



Deposition of:
Hearing , Volume III

March 11, 2020

In the Matter of:
**Petition For A Certificate Of Convenience
And Necessity / IN RE:**

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1 ALABAMA PUBLIC SERVICE COMMISSION

2 MONTGOMERY, ALABAMA

3
4 ALABAMA POWER COMPANY,

5 Applicant.

6
7 DOCKET NO. 32953

8
9 IN RE: PETITION FOR A CERTIFICATE OF CONVENIENCE
10 AND NECESSITY

11
12
13 VOLUME III

14
15
16 TESTIMONY AND PROCEEDINGS before the
17 Honorable John A. Garner, Chief Administrative
18 Law Judge, at the Carl L. Evans Chief Administrative Law
19 Judge Hearing Complex, 900 RSA Union Building, 100 North
20 Union Street, Montgomery, Alabama, on Wednesday, March
21 11, 2020, commencing at 9:31 a.m., and reported by
22 Jan A. Mann, Certified Court Reporter and Commissioner
23 for the State of Alabama at Large.

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APPEARANCES

FOR ALABAMA POWER COMPANY:

Mr. Dan H. McCrary

Mr. Scott B. Grover

Ms. Abby C. Fox

BALCH & BINGHAM

1710 Sixth Avenue North

Birmingham, Alabama 35203

Mr. Riley Roby

Mr. Robin Laurie

BALCH & BINGHAM

Post Office Box 78

Montgomery, Alabama 36101

FOR MANUFACTURE ALABAMA:

Mr. George N. Clark

410 Adams Avenue, Suite 710

Montgomery, Alabama 36104

FOR ALABAMA COAL ASSOCIATION:

Mr. Patrick Cagle

2 Office Park Circle, Suite 200

Birmingham, Alabama 35223

APPEARANCES CONTINUED

FOR ENERGY FAIRNESS.ORG:

Mr. Paul Griffin

Montgomery, Alabama

FOR AMERICAN SENIOR ALLIANCE:

Mr. Conwell Hooper

225 Peachtree Street NE

Suite 1430, South Tower

Atlanta, Georgia 30303

FOR ALABAMA INDUSTRIAL ENERGY CONSUMERS:

Mr. Richard C. Hill

Mr. Jackson Britton

CAPELL & HOWARD

150 South Perry Street

Montgomery, Alabama 36104

FOR SIERRA CLUB:

Mr. Joel E. Dillard

Ms. Diana Csank

BAXLEY, DILLARD, MCKNIGHT, JAMES & MCELROY

2700 Highway 280, Suite 110 East

Birmingham, Alabama 35223

APPEARANCES CONTINUED

FOR ENERGY ALABAMA/GASP:

Ms. Christina Tidwell

Mr. Keith Johnston

Mr. Kurt Ebersbach

SOUTHERN ENVIRONMENTAL LAW CENTER

2829 2nd Avenue South, Suite 282

Birmingham, Alabama 35233

FOR ALABAMA SOLAR INDUSTRY ASSOCIATION, INC.:

Ms. Jennifer L. Howard

RIMON, P.C.

2000 SouthBridge Parkway, Suite 205

Birmingham, Alabama 35209

FOR THE OFFICE OF THE ATTORNEY GENERAL:

Ms. Olivia Martin

Mr. Zack Wilson

Ms. Tina Hammonds

OFFICE OF THE ATTORNEY GENERAL:

501 Washington Avenue

Montgomery, Alabama 36104

APPEARANCES CONTINUED

FOR COMMISSION STAFF:

Mr. V. Chad Mason, Jr.

Mr. John Free

PUBLIC SERVICE COMMISSION

100 North Union Street

Montgomery, Alabama 36014

1 March 11, 2020

9:31 a.m.

2 PROCEEDINGS

3 ALJ GARNER: For the record, we are here
4 this morning -- all right. I think we are on now.
5 Sometimes it takes a minute for the system to warm up.
6 All right. We are here for the continued hearing of
7 Docket 32953. We are to the point of the intervenor
8 testimony today. We have a lot of that to cover. So
9 any preliminaries before we get started?

10 MR. GROVER: None that I'm aware of.

11 MR. MCCRARY: No, Your Honor

12 ALJ GARNER: All right. I'm going to
13 call the first intervenor which is Manufacture Alabama.
14 Mr. Clark. You submitted some prefiled testimony so if
15 you want to come up and let me swear you in before
16 you're seated.

17 MR. CLARK: I'm going to waive any
18 statements, Your Honor.

19 (Witness sworn.)

20 ALJ GARNER: You may be seated. As the
21 parties are aware, I'm sure Mr. Clark prefiled some
22 testimony. It was four pages. He has been sworn and he
23 has waived his opening statement and summary and so he

1 is available for cross-examination. Any
2 cross-examination of Mr. Clark? Seeing none --

3 MS. TIDWELL: Yes, Your Honor.

4 ALJ GARNER: I'm sorry.

5 MS. TIDWELL: I just thought maybe
6 someone up here had some.

7 ALJ GARNER: You almost got off,
8 Mr. Clark.

9 THE WITNESS: Wasn't there a time limit,
10 Your Honor?

11 GEORGE CLARK,
12 having been first duly sworn, was examined and testified
13 as follows:

14 CROSS-EXAMINATION

15 BY MS. TIDWELL:

16 Q. Good morning, Mr. Clark.

17 A. Good morning to you as well.

18 Q. My name is Christina Tidwell and I
19 represent Energy Alabama/GASP in this matter. You are
20 the president and CEO of Manufacture Alabama?

21 A. Yes, ma'am, I am.

22 Q. And is Manufacture Alabama a 501C4
23 organization?

1 A. I believe it's a 6.

2 Q. A C6?

3 A. Uh-huh.

4 Q. A trade organization. Is that right?

5 A. Right. Right.

6 Q. During your opening statement on Monday,
7 you mentioned that if any piece of Alabama Power's
8 proposal should be shaved it should be the solar
9 resources. Do I have that correct?

10 A. I did say that.

11 Q. And you said that's because solar can't
12 respond to peak demand?

13 A. That is my opinion, and if we look
14 outside here today, if we look at what the temperature
15 and what the climate has been like over the last 30
16 days, that is part of my personal evaluation. I'm not
17 a scientist.

18 Q. The resources that Alabama Power has
19 proposed are solar plus battery storage resources. Is
20 that right?

21 A. I support that.

22 Q. And battery storage will be able to
23 provide capacity during the winter peak demand, correct?

1 A. For a limited period of time, yes.

2 Q. You state in your direct testimony that
3 your members have a strong interest in the supply of
4 affordable and reliable power to your members. Is that
5 right?

6 A. It's critical. And we don't just have
7 an interest. It is absolutely critical.

8 Q. So, yes, that's what your direct
9 testimony states?

10 A. Yes.

11 Q. Many of your members also have a strong
12 interest in sustainability. Is that correct?

13 A. That is correct.

14 Q. Many of them have sustainability goals?

15 A. Absolutely.

16 Q. And on page three of your direct
17 testimony, you list several members. Is that correct?

18 A. I listed a good many of them.

19 Q. And one of those members is Olin
20 Chemical?

21 A. That is correct.

22 Q. Are you aware that Olin Chemical has a
23 goal of ten percent reduction in carbon emissions

1 intensity by 2030?

2 A. I'm not -- no, I'm not familiar with
3 the exact numbers but many of my members have such
4 goals.

5 Q. And that's a ten percent reduction in
6 carbon emissions intensity by 2030 using a 2018
7 baseline. U.S. Steel is also one of your members?

8 A. That's correct.

9 Q. And the secretary of your board of
10 directors is an employee of U.S. Steel?

11 A. That is correct.

12 Q. Are you aware that U.S. Steel has
13 committed to reducing greenhouse gas emissions intensity
14 by twenty percent?

15 A. Again I'm not, you know, privy to all
16 the various stated goals but I know as a general rule
17 most of my members have policies very similar to that.

18 Q. Okay. Another one of your members is
19 SSAB. Is that right?

20 A. And they are also on my board.

21 Q. And that's a steel company?

22 A. Steel company with an electric arc
23 furnace.

1 Q. Are you aware that SSAB has announced
2 plans to convert its global facilities to make
3 fossil-free steel including its plant in Alabama?

4 A. In general ways, yes.

5 Q. Does Manufacture Alabama receive any
6 funding from Southern Company or any Southern Company
7 affiliates?

8 A. Alabama Power Company is a member of
9 Manufacture Alabama.

10 Q. So do you receive funding from Alabama
11 Power Company?

12 A. Yes. They pay dues.

13 Q. How much are those dues?

14 A. We don't disclose our dues of any
15 member.

16 Q. Do you disclose your members, a list of
17 your members?

18 A. Yes.

19 Q. Is that on your website?

20 A. It's on our website.

21 Q. Okay. I believe actually the website
22 might have a malfunction because when I've gone to try
23 to find a list of your members, nothing seems to pop up.

1 So just letting you know that.

2 A. We're in the process right now of
3 remodeling. I'm limited when it comes to technology
4 and how to describe all of that. I'm a carbon-based
5 coal man. Excuse the pun. That's a Jimmy Buffett
6 song.

7 Q. Do you receive any funding from Alabama
8 Power Company other than what they pay in dues?

9 A. No.

10 MS. TIDWELL: Okay. That's all of my
11 questions. Thank you.

12 MR. HILL: I have a couple of
13 questions.

14 CROSS-EXAMINATION

15 BY MR. HILL:

16 Q. In the interest of time, Mr. Clark, you
17 list Olin, SSAB, Occidental and U.S. Steel as supporting
18 the petition. We had a representative from Olin here
19 all week supporting our position. I don't know
20 procedurally how to put this, but if we could clarify
21 whether those four companies support the petition or not
22 and let the judge know in the next week or two?

23 MR. HILL: Would that be acceptable to

1 you, Judge Garner?

2 ALJ GARNER: Yeah, if you need
3 clarification, leave it open-ended for that post
4 hearing. That's acceptable.

5 Q. I respectfully disagree with your
6 assessment that those companies support the petition but
7 I didn't really ask you a question but would you agree
8 to --

9 A. What I said was Manufacture Alabama
10 supports it. My board has been briefed on this issue.
11 Olin is not a voting member of my board.

12 Q. Okay.

13 A. But that is the consensus-of-my-board
14 reference, who I answer to.

15 Q. And let's see if we can kind of describe
16 things and maybe this will answer the question without
17 us needing to go to that level. Manufacture Alabama is
18 interested in economic development and bringing in more
19 industry to the state. Is that fair to say?

20 A. That's very accurate, yes, sir.

21 Q. And do you have an understanding of my
22 group, which is focused on industrial energy more than
23 other issues? Is that your understanding?

1 A. That's what I've always thought, yes,
2 sir.

3 Q. And we have some of the same members from
4 both of our groups?

5 A. Yes, we do.

6 Q. But our focus is more on industrial
7 energy and yours is more on economic development. Is
8 that fair?

9 A. No. I think we're much broader than
10 that. In my opening statement, I tried to speak in
11 terms of what we are doing in workforce development.
12 I'm 73 years old and most of my efforts are really
13 focused now on workforce development, and of course
14 what I'm doing with energy, that's also one of my
15 major efforts.

16 I have other people on my staff now
17 that do most of the day-to-day lobbying work. As I've
18 stated, I'm chairman of Governor Ivey's workforce
19 innovation board, development board and I spend an
20 inordinate amount of time doing that in order to help
21 reach the stated goals of Governor Ivey which is
22 500,000 new skilled employees and that's a mighty big
23 task.

1 It takes a lot of people to get it done
2 and I have to work with a lot of different moving
3 parts and so I spend a lot of time doing that. I can
4 go further and tell you that Accelerate Alabama, which
5 is our economic development strategy, I have --

6 Q. I don't think those are any of my
7 questions, sir, but would you agree that my group has
8 thousands of employees as well?

9 A. Of course you do.

10 Q. Well, how about this? Manufacture
11 Alabama supports the petition and AIEC opposes the
12 petition. If the Court off line would like us to
13 clarify, would you work with me to determine which
14 companies in fact support and oppose the petition?

15 A. Sure.

16 MR. HILL: Thank you. I have no
17 further questions.

18 MS. CSANK: Your Honor, I have a few
19 questions.

20

21 CROSS-EXAMINATION

22 BY MS. CSANK:

23 Q. Good morning. My name is Diana Csank

1 with the Sierra Club.

2 A. Good morning to you.

3 Q. Sir, you mentioned briefing your board on
4 this matter. Do you recall that?

5 A. Yes.

6 Q. Did you personally brief the board?

7 A. Yes.

8 Q. And approximately when was that briefing?

9 A. Excuse me?

10 Q. Approximately when did you brief your
11 board?

12 A. I brief my board on every board meeting
13 that we have on various issues. Primarily it
14 surrounds workforce development and what we're doing
15 in workforce development. It would have been on this
16 particular issue somewhere around the end of last year
17 or the first of this year.

18 Q. Do you recall whether it was before or
19 after you filed testimony?

20 A. It would have been before I filed the
21 testimony that I filed.

22 Q. Was it also before the company filed its
23 petition in this matter in early September 2019?

1 A. No. It was afterwards.

2 Q. Okay. And in that briefing, do you
3 recall if you provided any documents to your board?

4 A. No, I did not.

5 Q. No documents?

6 A. No.

7 Q. And in that briefing, did you, yourself,
8 base your verbal briefing on any particular documents?

9 A. No, not exactly. It's my -- well, no.

10 Q. All right. And in terms of the briefing
11 you were just describing that happened sometime between
12 September and December of last year, was there one
13 briefing, and upon your verbal briefing, your board
14 voted? Is that how it happened?

15 A. Well, I have a small board and we a lot
16 of times do things by consensus, and as I recall,
17 that's basically what happened. It was a consensus
18 that we understood that -- I've anticipated that there
19 would be a filing of this nature at some point in time
20 due to the fact that of all the coal-fired generation
21 loss of capacity and so it did not surprise me at all.

22 And all along the way, I try to keep my
23 board informed. One of the things in business, they

1 don't like surprises and I consistently advised the
2 board that they should be aware that further capacity
3 might be an issue for Alabama Power Company.

4 Q. And my question, sir, was whether at the
5 meeting where you briefed your board was it at that same
6 meeting that they decided upon your verbal briefing of
7 them? Yes? No?

8 A. What?

9 Q. You represented that you at a particular
10 meeting of the board briefed them without documents,
11 verbally. And my question was, was it at that same
12 meeting where your board decided its position --

13 A. Yes.

14 Q. -- in this case?

15 MS. CSANK: Thank you, sir. No further
16 questions.

17 ALJ GARNER: Any other cross of
18 Mr. Clark? Thank you, Mr. Clark.

19 THE WITNESS: Thank you.

20 ALJ GARNER: You are excused.

21 THE WITNESS: Thank you, Your Honor.

22 ALJ GARNER: Mr. Clark's prefiled
23 testimony will be entered into the record. All right.

1 That brings us to Alabama Industrial Energy.

2 MS. HOWARD: Your Honor, if I may, I have
3 a request to make regarding witness order. Alabama
4 Solar's witness, Maggie Clark, is trying to get back to
5 North Carolina for an important meeting. If she were to
6 be able to make that meeting, she would need to leave by
7 noon or so today.

8 Alabama Power has indicated they do not
9 anticipate having cross-examination of her. I polled a
10 few parties this morning but I have not been able to
11 poll every party yet to determine if anyone else has
12 cross-examination for her, but if not, I wondered if we
13 could take a few minutes to put her on the stand and
14 offer her testimony into the record.

15 MR. HILL: We would agree with that if
16 everybody stipulated that there's no cross.

17 ALJ GARNER: We can find out really
18 quickly. Anyone have any cross of Ms. Clark?

19 MR. HILL: I don't.

20 ALJ GARNER: Confirm that with Alabama
21 Power. I have no objection to that. We can accommodate
22 that. That's fine.

23 MS. HOWARD: Thank you, Your Honor.

1 ALJ GARNER: Is she ready to go?

2 MS. HOWARD: Yes, sir.

3 ALJ GARNER: All right. Let's go.

4 MAGGIE CLARK,

5 having been first duly sworn, was examined and testified

6 as follows:

7 DIRECT EXAMINATION

8 BY MS. HOWARD:

9 Q. Good morning.

10 A. Good morning.

11 Q. Would you please state your name for the
12 record?

13 A. Maggie Clark.

14 Q. And, Ms. Clark, who is your current
15 employer?

16 A. The Solar Energy Industries
17 Association.

18 Q. And your position there, please, ma'am?

19 A. Senior Manager of State Affairs
20 Southeast.

21 Q. And your business address?

22 A. One Glenwood Avenue, Raleigh, North
23 Carolina.

1 Q. Did you cause prefiled testimony and
2 exhibits to be filed in this matter?

3 A. I did.

4 Q. Do you have any corrections to that
5 testimony?

6 A. I do not.

7 Q. And if I were to ask you those same
8 questions today, would you have the same answers?

9 A. I would.

10 MS. HOWARD: We would move for
11 admission of Ms. Clark's prefiled testimony into the
12 record.

13 ALJ GARNER: All right. Ms. Clark's
14 prefiled testimony will be admitted. I only have one
15 exhibit. You said exhibits. Is it one exhibit?

16 MS. HOWARD: I believe you're correct,
17 sir.

18 ALJ GARNER: That will be marked as
19 Alabama Solar Industry Association Exhibit 5 and it is
20 also entered into the record.

21 MS. HOWARD: Thank you, sir.

22 Q. Ms. Clark, do you have a summary of your
23 testimony that you would like to give today?

1 A. I do.

2 Q. Please proceed with that.

3 A. In comparison to other states in this
4 region, Alabama is near the bottom in total and
5 projected solar installations over the next few years.
6 In other Southeastern states that have significant
7 (audience noise) solar capacity, regulators have
8 approved installations based on the economic benefits
9 and downward pressure on utility rates.

10 Solar has an important role to play in
11 economic development by attracting new businesses,
12 jobs, increasing tax revenue and modernizing energy
13 infrastructure. Companies and corporations are
14 increasingly demanding clean energy resources.

15 Solar is a proven technology that is
16 price competitive with other forms of new energy
17 generation and can result in ratepayer savings.
18 Alabama would stand to benefit economically by
19 increasing its installed capacity of solar energy.
20 The purpose of my testimony is to recommend the PSC's
21 approval of the proposed solar plus storage projects.

22 MS. HOWARD: Thank you, Ms. Clark. As
23 I understand it, cross-examination is waived.

1 ALJ GARNER: That's my understanding as
2 well. Thank you, Ms. Clark. You're excused.
3 Appreciate you being here.

4 THE WITNESS: Thank you.

5 ALJ GARNER: All right. Mr. Hill, are
6 we ready to proceed with your witness, Mr. Pollock?

7 MR. HILL: Yes, sir.

8 ALJ GARNER: He's already making his
9 way to the stand. He's so anxious to get up here.

10 (Witness sworn.)

11 MR. HILL: Are we ready, Judge?

12 ALJ GARNER: Yes. Proceed.

13 JEFFRY POLLOCK,
14 having been first duly sworn, was examined and testified
15 as follows:

16 DIRECT EXAMINATION

17 BY MR. HILL:

18 Q. State your name.

19 A. Jeffry Pollock.

20 Q. And where are you employed, Mr. Pollock?

21 A. I'm employed at J. Pollock,
22 Incorporated in St. Louis, Missouri.

23 Q. What is your business address?

1 A. 12647 Olive Boulevard.

2 Q. Did you cause direct testimony to be
3 filed in this petition?

4 A. Yes.

5 Q. You had some errata to your testimony
6 that was given to the parties and described in your
7 deposition. Is that correct?

8 A. Yes.

9 Q. You also had some errata to your
10 deposition that's been shared with the parties and also
11 handed over to Alabama Power's counsel this week. Is
12 that correct?

13 A. Yes.

14 Q. Subject to that errata, is your testimony
15 here today the same as what would be in those previous
16 testimonies before?

17 A. Yes.

18 MR. HILL: I would move to have his
19 testimony admitted subject to cross-examination.

20 ALJ GARNER: Mr. Pollock's prefiled
21 testimony will be admitted subject to cross as well as
22 his prefiled exhibits.

23 Q. Mr. Pollock, would you give an opening

1 summary of your testimony?

2 A. Yes. Thank you. Good morning, Madam
3 President, Commissioners and Your Honor. The Alabama
4 industrial Energy Consumers members desire to have a
5 reliable supply of electricity and rates that are
6 competitive to allow them to sustain their operations.
7 So that quite naturally raises the question why does
8 AIEC oppose the passage of resources in the proposed
9 certificate of convenience and necessity proceeding.

10 The answer to that question is that we
11 are highly skeptical about the 2018 target reserve
12 markets of the study and the results that Southern
13 Company requires of 26 percent target reserve margin
14 in the winter months. I've identified several
15 problems of that study in my testimony.

16 I would note that the Georgia Public
17 Service Commission recently reviewed the very same
18 planning study, and as a result of the settlement in
19 the Georgia Power IRP case last year, the commission
20 and parties agreed to defer any decision about a
21 target reserve margin but all parties agreed and AIEC
22 agrees that it's appropriate to do seasonal planning
23 and we support that approach.

1 My skepticism was also based on
2 observation that most utilities regional transmission
3 organizations have lower planning reserve margins than
4 Southern Company. These are indicated in my Exhibit
5 JP-3 which is a list of southeast investor utilities
6 and Exhibit JP-4 which is an excerpt from the NERC
7 long-term reliability assessment which reviews the
8 planning processes and reserve margin, target reserve
9 margins of various planning regions across the
10 country. As that exhibit shows, I think the largest
11 reserve margin is 20 percent. Most are in the teens.

12 Southern Company and Alabama Power do
13 have the capacity need. We believe that need is four
14 years out. We also believe that Barry 8 would be the
15 lowest cost resource to meet that need. We ask the
16 commission not to accept the 26 percent target reserve
17 margin but to require further study and analysis
18 before doing so. That concludes my summary.

19 MR. HILL: Thank you, Mr. Pollock.

20 ALJ GARNER: Cross-examination of Mr.
21 Pollock? Any cross?

22 MR. GROVER: We will but reserve our
23 right to go --

1 ALJ GARNER: Oh, that's right. Thank
2 you. I didn't see any movement over here.

3 MR. GROVER: I like that you're moving
4 us along.

5 ALJ GARNER: I assume no one on this
6 side -- oh, Ms. Csank.

7 MS. CSANK: Some brief questions, Your
8 Honor.

9 CROSS-EXAMINATION

10 BY MS. CSANK:

11 Q. Thank you for your patience, sir. Diana
12 Csank with the Sierra Club. We've met before, correct?

13 A. Correct.

14 Q. At your deposition?

15 A. Yes.

16 Q. Sir, I think it's your testimony and your
17 included resume identifies, you have decades of
18 experience and expertise in resource planning and
19 procurement in the electric sector?

20 A. That's part of my experience, yes.

21 Q. Including specifically resource planning
22 and procurement by Alabama Power and its affiliated
23 companies?

1 A. Yes.

2 Q. And also specifically advocating AIEC's
3 interests concerning the same?

4 A. Yes.

5 Q. Sir, as part of your testimony and
6 analysis that you're offering to this commission, did
7 you take into consideration AIEC members' clean energy
8 and climate commitments?

9 A. No.

10 Q. So you did not get an opportunity to
11 verify whether AIEC members like Evonik have such goals
12 and the extent to which the proposed expansion is
13 consistent with such goals?

14 A. I've not reviewed those goals, no.
15 That was not my charge.

16 Q. Nor did you review whether the proposed
17 expansion in this case is consistent with Southern
18 Company's clean energy and climate goals?

19 A. I haven't reviewed the Southern
20 Company's policy either.

21 Q. But you're familiar with the load of no
22 carbon commitment that we've been discussing?

23 A. I've heard about it. I haven't read

1 the policy in detail, no.

2 Q. So just to clarify, you did not perform
3 any independent analysis of the need for Barry Unit 8,
4 did you?

5 A. Clarify what you mean by independent.

6 Q. So did you perform any sort of
7 reliability assessment of whether Barry Unit 8
8 specifically is the right -- is in fact a match for the
9 company's claim to reliability need?

10 A. Yes. I reviewed the information that
11 the company provided, some independent analysis and
12 came to the conclusion that I did, that, yes, there is
13 a capacity need four years out and Barry 8 is the best
14 resource to meet that need.

15 Q. But you have not identified any technical
16 reason why combined cycle generation specifically is the
17 only way to meet a projected capacity deficit, have you?

18 A. What do you mean, the technical aspect?

19 Q. As opposed to an economic or a legal one.

20 A. I reviewed both the technical ability
21 of the combined cycling unit. I have testified in a
22 number of cases that deal with combined cycling gas
23 turbine units so I'm very familiar with the

1 technology.

2 In terms of the economics, I did review
3 the economic analysis that the company provided and
4 did some further independent analysis of that based on
5 more up-to-date gas prices.

6 Q. Did you review the transmission study
7 that the company has referenced as part of its basis for
8 identifying Barry 8 in its petition?

9 A. No.

10 Q. So you didn't do any transmission-related
11 analysis?

12 A. No.

13 Q. Can we agree that transmission is a
14 critical part of any reliability assessment?

15 A. Yes.

16 Q. And as far as your earlier statement that
17 your opinion is that Barry 8 is the best choice for the
18 company's clean needs, have you performed any
19 independent economic analysis for that opinion, to reach
20 that opinion?

21 A. Yes, taking information the company
22 provided and doing some additional analysis is how I
23 came to that conclusion.

1 Q. You did not perform any independent
2 analysis of the cost effectiveness of the five solar and
3 battery projects in the petition, did you?

4 A. I reviewed the contracts and the
5 term -- pricing terms of those contracts. So in a
6 sense, I'm aware of them.

7 Q. You're aware of them, but when we spoke
8 last month, you identified for me that you did not have
9 an opinion because you had not had a chance to perform
10 any meaningful analysis on the economics of those
11 resources in the petition, right?

12 A. I haven't done a specific analysis
13 though I have reviewed the contract terms and
14 particularly the pricing terms that are of concern.

15 Q. Okay. But you're not, for example,
16 offering analysis that compares head to head those
17 projects to Barry 8 other than what the company has
18 provided?

19 A. I've looked at the company's analysis.
20 I've also done some independent analysis based on the
21 information the company provided and I have done a
22 head-to-head analysis in terms of looking at the
23 resources on the cost per hour basis. That is the

1 basis for my conclusion today.

2 Q. And where is that documented, sir?

3 A. I can provide a document.

4 Q. Was that document created after your
5 deposition?

6 A. Yes.

7 Q. And at your deposition, you also
8 identified that you are communicating directly with
9 company representatives about this case. Is that
10 correct?

11 A. I communicate directly with counsel and
12 with the AIEC steering committee members.

13 Q. But you also have participated at least
14 in one call directly with company representatives, have
15 you not?

16 A. Talking about Alabama Power Company?

17 Q. Yes, sir.

18 A. I'm sorry. I misunderstood your
19 previous question. Yes, we did. Alabama Power did
20 call to provide a briefing and filing and I was
21 listening to that call.

22 Q. Sir, as a general matter, is it correct
23 to understand your testimony as objecting to wasting

1 customer money on long-term resource commitments that
2 are not necessary?

3 A. I think I indicated in the outset of my
4 testimony our goal -- the Alabama Industrial Energy
5 Consumers' goal is to ensure that there is a reliable
6 supply of electricity at rates that can help sustain
7 the operations of the AIEC members.

8 Q. Would you be good enough to just answer
9 my question with a yes or no?

10 A. We don't want the company to waste
11 money unnecessarily, so yes.

12 Q. And do you agree that long-term resource
13 commitments may present greater risks than short-term
14 resource commitments, all else being equal?

15 A. Well, they have different -- all the
16 things being equal, yes, they have different --
17 long-term resources have different risks than
18 short-term resources.

19 Q. Have you conducted an independent
20 analysis of all the risks bearing upon -- material risks
21 bearing upon the resources in the company's petition?

22 A. What would constitute -- if I may
23 clarify your question, what kind of analysis are you

1 asking about?

2 Q. Any, sir. Anything that's documented and
3 quantifies the material risks associated with the
4 resources in the petition, sir.

5 A. I have not done a formal study to
6 assess the pros and cons of each resource; however, I
7 have obviously looked at the need for resources and
8 the economics associated with the resources that are
9 at issue in this case.

10 Q. Okay. But specifically in terms of the
11 material risks, do you agree that those can be
12 identified and quantified to some extent? Do you know?

13 A. Risk of any -- yes, they can. Any
14 resource whether short-term, long-term, regardless of
15 technology will have its pros and cons, its risks and
16 its benefits and they have to be assessed.

17 Q. And they can be quantified?

18 A. They can be assessed over a wide range
19 of possible scenarios as a way of trying to quantify
20 which is the best mix overall of results and overall
21 lowest reasonable cost at the least risk for
22 customers.

23 Q. And you haven't performed that kind of

1 analysis of your own to present to this commission
2 today, have you?

3 A. I have in a sense in terms of the
4 recommendation. My recommendation is Barry 8 meets
5 the capacity need Alabama Power and Southern Company
6 will have in four years and at the lowest overall
7 cost.

8 Q. That's based on the company's
9 information?

10 A. It's based on that information and my
11 independent analysis and experience dealing with
12 similar utilities that have proposed combined cycle
13 gas turbines to meet future needs.

14 Q. Sir, do you agree that the electric
15 sector has experienced rapid changes in recent years,
16 correct?

17 A. Yes.

18 Q. Do you agree that the market for
19 resources has experienced rapid changes in recent years
20 in particular, correct?

21 A. The market for resources? Can you
22 clarify what you mean by market?

23 Q. Right. People toss around the term

1 market but it's a pretty vague term on its own, is it
2 not?

3 A. That's why I want to clarify your
4 question.

5 Q. Right. And we've been talking about
6 resources for several days now. Do you have an
7 understanding of resources, sir?

8 A. I assume we're talking about resources
9 to meet electricity needs, yes.

10 Q. Okay. And those can be capacity or
11 energy needs?

12 A. They can be resources that provide
13 capacity. They can be resources that are energy only.
14 They can be resources that are energy efficiency and a
15 various gamut of resources.

16 Q. Very good. And so for the market that
17 provides those types of resources and let's be -- that
18 are available to Alabama Power Company and Southern, has
19 that market experienced rapid changes in recent years?

20 A. Well, yes. That there is a broad
21 market for a wide range of resources and different
22 technologies? Yes, I would say that technology has
23 evolved and now utilities have a lot more choices than

1 they had in the past.

2 Q. Okay. And just to put a finer point on
3 it, you may recall that at your deposition we talked
4 about Swanson's law. Do you recall that?

