
19 was asking Mr. West what the timing would be on when
20 Kentucky Power would need to make those decisions
21 about whether to purchase capacity for that PJM
22 delivery year.

23 **A. Sure. The '26-'27 -- you know, PJM's had**
24 **some delays. The base residual auction right now I**
25 **believe is scheduled for early December for '26-'27.**

1 If Kentucky were to need some additional capacity,
2 it would have to make its -- first off, it would
3 have to make its FRR election a couple of months
4 before that, so say early October. So if it needed
5 some capacity, it would need to purchase that by
6 early October of this year.

7 Q. And I'm sorry, what did you say would happen
8 in December?

9 A. In December is when they -- PJM, I think, is
10 currently scheduled to hold their '26-'27 base
11 residual auction.

12 Q. And if Kentucky Power decided to do bilateral
13 contracts, would that be the same time frame?

14 A. Well, they have to make -- if they make their
15 FRR election, per PJM rules, you're required to make
16 that a couple of months before the base residual
17 auction. So I think it would be prudent for
18 Kentucky to go ahead and have any bilateral
19 contracts, if it needed any additional capacity,
20 lined up.

21 So I thought your question was, when would
22 they need to go acquire that bilateral capacity.
23 And I think it would be, you know, around the time
24 that they're going ahead and submitting to PJM that
25 they're going to go FRR and not participate in the

1 **base residual auction.**

2 Q. Understood. Thank you.

3 And then I had one other line of question
4 which relates to the confidential questioning
5 earlier.

6 MR. CMAR: So I think, Your Honor, we should
7 probably go ahead and go into a confidential
8 session.

9 CHAIRMAN CHANDLER: Okay. Candace.

10 THE CLERK: We're in private, Chairman.

11 CHAIRMAN CHANDLER: One second, Mr. Cmar.

12 MR. CMAR: Thank you, Your Honor.

13 (Confidential testimony heard from 8:47 p.m.
14 to 9:05 p.m.)

15 CHAIRMAN CHANDLER: Are we on the public
16 session?

17 THE CLERK: We are now.

18 CHAIRMAN CHANDLER: Okay. Mr. Cmar, any
19 questions?

20 MR. CMAR: We have no further questions.

21 CHAIRMAN CHANDLER: Thank you.

22 Mr. Koenig?

23 MR. KOENIG: We have no questions for the
24 witness.

25 MR. VAN ZYL: No questions.

1 CHAIRMAN CHANDLER: Good evening, Mr. Pierce.

2 THE WITNESS: Good evening.

3 EXAMINATION

4 BY CHAIRMAN CHANDLER:

5 Q. Are you familiar with the company's
6 September 2023 -- 2023 RFPs?

7 **A. Yes, sir.**

8 Q. I've asked earlier -- there's a question --
9 there's a statement in those that says, all three of
10 them, I believe -- and I'm just reading off the
11 Kentucky Power website so if you've got a better
12 version of them than I do, I'd be happy to see it.
13 But it says, project must be interconnected to PJM.
14 And I'm reading that from the thermal RFP, wind and
15 solar it says, projects must be interconnected to
16 PJM. Storage one says projects must be
17 interconnected to PJM, although the storage and the
18 wind and solar indicate they can be connected to the
19 distribution system as well.

20 But then they all three go on to say that
21 they all have to have at least a system impact study
22 that remains active in the PJM queue. Is this -- do
23 you read this portion of the RFP, based on your
24 familiarity with it, to mean that they already have
25 to be interconnected in the sense that they need an

1 executed ISA or that that's their intention to be
2 interconnected to PJM?

3 **A. I read that that -- the part about it must be**
4 **interconnected to PJM I think is in reference to**
5 **they must be interconnected to PJM as opposed to**
6 **interconnected to MISO or something like that.**

7 Q. Okay.

8 **A. So -- but they must have a system impact**
9 **study as you heard --**

10 Q. Right.

11 **A. -- Company Witness Ali describe.**

12 Q. Okay. I just want to make sure I'm clear.

13 **A. Okay.**

14 Q. Do you believe that that should be -- or do
15 you read that to be a requirement, that a project
16 responding to the RFPs must have an ISA at the time
17 when they respond?

18 **A. I don't recall those specific words in there.**
19 **They have to have a completed system impact study.**
20 **And there's some other provisions, they have to have**
21 **site control, there's some other things that are**
22 **required in there.**

23 Q. Yeah, I even looked up the -- you-all
24 provided some helpful recurring Qs and As based off
25 of what have people sought.

1 Okay. I want to ask it a different way, just
2 so I'm -- regardless of whether they have an SIS,
3 which I guess is a -- withdraw that.

4 Is the RFP -- do you-all indicate that the
5 RFP is for resources that are already interconnected
6 to PJM at the time they apply?

7 **A. Okay. Your Honor, you're going to have to**
8 **help me a little bit. When you say "already**
9 **interconnected," do you mean, like, already achieved**
10 **their commercial operation date, because I believe**
11 **the answer is no.**

12 Q. Yeah. So -- okay.

13 **A. Yeah.**

14 Q. That's my -- so it says it as if not must be
15 planning to interconnect to PJM, not -- I want to
16 make it very clear. This is not for already
17 connected generators with a signed interconnection
18 agreement that already have -- that have already --
19 way past the SIS point are connected to PJM, or is
20 it just supposed to be they're supposed to be
21 connected to PJM as opposed to -- eventually as
22 opposed to a different transmission operator?

23 **A. You're -- yes, Your Honor. The regulated**
24 **infrastructure development team actually develops**
25 **the RFPs.**

1 Q. Okay.

2 A. But as I said a minute ago, I read that
3 language to mean that -- it could have been,
4 perhaps, a little bit better worded, but that it is
5 -- they're referencing there that meaning, you know,
6 which RTO we're talking about. And in this case,
7 PJM.

8 Q. And so it's a --

9 A. It does not -- I don't believe it has to be a
10 project that has actually already signed the
11 services agreement and certainly not reached its
12 commercial operation date.

13 And I think some of the other words in there,
14 just, again, like, you know, must have site control,
15 I mean, you know, clearly it would be you're already
16 in service. You've achieved COD, commercial
17 operation date, if it was expected to already be in
18 service. So it is just you have to have been
19 through at least the system impact study on your
20 project.

21 But we put that level of detail, you know,
22 discussing with the group that actually runs the
23 RFPs, again, we help the evaluation. I think it's a
24 pretty good metric, you know. We want to be careful
25 that we allow projects that are under development.

1 **On the other hand, we can't -- you know, it's not**
2 **good for customers for us to rely on projects that**
3 **are just kind of an idea in somebody's mind yet as**
4 **well.**

5 Q. Okay. And that's the idea behind the site
6 control in the SIS; is that right? Far enough along
7 in the queue that they're not going to take forever.

8 Financing -- I think one of the requirements
9 was a financing plan. Do you remember that?

10 **A. It's been a while since I've reviewed it,**
11 **but --**

12 Q. Okay.

13 **A. -- I wouldn't disagree that's in there.**

14 Q. Okay. Mid-year capacity, Mitchell situation.
15 You agree it would be unreasonable for no one to get
16 the benefit of capacity -- never mind. I'm going to
17 withdraw. I'm going to ask Mr. Vaughn that
18 question.

19 Scoring rubrics. As a general matter, are a
20 AEP -- AEP operating company the final call on what
21 a scoring rubric will be for an RFP or is there a
22 general one that's used by operating companies
23 within the system?

24 **A. The scoring rubric is really defined by**
25 **Kentucky Power. I mean, we can advise, but they**

1 **make the decision on that.**

2 Q. Okay.

3 CHAIRMAN CHANDLER: So I'd like to ask, as a
4 post-hearing data request, for the most recently
5 used scoring rubric without any -- just literally
6 the rubric.