5 A. Yes.

6 Q. And that is much like Moore's law. Are
7 you familiar also with Moore's law?

8 A. I am.

9 Q. So Moore's law is the principle that the
10 speed and capability of computers can be expected to
11 double every two years as a result of increases in the
12 number of transistors and microchips can contain. Does
13 that sound correct to you, subject to check?

14 A. Well, yes, as it applies to information
15 and that kind of technology. Yes, that's correct.
16 That's a whole different story when it comes to
17 physics.

18 Q. But you agree that computers are used as
19 part of resources?

20 A. Well, I would assume that operational
21 controls are largely automated, yes. They don't
22 produce the energy. They help to operate --

23 Q. They are components of resources. Yes?

1 A. Yes.

2 Q. All right. And similarly there's
3 Swanson's Law that the price of solar photovoltaic
4 modules tends to drop 20 percent for every doubling of
5 cumulative shift volume. At present rates, costs go
6 down 75 percent about every ten years. Do you agree?

7 A. That may be correct in the past;
8 however, we've seen a leveling off of that cost,
9 leveling off of the reduction, the rate of reduction
10 of those costs and there is a physical limit. There
11 is only so many photons that can be converted in a
12 solar panel to electricity. So you're going to reach
13 very soon the physical limit of what solar panels can
14 actually produce.

15 Q. Do you have any documents that attempt to
16 quantify this leveling off that you're referencing?

17 A. Yes.

18 Q. Do you have documents with you here today
19 to present to the commission?

20 A. Yes, I can present to the commission
21 once we --

22 Q. Okay. What about solar favored
23 batteries?

1 A. Well, that's another issue, too.
2 Because you have battery technology that has evolved
3 and will continue to evolve. You experience some
4 risks with batteries with battery fires and things of
5 that nature that need to be resolved plus you have the
6 question of where do the resources that make those
7 batteries come from is a risk as well. So you have to
8 consider all of the aspects of the resource.

9 Q. Okay. Let's go back to the broader sweep
10 of resources and I think I at least had you agree that
11 those resources in general are improving in terms of
12 their performance and price?

13 A. They have in the past and there will be
14 some continued improvement in the future though not as
15 much as in the past.

16 Q. So you would agree that an incremental
17 approach to resource procurement is economically
18 efficient because it captures these improvements in
19 performance and price?

20 A. I'm sorry. Could you repeat the first
21 part of your question?

22 Q. Yes, sir. So an incremental approach to
23 resource procurement is economically efficient because

1 it captures those type of improvements, the value of
2 them, in performance and price?

3 A. I'm not sure what incremental planning
4 means. I mean in the sense when utilities claim to be
5 looking at options to meet their needs, they're going
6 to look at a wide range of different resources and
7 technologies to do that. That's part of the planning
8 process.

9 Q. But if they can invest in smaller
10 increments and diversify their investments not just in
11 term of the resource type but the time over which they
12 buy it, there's an economic efficiency because they can
13 capture that improvement in performance and price over
14 time, can they not?

15 A. Well, there's a value in option.
16 There's a value in waiting until technology improves.
17 So from that extent if we think we have confidence
18 that a particular technology is going to come way down
19 in price, then the prudent thing to do might be to
20 wait until that happens.

21 Alternatively there's also a risk of
22 looking just at the short term and trying to meet a
23 short-term need with an incremental resource because

1 you may be missing an opportunity that might not
2 otherwise arise --

3 Q. Have you attempted to magnify --

4 A. -- in the future.

5 Q. Excuse me -- to quantify the magnitude of
6 risks either -- in either direction?

7 A. I have not. I'm just aware that there
8 are those risks.

9 Q. Okay. So you can't present to us
10 whether, you know, the cost or benefits, how they
11 compare of acting now versus acting later?

12 A. We can look at what the projected costs
13 and projected benefits and resources the company has
14 identified in its analysis and, you know, we know that
15 there's a need that has to be met and we need to pick
16 a resource that will appropriately meet that need for
17 the benefit of the customers.

18 Q. So have you done any independent review
19 of whether the Calhoun PPA can be extended?

20 A. I have reviewed that PPA. I have not
21 done a review to determine if a second extension of
22 that contract can be done and I'm not sure that we
23 want necessarily to extend that contract further

1 either.

2 Q. So you don't know?

3 A. I do know in terms of the actual price
4 of that contract. It's much above the market right
5 now and I would not advise extending that contract.

6 Q. But, sir, but you don't know an
7 incremental extension of just a few years of that
8 contract, how that would compare to a -- to the proposed
9 gas units in this case, the capital cost of which,
10 publically known, are at least 1.1 billion and that's
11 just two of the three units?

12 A. That's kind of an apples-to-oranges
13 comparison because the purchase power contract we're
14 talking about is for peaking purchases only.
15 Essentially it's a combustion turbine, combustion
16 turbines. The gas units we're talking about are
17 combined cycling units that will operate year round.
18 And in spite of that difference, those units are a lot
19 less costly.

20 Q. Are we here talking about a winter peak
21 projected need?

22 A. Well, we're talking about Alabama
23 Power's winter peaking but they plan with the Southern

1 Company that is summer peaking system.

2 Q. Right. Have you independently
3 investigated -- strike that. You're familiar with the
4 Georgia decision on the integrated resource planning
5 proceeding that was completed this last year?

6 A. Yes.

7 Q. And do you know if that commission gave
8 direction to Georgia Power to in its resource
9 procurement also review the resources on the Southern
10 regulated system?

11 A. I'm not sure what part of the -- part
12 of that decision you're referring to.

13 Q. One moment. I believe it's in the
14 context of the capacity procurement.

15 A. Okay. I mean there's a lot --

16 Q. Subject to check, would you accept that?
17 I mean the -- in any event, the Georgia Power IRP final
18 order is in the record or at least it's an exhibit, a
19 pre-filed exhibit.

20 A. I wasn't aware of that, but if it is,
21 it is. Speaks for itself.

22 Q. Okay. One moment. And just to make sure
23 this is clear, your opinion is that this petition --

1 that you're filing support of denial of this petition?

2 A. Well, in part. I mean our findings
3 support the certification of Barry Unit 8 at this time
4 until such time as the companies can re-run or revise
5 the target reserve margin study and demonstrate that
6 26 percent is the appropriate target.

7 Q. And as we have discussed, you have no
8 documents to support that latter opinion other than the
9 documents from the company?

10 A. Well, I have the documents that -- I
11 have much more support as I indicated in my summary
12 besides the documents that the company provided. I
13 also have my -- the documents in Exhibit JP-3 and 4
14 which show the reserve margins, planning reserve
15 margins of other utilities and other regional
16 transmission organizations and my own experience.

17 Q. Sir, have you done an analysis of what
18 the economics would be of delaying Barry 8 by a year?

19 A. I have not done that analysis.

20 Q. Have you done an analysis of any type of
21 delay of Barry Unit 8?

22 A. No.

23 MS. CSANK: No further questions, sir.

1 ALJ GARNER: Any further cross from
2 anyone other than Alabama Power? Okay.

3 CROSS-EXAMINATION

4 BY MR. GROVER:

5 Q. Good morning, Mr. Pollock.

6 A. Good morning, Mr. Grover. How are you?

7 Q. I'm well, sir. You as well?

8 A. Yes.

9 Q. I will attempt to be judicious with your
10 time. I know you need to return to St. Louis. I do
11 want to start by asking just a general question in the
12 hope maybe leaning on some of your background
13 experience. I recall in your deposition you
14 acknowledged familiarity with regulatory activities at
15 the federal level. Do you recall that?

16 A. I monitor some of those activities,
17 yes.

18 Q. Okay. And my question is again more of
19 an exploratory one. In the course of your work, have
20 you gained an understanding of who regulates the rates
21 of interstate pipeline companies operating in the United
22 States?

23 A. Yes.

1 Q. Who is that agency?

2 A. The Federal Energy Regulatory
3 Commission.

4 Q. Okay. And do you have an understanding
5 of whether those rates are set on a cost-of-service
6 basis?

7 A. Yes, the rates do reflect cost of
8 service.

9 Q. Okay. And to the extent a pipeline
10 desires to change its tariffed rate for transportation
11 service, it has to seek authorization from the Federal
12 Energy Regulatory Commission, correct?

13 A. Correct.

14 Q. Okay. Thank you. Turning to Alabama
15 Power's electric service, I don't want to be repetitive
16 because I think you said much of what I want to ask you
17 but it's fair that the AIEC members are interested in
18 maintaining electricity supply that's reliable and cost
19 effective, right?

20 A. Yes.

21 Q. Okay. And the AIEC members are involved
22 in a lot of varied industrial and manufacturing sectors,
23 correct?

1 A. Yes.

2 Q. Okay. And I gather listening to
3 Mr. Hill's exchange with Mr. Clark that these sectors
4 and your members and Manufacture Alabama members provide
5 a strong basis for employment in the state of Alabama,
6 correct?

7 A. Yes.

8 Q. Okay. And drawing from opening by
9 Mr. Cagle -- and you were here. You got to enjoy Monday
10 with the rest of us.

11 A. It was fun.

12 Q. It was fun. Do the jobs that your
13 members and those like Manufacture Alabama provide, are
14 those sort of jobs that provide attractive wages to
15 individuals with skills and craft and technical
16 abilities in the state?

17 A. That's my understanding. In fact, AIEC
18 had a local economist do basically a study of the
19 economic benefits of manufacturing activities which
20 are considerable in terms of employment payroll
21 multiplier effect that creates multiple jobs in other
22 service-related sectors and is a major engine for
23 export revenues.

1 Q. On the point of export, I'm curious --
2 and this is not knowing. Does the AIEC membership
3 comprise the automotive sector?

4 A. I don't recall.

5 Q. Okay. I'm sorry to put you on the spot.
6 My question really then -- I mean because there is that
7 sector as well in the state of Alabama that is served by
8 Alabama Power?

9 A. Correct.

10 Q. You've got Mercedes, Hyundai, Honda --

11 A. Yes.

12 Q. -- as well as their secondary suppliers.
13 Is that correct?

14 A. Correct.

15 Q. Okay. And in terms of the operations of
16 these types of industries, a reliable supply of
17 electricity is important to those operations, correct?

18 A. In general, they are. Of course, some
19 of the operations can also work with the utility to
20 curtail electricity as necessary in order to prevent
21 the utility from having to go out and build additional
22 capacity when that situation becomes cost effective
23 but -- so in that sense, AIEC members can partner with

1 the utility to do that but, yes, they do want a
2 reliable supply of power for their operations.

3 Q. And you anticipated a question I was
4 going to ask you here in a moment. I'm going to try to
5 keep my train of thought straight. There are limits to
6 the extent that these customers can engage in that sort
7 of interruptible supply behavior, correct?

8 A. There can be. I think that we're
9 testing those limits in other markets right now to see
10 how well that companies are willing to work with RTOs,
11 for example, and providing certain ancillary services
12 that allow the RTOs to more efficiently manage their
13 systems, but given that experience, a number of
14 industries can't take -- can't take daily curtailments
15 and can't take long curtailments.

16 So there are going to be some limits
17 and there will be a practical limit how much of that
18 you can plan for in your future resource mix.

19 Q. And I think you indicated in your
20 deposition that Alabama Power's reserve margin already
21 comprises -- I think the word you used was hefty portion
22 of demand side options. That's correct?

23 A. That's correct.

1 Q. Right.

2 A. That's the limit I was referring to is
3 at some point if the demand side options constitute
4 the entirety of the utility's reserve margin, that's
5 going to have effects on the quality of service to its
6 customers.

7 Q. Yeah. I think you said it ultimately may
8 degrade the quality of service. Is that correct?

9 A. That's correct.

10 Q. And to that end, I mean I think it goes
11 without saying when interruptions in production, whether
12 on a coordinated basis with the power company or due to
13 some interruption in supply, that impacts your members
14 and other manufacturer and industrial customer member's
15 operations, right?

16 A. It does. They have to prepare to be
17 curtailed. It's not a cost-free proposition.

18 Q. That's exactly what I was thinking. It's
19 not a cost-free proposition. And for the unplanned
20 events, I mean there's safety concerns as well, correct?

21 A. That's correct. That's why they would
22 prepare for those events to make sure that they don't
23 enter into that type of contract if there was going to

1 be a safety issue.

2 Q. But outside the context of an
3 interruptible arrangement for purposes of events where
4 there is no notice, that presents safety concerns,
5 correct?

6 A. It could, again depending upon the
7 notification, assuming that there is some.

8 Q. Exactly. And I think drawing again from
9 Mr. Cagle's comments early on, I don't know to the
10 extent your members face similar situations but I recall
11 him acknowledging that in a met coal operation there
12 were concerns that the cessation of ventilation was
13 putting workers at risk, correct?

14 A. I heard that, yes.

15 Q. And again your membership -- I've heard
16 anecdotally and this is just drawing from what people
17 tell me that for some of the steel manufacturers, for
18 instance, you're talking about rolls of steel that weigh
19 like thirty tons?

20 A. Yeah, I think it really depends upon
21 the specific circumstances. You have certain parts of
22 the steel industry that really would have a hard time
23 interrupting, yet there are other facets of the steel

1 industry where those customers actively participate in
2 demand response programs and are able to manage those
3 programs pretty effectively.

4 So you can't just say all steel
5 companies can't interrupt or can't withstand that
6 because there are segments within the operations that
7 are capable of fully interrupting and providing
8 available resource.

9 Q. But again up to a certain threshold,
10 correct?

11 A. Well, it depends upon the specific
12 operation, and in terms of threshold, I don't think we
13 have hit that part yet.

14 Q. But I think you acknowledged in your
15 deposition we're getting close to the point where
16 service can degrade, correct?

17 A. Well, we're seeing it in terms of the
18 percentage of demand side options and the percent of
19 reserve margin, yes, that's right. Now whether that
20 will degrade the service will depend upon how the
21 operations are going forward.

22 Q. That's fair. Thank you. So ultimately
23 it turns back to what we're trying to accomplish. When

1 Alabama Power is seeking to add new generation, we're
2 looking to balance that reliability coin, reliability
3 side of the coin and the cost effectiveness side of the
4 coin as well, correct?

5 A. Yes.

6 Q. And the goal is, I think, to identify
7 what is the least cost reasonable solution, correct?

8 A. Yes.

9 Q. So I mean you could have technologies --
10 and again I think this was explored when we were
11 together in St. Louis. You could have technologies that
12 might come with a cheaper price tag but may present
13 problems in terms of integration with the system or how
14 it sort of coexists with existing customers on the
15 system, correct?

16 A. Yes, particularly, you know,
17 technologies that have not been tried very
18 extensively.

19 Q. You mentioned -- I'm going to come to
20 that in a second. You mentioned in your deposition a
21 phenomenon called cycling. Do you recall that?

22 A. Yes.

23 Q. What is cycling?

1 A. So what cycling means is when a
2 generating unit is in operation and that unit sees a
3 great reduction in load because other competing
4 resources are able to operate more cheaply, that
5 resource will cycle its operation down to some level,
6 and then as other resources come off the system, that
7 resource will have to cycle up to meet the demand.

8 Q. And does the integration of resources
9 that perhaps lack dispatchability characteristics cause
10 problems in terms of the amount to which they are
11 cycling required?

12 A. Yes. So, for example, a good example
13 in Texas, which has well over 20,000 megawatts of wind
14 generation, observed when the wind stopped blowing
15 early in the morning, the price of electricity jumped
16 and all of the industrial customers that were
17 providing responsive reserve were put on notice that
18 they may have to curtail their load because other
19 resources aren't fast enough to be able to respond to
20 a huge drop in wind generation.

21 Q. So earlier Ms. Csank was asking you
22 questions about -- I'm going to get it right --
23 Swanson's law. Do you recall that?

1 A. Yes.

2 Q. Okay. And there was some questions about
3 the existence of documents demonstrating what I thought
4 I heard you say which was a flattening out of a cost
5 reduction and sort of solar-type facilities. Do you
6 recall that?

7 A. Yes.

8 Q. Let me show you this.

9 MR. GROVER: May I approach, Your Honor?

10 ALJ GARNER: You may.

11 MR. GROVER: Thank you.

12 Q. I'm going to show you, Mr. Pollock, what
13 is from the exhibit of Sierra Club witness Mark Detsky,
14 Exhibit 4.

15 MR. GROVER: It's already in the record,
16 Your Honor.

17 ALJ GARNER: All right.

18 Q. And I draw your attention to the box on
19 the right side.

20 A. Okay.

21 Q. And without belaboring the point because
22 it's in the record, it speaks for itself, does that
23 chart illustrate a flattening out of costs of -- and I

1 think the words used at the top of the chart are
2 unsubsidized solar PV facilities?

3 A. That's exactly the phenomenon I was
4 talking about.

5 Q. Great. Thank you, Mr. Pollock. And also
6 during your deposition, you observed that large -- I
7 think this was the phrase you used to kind of
8 characterize your membership -- large energy intensive
9 users have deployed most, if not all, of sort of the
10 energy efficiency measures that they are capable of, I
11 guess, integrating with their operations. Do you recall
12 that?

13 A. Yes. That's my understanding, yes.

14 Q. Okay. And does that flow from the fact
15 that your membership, looking to minimize production
16 costs and maximize revenues, are going to take the steps
17 that are available to them to reduce that cost?

18 A. That's right.

19 Q. Okay. This is where we got ahead of me.
20 And again I'm not going to belabor this because I think
21 you testified to it very clearly. You see a need on the
22 company system in the '24, '25 time frame, correct?

23 A. Yes.

1 Q. And it's your testimony that Barry 8 is
2 well positioned from a timing perspective and an
3 economic perspective to meet that need, correct?

4 A. Very much so, yes.

5 Q. Okay. And I think as you discussed and
6 it sounds like based on your experience of these
7 combined cycle units, Barry 8 will be one of if not the
8 most efficient unit on not only the Alabama Power system
9 but the entire Southern system, correct?

10 A. In fact, of the gas fired combined
11 cycling units that I've evaluated over the past five
12 years, I think this one would have by far the lowest
13 heat rate.

14 Q. And that's what's driving those
15 efficiencies. Is that correct?

16 A. That's correct. And the other
17 advantage of being located -- coal located onsite with
18 existing infrastructure also creates a tremendous
19 amount of economies.

20 Q. Were you here yesterday when Mr. Bush was
21 testifying?

22 A. Yes.

23 Q. Okay. And you heard also that Barry 8's

1 location includes siting around multiple points of
2 interstate pipeline confluence as well as storage
3 facilities, correct?

4 A. Yes.

5 Q. And in your experience, that provides for
6 enhanced flexibility and efficiencies for a facility
7 like Barry 8, correct?

8 A. Yes.

9 Q. Okay. And then I understand what you
10 said in your summary and what's in your testimony. Can
11 we agree that if the commission concludes that the
12 company's needs are greater than what you believe those
13 needs are that the company -- or rather the commission
14 should look to other resources that have not been
15 identified as part of that sort of least cost portfolio
16 being presented?

17 A. Yes, and I leave that option open in my
18 testimony. If the commission finds there is
19 additional needs beyond what we've identified,
20 certainly look at the other resources.

21 Q. And one point in your testimony, Mr.
22 Pollock, is that the company in your opinion has the
23 ability to utilize what you think is available capacity

1 resources among its sister operating companies, correct?

2 A. Yes.

3 Q. And that's in accordance with or would
4 occur through the intercompany interchange contract
5 which I think we refer to sometimes as the IIC, correct?

6 A. That's correct.

7 Q. Okay.

8 A. The system is operated as a whole, and
9 to the extent that there are resources available and a
10 company needs those resources, those resources are
11 available to that company.

12 Q. Right. So a couple of things. One, at
13 the outset of her questions, Ms. Csank asked you about
14 your experience in the resource planning field. Do you
15 recall that?

16 A. Yes.

17 Q. And I think during your deposition you
18 and I clarify that that resource planning experience
19 comes through your work on behalf of your clients in the
20 course of the proceedings that you participated in in
21 your consulting career?

22 A. That's right. It's an accumulation of
23 my knowledge and participation in many, many

1 regulatory proceedings and more recently in a lot of
2 resource planning cases.

3 Q. Okay. But it's fair -- a couple of
4 things. And again I think we've heard this repeated so
5 many times. I've just got to say it with you, too.
6 You're not a lawyer?

7 A. Thankfully, no.

8 Q. I won't begrudge you that at all. And
9 you're not, through your trade and experience, an
10 electric system planner yourself, correct?

11 A. I've never been employed as a planner.

12 Q. Or an electric system operator?

13 A. I've not been employed as an operator.

14 Q. And it's my understanding you don't have
15 any firsthand experience with sort of the modeling that
16 occurs through systems such as the SERVIM model that
17 Mr. Carden testified to, correct?

18 A. Correct.

19 Q. And I think likewise you were here Monday
20 when I believe you spoke. You don't have the sort of
21 experience and exposure to the administration and
22 management of the IIC that someone like Mr. Weathers
23 has, correct?

1 A. No, I don't have that type of
2 experience, although I can remember back in my days
3 when I had more hair and it was dark that I remember
4 the terms IIC pretty well so it's been part of my
5 knowledge for many years.

6 Q. Okay. My final questions are these. I
7 know your testimony talks about what you've observed in
8 other systems with respect to the winter reserve margins
9 and you mentioned a few of those here but I think we did
10 acknowledge and agree in your deposition that the
11 Tennessee Valley Authority has a target winter reserve
12 margin of 25 percent, correct?

13 A. I'm aware of that, yes.

14 Q. Okay. And I think you also took an
15 action item in your deposition maybe to go and confirm
16 that the winter reserve margin for the PowerSouth
17 Cooperative here in Alabama also is in that 25 percent
18 range?

19 A. We were able to confirm that as well.

20 Q. And lastly, the little talk about the
21 Georgia Public Service Commission's IRP order, is it
22 your understanding that for purposes of planning the
23 target winter reserve margin that was derived from the

1 2018 reserve margin study was authorized for Georgia to
2 use?

3 A. I'm sorry. Could you clarify that
4 question?

5 Q. I know that didn't come out very well.
6 That for planning purposes, the Georgia Public Service
7 Commission authorized Georgia Power to use the target
8 winter reserve margin from the 2018 reserve margin
9 study?

10 A. The commission, the Georgia commission
11 didn't approve a specific target reserve margin. They
12 said -- in settlement indicated the decision on what
13 the reserve margin should be for the winter should be
14 deferred pending further collaboration with parties
15 and reviewed in the next IRP case.

16 Q. And I think in the spirit of the document
17 speaks for itself and it sounds like it is in the
18 record. If not, it's publicly available. If Georgia
19 Public Service Commission said that the winter reserve
20 margin could be used for planning purposes for Georgia,
21 you wouldn't quibble with what the commission said?

22 A. I understand the part of what you're
23 saying. I think what the commission was saying -- and

1 I can't read their thoughts. I can't read their minds
2 but what I think the intent of the order was, that the
3 parties agree that the seasonal planning was
4 appropriate and that the winter was an appropriate
5 period to do planning for.

6 Q. And I guess lastly just for clarity,
7 Georgia Power is a summer peaking utility, correct?

8 A. Yes.

9 MR. GROVER: Great. Thank you, Mr.
10 Pollock.

11 ALJ GARNER: Redirect?

12 MR. HILL: No other cross?

13 ALJ GARNER: They had their chance.

14 REDIRECT EXAMINATION

15 BY MR. HILL:

16 Q. Okay. Just a couple of questions as a
17 redirect. The Sierra Club asked you about the five
18 solar panel capacity versus Barry 8. Do you have an
19 opinion about capacity issues when it comes to solar
20 versus Barry 8?

21 A. I do have some issues with respect to
22 that. As I understand it, in order for the batteries
23 to qualify for tax credits, they have to be recharged

1 by the solar facilities themselves, which means that
2 if we have a long string of overcast days and those
3 batteries aren't able to be recharged and the weather
4 gets cold, it's not clear to me that those batteries
5 would be around to provide the capacity need.

6 Q. Okay. There was also discussion with you
7 and the Sierra Club about what you marked as Exhibit
8 JP-4, 2018 long-term reliability assessment?

9 A. Yes.

10 Q. And with regard to the 26 percent number,
11 are there any other conclusions that you can reach,
12 particularly from the graph that's provided on page two,
13 that would be relevant to our hearing here today?

14 A. Well, again as I indicated, this gives
15 an idea -- it's called a 2022 reference margin level.
16 That's what the -- basically you look at page 3 of 3.
17 That's what each system is planning toward, and as
18 indicated, the highest is 20 percent. The range is
19 anywhere from 12 percent to 20 percent and so none of
20 them -- none of the planning regions identified here,
21 assessment areas plan for more than a 20 percent
22 reserve margin. Most are in the teens.

23 Q. I'm sorry. And what is Alabama Power

1 proposing to do here?

2 A. Their proposal is a 26 percent target
3 reserve margin in the winter months and that's for
4 Southern Company. It's not just -- Alabama Power is
5 part of Southern Company so it's a Southern Company
6 target reserve margin.

7 Q. Okay. Mr. Grover asked you about your
8 goals about having reliable and cost effective
9 generation and that was your testimony. You also talked
10 about how you testified at numerous other places. For
11 instance, on page 37 of your testimony, you list
12 numerous, numerous pages. Do you always testify against
13 reliability and capacity in these proceedings?

14 A. Well, when I testify in resource
15 planning cases, we do a complete assessment of the
16 need for the resource and the economics.

17 Q. What I'm saying though is sometimes or
18 many times, if not most times, you're advocating the
19 utility to have more reliability or capacity. Is that
20 fair?

21 A. Well, if the utility's demonstrating a
22 particular need, then they should be adding capacity
23 but there are instances even when a utility is

1 advocating a particular need where the selection of
2 resource is not the lowest reasonable cost.

3 MS. CSANK: Your Honor, I was just
4 fumbling with the microphone. May I just note for the
5 record I object to that last question, Sierra Club
6 does, because it was a leading question.

7 ALJ GARNER: I will allow it. Use some
8 caution with leading.

9 Q. All right. One more question along those
10 lines. Do you always -- have you always testified in
11 favor of a utility opening up a new facility like
12 Barry 8 or another similar facility?

13 MS. CSANK: Your Honor, same objection.

14 MR. HILL: It's a yes or no question.

15 ALJ GARNER: I'll allow it.

16 A. Yes, I've taken the position opposing
17 proposed new resources, both combined cycle gas
18 turbines as well as renewable.

19 Q. There was some talk about the SERVIM model
20 and also talk about PowerSouth. Do you have any
21 insights about how modeling can affect the numbers that
22 get generated?

23 A. Well, the only thing I can -- two

1 things I can observe about that. First of all, it
2 turns out TVA and Southern Company both use SERV. ~~VM~~.
3 And, secondly, there was a study done in 2018 that
4 SERC conducted that probably -- assessment of the
5 reliability needs of the different SERC regions.

6 Southern Company is in the SERC
7 southeast region and that study indicated that if the
8 southeast region of each of the -- in the southeast
9 region including Southern Company, PowerSouth and TVA,
10 all the ones that currently plan for a 25 percent
11 target reserve margin, at the conclusion of that study
12 said if individually each of the utilities were
13 planning just for their own needs that their reserve
14 margin could be 25 percent, but if the region as a
15 whole were to conduct integrated planning and we
16 looked at the region holistically rather than the
17 individual components of that region, the range of
18 reserve margins would be 13 to 20 percent.

19 Q. How is that relevant to the hearing we're
20 having here today?

21 A. I think it's a valid question as to
22 whether or not -- it goes to the question of whether
23 or not the company's proposed target reserve margin is

1 reasonable given the empirical evidence of the study I
2 just quoted and the experience of other systems and
3 other utilities.

4 MR. HILL: Thank you, Mr. Pollock. I
5 have no further questions.

6 ALJ GARNER: Thank you, Mr. Pollock.
7 You're excused. Mr. Pollock's prefiled testimony and
8 exhibits are admitted into the record.

9 THE WITNESS: Thank you, Your Honor.

10 ALJ GARNER: Glad you enjoyed yourself.

11 THE WITNESS: Always a pleasure.

12 MS. CSANK: Your Honor, Sierra Club
13 would request a brief break just to confer with the
14 witnesses and make sure that we have a clear
15 understanding of their travel constraints.

16 ALJ GARNER: I'll give you five
17 minutes.

18 (Brief recess.)

19 ALJ GARNER: We didn't have any
20 prefiled testimony on behalf of Energy Fairness.Org.
21 I see Mr. Cagle didn't have any prefiled testimony.

22 UNIDENTIFIED SPEAKER: No, sir, Your
23 Honor.

1 ALJ GARNER: Okay. Mr. Hooper did not
2 have any prefiled testimony either. Just confirming.

3 (Witness sworn.)

4 ALJ GARNER: All right. Ms. Csank.

5 RACHEL WILSON,
6 having been first duly sworn, was examined and testified
7 as follows:

8 DIRECT EXAMINATION

9 BY MS. CSANK:

10 Q. Would you please state your name for the
11 record?

12 A. My name is Rachel Wilson.

13 Q. And where are you employed?

14 A. I'm employed at Synapse Energy
15 Economics.

16 Q. Did you cause to be filed in this matter
17 testimony and exhibits?

18 A. Yes, I did.

19 Q. And do you have any errata to that
20 prefiled testimony?

21 A. I have two corrections to make to that
22 testimony. The first is at page 10, line 2. The word
23 different should actually read difference. And,

1 secondly, on page 26, line 9, it says units Barry 7
2 and 8. That should actually read units Barry 6
3 and 7.

4 Q. And subject to that errata if I were to
5 ask you the questions in your prefiled testimony, would
6 you answer the same?

7 A. Yes, I would.

8 MS. CSANK: Sierra Club would move Ms.
9 Wilson's prefiled testimony and exhibits into the
10 record.

11 ALJ GARNER: Ms. Wilson's prefiled
12 testimony and her exhibits will be entered subject to
13 cross-examination.

14 MS. CSANK: We tender the witness for
15 cross-examination.

16 ALJ GARNER: Does she have a summary?

17 MS. WILSON: I do have a summary, yes.
18 Good morning, Your Honor. Good morning, Commissioners.
19 Thank you for this opportunity to share my findings and
20 recommendations.

21 Based on my review of the testimony and
22 documents that Alabama Power has offered in support of
23 its petition, I find that the company has not shown that

1 its proposed expansion is needed or that it is the least
2 cost means to serve customers.

3 The proposed gas units are a mismatch for
4 Alabama Power's projected need because of peak demand
5 declines in the middle of the decade while the gas units
6 have useful lives of several decades. The company did
7 not investigate alternative resource portfolios and I
8 demonstrate that a mixture of DSM and renewables can
9 result in lower costs to repairs.

10 Alabama Power should do three things to
11 reduce its projected capacity deficit before seeking to
12 add these gas units to its system. First, it should
13 seek capacity from the other Southern Company operating
14 companies to the extent it can to meet its capacity need
15 through the middle of the decade.

16 Second, the company should conduct a new
17 DSM potential study and undertake all cost effective
18 DSM. Third, the company should also procure additional
19 renewable resources.

20 It is my recommendation that the proposed
21 gas unit should be rejected or at least deferred until
22 the results of these three actions are known.

23 If the commission does grant the

1 certificate to the proposed gas units rather than
2 deferring that decision, it should impose three
3 conditions on that approval to protect Alabama
4 customers.

5 First, the company shareholders rather
6 than its customers should bear the cost of the proposed
7 gas units if they were to become stranded assets.
8 Second, the proposed gas units should be required to
9 operate under enforceable annual declining greenhouse
10 gas emissions limits and, third, Alabama Power should
11 submit a retirement replacement study for the vulnerable
12 (audience coughing) units on its own system. Thank you.

13 ALJ GARNER: Thank you.

14 MS. CSANK: We now tender the witness for
15 cross-examination.

16 ALJ GARNER: All right.
17 Cross-examination from the intervenor's side? Seeing
18 none, looks like it's you, Mr. McCrary.

19 MR. MCCRARY: Thank you, Your Honor.

20 CROSS-EXAMINATION

21 BY MR. MCCRARY:

22 Q. Good morning, Ms. Wilson.

23 A. Good morning.

1 Q. Nice to see you again.

2 A. Nice to see you as well.

3 Q. Just a few preliminary matters. You are
4 a paid consultant in this case, are you not?

5 A. Yes, I am.

6 Q. Working with Synapse out of Cambridge,
7 Massachusetts?

8 A. That's correct.

9 Q. You are not an employee of Sierra Club?

10 A. I am not.

11 Q. But in looking over your resume, it
12 appears that you do a lot of work for that organization?

13 A. I have worked for Sierra Club in the
14 past; however, all of my work involves least cost
15 resource planning.

16 Q. When I took your deposition at the end of
17 February, in talking about Sierra Club, we kind of got
18 off to a rocky start. We couldn't seem to agree that
19 Sierra Club was an environmental organization. Do you
20 recall that exchange?

21 A. I do recall that exchange.

22 Q. And on reflection, can we now agree that
23 Sierra Club is an environmental organization?

1 A. I'm not sure that their operations are
2 limited to environmental matters but I think it would
3 be fair to say that they do perform a certain number
4 of -- a certain amount of work related to the
5 environment, yes.

6 MR. MCCRARY: Approach the witness,
7 Your Honor?

8 ALJ GARNER: You may.

9 Q. And just for the avoidance of doubt on
10 that, in anticipation that you might not --

11 MR. MCCRARY: Your Honor, I don't
12 anticipate marking this as an exhibit.

13 Q. -- we might not reach total agreement, I
14 have handed you a printout from the Sierra Club
15 Strategic Plan adopted May 2015. Do you see that?

16 A. I do.

17 Q. And there's a mission statement for
18 Sierra Club on page two, is there not?

19 A. Yes, there is.

20 Q. And it says the purposes of the Sierra
21 Club are to explore, enjoy, and protect the wild places
22 of the earth, to practice and promote the responsible
23 use of the earth's ecosystems and resources, to educate

1 and enlist humanity to protect and restore the quality
2 of the natural and human environment, and to use all
3 lawful means to carry out these objectives. Did I read
4 that correctly?

5 A. Yes.

6 Q. That sounds like the mission statement of
7 an environmental organization, does it not?

8 A. Yes, it does, and there may be other
9 things that Sierra Club does that are not reflected in
10 this mission statement. Also I'll just point out
11 again that my work in this docket is related to least
12 cost resource planning.

13 Q. Would you expect if there were other
14 important objectives of an organization it might appear
15 in their mission statement?

16 A. I don't think I said that those aren't
17 important. I said there may be other things that they
18 do.

19 Q. Okay. Now again reflecting on your
20 experience in looking at your Exhibit 1, that's your CV,
21 is it not?

22 A. That's correct.

23 Q. In part of that CV, you have listed all

1 the instances in which you have testified, correct,
2 starting on page five?

3 A. That's true as of the date of the
4 resume which is October 2019.

5 Q. So it doesn't include this proceeding?

6 A. It does not. And there was an
7 additional proceeding in the state of North Carolina
8 on which I testified on behalf of a solar developer.

9 Q. Okay. So looking at your pages five and
10 six of your Exhibit 1 and adding this proceeding to that
11 list, correct me if I'm wrong, but in all the instances
12 in which you've testified since 2011, it appears that
13 twelve of those have been for Sierra Club?

14 A. Without counting, I'll accept that
15 number, yeah.

16 Q. And two others have been for -- two other
17 instances have been for other environmental groups?

18 A. Yes.

19 Q. And then one for something called the
20 Public Council Unit. I don't even know what that is but
21 we'll spot you that's not an environmental group, okay?

22 A. It is not. That's the Washington
23 Attorney General.

1 Q. So 14 out of 15 of the instances in which
2 you've testified shown here including this case
3 represent testimony on behalf of environmental groups,
4 right?

5 A. That's correct.

6 Q. That would be a 93 percent appearance
7 rate?

8 A. I'll accept that number.

9 Q. Be careful accepting lawyer math. Now in
10 your opening summary, I think you indicated that Alabama
11 Power in your view had not demonstrated the expansion of
12 its resources was needed, correct?

13 A. That a portion at least of those
14 natural gas units that are proposed in this docket may
15 not be needed, yes.

16 Q. But your testimony -- you offer no
17 testimony, do you, on the reliability reserve
18 requirement?

19 A. I don't offer testimony on that, no,
20 and my testimony doesn't suggest that Alabama Power
21 should do no procurement, just that it should either
22 delay or eliminate certain of these proposed gas units
23 in favor of other resources that do have the capacity

1 value associated with them.

2 Q. Right. But looking at page seven of your
3 testimony, lines five through ten, you refer to the
4 reserve margin study, the 2018 reserve margin study and
5 you say my analysis does not delve into the details of
6 this new methodology and accepts without affirming the
7 company's calculations. That's your testimony, right?

8 A. That's correct.

9 Q. So you have not done a reserve margin
10 analysis, have you?

11 A. I have not looked at the reserve
12 margin.

13 Q. Now turning to page eight of your
14 testimony and caring over to page nine, there you
15 suggest that Alabama Power can rely on capacity at other
16 retail operating companies to meet its need. Is that
17 the upshot of that testimony?

18 A. My testimony states that Alabama Power
19 asserts that it can't rely on the capacity of other
20 operating companies but that I haven't seen evidence
21 that it can't rely on that capacity for at least a
22 portion of its projected capacity deficit.

23 Q. Now when you think of relying on that

1 capacity, are you referring to the Intercompany
2 Interchange Contract?

3 A. Yes.

4 Q. Now when I took your deposition at the
5 end of February, you indicated that you weren't
6 referring to the Intercompany Interchange Contract.
7 Isn't that what you said?

8 A. I recall having a discussion of the
9 contract and we discussed that any capacity acquired
10 from the other Southern Company operating companies
11 would have to be acquired via that contract and that
12 Alabama Power would be purchasing that capacity from
13 its sister companies.

14 Q. All right. Be that as it may, at the
15 time we -- at the time we met to take your deposition,
16 you had not read the Intercompany Interchange Contract,
17 correct?

18 A. That's correct. I had not read it.

19 Q. Right. And so since we had that
20 discussion and you couldn't answer any questions about
21 it, have you since read the Intercompany Interchange
22 Contract?

23 A. I have not read it in its entirety, no.

1 Q. Did you read the portions of the
2 Intercompany Interchange Contract that were quoted in
3 Mr. Kelley's testimony?

4 A. Could you point me to that testimony?

5 Q. You were responding to Mr. Kelley's
6 testimony here. It's footnoted on pages eight and nine
7 of your testimony.

8 A. That's correct. And my assertions in
9 my testimony are based on the testimony of Mr. Kelley
10 and the statements that he makes around capacity that
11 may or may not be available from the other operating
12 companies. And I don't have his testimony in front of
13 me so I'm happy to look at portions if you have a
14 copy.

15 Q. Are you aware that the Intercompany
16 Interchange Contract was included among Mr. Kelley's
17 rebuttal exhibits?

18 A. I didn't recall that.

19 Q. Did you read Mr. Kelley's rebuttal
20 testimony?

21 A. I did read it, yes.

22 Q. Did you read Mr. Bush's rebuttal
23 testimony?

1 A. Yes, I did.

2 MR. MCCRARY: And, Your Honor, I don't
3 have a copy of this but it's in the record. It's
4 Mr. Kelley's Exhibit 2.

5 Q. Let me just read this to you, Ms. Wilson,
6 and see if you recall looking at this in connection with
7 your testimony. Section 7.1 of the IIC says provision
8 for sharing of temporary surplus or deficits of capacity
9 between operating companies. And the first sentence
10 says, it is a fundamental premise of this IIC that each
11 operating company is expected to have adequate resources
12 to reliably serve its own obligations. Do you recall
13 that sentence?

14 A. I do, yes, and one of those resources
15 could include capacity purchases.

16 Q. Capacity purchases pursuant to the IIC?

17 A. Capacity purchases in general whether
18 from the other Southern Company operating companies or
19 another company or merchant power generator operating
20 in the market.

21 Q. But you're not suggesting -- because a
22 moment ago, you said that one of the resources that
23 Alabama Power could rely on to serve its customers could

1 be capacity purchased under the IIC but that's not
2 permitted. That would be circular. The company can't
3 acquire capacity pursuant to the IIC to meet its
4 obligations under the IIC, could it?

5 MS. CSANK: Your Honor, objection. She
6 stated that she's not a lawyer and I believe Mr. McCrary
7 is seeking a legal conclusion.

8 ALJ GARNER: I'll allow it.

9 A. I'm sorry. Could you restate that?

10 Q. The Intercompany Interchange Contract
11 itself could not provide a mechanism for fulfilling
12 Alabama Power's obligations under the Intercompany
13 Interchange Contract. That would be circular, would it
14 not?

15 A. I don't know how exactly Alabama Power
16 would go about procuring capacity under the IIC. My
17 testimony states that Alabama Power does seem to rely
18 on capacity from the other Southern Company sister
19 companies in the early years and stops relying on that
20 capacity in the year in which it constructs Barry 8.
21 I have not seen any evidence that Alabama Power could
22 not continue to rely on that capacity for at least
23 another year.

1 Q. This same section of the IIC goes on to
2 state, nevertheless the operating companies recognize
3 that in any given year one or more of them may have a
4 temporary surplus or deficit of capacity as a result of
5 coordinated planning or by virtue of load uncertainty,
6 unit availability or other circumstances. It is among
7 the purposes of this IIC to share among the operating
8 companies the benefits and burdens of their coordinated
9 system operations including the costs associated with
10 such capacity. Do you see that?

11 A. I don't see that but I hear that.

12 Q. You heard that.

13 A. Yes.

14 Q. And that's your understanding of the
15 sharing of capacity under the IIC?

16 A. Again I'll just restate that I'm not
17 familiar with the IIC and I don't offer any opinions
18 on that in my testimony.

19 Q. Do you know whether capacity accessed by
20 one company under the eyes -- withdraw that. When
21 capacity is it put in the pool -- you know the IIC is
22 sometimes referred to as the pool?

23 A. I do, yes.

1 Q. Do the retail operating companies retain
2 ownership of their capacity when it's committed to the
3 pool?

4 A. I don't know how exactly that functions
5 but I would assume so.

6 Q. And so the pool simply optimizes those
7 resources and dispatches them against aggregate load in
8 order to lower total production costs for all. Isn't
9 that the function of the IIC?

10 A. That's my understanding of how the pool
11 operates.

12 Q. It's an operating agreement, is it not?

13 A. Again I'll just say that I'm not
14 familiar with the IIC and can't say for certain that
15 that's true but I'll accept it, yes.

16 ALJ GARNER: For purposes of
17 clarification, that's Alabama Power Exhibit 30.

18 MR. MCCRARY: Thank you, Your Honor.

19 ALJ GARNER: IIC.

20 Q. So for purposes of my question, let's
21 assume that, as you suggest, Alabama Power would need to
22 approach one of the sister companies through some other
23 mechanism besides the IIC if it wanted to acquire

1 capacity from those companies?

2 A. I don't think I said that and I'll just
3 say again I don't know how Alabama Power would go
4 about procuring that capacity but it has relied on
5 other opcos in the past and I have not seen any
6 evidence that it has checked to see whether or not it
7 could acquire capacity in this year of great need
8 which is the winter of 2023-2024.

9 Q. How has Alabama Power relied on capacity
10 of other operating companies in the past other than
11 through the operation of the IIC?

12 A. I don't know the answer to that.

13 Q. Would you agree with me, Ms. Wilson, that
14 assuming other operating companies had capacity that
15 they wished to sell to Alabama Power, they would sell
16 whatever was assessed by the owning company to have the
17 least value to its own customers? Would you agree with
18 that?

19 A. I think that any excess capacity that
20 it would have available to sell is capacity that it,
21 itself, does not need and so it is certainly a
22 possibility that that would be more expensive
23 capacity, yes.

1 Q. I mean one retail company that's
2 obligated to serve customers in a cost effective manner
3 is not going to sell its best capacity to someone else,
4 is it?

5 A. That's correct. And I'll also point
6 out that the cost of existing capacity can still be
7 lower than the cost of building new capacity,
8 particularly if a purchase is short term in nature.

9 Q. Do you have any experience operating
10 power plants?

11 A. No.

12 Q. Do you have any experience in the
13 wholesale marketplace selling capacity?

14 A. No.

15 Q. Do you know what a super critical unit
16 is?

17 A. I'm generally familiar with that term,
18 yes.

19 Q. What does that term refer to?

20 A. To me, a super critical unit is a
21 coal-fired unit that operates at higher efficiencies
22 than other types of coal-fired units.

23 Q. You have testified in proceedings

1 involving the other affiliated retail operating
2 companies, have you not?

3 A. That's correct.

4 Q. And one of those proceedings was in
5 Mississippi?

6 A. Yes.

7 Q. And that was a proceeding involving the
8 Daniel plant?

9 A. That's correct.

10 Q. It's a two unit facility?

11 A. Yes.

12 Q. Do you recall how many megawatts in the
13 Daniel units?

14 A. Not offhand, no.

15 Q. But that would be among the capacity
16 that's held by another retail operating company,
17 correct?

18 A. Yes.

19 Q. Now your testimony there had to do with
20 whether or not environmental investment should be made
21 to enable Daniel to be in compliance with the CCR water
22 rule, correct?

23 A. CCR and ELG rules around water, yes.

1 Q. Right. And what was your position in
2 that proceeding?

3 A. My position was that the Daniel plant
4 had been operating uneconomically for three historical
5 years that we analyzed and projections using
6 Mississippi Power's own data show that Daniel was
7 forecast to be continuing to operate uneconomically in
8 the future.

9 Q. So you opposed the expenditure --
10 withdraw that. You opposed the making of investment to
11 allow Daniel to continue to operate in compliance with
12 environmental rules?

13 A. Data showed that continued operation of
14 plant Daniel and the capital investment necessary to
15 ensure that continued operation was uneconomic for
16 Mississippi ratepayers and Mississippi Power's own
17 analysis confirmed that.

18 Q. You opposed the making of the investment
19 that would allow Daniel to continue to operate?

20 A. That's correct on the grounds that
21 retirement was a least cost alternative for
22 ratepayers.

23 Q. So you also testified in the Georgia IRP

1 proceeding, did you not?

2 A. That's correct.

3 Q. The last one, 2019?

4 A. Yes.

5 Q. And in that proceeding, you offered
6 testimony regarding Bowen units 1 and 2, did you not?

7 A. That's correct.

8 Q. And your recommendation in that
9 proceeding was that the Bowen units be retired, correct?

10 A. My analysis showed that it was more
11 economic again on a net present value basis examining
12 Georgia Power's portfolio of resources to retire Bowen
13 units 1 and 2, yes.

14 Q. So your recommendation -- just to answer
15 the question, your recommendation was that Bowen units 1
16 and 2 should be retired?

17 A. I think my recommendation in that case
18 was two parts. One was that, yes, the plant should be
19 retired, and in the absence of Georgia Power
20 committing to retire those units, capital spending
21 limits should be placed on Bowen units 1 and 2.

22 Q. And the commission -- what year did you
23 recommend Bowen retirement?

1 A. I can't recall offhand. I think we
2 examined retirement in the year 2022 but that's
3 subject to check.

4 Q. All right. Did the Georgia commission
5 accept the recommendation that capital spending be
6 limited with respect to the Bowen units?

7 A. The stipulation does place capital
8 spending limits on Bowen 1 and 2, yes.

9 Q. Is that the same kind of capital spending
10 limits that the Georgia commission imposed in the prior
11 IRP proceeding directed to the Hammond and -- what was
12 the other units?

13 A. I believe it was McDonough.

14 Q. Right.

15 A. Yes. Similar, yes.

16 Q. Right. And in the next term of the
17 Georgia IRP, what was the fate of the Hammond and
18 McDonough units?

19 A. Georgia Power requested
20 de-certification for those units.

21 Q. Those units were retired?

22 A. That's correct.

23 Q. Would that series of events cause you

1 to -- withdraw that. Does that series of events suggest
2 to you that there is a possibility if not a probability
3 that the Bowen units might be retired in the next turn
4 of the Georgia IRP in 2022?

5 A. Yes, there is a possibility or
6 probability.

7 Q. How many megawatts are Bowen 1 and 2?

8 A. I can't recall offhand.

9 Q. Is it more than a thousand? Do you
10 remember that?

11 A. I don't. I believe so but I'm not
12 certain.

13 Q. So when you say that Alabama Power should
14 look to sister companies to buy so-called excess
15 capacity, the Daniel units would be those kinds of
16 units, that kind of capacity?

17 A. The capacity that's on the systems of
18 the sister operating companies.

19 Q. All right. The same Daniel capacity you
20 recommended be retired?

21 A. Not Daniel specifically. Just capacity
22 in general on those systems.

23 Q. All right. And the Bowen units, that's

1 the same kind of capacity that you think might be
2 available to purchase?

3 A. Bowen and Daniel make up a portion of
4 the operating company's capacity but they are
5 certainly not the entirety of that capacity.

6 Q. And somewhere in your testimony, I think
7 you also suggest that perhaps units could be used for
8 seasonal operation. You suggest that, do you not?

9 A. I say that other jurisdictions have
10 switched operation of their coal units to seasonal
11 operation and that that could be a possibility for the
12 Southern Company opcos.

13 Q. Well, we've already established you have
14 no experience operating plants, correct?

15 A. That's correct.

16 Q. Have you done any study or analysis
17 regarding the feasibility of operating a super critical
18 coal unit in a seasonal manner?

19 A. I have not done such analysis, no.

20 Q. And I think you said in response to a
21 data request that you were aware of some instances where
22 other jurisdictions have done that?

23 A. That's correct.

1 Q. All right. One of those was Dolet Hills.
2 Is that one of them?

3 A. Yes.

4 Q. Dolet Hills is a SWEPCO unit. Is that
5 right?

6 A. That's correct.

7 Q. Co-owned by Cleco and SWEPCO?

8 A. Yes.

9 Q. And do you know whether it continues to
10 function as a so-called seasonal capacity unit?

11 A. As of what date?

12 Q. As of now.

13 A. My understanding is that it does
14 continue to function that way; however, in the recent
15 rate case in Arkansas, part of the settlement that
16 resulted from that case was that SWEPCO committed to
17 retirement of Dolet Hills. I think that date was 2026
18 but that's subject to check.

19 Q. Let me hand you this document and see if
20 that reflects the same Dolet Hills unit that we've been
21 talking about.

22 ALJ GARNER: You want this one marked I
23 take it?

1 MR. MCCRARY: Yes.

2 ALJ GARNER: Marked as Alabama Power
3 Exhibit 41.

4 Q. Is this article referring to the Dolet
5 Hills coal plant that you were referring to?

6 A. It's the same unit, yes.

7 Q. So you point to Dolet Hills as an example
8 of seasonal capacity and yet Dolet Hills is being closed
9 pursuant to a settlement agreement with Sierra Club, is
10 it not?

11 A. That's correct. And again I don't see
12 the retirement date listed in this article but I
13 believe that it's 2026.

14 Q. Now, Ms. Wilson, in your testimony, you
15 offer a calculation of CO2 emissions from the three
16 gas-fired resources that are in the proposed portfolio,
17 do you not?

18 A. That's correct.

19 Q. That's on page 26 of your testimony?

20 A. 26 and 27, yes.

21 Q. All right. And you're calculating the
22 CO2 output of those units over a number of years, are
23 you not?

1 A. Correct. Their useful lives.

2 Q. Is that a calculation of the gross CO₂
3 output? In other words, it's the output of those units
4 alone?

5 A. Yes. That's correct.

6 Q. Are you aware that these resources, if
7 approved and dispatched in the system, could very well
8 displace other generating resources?

9 A. That's a possibility, yes, but that
10 depends on what the annual energy requirement is and
11 whether or not the generation from these units is in
12 fact displacing other resources or is going to meet
13 increasing energy demands.

14 Q. Did you do any sort of analysis to
15 consider the net CO₂ impacts of these units when you did
16 your calculation or did you just offer a gross
17 calculation?

18 A. I offered a gross calculation. To do
19 that sort of analysis requires the use of production
20 cost or system dispatch model, which I did not do in
21 this analysis.

22 Q. You think it would be fair -- if one were
23 to talk about the CO₂ effects of these units, do you

1 think it's fair to include the net effect as opposed to
2 just the gross effect?

3 A. It's a possibility, yes, and I'll add
4 that we had spoken about the Southern Company pool
5 doing least cost dispatch around its entire system,
6 and if that were the case, these units could be going
7 to meet demand that is coming from other Southern
8 Company opcos so it's not a simple calculation.

9 Q. But you will agree with me that if units
10 are being displaced and dispatched through these
11 facilities, then those units wouldn't be emitting CO2,
12 correct?

13 A. If those -- yes. That's correct.

14 Q. And if that were in fact the case --

15 A. Well, let me clarify. Those units
16 would be emitting CO2 to the level that they are
17 generating but they would be emitting less CO2 if they
18 were generating less.

19 Q. And it would be fair -- if you're trying
20 to offer this calculation for whatever reason, the net
21 would be a more fair representation than the gross?

22 A. It would be another representation
23 certainly.

1 Q. Now it's true, is it not, that the units
2 that are in the portfolio are already subject to
3 emission regulations directed to, among other things,
4 CO2?

5 A. I'm sorry. Could you say that again?

6 Q. Yes. Are the units that are involved in
7 the proposed portfolio, are they not already subject to
8 existing emissions regulations including CO2 emissions?

9 MS. CSANK: Your Honor, I'll launch an
10 objection to the extent that this question is seeking a
11 legal conclusion.

12 ALJ GARNER: Well, we've established
13 she's not a lawyer so I will allow -- if she has an
14 answer, she can give it.

15 A. We're talking about the gas units?

16 Q. Yes.

17 A. I can't say for certain. I'm generally
18 aware of certain rules that govern CO2 emissions in
19 the past but I'm not sure of the status of those rules
20 today.

21 Q. You're not familiar with air permits that
22 include limits on, among other things, CO2 emissions?

23 A. I don't know if these units have such

1 permits that limit CO2 emissions.

2 Q. So that maybe we will have a baseline to
3 talk from here, Ms. Wilson, I'm going to hand you what's
4 labeled table 2 of subpart triple and quadruple T part
5 60 of CO2 emission standards for affected stationary
6 combustion turbines. Do you see that?

7 A. I do.

8 ALJ GARNER: Do you want this document
9 marked, Mr. McCrary?

10 MR. MCCRARY: Yes, sir.

11 ALJ GARNER: Alabama Power Exhibit 42.

12 Q. You see under in the first column there,
13 effective EGU, it talks about newly constructed
14 combustion turbines?

15 A. I do see that.

16 Q. Right. You see the CO2 emission
17 standards?

18 A. I do.

19 Q. And it's a thousand -- it must meet a
20 thousand pounds of CO2 per megawatt hour limit?

21 A. That's correct. This is a standard
22 governing the weight of CO2 output.

23 Q. Do you know who ADEM is? A-D-E-M.

1 A. I'm not aware of that acronym.

2 Q. The Alabama Department of Environmental
3 Management?

4 A. Okay. Thank you. Sure.

5 Q. Is that entity responsible for issuing
6 air permits among other things?

7 A. I don't know that. I'll note that
8 these are standards for a combustion turbine and we're
9 examining combined cycle units in this docket.

10 Q. Is not a combined cycle a combination of
11 a combustion turbine and a steam generator?

12 A. It is, yes.

13 Q. So if Barry 8 is to be built and
14 operated, it would have to comply with existing
15 regulations such as this, would it not?

16 A. I don't know the answer to that.

17 Q. We can agree, can we not, that CO2
18 emissions are already regulated through regulation such
19 as this?

20 A. Generally, sure, we can agree to that,
21 but again I don't know how these rules apply
22 specifically as I'm not familiar with them.

23 Q. In your testimony, you also calculate a

1 so-called social cost of carbon, do you not?

2 A. That's correct.

3 Q. And that's on page 29 and 30 of your
4 testimony?

5 A. Yes.

6 Q. And your calculation there is based on
7 the work of an interagency working group and I think you
8 included their report among your exhibits?

9 A. I did, yes.

10 Q. Now in your testimony, we -- I mean your
11 deposition, we talked about this. The interagency
12 working group that you're referring to has been
13 disbanded, has it not?

14 A. That's correct.

15 Q. Do you know by what means it was
16 disbanded?

17 A. Not specifically but it was a working
18 group under President Obama's administration and it
19 may have been disbanded as a result of the change in
20 administration.

21 Q. All right.

22 ALJ GARNER: We will mark the document
23 that's just been handed to me -- the title is

1 Presidential Document -- as Alabama Power Exhibit 43.

2 Q. Ms. Wilson, what I've handed you is
3 Executive Order 13783 as of March 28, 2017. Do you see
4 that?

5 A. Yes, I do.

6 Q. And if we look over on the page, what's
7 marked as page 16095 in the federal register, three
8 pages over in this document -- you see section five?

9 A. I do.

10 Q. And in subpart B there, it says
11 interagency working group on social cost of greenhouse
12 gases which was convened by the Counsel of Economic
13 Advisors and O&B director shall be disbanded and the
14 following documents issued by the IWG shall be withdrawn
15 as no longer representative of governmental policy. Do
16 you see that?

17 A. Yes, I do.

18 Q. Is that the working group that we've been
19 talking about?

20 A. That's correct.

21 Q. And if I look over to subpart Roman
22 numeral VI at the top of the next page, technical update
23 of the social cost of carbon for regulatory impact

1 analysis August 2016, do you see that?

2 A. I do.

3 Q. Is that not the same document that you
4 attached to your testimony?

5 A. It is, yes.

6 Q. So when did you become aware that the
7 working group had been disbanded and this document no
8 longer reflected government policy?

9 A. I don't know specifically. I did know
10 that the working group had been disbanded when I wrote
11 this testimony and attached this document if that's
12 your question. And I'll say that governmental policy
13 changes from administration to administration and this
14 is one estimate of the social cost of carbon. There
15 have been others and will continue to be others in the
16 future.

17 Q. So at the time that you presented this
18 calculation in your testimony to this commission, you
19 did so knowing that the document -- that the working
20 group you were citing and the cost that you were relying
21 on had been withdrawn and no longer representative of
22 federal government policy?

23 A. That's correct. They were no longer

1 federal government policy but they -- the results and
2 the estimates of the social cost of carbon still serve
3 a number of studies done on the climate damages
4 associated with global emissions and I chose to use
5 those studies as one representation of the social cost
6 of carbon here.

7 Q. Now I asked you in your deposition if you
8 were aware of any other measures that had been put in
9 place by the government to replace that that had been
10 withdrawn here by this working group. Do you recall
11 that?

12 A. I do. And I wasn't aware of any at the
13 time but I have since become aware that the current
14 administration does have such an estimate, though I
15 cannot recall those numbers offhand.

16 MR. MCCRARY: Judge, I'll have to give
17 you one in just a moment. I'm one copy short.

18 Q. Now, Ms. Wilson, what I've handed you --
19 and perhaps this will refresh your recollection -- are
20 excerpts from the regulatory impact analysis for the
21 repeal of the Clean Power Plan. Do you see that issued
22 by the Environmental Protection Agency?

23 A. I do.

1 Q. And this is dated June of 2019?

2 A. Yes.

3 Q. And I included the table of contents but
4 then I move over to chapter 4 which is estimated climate
5 benefits and human health co-benefits. Do you see that?

6 A. I do.

7 Q. And if you look over on page 4-3 of that
8 document, the paragraph there, it says Table 4-1
9 presents the average domestic CO2 estimate across all
10 the integrated assessment model runs used to estimate
11 CO2 for each discount rate for the years 2015 to 2050.
12 Do you see that?

13 A. Yes.

14 Q. And if we turn over to the next page to
15 Table 4.1, does that refresh your recollection as to
16 some revised estimates as to the social cost of carbon
17 by the federal government?

18 A. It does, yes.

19 Q. And correct me if I'm wrong but does not
20 the cost estimate for the domestic social cost of CO2
21 range from one dollar to six dollars in 2015?

22 A. Yes, under two different discount
23 rates.

1 Q. Right. And as of 2050, it ranges from
2 two dollars to eleven dollars again over two different
3 discount rates?

4 A. That's correct.

5 Q. Would it be fair to say, Ms. Wilson, that
6 if your calculation was done using these updated values
7 as opposed to the ones from the disbanded interagency
8 working group, you would have gotten a considerably
9 smaller number through your calculation?

10 A. It would be lower, yes.

11 Q. Do you recall what kind of dollar values
12 you were using in your calculation?

13 A. So I state on page 30 of my testimony,
14 lines 3 through 5, climate damages were calculated
15 using the interagency working group's mid value for
16 the social cost of carbon of fifty-two dollars per ton
17 in 2020 that rises to eighty-five dollars per ton in
18 2050 at a discount rate of three percent.

19 Q. Okay. So that would then -- fifty-two
20 dollars a ton in 2020 under the three percent discount,
21 on this chart, that would be seven dollars. Is that
22 right?

23 A. That's correct.

1 Q. And then rising to eighty-five dollars a
2 ton in 2050 on this chart would be eleven dollars?

3 A. That's correct.

4 Q. So let me ask my question again. If one
5 were to use these updated values to do the calculation
6 in your testimony, you would get a significantly smaller
7 number, would you not?