7 Does that make sense? Not like --

8 MS. GLASS: A generic rubric not populated
9 with any specific information to --

10 CHAIRMAN CHANDLER: Not -- with not scored --
11 not scoring projects, just the rubric itself.

12 MR. GISH: Yes, makes sense.

13 CHAIRMAN CHANDLER: All right. So we'll ask
14 for that in a post-hearing data request, the most
15 recently used rubric.

16 MR. GISH: Okay.

17 CHAIRMAN CHANDLER: Okay. Or scoring --
18 whatever you want to call it.

19 I don't want to get pedantic on it, but if
20 you call it something different, we'll take it.

21 MR. GISH: I think they do.

22 CHAIRMAN CHANDLER: Okay.

23 BY CHAIRMAN CHANDLER:

24 Q. Other than thermal resources, are all the RFP
25 responses -- other than people who may have

1 withdrawn, are all the RFP responses the same as the
2 ones that were provided in Case Number 2021-370?

3 **A. I'm not sure.**

4 Q. Did you provide those by any chance in that
5 case? Well, let me ask, let me ask.

6 RFP responses, okay, to the September ones.
7 Were they all due on the same day, do you know, to
8 the three different --

9 **A. I think they were all due around the same
10 time frame, if not the same day.**

11 Q. Okay. And are they all being looked at
12 separately or as a -- did they all come in three
13 different ways -- because you wrote three different
14 RFPs. Are they all in the same bucket, or is there
15 a thermal bucket, a wind and solar bucket, and a
16 battery bucket?

17 **A. Yes, Chairman, that's a great question.**

18 **The way that we usually do the evaluation is
19 we will, if you will, look at each type of resource
20 in its own bucket. It's kind of a -- what we
21 sometimes call best in breed; right. We'll analyze
22 the solars, the wind, the thermals.**

23 **But then to evaluate the best portfolio
24 overall for Kentucky Power, then in the final step,
25 we'll bring all of them together and basically sort**

1 **them based on the total ranking of all the projects.**

2 Q. Yeah. And so, for instance, if conceptually
3 IRA passes, right, you're in the middle of a
4 process in the past, right, but that's a good
5 example. The IRA passes, the Inflation Reduction
6 Act comes out, and you go, look, we've got these
7 three buckets, we think battery's going to have been
8 materially affected by that change, the wind and
9 solar would, we don't think the thermal would.
10 You-all would necessarily hold up the final
11 evaluation of thermal, maybe go out and ask
12 respondents to the wind, the solar, and the battery,
13 hey, is your pricing different now with the passage
14 of the Inflation Reduction Act, and then you'd just
15 be -- you would just be holding up the third bucket
16 of thermal waiting for your other two, figure out
17 your best in breed for all three, and then you would
18 move onto your portfolio.

19 Is that a reasonable explanation of the kind
20 of distinction that's made between these best in
21 breeds in different buckets?

22 **A. Yes, Your Honor. And I think -- now, this**
23 **time around, unfortunately, the Inflation Reduction**
24 **Act was passed long enough ago that it really wasn't**
25 **one.**

1 **This time what we're seeing, as I have**
2 **mentioned, is with the -- with the new EPA rules.**
3 **So while, you know, we do have some baskets of**
4 **projects that aren't affected by it, we do have**
5 **some.**

6 **And, yes, we have to understand, you know,**
7 **how is that going to affect their relative ranking**
8 **when we bring them all together, so we have to kind**
9 **of put the others on hold for somewhat.**

10 **But with that said, we're certainly not**
11 **expecting the impacts of the EPA to result in a**
12 **thermal bid being more favorable, for example. So**
13 **we can't say with confidence if we had, for example,**
14 **a project not affected in such a way that it was**
15 **pretty much at the top of the scoring and we're**
16 **holding off the thermal but we understand time is of**
17 **the essence, so we may not have to hold --**