8 A. I think I said that that number would
9 be lower, yes.

10 Q. You said it would be different and lower.
11 It would be significantly lower based on this comparison
12 that we just looked at?

13 A. Significant has a scientific
14 designation behind it, and so I cannot -- as I sit
15 here today, I cannot calculate if that number is
16 statistically significantly different but it is
17 different.

18 ALJ GARNER: Still owe me the copy of
19 44.

20 MR. MCCRARY: Thank you, Judge.

21 ALJ GARNER: This will be marked at
22 Alabama Power Exhibit 45.

23 Q. Ms. Wilson, on page 19 of your testimony,

1 you refer to an exhibit RW-7 which is a document from
2 the Union of Concerned Scientists, correct?

3 A. Yes.

4 Q. The Union of Concerned Scientists is an
5 environmentalist organization, is it not?

6 A. I'm familiar with the Union of
7 Concerned Scientists's actions around climate change.
8 I'm not familiar with other things that they do. If
9 you have a mission statement to show me, I'll be happy
10 to take a look.

11 ALJ GARNER: While you're looking at
12 that, Mr. McCrary, you just handed me 44 so there is
13 no 45. I thought you were handing me another
14 document.

15 MR. MCCRARY: I'm sorry, Judge. Off
16 the record for a moment.

17 (Off-the-record discussion.)

18 Q. I don't have to -- I don't have to go to
19 the website to find the mission statement. If you look
20 on the last page of your own exhibit, Ms. Wilson -- are
21 you there with me?

22 A. Yes.

23 Q. There we go. And down at the bottom, you

1 see where it says Union of Concerned Scientists and it
2 says the Union of Concerned Scientists puts rigorous
3 independent science to work to solve our planet's most
4 pressing problems.

5 Joining with citizens across the country,
6 we combine technical analysis and effective advocacy to
7 create innovative practical solutions for a healthy,
8 safe and sustainable future. Do you see that?

9 A. I do. And I'll say that I believe,
10 subject to check, that the Union of Concerned
11 Scientists also does work relating to human health
12 which I don't -- can be an environmental concern but I
13 don't think it is exclusively an environmental
14 concern.

15 Q. As it relates to this document, this is
16 an environmental-oriented document, is it not?

17 A. This is, yes.

18 Q. Okay. Now have you independently
19 verified the analysis set forth or summarized in this
20 document?

21 A. I'm sorry. Can you ask that again?

22 Q. Sure. Have you independently verified
23 the analysis that purports to be set forth in this

1 document?

2 A. No, I haven't.

3 Q. You haven't looked at the methodology or
4 data or anything else it purports to present?

5 A. I've read the document. I haven't
6 attempted to recreate the analysis or do anything else
7 that would be a verification.

8 Q. All right. And similarly you have
9 another exhibit, RW-5. This is a document issued by a
10 group called Ceres?

11 A. That's correct.

12 Q. And Ceres is another environmentalist
13 organization, is it not?

14 A. Environmentalist or environmental?

15 Q. Either. Environmental.

16 A. Mostly environmental problems, yes, but
17 its members, I believe, are primarily investors.

18 Q. Okay. So on the second page of that
19 document where it says about Ceres --

20 A. Yep.

21 Q. -- Ceres is a nonprofit organization
22 mobilizing business and investor leadership on climate
23 change, water scarcity, and sustainability challenges.

1 A. That's in line with my answer to your
2 previous question, yes.

3 Q. So this is an environmental organization?

4 A. It tackles environmental problems, yes.

5 Q. And as with the document from the Union
6 of Concerned Scientists, would it be fair to say that
7 you have not independently verified any of the analysis,
8 methodology or data that purports to be set forth in
9 this document?

10 A. I haven't attempted to replicate the
11 analysis for verification purposes.

12 Q. You've just simply read it, correct?

13 A. Correct.

14 Q. Now on page 15 of your rebuttal -- I'm
15 sorry -- of your testimony, you suggest that Alabama
16 Power needs to get some wind resources from neighbors in
17 SPP or MISO. You say that, do you not?

18 A. I say that the procurement should
19 include PPAs for those resources. If they are found
20 to be cost effective, then I would say that the
21 company should obtain those resources, yes.

22 Q. Do you know whether Alabama Power
23 currently has any such resources?

1 A. Not to my knowledge.

2 Q. So you don't know about Alabama Power's
3 PPA with the Buffalo Dunes Wind Project in Kansas?

4 A. I'm not familiar with that project but
5 I'll accept that it has such a project.

6 Q. And similarly you're not familiar with
7 Alabama Power's PPA with the Chisholm View Wind Project
8 in Oklahoma?

9 A. No.

10 Q. And since you're not familiar with those
11 contracts, I assume you're not aware of Alabama Power's
12 experience with high transmission costs and high
13 congestion charges that are required in order to go
14 across the SPP RTO system and the MISO RTO system?

15 A. I'm not familiar with those, no. That
16 being said, Alabama Power can certainly structure a
17 resource procurement such that it can examine bids
18 from wind or wind generators operating in SPP or MISO
19 and evaluate those bids compared to other resources.

20 Q. Now on page 15 of your testimony --
21 strike that. On page 16 of your testimony, you say my
22 own analysis illustrates that customers can save money
23 if the company procures demand-side resources and

1 supply-side resources instead of its proposed gas units.

2 You say that, do you not?

3 A. I do.

4 Q. But then you proceed to describe an
5 analysis that you did using the clean energy portfolio
6 tool developed by the Rocky Mountain Institute, do you
7 not?

8 A. I do.

9 Q. And we will talk about your use of that
10 tool later, but suffice it to say that whatever you did
11 with that tool, it was an analysis comparing your clean
12 energy portfolio to Barry 8, correct?

13 A. It was a clean energy portfolio
14 developed from the use of the tool. I didn't specify
15 what the portfolio was with the exception of a DSM
16 requirement.

17 Q. Yes, ma'am. But you were comparing this
18 portfolio against a combined cycle unit, were you not?

19 A. That's correct.

20 Q. And that combined cycle unit was Barry 8?

21 A. Yes.

22 Q. You did no such comparison with respect
23 to the Hog Bayou facility or the Central Alabama

1 facility, correct?

2 A. I did not look at the other two
3 facilities, no.

4 Q. So when you say my own analysis
5 illustrates customers can save money if the company
6 procures demand-side resources and supply-side
7 renewables instead of its proposed gas units, you did no
8 such analysis with respect to Hog Bayou and Central
9 Alabama, correct?

10 A. That's correct. And I -- on page 18 of
11 my testimony, the question is why is your analysis
12 focused on Barry Unit 8 and my response is it is a new
13 unit that has not been built yet and it would have the
14 longest service life of the three gas units that the
15 company proposes to add to its system.

16 Q. Right. And my question wasn't why you
17 used Barry 8 as the point of comparison. It's simply to
18 point out you have no analysis directed to the other
19 units, do you?

20 A. That's correct. I do not.

21 Q. Now your analysis -- withdraw that. When
22 you say that customers can save money and you talk about
23 something being less expensive, that analysis is

1 predicated on the application of a levelized cost of
2 energy approach, is it not?

3 A. That's correct.

4 Q. Which is sometimes referred to as LCOE
5 because I'll get tongue tied otherwise if I say the
6 whole thing.

7 A. Yes. LCOE is the acronym.

8 Q. And LCOE, can we agree, is basically a
9 simple screening tool, isn't it?

10 A. Yes, I would characterize it as such.

11 Q. It does nothing more than take the net
12 present value of the cost of a resource and divide it by
13 the net present value of the megawatt hours of that
14 resource?

15 A. Generally, yes, and it is typically
16 used as a screening tool to compare resources with
17 varying useful lives as have the resources in the tool
18 that I used.

19 Q. It is not -- LCOE is not a production
20 cost modeling tool?

21 A. It is not.

22 Q. It does not provide a basis for making
23 resource decisions?

1 A. No.

2 Q. In fact, it is particularly ill-suited
3 even for screening purposes to compare different
4 technologies, is it not?

5 A. I wouldn't say so, no. It provides one
6 metric of the levelized cost of energy as a way to
7 compare a variety of different resources and it --
8 there are certain benefits that it doesn't take into
9 account that are captured by a production cost or
10 dispatch model but it's certainly useful as a
11 screening tool to give a user information about the
12 types of resources and the general cost and benefits
13 that might be expected to stem from those resources.

14 Q. Are you familiar with the U.S. Energy
15 Information Administration?

16 A. Yes.

17 Q. Sometimes called EIA?

18 A. Correct.

19 Q. What is EIA?

20 A. It is the information arm of the
21 Department of Energy.

22 Q. I'm going to hand you an excerpt from an
23 EIA document.

1 MR. MCCRARY: And, Your Honor, this is
2 Mr. Bush's Exhibit 3. I don't know -- but it's already
3 in the record as Mr. Bush's Exhibit, Rebuttal Exhibit 3,
4 however it was numbered.

5 ALJ GARNER: All right.

6 Q. And this document refers to the levelized
7 cost approach, does it not? Levelized cost electricity?

8 A. Yes.

9 Q. And as you said, this document recognizes
10 that the LCOE does not capture a number of important
11 aspects that attach to various resources, correct?

12 A. I don't think I've said anything about
13 this document.

14 Q. But previously you said LCOE doesn't
15 capture many important attributes that attach to
16 generating resources?

17 A. I said certain attributes, yes.

18 Q. Okay. And let me direct your attention
19 to the top of the second page of this exhibit. It's
20 marked page three at the bottom under the heading
21 levelized avoided cost of electricity. And the first
22 sentence says LCOE does not capture all of the factors
23 that contribute to actual investment decisions making

1 the direct comparison of LCOE across technologies
2 problematic and misleading as a method to assess the
3 economic competitiveness of various generation
4 alternatives. Do you see that?

5 A. I do.

6 Q. But you just disagree with that?

7 A. I do in part because I do believe that
8 LCOE analysis has value as a screening tool, which is
9 what I've used it for here. This statement doesn't
10 say to me that there is no value. It suggests what
11 we've already agreed upon, that a company or utility
12 wouldn't use the LCOE methodology as its sole tool for
13 making a decision.

14 Q. Do you agree --

15 A. And I'll note that in the second
16 paragraph it says comparing two different technologies
17 using LCOE alone evaluates only the cost to build and
18 operate a plant and not the value of the plant's
19 output to the grid. I do agree with that and it is
20 for that reason that one should investigate these
21 resources using a capacity expansion and production
22 cost model.

23 Q. So let's just -- let's tease that out a

1 little bit with a very simple example because that's the
2 only kind I could come up with. You could do an LCOE
3 on, for example, a solar -- a stand-alone solar
4 facility, could you not?

5 A. You could.

6 Q. And you could do an LCOE on a combustion
7 turbine, correct?

8 A. That's right.

9 Q. And if those are the only two resources
10 you had, you could compare those two LCOE results. And
11 let's just assume for the sake of my question that the
12 stand-alone solar had the lower LCOE value.

13 A. Okay.

14 Q. That would be in dollars per megawatt
15 hour?

16 A. Yes.

17 Q. But as far as being able to reliably
18 serve load with it, that would tell you nothing about
19 which of those resources was best suited to reliably
20 serve load, would it?

21 A. If you mean reliability in terms of
22 contribution toward peak, it doesn't give you very
23 much information, no, or none at all about peak.

1 Q. It doesn't give me any information about
2 the resource's ability to serve load, does it, in a
3 reliable manner?

4 A. It doesn't speak to reliability, no.

5 Q. Right. So, for example, I might have a
6 dirt cheap solar facility as compared to the CT in my
7 hypothetical, but if I want to turn the lights on at
8 night, my dirt cheap solar facility is not going to help
9 me out, is it?

10 A. Stand-alone solar generally doesn't
11 help you when the sun isn't shining.

12 ALJ GARNER: State for the record the
13 document that is currently being discussed is Alabama
14 Power Exhibit 34.

15 MR. MCCRARY: Thank you, Your Honor.

16 Q. And it's those kinds of important
17 operational attributes as demonstrated in my
18 hypothetical, that's the kind of thing that the LCOE
19 approach doesn't shed any light on, correct?

20 A. That's one thing, yes, and there are a
21 number of metrics by which a utility would evaluate
22 investment decisions. Reliability is one. It isn't
23 captured by LCOE but LCOE might give the company

1 valuable information about other metrics.

2 Q. You are aware, are you not, that we're
3 here in this proceeding because Alabama Power has a
4 reliability need?

5 A. That's correct.

6 Q. And so reliability is at the very heart
7 of this proceeding we're in today, is it not?

8 A. That's correct. And I believe it was
9 discussed yesterday that there is a capacity value
10 that is associated with solar. It isn't as high as
11 the capacity value that's given to a thermal resource,
12 but in most cases as we sit here today, it is not
13 zero.

14 Q. Is it your testimony that stand-alone
15 solar provides any significant capacity value to deal
16 with winter peak load requirements?

17 A. My testimony doesn't discuss that, no.

18 Q. And you do understand that we're here not
19 only to talk about a reliability need but specifically a
20 winter reliability need?

21 A. That's correct. And that is I believe
22 the reason that the solar has been paired with battery
23 storage resources in Alabama Power's analysis and the

1 clean energy portfolio that I put forth in my
2 testimony includes both solar and storage resources.

3 Q. All right. Do storage resources -- well,
4 withdraw that. We will get to it in a moment but do you
5 recall whether your portfolio includes some stand-alone
6 solar?

7 A. I believe it does, yes.

8 Q. And it also includes some battery
9 resources?

10 A. That's correct.

11 Q. Do you remember the duration of those
12 batteries?

13 A. Those were one hour batteries.

14 Q. All one hour batteries?

15 A. Correct.

16 Q. And that's in your portfolio?

17 A. Yes.

18 Q. But again the portfolio is not tested for
19 reliability under the LCOE, is it?

20 A. It does meet peak in the top 50 hours
21 of the year, yes.

22 Q. You're referring to the RMI tool that you
23 applied?

1 A. That's correct.

2 Q. All right. We'll talk about that soon.
3 In fact, the RMI report that you rely on is Exhibit
4 RW-10. Is that right?

5 A. That's correct.

6 Q. I'm going to take a shot here, but the
7 Rocky Mountain Institute, is that an environmental
8 organization?

9 A. I would call it more an electricity
10 organization.

11 Q. Okay. With an environmental bend?

12 A. To the extent that they talk about CO2
13 emissions contributing to climate change, then yes.

14 Q. So when I look over on -- I don't know
15 what page this is -- about two or three pages over about
16 the Rocky Mountain Institute, Rocky Mountain Institute,
17 an independent nonprofit founded in 1982, transforms
18 global energy use to a clean, prosperous, and secure low
19 carbon future?

20 A. I think that's consistent with what I
21 said, yes.

22 Q. Okay. Now this proceeding represents
23 your first involvement with the RMI tool, correct?

1 A. That's correct.

2 Q. The RMI tool, as we discuss it here, is a
3 model that was developed by RMI for purposes of doing
4 the evaluations described in this RW-10?

5 A. Yes.

6 Q. Your first use of the tool or exposure to
7 the tool was in November of 2019?

8 A. That sounds right.

9 Q. Prior to that time, you had no experience
10 with it?

11 A. Using it, no.

12 Q. And I think you told me in your
13 deposition that you received training on the use of the
14 tool?

15 A. That's correct.

16 Q. Training from an employee of the Sierra
17 Club?

18 A. Sierra Club holds the license to the
19 tool and Synapse does not so I had to receive a bit of
20 training from the Sierra Club in how to use it, yes.

21 Q. You got no training from the people at
22 RMI who developed the tool?

23 A. I did not but the person who trained me

1 is listed in the acknowledgment section as having
2 reviewed the report and the tool.

3 Q. So Sierra Club has a license to the tool,
4 a Sierra Club person helped develop the tool, and a
5 Sierra --

6 A. I don't know that they helped develop
7 it but they did review the tool and offer their
8 perspective.

9 Q. Okay. So they were somehow involved in
10 this RMI report?

11 A. Correct.

12 Q. You don't know what the involvement was?

13 A. I don't.

14 Q. All right. Be that as it may, the Sierra
15 Club has had a license to this tool and a Sierra Club
16 club employee trained you on the use of the tool?

17 A. Correct, on the input assumptions and
18 how they go into the model, yes.

19 Q. Did you develop an understanding of how
20 the tool works or did you just simply learn how to input
21 it and derive outputs?

22 A. The understanding of the use of the
23 tool is general and it runs in a code language called

1 Python which I'm not familiar with so I haven't
2 examined the Python code to determine exactly how the
3 model is running its algorithms.

4 Q. A few moments ago, you said something
5 about the top 50 hours and I think you were alluding to
6 some of the requirements in the RMI tool that it imposes
7 on the clean energy portfolio, were you not?

8 A. That's correct.

9 Q. And that's laid out on probably a number
10 of places but --

11 A. Page 23 is what we've discussed
12 previously.

13 Q. Let's turn over there. So for purposes
14 of trying to mimic a dispatchable gas-fired resource,
15 the CEP requires a clean energy portfolio to satisfy
16 these criteria, correct?

17 A. That's correct.

18 Q. And so the first criteria is that the CEP
19 has to produce at least as much energy each month as the
20 gas plant?

21 A. Yes.

22 Q. Does it matter when the energy is
23 produced?

1 A. No, it doesn't appear to.

2 Q. All right. So the gas plant being
3 dispatchable will produce the energy when it's needed,
4 correct?

5 A. It can, yes.

6 Q. And the clean energy portfolio won't
7 necessarily produce energy when it's needed, correct?

8 A. The renewable resources would produce
9 energy when either the wind is blowing or when the sun
10 is shining but then the battery storage components
11 would be able to dispatch any stored energy in times
12 when it is needed.

13 Q. These are the one hour batteries --

14 A. Correct.

15 Q. -- that are in your portfolio?

16 A. Yes.

17 Q. So this first criteria is just total
18 megawatt hours in a month?

19 A. That's correct.

20 Q. Without regard to when in the month?

21 A. Without regarding to timing, yes.

22 Q. And the second criteria is that it has to
23 match or exceed the gas plant's seasonally adjusted

1 nameplate during the region's top 50 hours of peak net
2 load?

3 A. Correct.

4 Q. So how many hours are there in a year?

5 A. Eighty-seven sixty generally.

6 Q. And so this has to just meet the gas
7 plant's nameplate capability in 50 of those hours?

8 A. That's correct.

9 Q. The gas plant will have its capability
10 subject to normal E-4 and -- or maintenance -- be there
11 24/7, won't it?

12 A. If it's online, yes.

13 Q. Then it says something about flexibility,
14 right?

15 A. That's correct.

16 Q. And it says the clean energy portfolio
17 must match or exceed the gas plant's nameplate capacity
18 during the hour when the region experiences its greatest
19 one hour increase in net load?

20 A. Yes.

21 Q. Just that one hour?

22 A. Yes.

23 Q. What about other hours when there are

1 increases in net load that might be very close to that
2 one hour?

3 A. Well, if it can meet its seasonally
4 adjusted nameplate capacity during the hour of
5 greatest one hour increase, then I would think that it
6 could meet smaller increases in other hours.

7 Q. What if there was an increase that was
8 very close to that greatest hour, say in the next hour?

9 A. I'm not sure how the model would deal
10 with that, but again I'll say if it can meet that
11 greatest one hour increase, then I think it would be
12 able to meet a similar increase. It would have to be
13 the following hour.

14 Q. What if it was a particularly challenging
15 day and there were a number of hours that were very
16 close in terms of the peak output requirement? No
17 problem for the CEP?

18 A. I don't know the answer to that.

19 Q. At some point, would your one hour
20 batteries run out of juice?

21 A. Each of the one hour batteries would
22 run out of juice after an hour and it would just
23 depend on how many batteries you have, how much energy

1 is needed, and how those batteries are dispatching the
2 stored energy.

3 Q. But whether all that would really work or
4 not doesn't matter because all that the tool requires is
5 to match the one hour that's identified here?

6 A. That's correct. And we've talked about
7 the CEP tool being a screening tool and so it's
8 assumptions that go into making it a simplified tool
9 are somewhat limited compared to a capacity
10 optimization and electric sector dispatch model and
11 I'm not suggesting that it be used for anything other
12 than what it was used for here.

13 If we want to get at some of these
14 questions, you would need to run your resource
15 portfolio through a dispatch model. I attempted to
16 show a portfolio that could be least cost compared to
17 the gas plant or the proposed gas unit additions and
18 Alabama Power did no such analysis.

19 Q. So in your testimony, for example, on
20 pages 16 and 17 and really all through there, when you
21 use words like save money, less expensive, cost
22 effective, that's just based on this -- those statements
23 are predicated on your LCOE analysis and the results of

1 your application of this tool, correct?

2 A. Yes.

3 Q. The RMI tool includes some regional data,
4 does it not?

5 A. I'm sorry. Includes what kind of data?

6 Q. Regional.

7 A. Oh, regional. Yes, it does.

8 Q. Somewhere in here -- maybe you can help
9 me -- there's a map that shows the various regions?

10 A. Yes.

11 ALJ GARNER: Page 43.

12 MR. MCCRARY: Wow. Go, Judge.

13 ALJ GARNER: I just turned to it.

14 THE WITNESS: Thank you. Page 43.

15 MR. MCCRARY: Yield to the bench.

16 ALJ GARNER: You're on your own.

17 MR. MCCRARY: Thank you, Judge.

18 Q. So on page 43 if I can get there -- yeah.

19 ALJ GARNER: You sound surprised.

20 MR. MCCRARY: No. Just having a hard
21 time getting these slick pages to turn.

22 Q. I assume we're down in the southeast,
23 right?

1 A. Yes.

2 Q. And then the description there on the
3 right where it says southeast, even though Alabama is
4 colored in the map, it says Florida, Kentucky,
5 Louisiana, and South Carolina?

6 A. That's correct. And I think that's
7 because of the time this report was issued, the
8 authors weren't aware of the proposed Barry Unit 8
9 addition. If you look on page 20 of the report,
10 Figure 3 shows announced gas-fired generation projects
11 and Barry 8 doesn't show up on that map.

12 Q. Oh, okay. So when this report talks
13 about any sort of analysis of gas-fired plants that it
14 purports to have done, it doesn't include Barry 8?

15 A. I don't believe so, no.

16 MR MCCRARY: Let's go off the record
17 for a second.

18 (Off-the-record discussion.)

19 ALJ GARNER: Let's come back at 1:15.
20 We are in recess until 1:15.

21 (Lunch recess.)

22 ALJ GARNER: We are back on the record.
23 Are you ready to proceed?

1 MR. MCCRARY: Yes, sir. Your Honor, we
2 will go ahead and mark as our next exhibit in order.
3 These are a number of excerpts from Ms. Wilson's
4 spreadsheets that were provided in discovery. I think
5 she's familiar with them.

6 ALJ GARNER: Alabama Power Exhibit 45.

7 MR. MCCRARY: We will be talking about
8 these for the next little bit.

9 THE WITNESS: Should this light be
10 green?

11 ALJ GARNER: Push the middle button.

12 THE WITNESS: Okay. Thank you.

13 Q. (BY MR. MCCRARY:) Ms. Wilson, one thing
14 I just wanted to revisit from our morning session just
15 briefly. You had indicated that in your view Alabama
16 Power should have inquired about any additional
17 wind-related resources in connection with its
18 solicitation?

19 A. Yes.

20 Q. Are you aware that the -- that the
21 capacity RFP that was conducted by the company in 2018
22 included a solicitation for wind although it had to be
23 delivered to the southern border?

1 A. I'm not explicitly familiar with that
2 RFP and the capacity that it requested. I will say
3 that to the extent that it did, it should continue to
4 do so as those types of wind resource pricing change
5 year to year. And what Alabama Power has done
6 historically shouldn't preclude it from asking for
7 bids for those types of resources in the future.

8 Q. Right. And for the record, the company
9 received zero proposals in response to that
10 solicitation.

11 A. Noted.

12 Q. I put before you certain spreadsheets and
13 these are familiar to you?

14 A. They are, yes.

15 Q. These are among the spreadsheets that
16 were inputs and outputs from your application of the RMI
17 tool, are they not?

18 A. That's correct.

19 Q. And before we get started, I just want to
20 ask you something. Yesterday your counsel said
21 something that I thought was pretty insightful as it
22 relates to this discussion. She said something to the
23 effect of flawed inputs, flawed outputs. Do you agree

1 with that when it comes to the application of a model?

2 A. That's generally true, yes, though the
3 degree will vary.

4 Q. Sure.

5 A. And I'll just along those lines note
6 that in my deposition we discussed these spreadsheets
7 and I have gone back and looked at some of the inputs
8 and outputs again with the hope that I can provide
9 clarification to some of the questions that you asked.

10 Q. Good.

11 MR. MCCRARY: Off the record.

12 (Off-the-record discussion.)

13 Q. Ms. Wilson, the first of these
14 spreadsheets is labeled at the top Attachment F. Do you
15 see that?

16 A. I do.

17 Q. And this is essentially the cost inputs
18 that you used in your application of the model, is it
19 not?

20 A. That's correct.

21 Q. And so that we're clear about -- the
22 record is clear about some of the abbreviations, there's
23 a reference to BAU NGCC. Is that business as usual

1 natural gas combined cycle and that refers to Barry 8?

2 A. Yes.

3 Q. Then there's a reference to various
4 resources that have the type RE. Is that renewable
5 energy?

6 A. Yes.

7 Q. And moving down that column B, there's a
8 reference to ES. Is that energy storage?

9 A. Yes.

10 Q. And then a reference to TX. That's
11 transmission?

12 A. Yes.

13 Q. And then a number of options that have
14 EE. Is that energy efficiency?

15 A. Yes.

16 Q. And then the last three have DR. Is that
17 demand response?

18 A. Yes.

19 Q. Okay. Then -- and I'll remind you and
20 you remind me. Some of this information is confidential
21 and we don't intend to get into that in this open
22 session. So we'll see if we can't talk around it, okay?

23 A. Okay.

1 Q. In column D, line 5, there is a CapEx
2 value shown for the Barry 8 unit, is there not?

3 A. There is.

4 Q. And next to that, there is a CapEx year
5 and that year is shown as 2019?

6 A. That's correct.

7 Q. All right. Now in our deposition, we
8 discussed how -- we discussed whether the value shown
9 under the CapEx, whether that was an in-service value as
10 of 2023 or a 2019 value, did we not?

11 A. We did.

12 Q. And I think during the deposition you
13 were unable to say for certainty which it was?

14 A. I think that at the end of the
15 deposition we got to the conclusion that that value
16 was in 2019 dollars but assumed an in-service date of
17 2023.

18 Q. And that's your understanding still
19 today?

20 A. Of this spreadsheet, yes.

21 Q. Is that an accurate statement as to the
22 cost of Barry 8 in 2023 in-service?

23 A. Mr. Bush during that deposition stated

1 that those costs in his testimony were in fact in 2023
2 dollars and the discussion in the deposition was
3 whether this analysis then under -- I'm sorry --
4 overstated the cost of Barry Unit 8 as it appears in
5 this spreadsheet, and for purposes of the levelized
6 cost analysis, that answer is no.

7 And that is because we're dividing, as
8 we discussed earlier, a numerator over a denominator
9 and the cost of production was also in those same
10 dollar years rather than in 2023. And so when you
11 then convert the base years dollars, the result winds
12 up being the same. There's no net effect on the LCOE
13 calculation for Barry 8.

14 Q. So it's your understanding that the value
15 you have entered in column D-5 is a 2019 value?

16 A. That's the way that I entered it, yes.
17 And as I said, when you carry that analysis through,
18 that value doesn't -- if you were to adjust it to 2023
19 dollars, it doesn't have an effect on the resulting
20 LCOE.

21 Q. Just so the record is clear as to what
22 your model does, when you enter a value for the CapEx
23 value for any of the resources, then there's a CapEx

1 year indicated, correct?

2 A. Yes.

3 Q. And the model -- does the model escalate
4 the CapEx value shown from the year entered up to the
5 in-service year of 2023?

6 A. It escalates it according to the year
7 in which -- the year's dollars in which that
8 investment goes into service. So it's essentially
9 presenting those dollar values in nominal terms as
10 opposed to real terms which are shown here.

11 Q. What life value did you enter for the
12 Barry unit?

13 A. So here -- well, we talked about this
14 in my deposition as well. Originally I had entered a
15 value of 40 years for the Barry life, and for some
16 reason, RMI's tool was producing an error when we ran
17 it that way so we did adjust it to a life of 20 years
18 in order to have the model actually produce outputs.

19 Q. So you've taken the -- you've taken the
20 cost of a 40 year asset and you've compressed it into a
21 20 year life. Is that the effect of this entry?

22 A. That's the effect, yes. And when you
23 redo the levelized cost analysis and give Barry Unit 8

1 a 40 year life, the net effect of that change is about
2 two dollars per megawatt hour.

3 So in this case, my results showed that
4 the LCOE of Barry 8 was about forty-five dollars and
5 change per megawatt hour so that lowers that value by
6 two dollars per megawatt hour.

7 Q. And what we have here -- and we'll get to
8 that later but the value you have shown for Barry 8 is
9 overstated in your LCOE results?

10 A. Slightly, yes, based on the useful life
11 adjustment.

12 Q. Did you read Mr. Bush's rebuttal
13 testimony as well?

14 A. I did.

15 Q. And did you see where he had indicated
16 that you had put the wrong dollar amount for a 2023
17 in-service cost for Barry?

18 A. I did. And I didn't recall that in the
19 deposition as we were discussing it but I did remember
20 it after the fact.

21 Q. All right. And you don't dispute what he
22 said in that regard, do you?

23 A. No, I have no reason to challenge that,

1 just that it wasn't clear from his testimony and work
2 papers to me at the outset that that value was in 2023
3 dollars.

4 Q. But sitting here today, we know that the
5 value is in 2023 dollars?

6 A. That's right.

7 Q. You have a 30 year life entered for the
8 solar renewable energy resources, do you not?

9 A. That's right.

10 Q. And is it not true that this tool takes
11 30 years worth of cost, spreads that cost of those
12 resources over 30 years, and then for purposes of the
13 LCOE just takes the first 20 years of that value?

14 A. That's what the methodology states
15 RMI's supporting document, yes, but it levelizes that
16 20 years over the production and discounts it back to
17 a present year dollar. I don't know what the effect
18 would be sitting here today of taking a 30 year cost
19 stream and discounting or dividing it by production
20 and discounting back to the present year dollars but I
21 believe it to be small.

22 Q. But to be clear, what this methodology
23 has done for these 30 year lifed solar resources, it

1 spread the cost over 30 years and then simply taken 20
2 of those 30 years and use it in the LCOE calculation?

3 A. That's correct, but it's discounted
4 then by 20 years as opposed to being discounted by 30
5 years and you're dividing a constant stream of costs
6 over either 20 or 30 years, depending on which way
7 you're doing it, and dividing it by production which
8 is constant in this portfolio.

9 Q. Well, a moment ago we discussed that
10 Barry has a 40 year life?

11 A. Yes.

12 Q. And you said that when you tried to enter
13 the accurate 40 year life in this tool, you got an error
14 message?

15 A. That's true.

16 Q. Did you try to enter a 30 year life?

17 A. No.

18 Q. Well --

19 A. The RMI methodology assumes a 20 year
20 life for natural gas plants and that is an assumption
21 that's contained in the documentation in my Exhibit 10
22 and my assumption is that that's the way that it would
23 have to be entered here. So when I adjusted it for --

1 to reflect that 40 year life, I did my own calculation
2 in Excel, not as part of the RMI tool.

3 Q. Well, if the tool will take a 30 year
4 life for the solar resources, why wouldn't it take a 30
5 year life for Barry? At least that would be closer to
6 right.

7 A. I don't know the answer to that.

8 Q. All right. Looking on down, I see the
9 CapEx year that's alongside all the generic energy
10 efficiency options is 2012, is it not?

11 A. Yes.

12 Q. Is that -- that's the vintage of the cost
13 information for those resources?

14 A. That's my understanding of that, yes.

15 Q. And do the penetration assumptions that
16 are embedded in the tool also -- were they also as of
17 2012?

18 A. I'm not sure I understand the question.

19 Q. Well, for example, energy efficient --
20 energy efficiency for commercial lighting, that would
21 refer to the move from the, say, incandescents to LEDs,
22 would it not?

23 A. Yes.

1 Q. And so there was a certain penetration of
2 LEDs in 2012, right?

3 A. That's correct.

4 Q. But now here we are in 2020 and I
5 assume -- would you agree with me that there is a much
6 greater penetration of LED lights in the commercial
7 space?

8 A. I assume that it's greater. I don't
9 know by what degree.

10 Q. So does the tool assume that there's the
11 opportunity for LED expansion as that opportunity might
12 have existed in 2012 as opposed to how that opportunity
13 might exist today?

14 A. I'm not sure and I think we could
15 perhaps go back to the methodology to determine that
16 answer.

17 Q. The last question on this page --

18 A. But --

19 Q. I'm sorry?

20 A. That's okay.

21 Q. The last question I had for you on this
22 page, over in column L, I'm seeing a CapEx decline per
23 year and that is only entered for the solar resources

1 for the renewable energy resources and the energy
2 storage resources, correct?

3 A. There's a wind decline as well.

4 Q. Okay. And the entering that CapEx
5 decline, that basically assumes as cost reduction in
6 connection with those resources, correct?

7 A. In real terms, yes.

8 Q. Year over year?

9 A. Correct.

10 Q. So would that be for the full life of
11 those resources?

12 A. So that CapEx reduction would only
13 apply to the year in which the capital is being spent.
14 So while the reduction would occur year over year, if
15 the capital is being spent in 2023, then there is
16 spending in that year that is then spread over the
17 remaining years and that doesn't decline. I think
18 that answers your question.

19 Q. Okay. If that same resource were
20 deployed several years later, it would assume the cost
21 of that resource has been reduced by this CapEx decline
22 rate per year, correct?

23 A. That's correct.

1 Q. So this assumes, for example, that for
2 storage resources, there's going to be a six percent
3 cost decline every year over the full 20 year horizon?

4 A. The number six percent isn't reflected
5 here.

6 Q. 5.7 percent.

7 A. That's not for solar.

8 Q. I said battery. If I said solar, I
9 misspoke. I was intending to say for the battery.

10 A. That's correct, yes. And that's
11 consistent with assumptions from the National
12 Renewable Energy Laboratory in Lazard which puts out
13 estimates of both capital and operating costs for
14 these technologies as well as the learning curves
15 associated with them.

16 Q. And there are other cost reduction
17 assumptions built into this model for other renewable
18 resources, correct?

19 A. That's correct. And in its
20 methodology, RMI notes that these assumptions about
21 learning curves are conservative relative to the
22 actual percentage declines that we've seen
23 historically.

1 Q. Have you seen any information that would
2 indicate to you that cost declines in this space are
3 starting to flatten out as the technology matures?

4 A. I think different sources predict
5 different types of learning curves.

6 Q. Well, just so we're on the same page, let
7 me show you what -- an excerpt from Detsky 4. It's a
8 page from the Lazard materials and you see the
9 highlighted section that I have there?

10 A. Yes.

11 Q. And does that -- let me read it so that
12 we are -- I'm sorry. I only have one copy. It says in
13 light of material declines in the pricing of system
14 components and improvements in efficiency among other
15 factors, wind and utility scale solar PV have exhibited
16 dramatic LCOE declines; however, as these industries
17 mature, the rates of decline have diminished. Do you
18 disagree with that?

19 A. For wind and solar, that's typically
20 thought to be correct, yes.

21 Q. Okay.

22 ALJ GARNER: What's that page reference,
23 Mr. McCrary?

1 MR. MCCRARY: It's page eight from the
2 Lazard book.

3 MR. GROVER: Detsky 4.

4 ALJ GARNER: Detsky 4.

5 MR. MCCRARY: Yes, sir.

6 Q. Let's look at the next page of Exhibit
7 45. Let me ask you a few questions about that. That's
8 at the top of the page marked attachment G, is it not?

9 A. Yes.

10 Q. And these are the scenario parameters
11 that are reflected in your model run?

12 A. That's correct.

13 Q. Line five, value for additional energy.
14 Do you see that?

15 A. Yes.

16 Q. And that's the value that this -- the RMI
17 tool assigns to energy produced by the clean energy
18 portfolio in excess of the output assigned to the Barry
19 unit, correct?

20 A. For the net cost calculation, yes.

21 Q. Right. And according to the RMI study,
22 RW-10, that value should be fifteen dollars, correct?

23 A. Not should be fifteen dollars but

1 that's the base assumption that RMI used in its
2 modeling. They also state that that is very
3 conservative and they compare that to cost in dollars
4 per megawatt hour of output for a combined cycle unit
5 of twenty-five dollars a megawatt hour. So this
6 twenty dollar number is still below the production
7 cost of a CC.

8 Q. All right. But to be clear, no less than
9 seven times -- and we can count them but no less than
10 seven times in RW-10 does the RMI report refer to the
11 fifteen dollar assumed value for the excess energy?

12 A. That was RMI'S assumption, yes, and RMI
13 looked at the entire United States as we saw earlier
14 in that map of the regions that we examined and the
15 cost per energy depends on the resource mix in each
16 state or utility service territory and so that number
17 will vary regionally.

18 Q. But you determined in your judgment to
19 increase that assumed value from fifteen dollars to
20 twenty dollars?

21 A. I did. And I will note that also in my
22 deposition we talked about my figure -- and I don't
23 see the number here but we had talked about it being

1 on a net basis. It's not actually. It represents the
2 true LCOE which I assume we'll get into later as well.

3 Q. We will. Now this twenty dollars assumed
4 value that you have, that's assigned to every megawatt
5 hour of so-called excess energy produced by your clean
6 energy portfolio, right?

7 A. In the net cost calculation, yes.

8 Q. Right. And that requires an assumption
9 that on average all of those megawatt hours are going to
10 have a value, a market value if you will of twenty
11 dollars?

12 A. Yes.

13 Q. Isn't it true that in some instances
14 energy produced by a solar resource can have a negative
15 value?

16 A. In hours where that resource has to be
17 curtailed or there's excess generation, then, yes,
18 that's possible.

19 Q. Because being not dispatchable, the solar
20 resource puts energy on the system when it puts energy
21 on the system, right?

22 A. That's correct. But with solar, that
23 tends to be in hours where the sun is shining which

1 might be a summer peak. And so given the penetrations
2 on Alabama Power system, it seems very unlikely that
3 we would experience negative pricing anytime soon.

4 Q. Well, it does produce energy when the sun
5 generally is shining. If the sun is not shining, it's
6 not producing energy, right?

7 A. Generally, no.

8 Q. It's not producing energy --

9 A. I mean there's some -- even with cloud
10 cover, there is a tiny bit of solar penetration but,
11 yes, that number is close to zero.

12 Q. All right. You're familiar with the load
13 shape in the winter on the Southern system, are you not?

14 A. I'm familiar with the concepts of load
15 shapes generally. I can't say that I know about
16 Southern's systems specifically.

17 Q. Are you aware that there's a steep
18 morning ramp in the morning in the winter around 7 a.m.
19 and then the load declines and there's actually a trough
20 in the middle of the day and then an evening peak as
21 well? Are you generally familiar with that?

22 A. That can often be true in utilities.
23 It's not specific to Southern Company.

1 Q. And in situations in that middle of the
2 day trough, if you will, units can sometimes be at
3 minimum, can they not?

4 A. What types of units?

5 Q. Operating -- dispatchable units may be at
6 their operating minimum level?

7 A. I suppose that's possible. It would
8 depend how many are turned on and what the load is.

9 Q. If the system has units at minimum and
10 then the renewable resource is dumping energy into the
11 system, can that create operational issues for the
12 system?

13 A. If there's no place for that energy to
14 go, then that's possible but this is where the
15 economics of battery storage resources become very
16 important because storage resources can store that
17 excess energy so that we avoid exactly this type of
18 situation and dispatch it in the hours when it's most
19 needed which would be that steep morning ramp where
20 the sun isn't shining and that solar energy can then
21 have value in those hours.

22 Q. In situations where there's energy being
23 produced that the system can't handle because, for

1 example, units are at minimum, then the system has the
2 choice of either having to get rid of the energy
3 possibly by asking its neighbors to -- possibly by
4 having to pay its neighbors to take the energy or be
5 confronted with de-committing a unit. Aren't those some
6 of the operating choices that might have to be made?

7 A. Those are some of the choices, yes, and
8 that depends on the amount of thermal capacity on a
9 utility system and how that thermal capacity is being
10 committed in other hours of the day.

11 Q. Have you done any sort of an analysis
12 regarding the Southern system and the operation of its
13 units and its system and other factors that you have to
14 take into account to test the validity of your twenty
15 dollar assumption?

16 A. I haven't and I think that I've stated
17 that I haven't done that type of dispatch analysis
18 here. To my knowledge, Alabama Power or Southern
19 Company, neither of them have done that analysis
20 either.

21 Q. Line 26 on this same page talks of the
22 NGCC average capacity factor. Again that's plant Barry,
23 right?

1 A. That's right.

2 Q. And it shows seventy-five percent?

3 A. Correct.

4 Q. Mr. Looney testified that according to
5 the system production cost model, which is a more
6 granular analysis, the capacity factor was more like 80
7 percent. Are you aware of that?

8 A. I heard that yesterday and it's my
9 understanding that the -- that particular study that
10 Mr. Looney referenced didn't also take into account
11 the other resources that are being proposed here which
12 namely are the solar and storage resources. That
13 might have an effect on the capacity factor if that
14 were taken into consideration.

15 Q. If the capacity factor for plant Barry
16 were higher than what you've modeled here, that would
17 increase the megawatt hours in the denominator of the
18 LCOE calculation, wouldn't it?

19 A. That's right.

20 Q. And that would reduce the LCOE value,
21 wouldn't it?

22 A. That's right.

23 Q. Now the last line here, line 50, talks

1 about the top load hours, correct?

2 A. Yes.

3 Q. Now this is part of the -- this is part
4 of the requirements that the tool imposes that the
5 renewable portfolio has to produce enough energy to
6 match the resource in the top 50 load hours?

7 A. Correct.

8 Q. And this refers to FERC 714, correct?

9 A. So this has two sources here and it
10 says use regional load data from Reinventing Fire
11 rather than FERC 714 in calculating that load for
12 capacity constraints. FERC 714 data has hourly
13 generation data historical for different utilities.
14 We did try to use FERC 714 data in this tool, and for
15 some reason, the tool was producing an error. And so
16 what this column says is to instead use regional load
17 data from Reinventing Fire, which is what was done
18 here.

19 Q. Did you investigate why the tool was
20 producing an error message?

21 A. I didn't. That's something we have to
22 the take up with RMI who developed the tool.

23 Q. So we've gotten error messages on the

1 true life of the Barry in it and we've gotten an error
2 message over the use of FERC 714 data?

3 A. Those were the only two, yes. And
4 again I don't offer this levelized cost analysis as
5 being the sole data source on which Alabama Power
6 should base a decision but it does look at a portfolio
7 of clean resources compared to Barry Unit 8 which is
8 being proposed here.

9 And it gives a cost comparison that
10 demonstrates that a portfolio similar to the one that
11 was constructed here is one that should be pursued by
12 Alabama Power and at least evaluated as a possible
13 least cost resource portfolio.

14 Q. Let's look on the next couple of pages of
15 Exhibit 45, please.

16 A. I'm sorry. I don't have exhibit
17 numbers. This whole thing is 45?

18 Q. Yes, ma'am.

19 A. Okay.

20 Q. And the first page there is the bar
21 charts?

22 A. Yes.

23 Q. All right. And those are the same bar

1 charts that show up in your testimony on page 17,
2 correct?

3 A. I think so. Yes.

4 Q. And those bar charts are a representation
5 of some of the information that's on the next page,
6 correct?

7 A. Yes.

8 Q. All right. Now the next page is your RMI
9 tool outputs, correct?

10 A. That's right.

11 Q. So we have columns -- you've got all
12 kinds of LCOE calculations here. The first one is
13 described as the CEP LCOE, right?

14 A. That's right.

15 Q. And correct me if I'm wrong but that's
16 the cost of the clean energy portfolio divided by the
17 megawatt hours from plant Barry. Is that right?

18 A. Yes. The same number of megawatt hours
19 that would be produced by Barry 8.

20 Q. All right. Then the next one says CEP
21 true LCOE, right?

22 A. Yes.

23 Q. And if I understand your formulation,

1 that's again the cost of the clean energy portfolio
2 divided by the total output of that portfolio, total
3 megawatt hours?

4 A. That's right. The clean energy
5 portfolio produces additional megawatt hours above
6 what Barry 8 produces and so the denominator of that
7 LCOE calculation is the total energy produced by the
8 CEP.

9 Q. And it produces a lot more megawatt hours
10 because there's a lot more capacity to do it, right?

11 A. That's right.

12 Q. Barry is, what, 1743 megawatts?

13 A. Correct.

14 Q. Do you know how many megawatts your clean
15 energy portfolio comprises?

16 A. I can't recall offhand but we can sum
17 some of these columns to arrive at that value.

18 Q. Would you accept, subject to check, it's
19 a little over 2600 megawatts?

20 A. Yes. And I'll just point out again
21 that that is because the capacity value given to
22 renewable resources is lower than the capacity value
23 given to thermal resources.

1 And we see oftentimes that because
2 these renewable resources have low to no variable
3 operating costs because there's no fuel costs
4 associated with them, the cost to both build and
5 operate a portfolio of renewable energy resources can
6 oftentimes be lower than the cost to build and operate
7 a terminal resource.

8 MR. MCCRARY: Your Honor, we can do
9 this all day but I believe that my question was fairly
10 specific and I believe we're getting a lot of color
11 commentary. Perhaps we could narrow that down just a
12 little bit.

13 ALJ GARNER: Let's keep it to an answer
14 to a question. If you need to give a reasonable
15 explanation, that's appropriate, but just a response
16 beyond that when there's not a question on the table,
17 we will be here all day.

18 THE WITNESS: Yes, sir.

19 Q. Now the next column we have here is
20 column E and it talks about a CEP net LCOE, does it not?

21 A. Yes.

22 Q. And that's the result of the cost of the
23 clean energy portfolio reduced by the excess energy

1 valued at your twenty dollars a megawatt in the
2 numerator, correct?

3 A. Correct.

4 Q. Divided by the output of its --
5 associated with Barry?

6 A. That's right. The previous true LCOE
7 changes the denominator and this net LCOE changes the
8 numerator.

9 Q. And then the last formulation you have is
10 BAU LCOE. That's an LCOE calculation for the Barry
11 unit, is it not?

12 A. That's correct.

13 Q. Cost of Barry in the numerator divided by
14 the assumed output at the 75 percent capacity factor?

15 A. Yes.

16 Q. All right. Now what you have depicted in
17 your bar chart in your testimony and also shown in this
18 exhibit, what you have shown as CEP, that's the result
19 of the column D calculation, is it not? What you refer
20 to as CEP true LCOE?

21 A. Yes.

22 Q. All right. And the one that's shown for
23 Barry is the result of column F, the BAU LCOE, correct?

1 A. Correct.

2 Q. But if I look at the RMI report that you
3 include in your testimony, RMI does not use your
4 so-called true LCOE, does it?

5 A. RMI uses the net value, yes.

6 Q. So even though you point to the RMI study
7 and you rely on the RMI study, you didn't follow the
8 methodology that RMI follows, correct?

9 A. That's correct. And it's correct in
10 certain instances. In other instances, I did follow
11 RMI's methodology.

12 Q. As to these bar charts, this bar chart
13 you have in your testimony is not the result of
14 following the cost comparison approach set forth in
15 RW-10, is it?

16 A. I did not use the net LCOE, so no.

17 Q. And again let's be careful about
18 confidential information but I see in column R there's
19 something called cost BAU CapEx?

20 A. I'm sorry. Let me -- this particular
21 document isn't labeled confidential. I don't know if
22 it should be confidential.

23 Q. I have intended the whole exhibit would

1 be confidential.

2 A. Okay. So I'm sorry. Column R?

3 Q. Yes.

4 A. Yes.

5 Q. And that's the value -- the cost shown
6 for the Barry unit, right, the CapEx value?

7 A. That's correct.

8 Q. In 2019 dollars?

9 A. In 2019 dollars escalated to 2023
10 dollars and discounted back to 2019.

11 Q. All right. And then when I look back at
12 page one of this same exhibit, I've got a dollar value
13 in column D, line 5 for Barry that also purports to be
14 the CapEx value for Barry in 2019 dollars, do I not?

15 A. That's correct. And we talked about
16 this earlier when I said that it was unclear to me
17 that the CapEx number was presented by Mr. Bush in
18 2023 dollars, and when you make that correction
19 because you do it in both the numerator and the
20 denominator, the net effect on the LCOE is zero.

21 Q. You're assuming, are you not, that that's
22 offset by the effect of the FOM and VOM values?

23 A. The same types of methodology -- the

1 same methodology was applied to those numbers, and
2 when I did that analysis in Excel, there was a net
3 effect of zero.

4 Q. All right. If you're incorrect about the
5 vintage year of the FOM and VOM values, then your
6 adjustment, your assumed zero effect would be incorrect?

7 A. Can you say that again?

8 Q. Sure. You've assumed that the FOM and
9 VOM values that are input here on the first page of this
10 exhibit are as of 2019, are you not?

11 A. They're in 2019 dollars in this exhibit
12 similar to the CapEx, yes.

13 Q. And if they are in fact 2023 dollars,
14 then your calculation is in error, is it not?

15 A. So those are all considered as --
16 capital and fixed operating costs would be taken
17 together, and when you apply -- when you make that
18 same adjustment to the variable O&M and you divide,
19 it's affecting both the numerator and the denominator.
20 So the net effect of that change to all of those costs
21 taken together is zero.

22 Q. The denominator has the megawatt hours in
23 it, doesn't it?

1 A. Yes, but that -- in order to determine
2 the total cost of the resource, then the variable
3 operating costs are applied to those megawatt hours
4 and escalated similarly as the fixed O&M in capital
5 expenditures.

6 Q. Yes, ma'am. But my question to you is if
7 the CapEx value and the FOM value and the VOM value all
8 reflect those costs in 2023 -- that's when the unit
9 would go into service, is it not?

10 A. That's correct.

11 Q. So if that -- if those costs are costs in
12 2023, then you have inappropriately entered a year of
13 2019, haven't you?

14 A. When I make the adjustment to 2023
15 dollars, the net effect is zero. I'm not sure how to
16 restate that.

17 Q. Okay. Let's look at the results of your
18 application of this tool in terms of total costs. Let's
19 look over -- I'm back on the -- the particular page I'm
20 looking at is tab one of nine.

21 A. Summary outputs, page 203?

22 Q. Yes.

23 A. Yes.

1 Q. So column M shows the total cost of your
2 clean energy portfolio?

3 A. That's correct.

4 Q. And column O shows your calculation of
5 the total cost of Barry?

6 A. Yes.

7 Q. And we may just have to agree to disagree
8 about the accuracy of what you entered there, but for
9 the sake of this discussion, we'll assume you've done it
10 right. Isn't it true that in every one of those
11 scenario runs you did, the total cost of the CEP is
12 higher than the total cost of Barry?

13 A. Yes.

14 Q. In some instances, by as much as 25
15 percent?

16 A. That seems right, yes.

17 Q. And isn't it also true if I look over in
18 column P at the capital cost only for your CEP portfolio
19 and compare that to the capital cost only for Barry, in
20 each and every one of those scenarios, your CEP has a
21 higher capital cost?

22 A. That's correct.

23 Q. Generally by a factor of three times?

1 A. Yes. And that's a result of the
2 additional capacity that's added in the CEP portfolio
3 as we discussed earlier.

4 Q. Looking down at column AV where it has
5 scenario energy discounted, that's the megawatt hours
6 for plant Barry in a PV statement -- in a present value
7 form, correct?

8 A. Well, I think as Mr. Looney mentioned
9 yesterday, you don't discount gigawatt hours but
10 that's the number of megawatt hours or gigawatt hours,
11 yes.

12 Q. Okay. It says discounted?

13 A. In financial terms. So their discount
14 refers to something other than taking a net present
15 value of gigawatt hours.

16 Q. All right. We discussed that in your
17 deposition. You said it's discounted some other way,
18 not according to the discount rate used in the model but
19 you just don't know what it is?

20 A. That's right.

21 Q. Okay. Be that as it may, they are the
22 same -- it's the same amount of energy shown in each and
23 every one of those scenarios --

1 A. That's correct.

2 Q. -- for plant Barry?

3 A. Yes.

4 Q. Except -- but Barry is a dispatchable
5 unit, is it not?

6 A. That's right.

7 Q. Right. And one of your scenarios is even
8 a high gas scenario?

9 A. Yes.

10 Q. And so that would suggest a higher cost,
11 higher fuel cost for plant Barry?

12 A. That's right.

13 Q. And all things equal, wouldn't you expect
14 plant Barry to respond to a higher gas cost by having a
15 reduced output?

16 A. All things equal, yes, but as was
17 stated yesterday, Barry 8 would be the most efficient
18 gas unit in Alabama Power's generating portfolio and
19 so there are other gas units that could potentially
20 back off first and that's -- the operation of gas
21 plants is also relative to the cost to operate other
22 plants in the system. So it would also depend on how
23 that gas cost related to coal costs at each of the

1 units.

2 Q. Right. I'm glad we're able to talk now
3 about displaced generation because earlier when we were
4 talking about CO2 emissions net versus gross, we had a
5 hard time coming to grips with the possibility that
6 these efficient gas-fired units might displace other
7 higher-emitting resources but that's what you're
8 referring to now is displacing energy from other
9 resources?

10 A. Yes, and I wouldn't have classified our
11 conversation that way. I just simply didn't estimate
12 displacement and it can be hard to tell offhand
13 without doing an actual production cost.

14 Q. Be that as it -- I'm sorry. I didn't
15 mean to interrupt you.

16 A. No.

17 Q. Be that as it may, this tool, this LCOE
18 tool denies the Barry 8 unit the opportunity to respond
19 as a dispatchable unit would respond?

20 A. That's correct. This isn't a dispatch
21 analysis so it doesn't adjust the output of the Barry
22 8 unit based on fuel cost or a price on CO2 emission.

23 Q. Let's turn to the next page of the

1 outputs. I have a few questions about the selection
2 that your tool made of various so-called clean energy
3 options.

4 A. Okay.

5 Q. Are you with me? This is page 3 of 3 on
6 tab one.

7 A. Yes.

8 Q. All right. So I see that there are 1193
9 megawatts of solar selected, right?

10 A. Yes.

11 Q. That's --

12 A. That's column BH.

13 Q. Column BH.

14 A. Yes.

15 Q. Thank you. And that's stand-alone solar,
16 right?

17 A. That's correct.

18 Q. You understand that this certification is
19 for resources to deal with a winter reliability need?

20 A. That's right.

21 Q. And I think we agreed earlier that
22 stand-alone solar doesn't do much for a winter
23 reliability need. Didn't we agree on that?

1 A. For that morning peak, yes.

2 Q. And you are planning to meet the peak,
3 are you not?

4 A. I believe we've also discussed that the
5 RMI tool meets the top 50 hours for peak demands in
6 its calculation.

7 Q. Okay. And then I also see that there's
8 some wind. It shows some wind here, 317 megawatts of
9 wind?

10 A. In some cases, yes.

11 Q. Right. And 39 megawatts of that wind in
12 column BR, that's from domestic wind? That's like from
13 Alabama Power service territory?

14 A. I can't recall. We talked about the --
15 I'm not sure. There is a transmission adder that gets
16 applied if it takes it from out of a utility service
17 territory or out of state.

18 Q. Right. But there's three different kinds
19 of wind here in this tool. Under BR, there's wind, BS,
20 there's offshore wind, and BT, there's imported wind,
21 correct?

22 A. That's right. Yes.

23 Q. So BR, do you understand that to be local

1 wind?

2 A. Yes, it would appear so.

3 Q. All right. Where would local wind be
4 sited in Alabama?

5 A. I don't know the answer to that but
6 RMI's tool does take into account regional -- regional
7 costs and capacity factors for wind. In column three,
8 which is the portfolio that I discuss in detail,
9 there's no wind shown. Sorry. Which is the fifty
10 percent DSM CEP case.

11 Q. Because the tool assumes -- the base
12 assumption is that 25 percent of the capacity required
13 by the Barry unit would be met with DSM, correct?

14 A. That's right.

15 Q. And that assumption is fulfilled
16 regardless of cost effectiveness measures that might be
17 in place by this commission?

18 A. That's right.

19 Q. All right. Then in column BT, I see
20 there's a lot of imported wind that the tool has
21 selected?

22 A. There's some imported wind, yes.

23 Q. Okay. 278 megawatts in all but one of

1 the scenarios?

2 A. Yes. And the one scenario that doesn't
3 have 278 megawatts is that 50 percent DSM case.

4 Q. Right. And we discussed earlier that
5 Alabama Power actually solicited from the market wind
6 proposals and received none?

7 A. That's right.

8 Q. And then in column BU, this is energy
9 storage, right?

10 A. Yes.

11 Q. And that's a one hour battery?

12 A. That column is one hour, yes.

13 Q. Right. But that's not paired with solar,
14 is it? That's just stand-alone battery?

15 A. Yes, the RMI will tool doesn't have --
16 doesn't utilize a paired resource as part of its
17 portfolio from which it can choose.

18 Q. All right. So that wouldn't even be like
19 the battery solar combinations that are included in the
20 portfolio put forth here today? This is something
21 different?

22 A. That's right. And there are some
23 improved economics with those paired resources.

1 Q. And then just looking down at column CN,
2 that's residential water heating. That's one of the
3 energy efficiency choices that the tool made?

4 A. Yes.

5 Q. Is that like a direct load control for
6 residential water heating?

7 A. It says DR which indicates to me demand
8 response so I would think so but I'm not certain.

9 Q. All right. And so the tool assumes that
10 we can get 422 megawatts of capacity by turning off
11 residential customer's water heaters to meet a winter
12 load?

13 A. No. It assumes that you can use this
14 residential water heating demand response measure to
15 meet the top 50 hours. It's not necessarily -- not
16 all of those hours in this tool occur in the winter.

17 Q. Okay. But be that as it may, if I add up
18 all of the solar, the wind, the energy storage, the
19 energy -- all the things that this tool chose, I would
20 get, subject to check, 2602 megawatts of capacity, would
21 I not?

22 A. Yes. I think we've already agreed on
23 the number.

1 Q. Okay. Let's look at the next couple of
2 pages in Exhibit 45.

3 A. We're on to a new staple, right?

4 Q. Yes, ma'am.

5 A. Okay.

6 Q. This is tab 2 of 9, BAX down at the
7 bottom.

8 A. Yes.

9 Q. All right. And this -- we've been
10 wanting to talk about the top 50 hours. This page has
11 the top 50 hours, does it not?

12 A. It does.

13 Q. All right. In fact, the top 50 hours
14 start on line 15 and carry over to line 64, correct?

15 A. Yes.

16 Q. All right. And we've already agreed that
17 this is not the result of FERC form 714 data because you
18 got an error when you tried to use that. It's drawn
19 from something called Reinventing Fire?

20 A. That's right.

21 Q. What is Reinventing Fire?

22 A. It is another RMI publication.

23 Q. When was Reinventing Fire published?

1 A. Offhand I can't recall but sometime
2 earlier in the decade.

3 Q. Like in the 2011 time frame?

4 A. I'd accept that.

5 Q. How did Reinventing Fire come up with
6 loads for Alabama Power in 2020?

7 A. I don't know the specifics of that
8 analysis or study.

9 Q. Okay. All right. Well, just -- we'll
10 just skip past that issue. Let's look at the column D.
11 Column D, these are the top 50 hours that the CEP is
12 going to take care of, right?

13 A. Starting on row 15.

14 Q. Right. And would you just scan down that
15 list -- it won't take long -- and identify for me the
16 winter hours chosen by this tool?

17 A. I see June, July, and August so there
18 would be no winter hours chosen.

19 Q. So the tool picks the top 50 load hours.
20 We're here to deal with a winter reliability issue and
21 the top 50 load hours selected and run through your
22 model are all in the summer?

23 A. That's right. If the data are from the

1 2011 as we have agreed that they are, then that
2 reflects a summer peak for Alabama Power as opposed to
3 a recent shift to a winter peak.

4 MR. MCCRARY: Your Honor, can I have
5 just a moment?

6 ALJ GARNER: Sure.

7 MR. MCCRARY: Thank you, Your Honor.

8 Q. Ms. Wilson, on page 21 of your testimony,
9 you seem to suggest that gas-fired units are potentially
10 exposed to gas transportation risks, do you not?

11 A. They can be, yes.

12 Q. Are you familiar with Southern Company's
13 fuel policy and how it is applied to combined cycle
14 units like those in the portfolio to address that risk?

15 A. I'm not familiar with that policy.

16 Q. You reference Gadsden units 1 and 2 and
17 you say -- this is on page 21, lines 4 through 6. You
18 say that Alabama Power has already experienced issues
19 around winter gas supply in the operation of its units
20 and you talk about gas transportation related to those
21 units?