18 **Q. Well, let me --**

19 **A. -- that type of project.**

20 **Q. When you say -- I just want to make sure I**
21 **understand. Your response there is relative to the**
22 **other two buckets?**

23 **A. Yes.**

24 **Q. Okay.**

25 **MS. GLASS: I'd just like to remind --**

1 CHAIRMAN CHANDLER: Oh, that's all.

2 MS. GLASS: -- that we're not in confidential
3 session.

4 CHAIRMAN CHANDLER: That's all.

5 MS. GLASS: But we're getting close.

6 CHAIRMAN CHANDLER: Do you have any redirect
7 of this witness, Mr. Gish?

8 MR. GISH: I do not.

9 CHAIRMAN CHANDLER: Anything else for this
10 witness?

11 All right. Thank you, Mr. Pearce.

12 MR. GISH: May Dr. Pearce be excused?

13 CHAIRMAN CHANDLER: He may.

14 Would you like to call your last witness>.

15 MR. GISH: I am, or we are.

16 MS. GLASS: Yes. Kentucky Power calls Alex
17 Vaughn. He'll be presented by Mr. Gish.

18 CHAIRMAN CHANDLER: Mr. Vaughn, please raise
19 your right hand. Do you swear or affirm that the
20 testimony you're about to give is true and correct
21 under penalty of perjury?

22 THE WITNESS: I do.

23 CHAIRMAN CHANDLER: Please have a seat.

24 State your name and business address for the
25 record.

1 THE WITNESS: My name is Alex Vaughn. My
2 business address is One Riverside Plaza in Columbus,
3 Ohio.

4 CHAIRMAN CHANDLER: Mr. Gish.

5 MR. GISH: Thank you, Mr. Chairman.

6 ALEX VAUGHN, called by Kentucky Power
7 Company, having been first being duly sworn,
8 testified as follows:

9 DIRECT EXAMINATION

10 BY MR. GISH:

11 Q. Mr. Vaughn, would you please state your job
12 title?

13 **A. I am the managing director of regulated**
14 **generation and fuel strategy for AEP Service**
15 **Corporation.**

16 Q. And did you provide responses to data
17 requests in this case?

18 **A. I did.**

19 Q. And based on what you knew then, if I asked
20 you those same questions now, would you give the
21 same responses?

22 **A. Yes, I would.**

23 MR. GISH: Mr. Chairman, Mr. Vaughn is
24 available for cross-examination.

25 CHAIRMAN CHANDLER: Mr. West?

1 MR. WEST: No questions.

2 CHAIRMAN CHANDLER: Mr. Kurtz?

3 MR. KURTZ: No questions.

4 MR. GARY: No questions.

5 MR. BELLAMY: We have no questions.

6 CHAIRMAN CHANDLER: Good evening, Mr. Vaughn.

7 THE WITNESS: Oh, good evening.

8 EXAMINATION

9 BY CHAIRMAN CHANDLER:

10 Q. Yeah, almost. Like the troll under the
11 bridge, I'm here to keep you from crossing without
12 doing a little bit of work.

13 You've heard the conversation about the
14 Mitchell capacity mid-year situation with the
15 '28-'29 delivery year?

16 **A. Yes.**

17 Q. Do you believe it would be unreasonable for
18 no one for -- well, okay.

19 So if -- just, again, taking a lot of things
20 at face value, but if Mitchell is not at all
21 retiring, let's just say it plans on operating into
22 infinity for the purpose of this question. All
23 right?

24 **A. Sure.**

25 Q. But that it is going to be owned at a minimum

1 by operating companies in the AEP system, okay. It
2 is going to be available for the entire -- the
3 entirety of the '28 and -- '28 to '29 delivery year
4 for the purposes of AEP's FRR plan.

5 **A. Yes.**

6 Q. Okay, for all those.

7 Regardless of this whole who should we
8 account for who gets the benefit of it, it is -- it
9 would in that scenario count towards 700-plus
10 megawatts as de-rated, for lack of a better term, by
11 some future capacity accreditation, but it's going
12 to have a megawatt value in the AEP's FRR plan,
13 correct?