22 A. That's right.

23 Q. I think we learned in your deposition

1 that you are not familiar with the manner in which
2 pipeline expansion costs are passed along to pipeline
3 customers, correct?

4 A. I am not.

5 Q. So you wouldn't know, for example, if --
6 withdraw that. So if Alabama Power wanted firm gas
7 transportation to these units, it may well be it can be
8 obtained. It just might be obtained at a cost that
9 doesn't make sense?

10 A. It's possible.

11 Q. Are you -- so you talk about gas
12 transportation risk for combined cycle. Are you aware
13 of any risk or challenges that might apply to ongoing
14 reliance on renewables?

15 A. Can you give me an example of what you
16 mean?

17 Q. No. I'm asking for an example. I mean
18 this is a risk you say attaches to gas-fired generation
19 and we can discuss ways that that's mitigated and
20 whether that's a reasonable concern but I'm asking you
21 are you aware of any challenges or risks that might
22 attach somewhat uniquely to renewable resources in terms
23 of relying on them going forward?

1 A. Well, they wouldn't have any fuel cost
2 risk because they don't have a fuel associated with
3 them. I suppose one potential risk could be tariffs,
4 increasing tariffs on renewables coming from overseas,
5 which is one of the policies of the current
6 administration. That's one that comes to mind
7 immediately.

8 Q. Okay. Having given this some thought, I
9 wanted to run a few ideas past you and let me know what
10 you think of them as far as sort of the risk that might
11 attach to renewable resources somewhat uniquely. Would
12 you consider landowner reaction to -- withdraw that.
13 How many acres of land is required roughly for a
14 megawatt of solar capacity?

15 A. I don't have that number off the top of
16 my head.

17 Q. Would you accept, subject to check, it's
18 something on the order of seven to ten acres?

19 A. Yes.

20 Q. So a large solar project is going to
21 consume a large amount of land, correct?

22 A. It could.

23 Q. And are you aware of any reaction that

1 seems to be growing in the country to local opposition
2 to having the land used in that way?

3 A. I think there can be local opposition
4 for all types of generators. You know, NIMBY, not in
5 my backyard, is a term that's been in the
6 environmental community with respect to power
7 generators for years. However, I think in Georgia in
8 the recent IRP case, there was interest for rural
9 communities in siting solar in those communities
10 because of additional income that those solar
11 generators provided and there are distributionable
12 benefits to having solar sited at different places on
13 the grid versus one large central generator like Barry
14 Unit 8.

15 Q. Okay. Let me show you this article that
16 I found that speaks to that issue.

17 ALJ GARNER: I take it you want this
18 marked?

19 MR. MCCRARY: Yes, sir, please.

20 ALJ GARNER: It will be marked as Alabama
21 Power Exhibit 46.

22 Q. And this is just an example of an article
23 that I've seen. This one is entitled -- this one is

1 dated March 10, 2020. Angry U.S. landowners are killing
2 off renewable energy projects. And, you know, the
3 article speaks for itself, but on the second page,
4 there's a particularly clear statement.

5 It says the conflict stems from the
6 vacant land myth, the notion that there's plenty of
7 unused land out there in flyover country that's ready
8 and waiting to be covered with wind turbines, solar
9 panels, power lines and other infrastructure. Do you
10 see that?

11 A. I do.

12 Q. Would you please consider -- oh, and this
13 talks about protests that are happening in New York and
14 New England over wind turbines, I think, being put up in
15 their area. Even protests in Germany about it, it says
16 on the next page. Are you aware of this kind of
17 opposition that might be growing to those types of
18 facilities?

19 A. So this article mentions a proposed
20 northern pass transmission line which I was familiar
21 with which would bring hydropower from Canada to New
22 England. I haven't heard about these wind protests
23 but I will note, as you said, this article cites New

1 York and New England and the penetration of wind and
2 solar resources is higher than it is here and so a lot
3 of the best sites are already developed in those
4 regions -- in that region.

5 Q. Okay. If you know, where are a lot of
6 the component parts for solar facilities produced? Is
7 there kind of a dominant source?

8 A. I'm not sure of the answer to that.

9 Q. Do a lot of the -- does a lot of the
10 supply chain emanate out of China?

11 A. It has in the past and I'm not sure how
12 those tariffs I mentioned earlier have changed that or
13 if they have.

14 Q. All right. So just sort of a timely
15 concern, reliance on China for the production of key
16 components. Here's an article that I ran across that
17 says the solar sector is suffering from coronavirus
18 contagion, and while we can hope that the coronavirus
19 won't be with us for an extended period of time, it does
20 kind of highlight the supply chain issue of relying on
21 China as a source of -- a key source of component parts,
22 does it not?

23 A. Yes, that's true. And it also -- I

1 mean the first line of this references the fallout
2 from the coronavirus outbreak on global oil demand and
3 there are manufacturing components that also go into
4 the construction of new thermal resources. There may
5 be similar sourcing issues related to those as well.
6 I don't know.

7 Q. All right. The favorable pricing that
8 you identify for a lot of the renewable resources,
9 particularly the solar, that's a product of them being
10 produced at a low cost in China, isn't that true?

11 A. Yes, generally.

12 ALJ GARNER: And by the way, that is
13 marked Alabama Power Exhibit 47, that article.

14 MR. MCCRARY: Yes, sir, Your Honor.

15 Q. And lest we think there is only one out
16 there, here's another one and maybe we can include this
17 in the same exhibit since it touches on the same topic.
18 This one is called Wisconsin solar installations delayed
19 because of coronavirus. Minnesota developers worried.
20 Makes the same point, does it not, Ms. Wilson?

21 ALJ GARNER: While she's contemplating
22 that, I'm going to need to give her a break in a minute.

23 MR. MCCRARY: Sure.

1 ALJ GARNER: Are we close to a break
2 point?

3 MR. MCCRARY: I may be within fifteen
4 minutes of being finished if that matters subject to
5 her --

6 THE WITNESS: I'm happy to go on if --

7 ALJ GARNER: You're okay?

8 THE WITNESS: Yeah, that's fine.

9 A. Yes, this article does make that same
10 point.

11 Q. And in a similar vein, I think one of the
12 work papers that we were provided and I think you were
13 listed as a sponsor was a Department of Energy
14 publication that says State of Alabama energy sector
15 risk profile. Do you recall that?

16 A. I don't.

17 Q. Here. Maybe this will refresh.

18 A. Thank you.

19 ALJ GARNER: It's a separate exhibit?

20 MR. MCCRARY: Yes, sir.

21 ALJ GARNER: This will be Alabama Power
22 48.

23 Q. Do you recall this document being among

1 those produced by Sierra Club?

2 A. No, I don't. I don't use this document
3 in my testimony.

4 Q. Okay. Well, really there is only one
5 thing I wanted to draw your attention to. On the front
6 page on the right side, there's a chart that says
7 annualized property loss due to natural hazards in
8 Alabama. Do you see that?

9 A. I do.

10 Q. And what's the number one cause of
11 property loss in Alabama?

12 A. Tornado.

13 Q. Right. Being from Massachusetts, have
14 you ever heard us referred to as Tornado Alley? And
15 we're not proud of it but it's a fact.

16 A. I've heard the term Tornado Alley. I'm
17 not sure I realized that it was in reference to
18 Alabama.

19 Q. Right. Unfortunately we have a lot of
20 tornadoes as evidenced by this bar chart showing a lot
21 of damage caused by tornadoes?

22 A. I see that.

23 Q. In fact, it's five times the second place

1 cause which is flooding, right?

2 A. In terms of damages, that's true. It
3 looks like annual frequency of tornadoes is fourth on
4 the list.

5 Q. Right. Do you think a solar array, acres
6 and acres of solar panels would fair well in a tornado?

7 A. Probably not.

8 Q. Right. Lest people think we are picking
9 on solar, I found another article that I think maybe we
10 could talk about similarly as it relates to wind.

11 ALJ GARNER: You're quite the reader.

12 A. You also -- you gave me two. Should I
13 hang on to this one?

14 MR. MCCRARY: Yes, two articles.

15 ALJ GARNER: Same exhibit?

16 MR. MCCRARY: Yes, sir.

17 ALJ GARNER: It will be Alabama Power 49.

18 Q. And this one is about --

19 A. Sorry. We're looking at Bloomberg
20 Green?

21 Q. That's fine. We will put that one first.
22 Both of these kind of go to the same point and it speaks
23 of the landfill issue, the growing landfill issue that's

1 associated with wind turbine blades that can't be
2 recycled. Were you familiar with that risk?

3 A. No, I was not.

4 Q. And turning back to really a number of
5 different renewable technologies, let me draw your
6 attention to this article --

7 ALJ GARNER: Alabama Power 50.

8 MR. MCCRARY: Yes, sir. Thank you.

9 Q. -- that speaks to the need for rare earth
10 elements and their critical role in everything from
11 solar panels to wind turbines to electric cars and
12 consumer electronics. Do you see that?

13 A. I do see that.

14 Q. Were you aware of that dependence of the
15 renewable industry on rare earth elements?

16 A. Generally, yes.

17 Q. Do you happen to know where most of the
18 rare earth elements come from currently?

19 A. I could make a guess but I couldn't say
20 for certain.

21 Q. Right. If we look over on page 4 of 13,
22 at least that's how it's numbered here --

23 MS. CSANK: Respectfully, Your Honor, I'm

1 going to interject with an objection. I've allowed this
2 for some time now but repeatedly Mr. McCrary keeps
3 introducing documents that are hearsay and the witness
4 identifies that she's never seen them before and then
5 proceeds to ask a bunch of questions asking her to
6 speculate about them. I don't see the value from an
7 evidentiary prospective of proceeding this way.

8 ALJ GARNER: I will allow him to
9 continue. I do hope he's kind of winding down with
10 that.

11 MR. MCCRARY: Yes, sir, I am.

12 Q. This article says that rare earth mining
13 is massively concentrated in just a few countries,
14 particularly China which dominates 80 percent of the
15 mining and nearly 95 percent of the refining. Do you
16 see that?

17 A. I do.

18 Q. Would you consider China to be a
19 particularly favorable country vis-à-vis the United
20 States?

21 MS. CSANK: Objection.

22 MR. MCCRARY: I'll withdraw that
23 question.

1 ALJ GARNER: All right.

2 Q. And you see on page two of this article,
3 it says that according to a study done by the Dutch
4 Ministry of Infrastructure, global production of several
5 rare earth minerals used in solar panels and wind
6 turbines especially -- and I'll never be able to say
7 this -- neodymium, terbium -- do you know these words?

8 A. I'm not familiar with these words, no.

9 Q. Indium, dysprosium.

10 MS. CSANK: Your Honor, she just said
11 she's not familiar with these terms.

12 MR. MCCRARY: I'm just trying to --

13 ALJ GARNER: Let's move on.

14 MR. MCCRARY: All right.

15 Q. Must grow twelve fold by 2050. Do you
16 see that?

17 A. I do.

18 Q. All right.

19 A. The first page also mentions that we
20 don't recycle them currently but I don't know if it
21 says anywhere if that's -- if there's a potential for
22 that or not.

23 Q. Right. Well, that's a good point and --

1 MR. MCCRARY: This is my last article,
2 Your Honor.

3 Q. Here's another one that maybe can join
4 that exhibit. This is called -- this is from Yale
5 Environmental and Yale Environment 360. A scarcity of
6 rare metals is hindering green technologies.

7 ALJ GARNER: And let's be clear. You're
8 not introducing these to prove a particular point
9 represented in the articles.

10 MR. MCCRARY: No, sir. I am however --

11 ALJ GARNER: You want this one attached
12 to the last article?

13 MR. MCCRARY: Yes, sir.

14 ALJ GARNER: So this is part of 50.

15 Q. And this one does -- it makes much of the
16 same point of the rare earth elements that are
17 essential, but as to your recycling point, on the third
18 page, it says recycling is a menial but intricate task
19 that's often handed over to low paid workers in places
20 like China or Nigeria?

21 MS. CSANK: Your Honor, may I just ask --
22 launch an objection, ask Mr. McCrary if he's not
23 speaking to prove the facts, it's unclear that this

1 line -- what he's seeking to do with the hearsay.

2 ALJ GARNER: I would like to wrap that up
3 so give a response and I think we should probably move
4 on.

5 MR. MCCRARY: Well, Your Honor, the
6 points is, I think, pretty obvious. There are risks
7 that attach to every technology and this witness has
8 spoken of some of the risks that attach to conventional
9 generation such as combined cycle and I'm simply
10 demonstrating that there are risks that attach to other
11 forms of generation as well. Nothing is riskless.

12 THE WITNESS: That's true but I would
13 also like to point out that we are in a time period of
14 tremendous change and innovation with respect to both
15 renewable technologies and storage technologies and so,
16 you know, while these may in fact be risks that
17 currently exist, it's not necessarily true that these
18 are risks that will always exist.

19 Q. That's true. Technology will presumably
20 advance, correct?

21 A. I would think so.

22 Q. All right. And it may advance, for
23 example, in areas of carbon capture, correct?

1 A. It's possible.

2 Q. And it could advance, for example, with
3 turbines that are able to burn hydrogen, correct?

4 A. That's possible though not costless.

5 MR. MCCRARY: Your Honor, that's all I
6 have.

7 ALJ GARNER: All right.

8 MR. MCCRARY: Thank you, Ms. Wilson.

9 THE WITNESS: Thank you.

10 ALJ GARNER: Any redirect?

11 MS. CSANK: Yes, Your Honor. Just
12 briefly.

13 ALJ GARNER: Are you still okay, Ms.
14 Wilson?

15 THE WITNESS: I'm fine. Thank you.

16 REDIRECT EXAMINATION

17 BY MS. CSANK:

18 Q. Ms. Wilson, could you please remind us
19 what was the nature and purpose of your testimony on
20 risk related to resources?

21 A. It was simply to point out some of the
22 risks that are associated with new and existing gas
23 units that Alabama Power didn't take into

1 consideration in its analysis.

2 Q. And with respect to your testimony
3 concerning risks associated with the proposed gas units,
4 please remind us what is the magnitude of those units as
5 compared to the solar battery projects in the petition?

6 A. There were 340 megawatts -- let me just
7 confirm that number -- 340 megawatts of solar and
8 storage projects proposed here and then 1896 megawatts
9 of gas resources proposed.

10 Q. And did you, in your review for the
11 purpose of this case, see the company do an analysis of
12 risk associated with those various resources?

13 A. Of those gas resources you mean? No, I
14 didn't see such an analysis.

15 Q. And with respect to specifically those
16 climate damages, do you recall discussing that with Mr.
17 McCrary?

18 A. I do.

19 Q. And what was the again sort of takeaway
20 for this commission concerning that testimony?

21 A. That takeaway is that there are
22 estimates of the dollar value associated with CO2
23 emissions and how that translates into climate

1 damages. Alabama Power didn't consider that in its
2 analysis and I provide one such estimate for the
3 commission to consider.

4 Q. And what about those values that Mr.
5 McCrary showed to you from the current administration?

6 A. Alabama Power did not consider those
7 values in its analysis either.

8 Q. So what value did it assign, if any?

9 A. Alabama Power didn't assign a value and
10 therefore the assumption is that that value is zero.

11 Q. So I believe at some point, Mr. McCrary
12 asked you about whether -- and I honestly didn't hear
13 the question and answer. It was a question about
14 whether LCOE is an appropriate basis for a resource
15 decision. Do you recall that?

16 A. I do generally.

17 Q. Could you remind us what the question was
18 and what your answer was, whether was it the sole basis
19 or any basis? Do you recall?

20 A. I don't recall exactly what the
21 question was but my response is that an LCOE analysis
22 is part of a -- part of a -- it's a tool and it is one
23 of the tools that a company would have at its disposal

1 in doing this type of analysis.

2 A handyman uses a tool. He has an
3 entire toolbox of things that he would bring to a
4 project. Southern Company similarly is one of the
5 largest utilities in the United States and should have
6 quite a sophisticated toolbox to be able to analyze a
7 resource portfolio and its effects on both peak
8 demand, annual energy, and things like CO2 emissions;
9 however, it's my opinion that Southern Company chose
10 to deploy a limited set of tools to examine its
11 analysis and didn't include any sort of analysis
12 related to alternative resource portfolios.

13 What it did do in its analysis is
14 seemingly to assign the most value to resources that
15 have longer useful lives. The company examined a
16 range of PPA options as well as the purchase of
17 Central Alabama Generating Station and the soft build
18 of Barry 8. Those three resources were the longest
19 lived assets in the range of thermal alternatives that
20 the company was considering.

21 There is an adjustment factor that
22 Alabama Power used in order to look at the benefit of
23 not having to construct a CT further in time which

1 penalizes some of those shorter duration thermal
2 resources relative to the construction of Barry 8, the
3 acquisition of Central Alabama Generating Station or
4 the PPA with Hog Bayou.

5 So it seems to me that the company is
6 willing to back ratepayer money that it can build a CC
7 that's going to last 40 years rather than assuming
8 some -- or rather than persuing rather some of these
9 shorter term resource options that can meet its
10 projected peak in the 2023-2024 period and preserve
11 some of that option value relative to the construction
12 of a new natural gas combined cycle unit.

13 Q. And I think related to this shorter term
14 set of options that you just referred to you received
15 some questions from Mr. McCrary about the IIC, the
16 intercompany interchange contract. Do you recall that?

17 A. I do.

18 Q. Do you have any other basis for your
19 opinion that the company should re-examine and examine
20 further its short-term resource procurement options?

21 A. I do. And I'm going to refer to my
22 Exhibit 6 which is the order adopting the stipulation
23 in the Georgia Power 2019 IRP case. And on page six

1 of that document, the commission states that part of
2 its role in ruling on Georgia Power's IRP is that the
3 commission must determine whether the plan adequately
4 demonstrates the economic and environmental benefits
5 to the state and customers of the utilities associated
6 with the following possible measures and sources of
7 supply.

8 A, improvements in energy efficiency.
9 B, pooling of power. C, purchases of power from
10 neighboring states. D, facilities that operate on
11 alternative sources of energy. E, facilities that
12 operate on the principle of cogeneration or hydro
13 generation and, F, other generation facilities and
14 demand side options.

15 Q. And in terms of your overarching
16 recommendations on resource planning, best practices,
17 what government authorities can you point to that have,
18 for example, asked you to make presentations on such
19 practices?

20 A. So --

21 MR. MCCRARY: Excuse me, Your Honor. If
22 I might object, I didn't ask a single question about
23 best IRP practices, nothing of that sort. I don't think

1 this is appropriate redirect.

2 MS. CSANK: Your Honor, may I reply?

3 ALJ GARNER: Yes. I'll hear what you
4 have to say before I rule. Go ahead.

5 MS. CSANK: Mr. McCrary began a line with
6 flawed inputs, flawed outputs and methodology. That was
7 all about the appropriate practices in this context and
8 integrated resource planning so that clearly opened the
9 door to this line of questioning, which I will keep very
10 brief.

11 ALJ GARNER: Keep it very brief because I
12 really do think you're pushing the limits and I don't
13 want to hear something that sounds more like a scripted
14 response that's already been set up as opposed to
15 something you're truly delving into on redirect. So
16 let's keep it brief.

17 A. I'm a faculty member at the Institute
18 of Public Utilities, Michigan State University and
19 have presented on the integrated resource planning for
20 the past three years. I've also pretty recently given
21 that training to the Washington Attorney General's
22 Office on integrated resource planning.

23 Q. Are your presentations available online?

1 A. I don't know quite the answer to that.
2 Some of them might be but not all of them.
3 Potentially not the most recent ones.

4 MS. CSANK: Your Honor, for the benefit
5 of the record, there is at least one presentation
6 that's here Sierra Club has available, and if it would
7 be helpful for the record, we will gladly provide it.

8 ALJ GARNER: You can give me the cite.
9 Do you have the cite? This is pretty unusual for
10 redirect.

11 MS. CSANK: Your Honor, it's a February
12 2019 presentation titled Integrated Resource Planning
13 and Washington Rules and Best Practices and Emerging
14 Issues prepared for Washington State Office of the
15 Attorney General.

16 ALJ GARNER: All right.

17 Q. Ms. Wilson, at some point, I believe you
18 stated that in your clean energy portfolio analysis at
19 times you applied the Rocky Mountain Institute
20 methodology and other times you did not. Do you have
21 any further explanation of that?

22 A. I reviewed RMI's assumptions and
23 adjusted those that I thought were reasonable to

1 adjust in this docket.

2 Q. And in terms of a whole variety of issues
3 that Mr. McCrary was pointing you to through these
4 articles that he handed out, what kind of market test
5 could the company use to identify or verify whether
6 these types of issues are in fact present here in the
7 market for resources available to it?

8 A. An RFP would certainly be such a market
9 test.

10 MS. CSANK: No further questions.

11 ALJ GARNER: Thank you, Ms. Wilson. You
12 are excused.

13 THE WITNESS: Thank you, Your Honor.

14 ALJ GARNER: Let's deal with the
15 exhibits. We have Alabama Power 41 through 50.
16 Objections other than those already noted, Ms. Csank?

17 MS. CSANK: Yes, Your Honor.

18 ALJ GARNER: Any objection to the
19 admission of Alabama Power Exhibits 41 through 50?

20 MS. CSANK: I think I stated my objection
21 to these --

22 ALJ GARNER: The articles?

23 MS. CSANK: -- these articles and

1 preserve those for the record, Your Honor.

2 ALJ GARNER: So you want to make sure the
3 record notes your objections to 46 through 50 which is
4 all the articles --

5 MS. CSANK: Yes, sir.

6 ALJ GARNER: I'm going to go ahead and
7 admit them but with your objections noted.

8 MS. CSANK: Thank you, Your Honor.

9 ALJ GARNER: Alabama Power 41 through 50
10 are admitted as is Ms. Wilson's prefiled testimony and
11 exhibits.

12 MS. CSANK: Thank you, Your Honor.

13 ALJ GARNER: All right. Who is the next
14 witness? Is that Mr. Detsky? Let's take --

15 MS. CSANK: If I may, I personally need a
16 brief break.

17 ALJ GARNER: Let's take about a ten
18 minute break and we will come back.

19 (Brief recess.)

20 ALJ GARNER: For the record, we are ready
21 for the testimony of Mr. Detsky. I'm going to swear him
22 and then we will proceed.

23 MARK DETSKY,

1 having been first duly sworn, was examined and testified
2 as follows:

3 DIRECT EXAMINATION

4 BY MS. CSANK:

5 Q. Good afternoon. Please state your name
6 for the record.

7 A. My name is Mark Detsky.

8 Q. Where and by whom are you employed?

9 A. I'm employed with Dietze and Davis,
10 P.C., Boulder, Colorado.

11 Q. Did you cause to be -- and on whose
12 behalf are you testifying in this case?

13 A. On behalf of the Sierra Club.

14 Q. Did you cause to be filed testimony and
15 exhibits in this case?

16 A. I did.

17 Q. And did you have any errata to that
18 testimony?

19 A. I did. That was filed previously.

20 Q. And subject to that errata if I were to
21 ask you the same questions today, would your answers
22 remain the same?

23 A. Yes, they would.

1 Q. And have you prepared a short summary?

2 A. I have.

3 Q. Would you please state that now?

4 A. Thank you, Your Honor. Commissioners.

5 I have three points to summarize my testimony. First,
6 the company's IRP base case put its thumb on the scale
7 in terms of the company's approach to the market in
8 three ways.

9 First, by manipulation of the model by
10 precluding the model from even considering renewable
11 energy technologies in its base case. It then used
12 this result of that base case to determine its
13 capacity need and its capacity RFP. And then third,
14 it based its bid evaluation on the base case output by
15 comparing that with individual bids.

16 Secondly, an all source IRP was not
17 conducted. By all source, I refer to more than just
18 the RFP but the bid evaluation process. Strategist is
19 the model used by Alabama Power and centers on PROVIEW
20 which is a modeling tool that optimizes for creating
21 least cost portfolios based on bids that are submitted
22 by running scenarios but Alabama Power did not use
23 this function of their own model to evaluate bids and

1 provide alternative portfolios.

2 Analyses of bids were conducted on a
3 one-off basis. Here the model did not do its job so
4 we don't know what the true best mix of resources is
5 to meet the capacity and the energy needs of the
6 system.

7 My recommendation is to integrate the
8 company's planned and ordered renewable RFP which is
9 set to take place this year according to the RGC
10 docket 32382 which has not been factored into its IRP
11 and then to defer the acquisition of the Central
12 Alabama plant which is the most expensive least
13 efficient gas unit proposed.

14 The transaction is not intended to
15 close until later this year. That transaction should
16 be deferred in order to analyze the results of
17 resources that are bid into the renewable RFP and the
18 acquisition can be decided upon at that time.

19 The RFP conducted later this year
20 should be expanded to allow the capacity of bids
21 greater than 80 megawatts and to allow bids to
22 interconnect to the Southern system as opposed to the
23 Alabama transmission system only. This will let the

1 market decide the best choice for Alabama Power
2 ratepayers.

3 Going forward, I recommend that the RGC
4 in Docket 32382 be extended for another six years and
5 that all source bid evaluation bid process be acquired
6 in the next IRP.

7 MS. CSANK: Your Honor, we would move for
8 Mr. Detsky's prefiled testimony and exhibits to be
9 entered into the record.

10 ALJ GARNER: Mr. Detsky's prefiled
11 testimony and exhibits will be entered into the record
12 subject to cross-examination.

13 MS. CSANK: We tender the witness for
14 cross-examination at this time.

15 ALJ GARNER: Cross-examination from the
16 intervenors? Seeing none. Alabama Power.

17 MR. GROVER: Thank you, Your Honor.

18 CROSS-EXAMINATION

19 BY MR. GROVER:

20 Q. Mr. Detsky, how are you?

21 A. Good.

22 Q. Good. I'm Scott Grover. We met before
23 in Boulder at your deposition. In a reversal of trend,

1 you are a lawyer?

2 A. That is correct.

3 Q. And you are however only licensed in the
4 state of Colorado, correct?

5 A. That is correct.

6 Q. Okay. And you were licensed there in
7 2003, correct?

8 A. Yes, sir.

9 Q. Okay. And that being the case, you are
10 not here as Sierra Club's lawyer, correct?

11 A. That's correct.

12 Q. Your engagement by Sierra Club was to
13 review the IRP and form opinions about the IRP and the
14 RFPs that were conducted in the fall time frame of 2019,
15 correct, by Alabama Power?

16 A. I was engaged in the fall of 2019. Is
17 that what you're referring to?

18 Q. You were engaged and that was to form
19 opinions on the IRP and the RFPs that were conducted,
20 correct?

21 A. Yes, sir.

22 Q. Okay. Thank you. And earlier in -- and
23 just for point of reference, that took place, like I

1 said, in the fall of 2019. Sorry. It's been a long
2 week. So earlier in 2019, you were engaged by the
3 Southern Alliance for Clean Energy and the Southern
4 Renewable Energy Association to give testimony in
5 connection with the Georgia IRP proceeding, correct?

6 A. Georgia Power, yes.

7 Q. Georgia Power. Thank you very much. And
8 in that case, your opinions -- when was that delivered?
9 Was that in the spring of 2019?

10 A. The hearing was held in May of 2019.

11 Q. Okay. Spring. And your opinions there,
12 if I recall from your deposition, were largely identical
13 to those here save the distinction being that Alabama
14 Power has performed RFPs already while Georgia Power had
15 not yet performed any such IRP?

16 A. There's some overlap, yes.

17 Q. Yes. I mean but I recall there not being
18 a whole lot of distinction between the two other than
19 the timing of the RFPs in that Alabama Power has
20 performed its and Georgia had not performed its?

21 A. The major similarity being Georgia
22 Power used a similar screening method in its base
23 case.

1 Q. Right. Not trying to compare Georgia
2 Power and Alabama Power in that context. Rather your
3 opinions there versus your opinions here. The overlap
4 was largely the same except insofar as you're opining on
5 RFFs that have been performed rather than RFPs that have
6 not yet been performed?

7 A. In the Georgia Power case, they were
8 also considering whether or not to retire the plant
9 Bowen units and so there was some different opinions
10 around that. The opinions that were similar were on
11 the subject of conducting an all source RFP.

12 Q. Correct. Thank you. And as I understand
13 your testimony as informed by our deposition, the sort
14 of described basis for your expertise is your
15 representation of independent power producers in
16 connection with proceedings before the Colorado Public
17 Service Commission, correct?

18 A. In terms of my experience in other
19 resource planning?

20 Q. The experience you would bring to bear to
21 this commission respecting Alabama Power's petition
22 derives from your experience in proceedings before the
23 Colorado Public Service Commission?

1 A. I have in the last two or three ERP
2 cycles of the major Colorado utilities represented
3 independent power producer interests.

4 Q. Right. That's the basis for your
5 expertise is that representation?

6 A. Some of it, yes.

7 Q. If there's more to it, please tell me.

8 A. Just in terms of my working with
9 independent power producers over the last fifteen
10 years and gaining experience in various ERP
11 proceedings where I was not necessarily counsel to a
12 party as well.

13 Q. Okay. And when we say independent power
14 producers, that could theoretically cover a gamut of
15 generators. Your work though is largely, if not
16 exclusively, isolated to power producers utilizing
17 renewable generation, solar, wind, hydroelectric,
18 correct?

19 A. Yes. I've also represented natural gas
20 producers.

21 Q. Okay. You have represented one but I
22 recall in the deposition the number of those was few and
23 far between?

1 A. Correct.

2 Q. Okay. And just so people in the audience
3 are clear, you're saying ERP in connection with the
4 Colorado Public Service Commission as opposed to the IRP
5 which is what is utilized by Alabama Power here,
6 correct?

7 A. Yes, my apologies.

8 Q. No, no, no.

9 A. Interchangeably.

10 Q. And that's electric resource plan?

11 A. Yes, sir.

12 Q. As opposed to the integrated resource
13 plan?

14 A. Correct.

15 Q. Thank you. Based on the representation
16 for the two entities that I spoke of a minute ago in
17 Georgia, do you have an understanding that Georgia Power
18 is a summer peaking utility?

19 A. Yes.

20 Q. Okay. And from your work in Colorado, do
21 you have an understanding of what, say, the Public
22 Services Company of Colorado is in terms of when it
23 peaks on a seasonal basis?

1 A. Also summer peaking.

2 Q. So with that in mind, it's fair to say,
3 is it not, that your experience in terms of representing
4 independent power producers and your experience in front
5 of public service commissions leaving aside Georgia
6 Power and what I'll acknowledge is some work you told me
7 about with respect to an RFP conducted in Ohio, your
8 experience has been west of the Mississippi?

9 A. Yes, sir.

10 Q. And so to that extent, you've done no
11 work for independent power producers in the SERC
12 regional entity, correct?

13 A. Correct.

14 Q. Okay. And do you know -- do you have an
15 understanding of what states comprise the SERC regional
16 entity?

17 A. I do not.

18 Q. Okay. And in your testimony, you
19 discuss -- actually you just mentioned a second ago in
20 your introduction familiarity with respect to the
21 Strategist model?

22 A. Yes, sir.

23 Q. And that experience comes from your

1 representation of your clients in the proceedings we
2 described, correct?

3 A. Yes.

4 Q. You're not an engineer, right?

5 A. Correct.

6 Q. You're not a modeler or a statistician?

7 A. Neither of those things.

8 Q. Okay. And you've never been employed
9 directly by an electric utility or an electric supplier?

10 A. Correct.

11 Q. Okay. You, yourself, have not done any
12 sort of resource planning for any of the two entities I
13 just mentioned?

14 A. I have not worked for an electric
15 utility.

16 Q. Right. So to that extent, you've done no
17 work for an electric utility all encompassing?

18 A. Correct.

19 Q. Okay. And I think when we discussed it
20 at your deposition, you have not ever drafted a request
21 for proposals, an RFP, yourself, correct?

22 A. No, I have not drafted it.

23 Q. Now turning to Alabama here, you offer

1 opinions in your testimony with respect to the Docket
2 32523. Is that right?

3 A. The RGC?

4 Q. Yes, sir.

5 A. I believe 32382.

6 Q. That's a lot of threes. Correct. The
7 RGC. Just so the record is clear, you were not
8 participating for Sierra Club or any entity in
9 connection with that proceeding, correct?

10 A. Correct.

11 Q. Your understanding of the RGC is based on
12 what I think is included as an exhibit to your
13 testimony, the order of the commission, correct?

14 A. Yes, sir.

15 Q. Okay. And at the time of the deposition,
16 you had reviewed the company's petition or --

17 A. Correct.

18 Q. You had reviewed. Okay. And at the time
19 of the deposition, you had not reviewed the transcript
20 in that proceeding, correct?

21 A. Correct.

22 Q. Have you since had a chance to look over
23 that transcript?

1 A. I have not.

2 Q. Okay. Is it fair to say that in terms of
3 administration and implementation of that certificate,
4 any changes to it would be best determined by this
5 commission, correct?

6 A. Any changes to the order?

7 Q. Yes, sir.

8 A. Yes, sir.

9 Q. And you're aware, are you not, that there
10 were RFP guidelines included with the renewable
11 generation certificate order, correct?

12 A. Can you clarify what you mean by
13 guidelines?

14 Q. As in like guidelines, talking about how
15 RFPs would be performed.

16 A. You mean in terms of the 80 megawatt
17 limit?

18 Q. I'm talking about there were several
19 pages of guidelines, not necessarily limited to that. I
20 think there were more than one page of guidelines and
21 procedures.

22 A. There were some conditions placed on
23 the RFPs, yes.

1 Q. Okay. Do you have an understanding of
2 how those guidelines compared to the commission's
3 existing guidelines for conventional generation
4 procurements?

5 A. I am aware of the guidelines that were
6 put forth by the company in the capacity RFP and how
7 those differed from the renewable RFP in 2018.

8 Q. What about the existing guidelines that
9 predated the RGC?

10 A. No, I have not reviewed those.

11 Q. You have not reviewed those. Okay. And
12 just to confirm this, in connection with the opinions
13 that Sierra Club asked you to form, you were not asked
14 to develop a view on the quality or the draftsmanship of
15 any of the contracts that are before this commission for
16 certification, correct?

17 A. Correct.

18 Q. And indeed among them, I recall you
19 telling me you have not even reviewed the Barry contract
20 documents?

21 A. The EPC contract?

22 Q. Yes, sir.

23 A. Correct.

1 Q. Which I will concede is a big document.

2 A. It is a large document, yes.

3 Q. And to that extent, you also haven't been
4 asked to develop an opinion with respect to the
5 intercompany interchange contract or the IIC, correct?

6 A. Correct.

7 Q. Going back to Strategist for a moment, I
8 believe we discussed for all that Strategist can do,
9 Strategist does not solve for impacts to the
10 transmission system as the result of the addition of a
11 resource to a company generating portfolio, correct?

12 A. Correct. Strategist is a production
13 cost model.

14 Q. Right. Now I believe you told me you can
15 figure out what the cost impacts might be and put them
16 into the model but obviously you would have to know what
17 that was first to do that, correct?

18 A. Correct.

19 Q. That would be discernment of the cost
20 associated with adding the resource to the portfolio,
21 right?

22 A. The transmission impacts?

23 Q. Yes, sir.

1 A. You could put an estimate of
2 transmission interconnection costs, for example,
3 attribute them to a certain bid and then input those
4 into Strategist is my understanding.

5 Q. Right. And you'd have to develop a basis
6 for that first before you did that, right?

7 A. Yes, sir.

8 Q. Okay. And just with respect to
9 transmission impacts, I don't want to limit it. That's
10 true also with respect to impacts to the distribution
11 system, correct?

12 A. Yes.

13 Q. Okay. And when I say impacts, I don't
14 necessarily mean costs limited to some sort of, you
15 know, damage or remediation but we're also talking about
16 upgrades or capacity expansions on those respective
17 systems. You would agree with that?

18 A. Things that would be associated with
19 interconnecting a project to the grid.

20 Q. Correct. Strategist does not solve for
21 that?

22 A. Correct.

23 Q. And lastly, Strategist does not capture

1 the extent to which the integration of a resource might
2 have some impact to existing customers that are already
3 receiving electric services from the company, correct?

4 A. Strategist can -- if you have a cost
5 input that you can add to it, then Strategist can
6 consider that.

7 Q. But Strategist isn't going to tell you
8 that if I integrate this resource on the system, it's
9 going to create flicker and cause potential damage to a
10 large industrial customer's operations?

11 Q. Correct. Flicker would be a
12 transmissions study.

13 Q. Yeah. Let me turn briefly to your
14 testimony. I wanted to clarify a few things. On page
15 15 -- you've got your testimony in front of you?

16 A. Yes, sir.

17 Q. So I'm really focused -- you're
18 discussing sort of the lack of use of the PROVIEW model
19 as I think you referenced earlier in introduction. As
20 you discussed that in your testimony in there, you
21 reached the observation that the activities that were
22 taken by Alabama Power led, in your words, to a flawed
23 review into how the Alabama Power system should expand,

1 a problem you go on to say that was exacerbated because
2 Alabama Power based its decision to hold a capacity RFP
3 for only gas units. Do you see those words?

4 A. Yes, sir.

5 Q. Okay. And I think as we discussed in
6 your deposition and as later pages in your testimony
7 illustrate, the capacity RFP was not in fact limited to
8 just the solicitation for gas units, correct?

9 A. Well, I did have a chance to review the
10 capacity RFP since our deposition and the capacity RFP
11 is all set forth in terms of gas units. If you go to
12 page 30 of 40 some odd pages, there's a Q and A where
13 it said could a solar resource bid in and the answer
14 was, yes, if it was paired with storage. But
15 otherwise, if you go down the categories and look
16 at -- page through the document, all you would see is
17 reference to CCs or CTs.

18 Q. Okay. That's fine, but you do
19 acknowledge -- and you will save us and accelerate the
20 efficiency here. The capacity RFPs specifically
21 acknowledge that bidders could propose storage
22 resources -- strike that and reverse it -- could propose
23 intermittent resources or nondispatchable resources as

1 long as they were paired with some sort of storage
2 capability, correct?

3 A. Correct.

4 Q. Okay. And I know we talked about some of
5 the limitations of the RGC. I must circle to that in a
6 second. The minimum size requirement for the capacity
7 RFP, do you recall what that is?

8 A. It was increments of a hundred
9 megawatts, I believe. I don't remember what the
10 lowest -- a hundred I guess was the lowest.

11 Q. Okay. Very good. And I mean in your
12 experience as an independent power producer
13 representative, is there some economies scale sweet
14 spots between 80 megawatts and a hundred megawatts?

15 A. For renewables?

16 Q. Yes.

17 A. I would say that renewables tend to get
18 an economies scale as you get up to increments of a
19 hundred megawatts.

20 Q. Thank you. Now I heard you say it and
21 you observe that the renewable RFP, which is a
22 by-product of the RGC, required that projects be located
23 in Alabama and interconnected with the Alabama Power

1 transmission system, correct?

2 A. Yes, sir.

3 Q. Okay. And I looked for you yesterday. I
4 wanted to say hi but you were not here, were you?

5 A. In this room yesterday? No, I was not.

6 Q. Okay. So you didn't hear testimony from
7 some of the witnesses with respect to the purpose and
8 intent behind the RGC, correct?

9 A. Correct.

10 Q. Do you have any understanding as to the
11 extent to which an RGC project was expected to have some
12 nexus with a customer?

13 A. Can you explain -- clarify what you
14 mean by nexus with the customer?

15 Q. In other words, that the project was
16 desired by and/or supported by an individual customer
17 perhaps to fulfill some sort of sustainability goal or
18 resiliency goal?

19 A. I do recall that in the order it was
20 noted that there was a letter of support from the
21 governor as well as certain military installations.

22 Q. So with that in mind, does the
23 requirement or condition that facilities be located in

1 Alabama -- I mean that's a reasonable condition to help
2 fulfill that, correct?

3 A. I can't say if it's a reasonable
4 condition to help fulfill that in light of the some of
5 the testimony we heard earlier, for example, of wind
6 resource that might be better located. In SPP, for
7 example, there's lots of benefits that may accrue to
8 Alabama even if the physical facility was not located
9 in Alabama.

10 Q. But again -- and this is true on the
11 capacity side of the equation. The capacity RFP for
12 intermittent resources paired with a storage feature,
13 they could bring it to the Southern system for delivery,
14 correct?

15 A. Correct. The capacity RFP allowed
16 resources to basically connect anywhere.

17 Q. Okay. And then one other thing we talked
18 about in your deposition -- I was hoping maybe you had a
19 chance to remember -- was what I think you understood to
20 be a restriction on developers in that they were, in
21 your words or in your view, required to have fee title
22 or full ownership of the land on which they wanted to
23 locate their development. Do you recall that?

1 A. Yes, sir.

2 Q. Okay. And we discussed whether that
3 requirement was in fact limited to interconnection
4 facilities and was not, say, a condition on entities who
5 wanted to cite a proposal and enter into a power
6 purchase agreement?

7 A. Yes. The errata changed that word to
8 interconnection facilities in my testimony.

9 Q. Okay. You've caught me not having seen
10 your errata so thank you for correcting that. All
11 right. I want to switch gears with you and look at a
12 couple of documents. Do you have your Exhibit 4 with
13 you?

14 A. I don't believe I do.

15 Q. That's okay.

16 A. Oh, wait, I do. Sorry. Lazard.

17 Q. Yes, yes. And really there's just one
18 thing about this I want to focus on. Before I do, I
19 need to get your testimony. You describe -- in your
20 testimony, you describe this Lazard analysis as being
21 sort of a respected capture of the levelized cost of
22 sort of energy. Is that right?

23 A. Yes, sir.

1 Q. Okay. Look at page one of that document
2 for me, will you. Not the cover page.

3 A. Okay. Introduction?

4 Q. Yes, sir. It's that bottom paragraph
5 that I want you to look at with me. And in terms of
6 this sort of levelized cost of energy analysis, there's
7 a note here at the bottom that reads, at the start,
8 other factors would also have a potentially significant
9 effect on the results contained herein but have not been
10 examined in the scope of this current analysis. These
11 additional factors, among others, could include -- and
12 it goes on to list quite a few including capacity value
13 versus energy value, network upgrades, transmission
14 congestion or other integration-related costs. Did I
15 read that correctly?

16 A. That snippet, yes.

17 Q. There's more and there's actually a part
18 of the bottom, too. At the bottom, it says the analysis
19 also does not address potential social and environmental
20 externalities. And then it lists several including the
21 social costs and consequences for those, the rate
22 consequences for those who cannot afford distributed
23 generation solutions as well as the long-term residual

1 and societal consequences of various conventional
2 generation technologies that are difficult to measure.
3 And then it gives some examples including nuclear waste
4 disposal, air-borne pollutants, and greenhouse gases?

5 A. Yes.

6 Q. Okay. Having introduced this document
7 along with your testimony, do you disagree with this
8 statement in any form?

9 A. No.

10 Q. Okay. Let me now show you -- and I will
11 acknowledge that this is not the complete document
12 because the complete document is 160 pages or maybe 80
13 pages with two pages on a page but it's your Exhibit 5,
14 which is the annual energy outlook for 2019.

15 MR. GROVER: It's in the record but this
16 is a snippet so, Judge, I'll defer if you would like it
17 or not.

18 ALJ GARNER: No. It's already in the
19 record. Just reference it in the exhibit.

20 Q. Please. This is MDD 5 and I again
21 acknowledge that it's an excerpted MDD 5. And again you
22 haven't been with us the last few days perhaps rightly
23 or exercising your legal acumen but there was a lot of

1 talk about gas supply and risk of gas availability and I
2 wanted to talk to you about this report. Do you
3 understand who prepares the AEO or this annual energy
4 outlook?

5 A. Yes, sir.

6 Q. And that is whom?

7 A. The U.S. EIA.

8 Q. And the U.S. EIA -- we talked about this
9 in your deposition. The EIA is not an advocacy
10 organization, correct?

11 A. Correct.

12 Q. All right. They are dealing in data,
13 correct?

14 A. Yes, sir.

15 Q. All right. So with respect to that data,
16 if you would turn I think to the first page after the
17 cover which -- maybe that's actually the orientation
18 page so turn one more. I apologize -- which says sort
19 of what is the reference case?

20 A. I'm there.

21 Q. You see that? And would you please read
22 that, just the start of that first bullet for me?

23 A. The AEO 2019 reference case represents

1 EIA's best assessment of how U.S. and world energy
2 markets will operate through 2050 based on many key
3 assumptions. For instance, the reference case
4 projection assumes improvement in known energy
5 production, delivery and consumption technology
6 trends.

7 Q. Okay. And then one, two, three bullets
8 down, there's an acknowledgment about what is not
9 included in the reference case and can you see that? It
10 says "the potential impacts of."

11 A. The potential impacts of proposed
12 legislation, regulations or standards are not included
13 in the AEO 2019 cases.

14 Q. And then the bullet that follows that
15 says the reference case should be interpreted as a
16 reasonable baseline case that can be compared with the
17 cases that include alternative assumptions. Did I read
18 that right?

19 A. Correct.

20 Q. Okay. So turn with me now to the next
21 page, and if you will humor me, what's the page number
22 at the bottom?

23 A. Twelve.

1 Q. Make sure I'm following along. So
2 actually the third bullet there that starts "natural gas
3 prices," can you read that?

4 A. Natural gas prices remain comparatively
5 low during the projection period compared with
6 historical prices leading to increased use of this
7 fuel across end use sectors and increase liquified
8 natural gas exports.

9 Q. Okay. Would you turn to the next page in
10 your sheet? And at the top there, does your page start
11 with "the United States"?

12 A. Yes, sir.

13 Q. All right. Could you read what the EIA
14 states in summary form here?

15 A. The percentage of dry natural gas
16 production from oil formations increased from 8
17 percent in 2013 to 17 percent in 2018 and remains near
18 this percentage through 2050 in the reference case.

19 Q. Okay. I wasn't clear in what I asked
20 you. At the top there in sort of a bigger font in the
21 color blue starts with "the United States continues," do
22 you see that?

23 A. Yes.

1 Q. What does that say?

2 A. The United States continues to produce
3 large volumes of natural gas from oil formations even
4 with relatively low oil prices.

5 Q. And then it goes on to observe this will
6 put downward pressure on natural gas prices?

7 A. Yes, sir.

8 Q. Okay. And for a point of reference for
9 the audience, do you have a sense of what, based on the
10 AEO's outlook, the time horizon is captured here?

11 A. 2050.

12 Q. 2050. Okay. And can I get you to turn
13 to the next page in your little packet, and at the top
14 there, can you tell me what that says?

15 A. Electricity generation from natural gas
16 and renewables increases and the shares of nuclear and
17 coal generation decrease as lower natural gas prices
18 and declining costs of renewable capacity make these
19 fuels increasingly competitive.

20 Q. And one thing I want to point out, the
21 chart there that captures electricity generation from
22 selected fuels in the reference case includes production
23 both -- or not both from but from natural gas

1 facilities, nuclear facilities, renewable facilities,
2 and coal facilities, correct?

3 A. Yes.

4 Q. Okay. So it's projecting out into 2050
5 the continued utilization of coal at approximately a 17
6 percent level. Is that what that projects?

7 A. That's what this says, yes.

8 Q. All right. And there's one more page I'm
9 interested in. If you could turn to -- what's in your
10 packet?

11 A. Thirty-four.

12 Q. Perfect. Yes. Does that show on the
13 right side sort of projected assumptions of natural gas
14 prices?

15 A. At the Henry Hub.

16 Q. Yes. And I'm interested actually in two
17 things. One, looking at that chart, what does the
18 reference case show for expected natural gas prices in
19 the 2050 time frame?

20 A. The reference case?

21 Q. Yes, sir.

22 A. So these are 2018 dollars per million
23 British thermal unit. It's showing five.

1 Q. And then above that in sort of what I
2 would tell you is EIA's projection of a higher gas cost
3 projection, I realize there's not sort of a real
4 discreet marker there but does that value look to be
5 just slightly north of eight dollars?

6 A. On the -- where are you?

7 Q. Just above the reference case in the same
8 chart you were looking at. I think it's an orange line.

9 A. Low oil and gas resource and
10 technology?

11 Q. Yeah, that case.

12 A. Yes.

13 Q. And it shows in 2050 it being just above
14 eight dollars?

15 A. Yes, sir.

16 Q. And is there one more sheet in that?

17 A. Seventy-two.

18 Q. Okay. And this was where I think if you
19 had been here -- you started to say it. It's the
20 statement that U.S. natural gas consumption and
21 production, dry natural gas consumption and production
22 increase in most cases. That's what it says at the top?

23 A. Yes.

1 Q. And it follows by observing that with
2 production growth outpacing natural gas consumption in
3 all cases. Did I read that correctly?

4 A. Yes.

5 MR. GROVER: Okay. That's all I have,
6 Your Honor.

7 ALJ GARNER: All right. Any redirect of
8 Mr. Detsky?

9 MS. CSANK: Perhaps simply this.

10 REDIRECT EXAMINATION

11 BY MS. CSANK:

12 Q. Mr. Detsky, in your experience working on
13 these subjects of resource planning and related price
14 forecasts, has it been your experience that there has
15 been no regulation or legislation or regulatory
16 standards that have changed over such a long period of
17 time as what these projections are that you just went
18 over with Mr. Grover?

19 A. So in my experience, the projections
20 made about long-term gas prices, for example, cannot
21 be very reliable but instead what I would say is that
22 a prudent resource planning exercise is one that
23 hedges against different types of future outcomes.

1 So in the portfolio selected by Alabama
2 Power here, they lean heavily on some particularly
3 aging units like Central Alabama and it does a
4 comparatively smaller acquisition of renewables that
5 is not hedging very well against the potential
6 increased costs of natural gas and having this
7 renewable RFP in 2020 in place could add some extra
8 hedge value to the system.

9 Q. And you refer to -- you had a
10 conversation with Mr. Grover about the capacity RFP and
11 how it allowed for solar bids when paired with storage.
12 Do you recall that?

13 A. Yes.

14 Q. And could you just explain your
15 recommendation on what you're saying the company should
16 do differently in its resource procurement with regard
17 to specifically soliciting those types of resources?

18 A. Yes. The capacity RFP mentions in a
19 Q and A that they accepted solar when paired with
20 storage, but in discovery, they did not show any bids
21 and all of the bids that they did have were -- would
22 be renewable RFP analysis.

23 So it wasn't clear to me -- it's very

1 likely that the market for solar and storage just did
2 not even see that Q and A on page 30 that this RFP
3 talking about gas would have also accepted solar and
4 storage and so I don't think it was a good canvas of
5 the market.

6 So what I would recommend is that in
7 the all source RFP context that they put out specific
8 target proposals for solar with storage that would get
9 a potentially better response from the market. The
10 capacity RFP would still be a good way to solicit it
11 in terms of having solar with storage at 200
12 megawatts, 300 megawatts. You're going to see a lot
13 cheaper pricing which was already at -- 80 megawatts
14 was by far the cheapest resources selected here.

15 Q. What examples specifically would you
16 point the commission to in terms of how the company
17 could operationalize the recommendation for such
18 procurements?

19 A. In terms of how to operationalize the
20 procurements, what I would suggest is that they first
21 of all integrate the upcoming RFP into this IRP and
22 they compare the results of that RFP with in
23 particular this Central Alabama plant.

1 Going forward, what I would suggest
2 they do is in their base case IRP allow the
3 technologies on the market to be evaluated because
4 particularly the solar and storage resources, it's not
5 just a capacity question. It's also the price of
6 energy and solar on a day-to-day basis is going to
7 provide cheap energy to the system and it's going to
8 make the overall gas usage go down, overall system
9 costs go down over time and that's how they can factor
10 these into their operations.

11 Q. And one more question. What examples or
12 precedents of such procurement can you point the
13 commission to?

14 A. In my testimony, I discuss Public
15 Service Company Colorado which Mr. Grover has got my
16 primary experience. There in 2017, they did a
17 renewable RFP, a semi-dispatchable, which was
18 renewables paired with storage and then a
19 dispatchable. They took all those different RFP bids
20 and they modeled them using the Strategist PROVIEW and
21 they had the model optimize hundreds of least cost
22 alternative portfolios and that's what the model tool
23 does if you use it.

1 And by doing that, they can select what
2 portfolio best meets capacity and energy needs. So
3 that's why I recommend going forward that there be an
4 IRP that is all source, meaning that the model is
5 allowed to perform its function and show the
6 commission alternatives --

7 Q. And you're familiar with Mr. Kelley's
8 rebuttal testimony in this regard related to the PS Co
9 2017 solicitation?

10 A. Yes, I am.

11 Q. And you reviewed the exhibits that he
12 included with his rebuttal testimony?

13 A. Yes, I did.

14 Q. Do you recall whether that exhibit
15 included all of the RFPs that you just identified?

16 A. I don't recall as I sit here without
17 seeing if it had all the RFPs but the major point that
18 Mr. Kelley missed in his rebuttal was that different
19 RFP documents are okay. You can't have a solar
20 putting in gas plant information.

21 So it's okay to have different RFP
22 documents but what an all source RFP does is evaluate
23 those bids together and optimize among which mix of

1 the bids is going to best meet not only the capacity
2 need but also the energy need, which is what is
3 required to keep the system's lights on day to day.

4 MS. CSANK: No further questions.

5 ALJ GARNER: Thank you, Mr. Detsky. You
6 are excused. Appreciate your testimony. Mr. Detsky's
7 prefiled testimony and exhibits will be admitted. For
8 the record, the exhibit that was discussed fairly
9 extensively on cross, MDD 5, was marked as Sierra Club
10 30.

11 ALJ GARNER: Sierra Club, does that
12 conclude your presentation other than perhaps addressing
13 the stipulation of the six witnesses that were agreed
14 upon? You want those testimonies entered into the
15 record, I believe, don't you, Mr. Dillard?

16 MR. DILLARD: We do, Your Honor.

17 ALJ GARNER: And that's in agreement with
18 the company?

19 MR. GROVER: Subject to the terms of the
20 stipulation. So with that in mind, yes.

21 ALJ GARNER: Sure. Yes. Okay. And
22 that's going to be -- make sure we're clear on that.

23 MR. CAGLE: Your Honor, is that all six

1 of Sierra Club's witnesses?

2 ALJ GARNER: Yes. Well, it's
3 Mr. Stetson, Ms. Davis, Mr. Womack, Ms. Lowe, Ms. Jones
4 and Ms. Fralich.

5 MR. CAGLE: Pending that agreement, I
6 have some questions I would like to ask Mr. Stetson. He
7 is situated differently than the other witnesses.

8 ALJ GARNER: I don't even know if -- is
9 Mr. Stetson here?

10 UNIDENTIFIED SPEAKER: Yes.

11 ALJ GARNER: The stipulation only is
12 between Alabama Power and Sierra Club. Any thoughts,
13 Mr. Dillard? Any objection?

14 MS. CSANK: If we can confer for a
15 moment, Your Honor.

16 ALJ GARNER: Sure.

17 MR. DILLARD: If we may have a moment,
18 it's a little bit of a surprise.

19 MR. CAGLE: Your Honor --

20 ALJ GARNER: He's conferring at the
21 moment.

22 MR. MCCRARY: I'm sorry. Can we have
23 just a moment?

1 ALJ GARNER: Sure. Let's let them talk
2 and then we will address it. All right, Mr. Dillard.

3 MR. DILLARD: Your Honor, our position
4 would be the stipulation has been admitted between the
5 petitioner and Sierra Club for the purposes for which
6 its terms describe.

7 ALJ GARNER: Expand on that.

8 MR. DILLARD: Exactly. And while
9 Mr. Cagle may desire to question Mr. Stetson, that
10 notice to us is untimely, and on that basis, we would
11 object.

12 ALJ GARNER: All right. Mr. Cagle, I
13 will allow you to respond.

14 MR. CAGLE: If I had been aware that that
15 stipulation was being made, I would have directed my
16 questions at other Sierra Club witnesses.

17 MR. DILLARD: In that respect, Your
18 Honor, the stipulation was electronically filed and we
19 obtained service on all the parties at the time of its
20 filing.

21 ALJ GARNER: And so do you have questions
22 regarding standing?

23 MR. CAGLE: No, sir.

1 ALJ GARNER: I'm trying to review very
2 quickly what was in Mr. Stetson's testimony. It was
3 fairly brief.

4 MR. CAGLE: He's an employee of Sierra
5 Club and isn't a member of the Sierra Club as the other
6 five.

7 ALJ GARNER: And is your -- are your
8 questions related to this case?

9 MR. CAGLE: Yes, sir, his testimony,
10 again which is right in line with the testimony the
11 other Sierra Club witnesses have filed.

12 MS. CSANK: Your Honor, if we may just
13 supplement and provide further explanation, the terms of
14 the stipulation were such that the Sierra Club waived
15 its ability to present all six of those witnesses. To
16 just call upon one would be prejudicial to us insofar as
17 those other five witnesses are not able to also take the
18 stand and testify and present live testimony to this
19 commission. So on that additional basis, we would
20 object.

21 MR. CAGLE: Your Honor, if I can respond
22 to that, to Ms. Csank's testimony -- or her questions
23 and you have given great latitude in response to those

1 questions.

2 ALJ GARNER: I'm just trying to figure
3 out the probative value of what you want to do here and
4 the fact that this was filed on the 2nd. So, you know,
5 we're over a week and I haven't seen anything from you
6 regarding the stipulation so the timing is not good.

7 MR. CAGLE: Well, I withdraw my request
8 and (inaudible).

9 ALJ GARNER: Another Sierra Club witness?

10 MR. CAGLE: No, sir, since there's not
11 one.

12 ALJ GARNER: That's it for today. I'm
13 not sure what you mean by that. You're throwing me for
14 a loop here.

15 MR. CAGLE: I could withdraw my request
16 if you're having reservations.

17 ALJ GARNER: Yeah. Well, I just don't
18 know about the probative value of what you want to do
19 given the fact that this has been filed and agreed upon,
20 discussed in a conference call, and so now it's just
21 being brought up. So I do question the probative value
22 of what you're trying to accomplish.

23 MR. CAGLE: I think it relates to other

1 testimony that's been filed. There's been a lot of talk
2 about the climate change and I think he's well-suited to
3 answer questions related to that.

4 ALJ GARNER: But I don't think he's been
5 presented as a witness in that regard so I just don't
6 know the probative value of that.

7 MR. CAGLE: Okay.

8 MR. DILLARD: And that, Your Honor, was
9 the basis of our objection.

10 ALJ GARNER: Right. With that, I'm going
11 to deny your request.

12 MR. CAGLE: Okay.

13 MS. CSANK: Thank you, Your Honor.

14 ALJ GARNER: With that, we will introduce
15 those six testimonies --

16 MS. CSANK: Thank you, Your Honor.

17 ALJ GARNER: -- into the record. And
18 that's Mr. Stetson, Ms. Davis, Mr. Womack, Ms. Lowe, Ms.
19 Jones and Ms. Fralich. All right. Does that conclude
20 Sierra Club's presentation?

21 MR. DILLARD: Yes, sir.

22 ALJ GARNER: Brings us to Energy Alabama
23 and GASP and do you have the order of your witnesses?

1 MR. JOHNSTON: Yes.

2 ALJ GARNER: What is that?

3 MS. TIDWELL: Mr. Wilson and Mr. Rabago
4 and Mr. Howat.

5 ALJ GARNER: Ready with Mr. Wilson?

6 MS. TIDWELL: Sure. Energy Alabama and
7 GASP calls James F. Wilson to the stand.

8 JAMES WILSON,
9 having been first duly sworn, was examined and testified
10 as follows:

11 DIRECT EXAMINATION

12 BY MS. TIDWELL:

13 Q. Please state your name and full business
14 address for the record.

15 A. James F. Wilson, 4800 Hampden Lane,
16 H-a-m-p-d-e-n, Suite 200, Bethesda, Maryland 20814.

17 Q. Mr. Wilson, by whom are you employed?

18 A. I'm an economist and independent
19 consultant doing business as Wilson Energy Economics.

20 Q. On whose behalf are you testifying?

21 A. In this proceeding, Energy Alabama and
22 GASP, Inc.

23 Q. Did you prepare and cause to be prefiled

1 in this docket a public and redacted version of 71 pages
2 of direct testimony in question and answer form?

3 A. Yes, I did.

4 Q. Did you also cause to be prefiled along
5 with your testimony 39 exhibits marked Exhibit JFW 1
6 through JFW 39?

7 A. I'll accept that.

8 Q. Do you have any changes to your prefiled
9 direct testimony or exhibits at this time?

10 A. I do. I have two errata.

11 Q. And what are those errata?

12 A. On page 4, lines 18 to 19 where it says
13 with five of the past six years falling within a 190
14 megawatt range, it should read with six of the past
15 seven years falling within a 190 megawatt range. And
16 the second one, page 30, footnote 31, it reads SCLC
17 GR2 I01K. It should read I01H.

18 Q. Other than those changes if I were to ask
19 you the same questions that appear in your prefiled
20 testimony at the hearing today under oath, would your
21 answers be the same?

22 A. Yes, they would.

23 MS. TIDWELL: Your Honor, I move to

1 have Mr. Wilson's direct prefiled testimony and
2 exhibits entered into the record as if given orally
3 from the stand.