14 **A. Yeah, absolutely.**

15 Q. Okay.

16 **A. And I imagine it would function just like it**
17 **did when Kentucky Power's Rockport UPA ended**
18 **mid-delivery year; right? They received -- while**
19 **you can't have a partial year capacity resource in**
20 **the market, this is -- this is kind of one of the**
21 **other benefits of FRR in that control OF that unit**
22 **from a capacity standpoint was still within the FRR**
23 **plan, still within those companies, and Kentucky**
24 **Power received financial credit for the UPA for part**
25 **of the delivery year and then purchased for the rest**

1 of it.

2 **And I imagine something very similar would**
3 **happen in the circumstance that you've articulated.**

4 Q. Like a prorated --

5 **A. Yeah.**

6 Q. -- from June 1st to December 5th or whatever.

7 **A. If you needed to buy capacity, you're buying**
8 **5 months rather than 12, the back half, not the**
9 **whole thing. Because in your -- in your**
10 **hypothetical, it's still in the family, you're just**
11 **-- it's just accounting.**

12 Q. Yeah. And insofar as the modeling here
13 assumed a full capacity purchase at, let's call it,
14 in excess of \$15 million for the entirety of that
15 loss, that is a, all else equal, an outer bound of
16 that cost because -- well, you're not going to have
17 to buy the entirety of 700, you're probably going to
18 buy 5 -- 5/12ths of that amount?

19 **A. Yeah, right. This is -- there's a difference**
20 **in the planning -- the planning analysis and what**
21 **would practically happen, I think heard it described**
22 **earlier as a worst-case assumption.**

23 Q. Okay.

24 **A. I think that's fair.**

25 Q. There's the power coordination agreement --

1 **A. Yes.**

2 Q. -- and then these bilateral contracts that
3 Mr. West referred to. Do you remember that?

4 **A. Yes.**

5 Q. Okay. The bilateral contracts are
6 exclusively for capacity?

7 **A. Yes, sir.**

8 Q. Okay. Has Kentucky Power entered into any
9 firm energy contracts over the past couple of years
10 or do you know whether the company intends on
11 entering into any firm energy contracts?

12 **A. So we're in that process right now. So**
13 **the -- nothing has changed from the plan we put out**
14 **in the last IRP and what we've been working on here**
15 **with the bilaterals of capacity to replace the UPA,**
16 **the market energy purchases, and then that was meant**
17 **to be a bridge to a long-term -- a long-term asset,**
18 **which is the RFP process we're currently conducting**
19 **now.**

20 **So we are --**

21 Q. Okay.

22 **A. -- currently going through that process.**

23 Q. Okay. Well, and the PCA is actually
24 called -- or at least referred to in previous
25 instances as the bridge power coordination

1 agreement. Do you remember that?

2 **A. That was a different --**

3 Q. I'm saying but that -- it was, the idea was a
4 bridge, right, a short --

5 **A. To a different thing --**

6 Q. Yeah, I get --

7 **A. -- that different happen, yes.**

8 Q. -- it's a different transaction?

9 **A. Yeah.**

10 Q. The idea is to get you from one place to the
11 other. So this is capacity, the power coordination
12 agreement, and the bilaterals are capacity.

13 **A. To the -- go ahead, sorry.**

14 Q. No. And what -- what I was asking is -- so
15 two questions, what were you doing? I think you
16 answered that one. But you-all have not purchased
17 any bilateral transactions that included energy
18 since -- well, other than the Rockport UPA?

19 **A. No. Since -- to fill the -- as we've**
20 **indicated, since the Rockport UPA ended, we've**
21 **purchased the bilaterals of UCAP so that Kentucky**
22 **Power can meet its -- its obligations, and we've --**
23 **we've -- we've purchased low-cost market energy and**
24 **that's -- customers have benefitted from that.**

25 Q. Okay.

1 A. You know, that was part of the plan. That's
2 what we're implementing, and now that's coming to an
3 end as we plan for the next long-term resource --

4 Q. Okay.

5 A. -- as we -- that we're working towards right
6 now.

7 Q. Or portfolio of resources?

8 A. Sure.

9 Q. Yeah, okay.

10 A. One more.

11 Q. Okay. So I'm not made fun of, if you don't
12 call a rubric, what are you -- what is -- what do
13 the AEP companies call the scoring guide for
14 responses -- response -- score responses to RFPs?

15 A. Yeah. When you said that earlier, I couldn't
16 think of what we actually -- I don't know. It's
17 like a matrix, a rubric, whatever --

18 Q. Okay.

19 A. -- whatever word you're into, but, yeah. It
20 produces -- right? It produces the -- the price and
21 non-price scoring that ultimately goes into the
22 ranking of assets that Kentucky Power would use to
23 inform its decision --

24 Q. Okay.

25 A. -- on what it would choose.

1 Q. Based on your time with the companies and
2 particularly involved in -- I think at one point, I
3 don't know if you are anymore, at one point you were
4 heavily involved in these sort of issuance or at
5 least were -- well, what's your experience with RFPs
6 while at AEP?

7 **A. Yeah. So -- oh, gosh, I'm trying to think**
8 **here. So for the last three-plus years, my team has**
9 **been directly responsible for the regulatory**
10 **approvals of the new assets that come out of all the**
11 **RFPs in our vertically integrated companies.**

12 Q. Okay.

13 **A. So I've been involved in all of them.**

14 Q. Have you been involved in the creation of
15 these matrices or rubrics before?

16 **A. Yes, myself.**

17 Q. Okay?

18 **A. Myself and many other groups all have input;**
19 **right? You want to have your subject matter experts**
20 **in the various areas, like Mr. Ali was discussing**
21 **earlier, have inputs into what -- what criteria, you**
22 **know, the operating company should be considering.**

23 **But, again, at the end of the day, one -- one**
24 **portion of the scoring may be more important to a**
25 **certain operating company in a certain state versus**

1 **another one, and so that's -- that's really what**
2 **makes it through; right? We make recommendations,**
3 **they make choices.**

4 Q. Yeah. And what I want to ask you about is,
5 in your time at AEP and your involvement in these
6 matrices or scoring guides, are you aware of any
7 experience in which the inclusion of -- that the --
8 well, did you hear my questions earlier about the
9 fact that -- well, did you hear my questions earlier
10 about the degree by which executive compensation is
11 based off of an increase in the megawatts of
12 carbon-free emitting generation?

13 **A. Yeah, I did hear that.**

14 Q. Okay. Assuming that that is a 10 percent
15 weight of executive compensation at AEP, let's just
16 assume that it is, have you had firsthand experience
17 where that is taken into account in determining how
18 to score, how to rate or what to apply for in terms
19 of generating capacity?

20 **A. I have never been in a discussion where**
21 **anyone's compensation has been discussed as a**
22 **driving factor for how a resource would be chosen,**
23 **and I can also add that that goal has been changed**
24 **and/or no longer exists.**

25 **So the new goal is related to ensuring**

1 reliability through the energy transition, to the
2 fleet transition, and so it's -- it's -- in terms of
3 lower-emitting and non-emitting resources, so
4 low-emitting is gas, and that is -- that -- you
5 know -- there isn't a resource type in the current
6 RFP that doesn't meet that long-term incentive
7 compensation goal.

8 Q. And that's been since March of this year it's
9 been amended?

10 A. I don't know when this year, but it's like
11 for '24 going forward, yeah.

12 Q. Okay. So if, for instance, I was getting my
13 information from the April 23, 2024, annual meeting
14 of shareholders, you've heard something since then
15 that would indicate that you don't believe that that
16 is now being chosen for that?

17 A. Yeah.

18 Q. Okay.

19 CHAIRMAN CHANDLER: Mr. Gish, any redirect?

20 MR. GISH: Yeah. One real quick
21 clarification question.

22 REDIRECT EXAMINATION

23 BY MR. GISH:

24 Q. The chairman asked about a power coordination
25 agreement.

1 **A. Yes.**

2 Q. And there was reference to the bridge power
3 coordination agreement, the bridge power
4 coordination agreement was something that was
5 proposed as -- that would be implemented in the
6 event that the sale with Liberty was consummed,
7 correct?

8 **A. That's -- that's --**

9 Q. Consummated, not consumed.

10 **A. Consummated, yes. Yeah, that's correct,**
11 **right. I was referring -- when I said bridge, I was**
12 **referring to the short-term market purchase of**
13 **capacity being a bridge or some transition to a**
14 **longer-term --**

15 Q. Right.

16 **A. -- asset, not the bridge power coordination**
17 **agreement --**

18 Q. Right.

19 **A. -- which does not exist.**

20 Q. Right.

21 **A. The currently FERC-approved power**
22 **coordination exists -- power coordination agreement**
23 **still exists, yes.**

24 MR. GISH: I have no further questions,
25 Mr. Chairman.

1 CHAIRMAN CHANDLER: Anything else for
2 Mr. Vaughn?

3 MR. CMAR: No, sir.

4 CHAIRMAN CHANDLER: Thank you, Mr. Vaughn.

5 THE WITNESS: Thank you.

6 CHAIRMAN CHANDLER: All right. So we will
7 need to set a post-hearing procedural schedule. We
8 will have a number of post-hearing data requests. I
9 know Ms. Legge has a couple. Mr. Kurtz, Mr. West, I
10 don't remember if you-all had any.

11 All right. Today is June the 12th. Can
12 you-all have your data requests out by Friday?

13 MR. VAN ZYL: We can make that work.

14 MR. BELLAMY: Yes.

15 CHAIRMAN CHANDLER: Okay. Okay. All right.
16 We'll enter a post-hearing procedural schedule that
17 sets the date for data requests to be issued by
18 June 14th, with the exception of Juneteenth next
19 Wednesday, no holidays between that, would 14 days
20 be sufficient for those responses?

21 MS. GLASS: I believe so, yes.

22 MR. GISH: Yes.

23 CHAIRMAN CHANDLER: Okay. Insofar as you
24 have individual data requests that you would like to
25 ask for more time, I'd ask two things, that you

1 answer all of the other data requests and that you
2 as early as possible seek an enlargement of time for
3 those specific requests.

4 MR. GISH: Of course.

5 MS. GLASS: Understood.

6 CHAIRMAN CHANDLER: And the fun part about
7 IRPs is that's the only thing that we have to
8 actually agree on tonight because we will be setting
9 the rest of the procedural schedule in accordance
10 with -- we don't have dates for comments, reply to
11 comments, post-hearing, already set, right.

12 MR. VAN ZYL: We don't have those set.

13 CHAIRMAN CHANDLER: Okay. So it will be a
14 surprise for everybody. So we will set a -- in
15 accordance with the IRP processes that we've had in
16 other cases, we'll have a post-hearing procedural
17 schedule following discovery where provides
18 comments, final comments, Staff, that whole thing.

19 But we'll make sure there's plenty of time
20 involved in those and hopefully be able to issue a
21 final report in time for Mr. West and the folks at
22 Kentucky Power to get started on their next
23 Integrated Resource Plan. When one is done, the
24 next one starts.

25 We have two outstanding, I believe, petitions

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1 for confidentiality.

2 Is there anything else that we need to take
3 up? I think we have all for the pro hac vices for
4 the joint intervenors?

5 MR. GARY: Yes.

6 CHAIRMAN CHANDLER: I think. All right.
7 Thank you all very much. This hearing is adjourned.

8 (Hearing concluded at 9:30 p.m.)

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