4 ALJ GARNER: Mr. Wilson's prefiled
5 testimony and exhibits will be entered into the record
6 subject to cross-examination.

7 Q. Mr. Wilson, did you prepare a summary of
8 your testimony?

9 A. Yes, I did.

10 Q. Will you go ahead and read it?

11 A. Yes, I will. Thank you. Good
12 afternoon. My testimony in this case addresses the
13 two key elements of Alabama Power's claimed future
14 capacity needs, the winter peak load forecast, and the
15 winter reserve margin.

16 With regard to the winter peak load
17 forecast over the past several years, the company's
18 weather normal winter peak loads have been flat, as I
19 just mentioned, with a 190 megawatt range and the
20 winter peak load forecast from the company's peak
21 demand model, also known as PDM, forecast tool is also
22 quite flat and consistent with the weather normal
23 trends.

1 The company has tried various dates and
2 calculation methods to get some higher values for the
3 recent weather normalized peak loads. This is an
4 invalid approach. The company has also applied some
5 upward adjustments to the forecast. These adjustments
6 are also unwarranted.

7 So the bottom line is the peak demand
8 model winter peak load forecast without the
9 unwarranted adjustments is consistent with the recent
10 weather normal trend and far lower than the company's
11 adjusted forecast as shown in figure JFW 1 of my
12 testimony.

13 On the reserve margin, the company's
14 reserve margin study substantially overstates the
15 necessary winter reserve margins by making a number of
16 flawed assumptions, in particular the impact of
17 extreme cold on load and the likely frequency of very
18 extreme cold in the coming years are overstated. As a
19 result of these and other flawed assumptions, the
20 winter reserve margin is overstated by at least five
21 percentage points.

22 I conclude that overall through flaws
23 in the load forecast and reserve margin the alleged

1 winter capacity deficit in 2023 is overstated by at
2 least 1400 megawatts. Thank you for your time and I
3 would be happy to answer any questions.

4 MS. TIDWELL: Mr. Wilson is now
5 available to answer questions, Your Honor.

6 ALJ GARNER: All right. Questions from
7 the intervenors? Mr. Cagle.

8 MR. CAGLE: Yes, sir, Your Honor. Can I
9 borrow one of your seats?

10 MR. HILL: Mine.

11 MR. CAGLE: Thank you.

12 CROSS-EXAMINATION

13 BY MR. CAGLE:

14 Q. I'm Patrick Cagle and I'm the president
15 of the Alabama Coal Association whom I'm representing in
16 this proceeding. So you were hired by Energy Alabama
17 and GASP in this proceeding, correct?

18 A. Well, I was hired by Southern
19 Environmental Law Center and those are the two
20 clients, yes.

21 Q. On their behalf. I assume you're being
22 paid to be here?

23 A. That's correct.

1 Q. What's your rate per hour?

2 A. My hourly rate is 290 dollars per hour.

3 Q. How much income do you expect to earn for
4 your total work related to this proceeding?

5 A. It will be about forty thousand
6 dollars.

7 Q. What is the scope of the services you
8 were asked to provide as it relates to this proceeding?

9 A. As described in my testimony, I was
10 asked to review the load forecast and reserve margin
11 and to give my opinions on those.

12 Q. The work you billed for, did it include
13 anything outside of what you actually offered an opinion
14 on? Did you review anything else?

15 A. I may have reviewed other documents
16 that were peripherally related but the focus of my
17 work was on those two key elements of the claimed
18 capacity needs.

19 Q. I'm going to ask you to read several
20 parts of your testimony if you will. I've got a
21 highlighter. It might be a little easier if you want to
22 use it. We'll try it and see. Would you please turn to
23 page seven of your prefiled testimony and read lines 12

1 through 16?

2 A. Please summarize your conclusions with
3 regard to the RM study analysis. I find -- 12 through
4 16?

5 Q. Yes, sir.

6 A. I find that due to various flawed
7 assumptions, the RM study has substantially overstated
8 their reserve margin necessary to satisfy reliability
9 or economic objectives. Winter risks and reserve
10 margins are especially overstated primarily due to
11 assumptions that exaggerate the likely future
12 frequency and magnitude of extreme winter temperatures
13 and peak loads.

14 Q. Thank you. All right. Would you please
15 turn to page eight now and read -- starting on line one,
16 part one of your answer which ends at the middle of
17 page -- of line six.

18 A. Lines one through six?

19 Q. Yes, sir, the middle of six.

20 A. The RM study has greatly exaggerated
21 the likely frequency and magnitude of extreme winter
22 peak loads by, one, using a data set back to 1962
23 which reflects a relatively high frequency of extreme

1 temperatures in the early years that have not been
2 seen at all or only rarely in recent decades.

3 And, two, projecting onto those extreme
4 temperatures extremely high loads based on an
5 over-simplified approach that incorrectly extrapolates
6 based on a single date for a polar vortex in 2014.

7 Q. Again, sir, you covered what I was asking
8 for, the part one. All right. I've got two more. All
9 right.

10 A. That ended with a semicolon.

11 Q. Yes, sir. It was three part sub answer
12 so -- all right. Would you turn to page 49 and read
13 lines 1 through 6? Actually I withdraw that request and
14 I'll just go right to the last one which is -- all
15 right. Page 55, I believe. Fifty-five. Would you
16 please read lines 1 through 7?

17 A. That's the middle of a sentence in my
18 copy.

19 Q. Page 55?

20 A. Yeah.

21 Q. Page 55 starting with line 1, it starts
22 with a question?

23 A. Okay. Maybe my pagination is a little

1 different. What are the words?

2 Q. I will give you one.

3 A. What's the -- read the beginning of the
4 sentence.

5 Q. It's a question. You've explained the
6 RSM model -- I'll give you the same thing.

7 ALJ GARNER: Cut to the chase.

8 MR. CAGLE: I've got it.

9 A. Okay. You have explained that the RM
10 study -- start there?

11 Q. Yes.

12 A. You have explained that the RM study
13 applied a flawed approach using PALFs to associate
14 loads with extreme temperature. Now please describe
15 the range of temperatures modeled in the RM study.
16 Continue?

17 Q. Yes.

18 A. The data set used in the RM study
19 included many instances of very extreme cold that have
20 not been seen or only rarely for decades, paren, data
21 through 2015 was used, data through 2016 was provided
22 through discovery, end paren. This calls into
23 question how likely such extreme cold really is going

1 forward. In particular -- and there's a footnote.

2 Q. And that's it. Thank you. And that's
3 the part I want to get to. So again is it fair to say
4 that part of the underlying documentation, part of your
5 testimony, a key part is that you don't expect
6 temperatures going in the future for us to experience
7 extreme colds in the future over the next 40 years that
8 we experienced over the past 58 years?

9 In other words, you pointed out the
10 extreme colds in the model from 1962 to 1985 and said
11 that that overstates the extreme cold that we've
12 experienced since. Is that correct?

13 A. Well, to clarify, there was some
14 extreme cold in 1982 and 1985 as discussed elsewhere
15 in my testimony and also in some of the rebuttal.
16 1962 and 1963 were also a couple of years with extreme
17 cold.

18 If you go back to the '40s, the '40s
19 and '50s didn't have extreme cold like '62 and '63,
20 and if you go from as I describe right here from about
21 '86 to the present, there was very little of that
22 extreme cold.

23 So the particular time frame that was

1 chosen was very much cherry picked in order to have a
2 lot of very extreme cold and I'm simply pointing out
3 that that kind of extreme cold has not been seen very
4 often.

5 And if you look at Mr. Carden's
6 rebuttal work papers, which I guess I'm not supposed
7 to talk about because they're confidential, but they
8 suggest that the selection of the historical time
9 frame makes a huge difference on that recommended
10 winter reserve margin.

11 You pick one date. You pick a few
12 years earlier and get a very, very different result.
13 So I'm not taking a position on climate change if
14 that's where you're going.

15 Q. That's my next question.

16 A. I'm simply pointing out that in that
17 model the results are very much driven by some very
18 extreme cold that as the rest of this page describes
19 hasn't been seen for decades.

20 Q. Well, what is your position on climate
21 change?

22 A. Where are you pointing to in my
23 testimony?

1 Q. Well, you've offered an assessment that
2 you expect temperatures going forward to be less cold,
3 less extreme cold than we have experienced in the past.

4 MS. TIDWELL: Your Honor, we object to
5 this. What is the relevance of this line of questioning
6 when he's clearly pointed out his explanation in his
7 testimony?

8 ALJ GARNER: Yeah, I think the witness
9 has stated he's not taking a position on climate change.
10 He just made an assessment of temperatures based on
11 which the power company's case is based in the forecast.

12 Q. What about the polar vortex? Do you
13 think that was in any way associated or a result of
14 climate change?

15 MS. TIDWELL: Same objection, Your Honor.

16 MR. CAGLE: I'd argue this one is
17 relevant.

18 ALJ GARNER: I'm not seeing it. He
19 stated again he's not taking a position. If you can
20 refer me to anywhere in his testimony that he has taken
21 a position on climate change, we may go in a different
22 direction.

23 MR. CAGLE: I believe he's taken a

1 position against it because he stated that it's unlikely
2 we experience extreme colds in the future.

3 THE WITNESS: No. I'm sorry. That's not
4 in my testimony.

5 Q. Well, that last line we read, this calls
6 into question how likely such extreme cold really --
7 cold is going forward. Is that not your testimony?

8 A. Yes. The fact that the model is
9 heavily driven by some extreme cold that hasn't been
10 seen since 1986 but including that in the model drives
11 the reserve margins much higher. But the fact that
12 those numbers haven't been seen since '86 calls into
13 question how much weight should be placed on those
14 numbers in the reserve margin study.

15 Yes, I'm calling into question whether
16 that weighting that drives the reserve margins higher
17 is appropriate. And again the time frame is cherry
18 picked in order to pull in a lot of extreme cold which
19 hasn't been seen for a long time.

20 Q. All right. Thank you. So do you expect
21 us to experience more events like the polar vortex in
22 the future?

23 A. Well, the polar vortex as I point out

1 here isn't one of the big ones in driving the reserve
2 margin higher. What was it? Sort of seven percent
3 where we've got 21 percent in there. So it's not --
4 it's not a driver. Yes, we'll probably see more polar
5 vortex type events but those aren't the ones that
6 drive the reserve margins 25, 26 percent.

7 Q. So if the polar vortex is associated with
8 climate change and I recognize you haven't taken a
9 position on that, but if it is and we expect the climate
10 becomes -- we see more extremes both in terms of cold
11 and other aspects of climate change, would you -- do you
12 think that could impact the testimony that you provided
13 that we won't see as extreme colds moving forward?

14 MS. TIDWELL: Your Honor, I object. This
15 exceeds the scope of his testimony. As we've just
16 discussed, it's more questions about climate change.

17 ALJ GARNER: Yeah, I'm having a hard time
18 seeing the relevance of your questions. I think you're
19 just creating a distraction holding us up for the day.
20 This is not the place for that debate.

21 MR. CAGLE: Yes, sir, Your Honor. I
22 understand. Well, I'll leave it there. Thank you.

23 ALJ GARNER: Thank you, sir. Any further

1 cross from intervenors? Alabama Power.

2 MR. MCCRARY: Yes, sir. Thank you.

3 CROSS-EXAMINATION

4 BY MR. MCCRARY:

5 Q. Hello, Mr. Wilson. Just a moment ago,
6 you made a comment about cherry picking weather data.
7 Do you recall that?

8 A. Yes.

9 Q. Is it your understanding that the use of
10 the data going back to 1962 is solely a function of the
11 availability of reliable data and no other reason?

12 A. I don't know why '62 was chosen.
13 Weather data is available much further back than '62.

14 Q. What evidence do you have of cherry
15 picking?

16 A. Well, I looked at the temperatures in
17 the fifteen years before '62 and there was like one
18 cold day out of that period. '62 and '63 were
19 extremely cold and then I think maybe '58, but other
20 than that, it was a whole bunch of mild years. So if
21 you had gone further back, you would have gotten a
22 much lower reserve margin.

23 Q. If in fact the period back to '62 was

1 chosen simply because of the availability of reliable
2 data, would that have been an acceptable data set to use
3 for purposes of the reserve margin study?

4 A. I guess if that's true but the weather
5 data is available very far back.

6 Q. Is it your understanding that hourly
7 weather data is available prior to 1962?

8 A. Yes.

9 Q. Where?

10 A. From NOAA.

11 Q. All right.

12 A. I downloaded it last week.

13 Q. I think this already has been established
14 but you're a paid consultant, are you not?

15 A. Yes.

16 Q. And I've looked at your resume, Exhibit
17 1, and it looks like the testimony that you've
18 presented, especially in the more recent periods, has
19 primarily been on behalf of environmental and consumer
20 advocacy groups. Is that true?

21 A. I have a number of different clients
22 but I have done a fair amount of work for
23 environmental groups and consumer advocates recently.

1 Q. I also took a look at your client list on
2 the website and it doesn't appear to include any public
3 utilities. Do you do any work for public utilities?

4 A. Yes.

5 Q. Which ones?

6 A. I've done lots and lots for Pacific Gas
7 & Electric Company.

8 Q. I'm sorry. I didn't mean to interrupt
9 you.

10 A. Especially back in the '80s and '90s,
11 did a lot of work with various utilities around the
12 country.

13 Q. More recently say in the last fifteen or
14 twenty years, have you done work for public utilities?

15 A. Yes, a lot of work for PG&E in the last
16 twenty years.

17 Q. Is that the last company that you've
18 done -- the last public utility you've done work for?

19 A. I don't know. I'd have to review my
20 resume for that.

21 ALJ GARNER: Make sure you speak
22 directly into the microphone, Mr. Wilson.

23 THE WITNESS: Sorry.

1 Q. Your work for PG&E in whatever time frame
2 that was, was that in connection with the development of
3 reserve margins?

4 A. I don't believe it was. There were a
5 number of projects on both the electric and natural
6 gas side having to do with a number of matters. I
7 don't remember if it involved that. I don't believe
8 it did.

9 Q. Okay. So sitting here today, you can't
10 recall doing work for a public utility in the
11 development of reserve margins?

12 A. I'd have to review my CV for that.

13 Q. The PG&E that you have done work for, is
14 that the one that's now in bankruptcy?

15 A. Pacific Gas & Electric Company. Yeah,
16 I believe they are in trouble right now.

17 Q. I took a look also at the list of
18 testimony that's included in your resume and I was
19 trying to -- and I spent some time looking at those
20 dockets and I have been unable to locate any instance in
21 which you were hired to review a load forecast and your
22 conclusion was that the load forecast was reasonable and
23 you recommended no change. Did I miss something?

1 A. Yes.

2 Q. Which one did I miss?

3 A. I believe in North Carolina, I was
4 pretty good with their load forecast.

5 Q. Can you point to me which case that was,
6 please?

7 A. I don't know which iteration. There
8 might have been a few iterations there. A number of
9 times -- I mean recently especially now that we have
10 ten years of post-recession history, a lot of
11 utilities are focusing their load forecasting on just
12 that post-recession history, that kind of stable ten
13 years, and getting load forecasts that are actually
14 quite reasonable.

15 So we are in a period now where a lot
16 of load forecasts are pretty stable and pretty
17 reasonable. But I think in the Duke case, I have a
18 couple of iterations there. I was pretty okay with
19 their load forecasts. And of course, I've been
20 involved with PJM's forecast loads year after year,
21 and if I recall, there was one year when I thought
22 they had it right, too. And other than that, I don't
23 know. I'd have to go back line by line.

1 Q. All right. Same question with regard to
2 reserve margins. I tried looking through your list of
3 cases here and I was unable to identify an instance
4 where you examined a public utility's reserve margins
5 and concluded that it was reasonable and you agreed with
6 it?

7 A. Well, I wasn't too critical of the
8 summer reserve margin in this case and in some other
9 cases. The unfortunate reality is that utilities like
10 to try to justify high reserve margins, and so usually
11 if you look carefully at the work underlying the
12 reserve margin, you find six or seven thumbs on the
13 scale and usually can pick on two or three of those
14 thumbs because there's a few big ones. And then if
15 you, you know, correct just the really biggest flaws,
16 it comes way down and then it's probably still too
17 high but it's in a range of reasonableness.

18 So I think it would be unusual for an
19 intervenor to take a look at a utility reserve margin
20 when they have every incentive to want to inflate it
21 and not find that indeed they have inflated it and in
22 some instance some of the assumptions that they've
23 relied on to inflate it are pretty obviously not, you

1 know, valid.

2 Q. So it's your belief that utilities
3 exaggerate the risk or reliability events in order to
4 drive up the reserve margins. Is that your testimony?

5 A. Not necessarily. There's other ways to
6 drive up reserve margins by typically just using very
7 conservative assumptions rather than -- I mean the
8 fundamental concept is usually one day in ten years,
9 0.1 LOLH.

10 So it's supposed to be a probabilistic
11 analysis, and if you built a very complex model and
12 represented everything probabilistically, then the
13 result of your model would theoretically be, you know,
14 calculating the capacity needed for that one day in
15 ten years but instead usually there's only a couple of
16 things represented probabilistically, and the other
17 things that aren't represented probabilistically,
18 usually an extremely conservative assumption is used,
19 which if you represented it probabilistically would
20 represent a whole lot more of that, whether it's
21 merchant capacity, transmission from neighbors,
22 assistance available from neighbors, demand response,
23 price response of demand. You know, there's many

1 other things that in a complicated model you would
2 have all these things going on.

3 So for instance after the polar vortex,
4 the president of PJM talked about how there were
5 resources coming out of the woodwork he said. When
6 prices get high, when the system gets tight, there's a
7 lot of things that kind of can, you know, work, show
8 up and work in your favor, and a lot of times, all
9 those details, all that richness is not represented.

10 Q. So is it your conclusion then in those
11 instances the target reserve margin is exaggerated and
12 higher than it needs to be? Is that your testimony?

13 A. It's often the case that the reserve
14 margin is exaggerated and higher than it needs to be.
15 And if you look around the country, how often do we
16 see one day in ten years? I mean the polar vortex,
17 even then, we didn't have lost load in those places.

18 So I think the evidence supports the
19 fact that the reserve margins that are supposed to be
20 one day in ten years are actually probably providing a
21 lot more reliability than that and a lot more than
22 necessary.

23 Q. Let me hand you a document. It's a NERC

1 document, 2016 probabilistic assessment. Are you
2 familiar with that?

3 A. Yes.

4 ALJ GARNER: Do you want this marked as
5 an exhibit?

6 MR. MCCRARY: Yes, Your Honor.

7 ALJ GARNER: Alabama Power 51.

8 Q. And in this document, NERC is assessing
9 the likelihood of a reliability event over a future time
10 frame, is it not?

11 A. Well, for the most part, they collect
12 information from utilities and compile it.

13 Q. So let me -- but NERC is doing an
14 assessment of loss of load probability in this document,
15 is it not?

16 A. I'm not sure. I mean usually what they
17 do is they collect those from utilities and create a
18 document that summarizes them all. So I don't -- I
19 don't recall of actually -- I don't think they did in
20 this document.

21 Q. Okay. So the utility is doing the
22 assessment, they provide the information to NERC, and
23 NERC produces the document?

1 A. That's my understanding.

2 Q. Okay. Let's look, if you would, at page
3 six.

4 A. Roman?

5 Q. No. Arabic six.

6 ALJ GARNER: MISO?

7 MR. MCCRARY: Yes, sir.

8 Q. And the monthly reliability measure for
9 January under the 2018 base, what was the probability of
10 LOLH?

11 A. Well, it says there zero hours per
12 month.

13 Q. Right. And EUE, zero?

14 A. Yes.

15 Q. And then there's --

16 A. I don't know what this is. I'd have to
17 read the document to see what we're looking at right
18 now.

19 Q. Does that suggest to you that the
20 analysis yielded a zero chance of a reliability event?

21 A. I would want to read the document to
22 see what I'm looking at here.

23 Q. I thought you said you were familiar with

1 this kind of a document?

2 A. I am.

3 Q. But you don't know what this means?

4 A. I would want to read what MISO
5 submitted. Every utility applies a completely
6 different approach here. So I'd be familiar with it
7 if it was PJM's. With MISO, I would want to read the
8 documentation here, which is only three pages long,
9 before I have an opinion on what those numbers meant.

10 Q. All right. Go ahead, please.

11 A. Okay. This is MISO's resource adequacy
12 analysis from that time.

13 Q. And it is indicating a zero probability
14 of a reliability event in January of 2018, correct?

15 A. Well, I think what they're reflecting
16 is they had a huge amount of excess capacity at the
17 time.

18 Q. Okay. And let's look over at page 33.
19 Do you have that?

20 A. Yeah.

21 Q. And then SERC north, that's TVA?

22 A. Apparently so and some other public
23 utilities.

1 Q. And I'm looking at the upper portion of
2 the chart on page 33.

3 A. Okay.

4 Q. And similarly for January of 2018, TVA
5 was projecting a zero chance of a reliability event, was
6 it not?

7 A. To three decimal places.

8 Q. Yeah.

9 A. Of course, this is resource adequacy.
10 Outages do occur for other reasons and this is
11 typically what's called copper sheet or zonal which
12 means they're not including the possibility of outage
13 due to very local transmission constraints, for
14 instance. So, you know, things happen that fall
15 outside of the scope of these studies.

16 Q. All right. And below that, SERC
17 Southeast, that's Southern Company, Southern BA?

18 A. I believe you.

19 Q. And again for January of 2018, a zero
20 expected reliability event?

21 A. Yes.

22 Q. And finally over on page 36 for SPP --

23 A. These are single digits.

1 Q. Still zeros?

2 A. Well, we don't know. It could be 0.4
3 and they rounded it down to one digit zero.

4 Q. What's shown here is zero?

5 A. Yes.

6 Q. All right. So at least for purposes of
7 those presentations, the utilities there were not
8 exaggerating the risk of a reliability event, were they?

9 A. Well, this is based on their current
10 mix, I assume, but that's their forecasting based on
11 their current reliability mix. So, you know, those
12 numbers are pretty small but I don't know. I'd have
13 to take a look at their study to see exactly what all
14 is going on there.

15 Q. But as it turned out, as it turned out,
16 there was a reliability event in January of 2018, was
17 there not?

18 A. Let's see.

19 MR. MCCRARY: Your Honor, I only have
20 one more. I'll show it to counsel.

21 ALJ GARNER: Sure. That's fine.

22 Q. You're familiar with this report, are you
23 not?

1 A. I did see it at one time, yes.

2 Q. And this was a report done by the FERC
3 and the NERC staff in response to a cold weather bulk
4 electric system event January 17, 2018, correct?

5 A. Yes.

6 ALJ GARNER: The document is marked as
7 Alabama Power Exhibit 52.

8 MR. MCCRARY: Thank you, Your Honor.

9 Q. And this report documents, does it not,
10 Mr. Wilson, that there was not an actual loss of load on
11 this day but a very near miss because of the cold
12 weather that occurred in the region at that time?

13 A. Yes, there was extreme cold over quite
14 a bit of the country and a lot of other contingencies,
15 so, yes, it was a near miss.

16 Q. And if you look over at page 20 of that
17 exhibit, page 20 of 153 --

18 A. Uh-huh.

19 Q. -- in the paragraph that's below the
20 chart, it says none of the affected RCs forecast having
21 a shortage of generation to meet their winter peak
22 loads. MISO, SPP, TVA, BA and SERC all provided
23 resource adequacy projections for their entire

1 footprints for the winter 2017-18 as part of NERC's
2 2017-18 winter reliability assessment. That's the
3 document we just looked at, correct?

4 A. Right.

5 Q. Then continuing on, it says which ranged,
6 the resource adequacy projections ranged from 32 percent
7 to 67 percent resource reserve margins excluding planned
8 and expected unplanned generation outages well above
9 their reserve margins of 12 to 17 percent. Do you see
10 that?

11 A. Yeah.

12 Q. So despite the fact that these utilities
13 are not projecting any sort of resource adequacy issue
14 and despite the fact they had reserves that were
15 actually from 32 to 67 percent, there was a near miss in
16 the Southeastern United States on this day, was there
17 not?

18 A. Right. I mean that should have been
19 the one day in ten years and they still didn't have an
20 outage because, you know, they had so much capacity
21 but I mean it's similar to the polar vortex in 2014
22 and PJM. There's a lot of lessons learned with
23 winterization and such. The temperatures were very

1 extreme over a very broad area here.

2 So, you know, there are a lot of
3 lessons learned but they still didn't have an outage
4 even under very extenuating circumstances which
5 suggests to me that we're not at one day in ten years.
6 We're a little better than that.

7 Q. Indeed in response to this near miss,
8 NERC in this hundred and fifty something page report
9 issued a host of recommendations addressing many of the
10 same risks that are reflected and discussed in the
11 Southern 2018 reserve margin study. Isn't that true?

12 A. There's always a lot of learning from a
13 close call. We don't have very many of them but we
14 learn a lot from each one.

15 MR. MCCRARY: Just a moment, please.
16 No more questions, Your Honor.

17 ALJ GARNER: Redirect of Mr. Wilson?

18 MS. TIDWELL: Just very quickly.

19 REDIRECT EXAMINATION

20 BY MS. TIDWELL:

21 Q. Mr. Wilson, what's your opinion about the
22 Alabama Power's peak demand model forecast in this case?

23 MR. MCCRARY: Your Honor, I would object.

1 I asked no questions about the peak demand model.

2 ALJ GARNER: I don't remember a question
3 about that.

4 MS. TIDWELL: Your Honor, he was asking
5 questions about whether Mr. Wilson ever found a load
6 forecast reasonable.

7 ALJ GARNER: Okay. Connect the dots for
8 me to a question that --

9 MS. TIDWELL: Me?

10 ALJ GARNER: Yeah, you have to help me
11 how that's related to the cross specifically.

12 MS. TIDWELL: Mr. Wilson's testimony
13 addresses Alabama Power's initial peak demand --

14 ALJ GARNER: I got that. I understand
15 that but -- be very quick.

16 Q. Do you recall what I just asked you, Mr.
17 Wilson?

18 A. Yeah. No, you're right. I mean my
19 recommendation in this case was that the peak demand,
20 winter peak demand forecast as it is produced by the
21 company's peak demand model should be used without the
22 adjustments. They applied four adjustments which
23 three were documents and my recommendation in this

1 case is that the peak demand model is giving you a
2 reasonable forecast for the winter period.

3 MS. TIDWELL: Thank you. No further
4 questions.

5 ALJ GARNER: All right. Mr. Wilson's
6 prefiled testimony will be admitted including his
7 exhibits, all 39 of them, and you are excused, Mr.
8 Wilson. Thank you, sir. Any objection to the admission
9 of Alabama Power Exhibits 51 and 52? I see none. They
10 are admitted.

11 MS. TIDWELL: Thank you, Your Honor. You
12 admitted Mr. Wilson's exhibits as well?

13 ALJ GARNER: Yes, all 39. Ready for
14 Mr. Rabago?

15 MR. JOHNSTON: Yes, Your Honor. Alabama
16 Energy & GASP calls Karl Rabago to the stand.

17 ALJ GARNER: Moves quick around here,
18 Mr. Rabago.

19 KARL RABAGO,
20 having been first duly sworn, was examined and testified
21 as follows:

22 DIRECT EXAMINATION

23 BY MR. JOHNSTON:

1 Q. Mr. Rabago, please state your name and
2 full business address for the record.

3 A. My name is Karl Rabago. My business
4 address is 2025 East 24th Avenue, Denver, Colorado.

5 Q. And by whom are you employed?

6 A. I am self-employed. I have a Colorado,
7 LLC, Rabago Energy.

8 Q. On whose behalf are you testifying today?

9 A. GASP & Energy Alabama and working with
10 you, SELC.

11 Q. On December the 4th, 2019, did you
12 prepare and cause to be prefiled in this docket a public
13 and redacted version of 30 pages of direct testimony in
14 question and answer format?

15 A. Yes, I did.

16 Q. Did you also cause to be prefiled along
17 with your corrected testimony fourteen exhibits marked
18 Exhibits KRR-1 through KRR-14?

19 A. Yes, I did.

20 Q. Do you have any changes to your prefiled
21 direct testimony or exhibits at this time?

22 A. I do not.

23 Q. If I were to ask you the same questions

1 that appear in your prefiled testimony at the present
2 hearing today under oath, would your answers be the
3 same?

4 A. Yes, substantially the same.

5 MR. JOHNSTON: Your Honor, I move to
6 have Mr. Rabago's direct prefiled testimony and
7 exhibits entered into the record as if given orally
8 from the stand.

9 ALJ GARNER: Mr. Rabago's prefiled
10 testimony and exhibits will be admitted subject to
11 cross-examination.

12 Q. Mr. Rabago, did you prepare a summary of
13 your testimony?

14 A. Yes, I did.

15 MR. JOHNSTON: Your Honor, with your
16 permission, I would like Mr. Rabago to read a summary,
17 read his summary.

18 ALJ GARNER: Deliver it timely.

19 A. Your Honor and Commissioners, my
20 testimony, which draws on 30 years of experience
21 including as a public utility commissioner, a utility
22 executive, and as an advocate, reviews the company's
23 proposals and finds that in spite of having access to

1 solid planning and development tools through Southern
2 Company and contractors, the company, Alabama Power
3 Company, has failed to meet its burden of showing need
4 and that its proposals -- and that its proposals
5 aren't in the best interest of its customers, the
6 commission and the state of Alabama.

7 With the exception of its solar
8 proposals and the small poorly developed proposal for
9 demand side programs, the company wants to further
10 increase Alabama customers' already highest bills in
11 the country by adding polluting, economy limiting and
12 risky investments that are not in the public interest.

13 One major and fatal flaw in this
14 proposal is that the company has not only allowed but
15 created a winter peak problem through excessive gas
16 generation and unreasonably proposes even more gas
17 generation as effects.

18 Therefore I recommend among other
19 things a denial and deferral of gas build and
20 acquisition proposals and a commission rule making on
21 peak processes. That concludes my opening statement.

22 MR. JOHNSTON: Mr. Rabago will now be
23 available to answer questions from the bench by

1 cross-examination by the parties.

2 ALJ GARNER: All right. Any questions
3 from the intervenors?

4 MR. HOOPER: Your Honor, we don't have
5 any questions, American Senior Alliance, of Mr. Rabago.

6 ALJ GARNER: No one? All right. Alabama
7 Power.

8 CROSS-EXAMINATION

9 BY MR. GROVER:

10 Q. Mr. Rabago, hi, I'm Scott Grover. How
11 are you?

12 A. I'm fine. Thank you.

13 Q. Good. We've met before, have we not?

14 A. We have.

15 Q. Good. I want to start with this. You
16 would describe yourself as a clean energy advocate,
17 would you not?

18 A. I would and a free market green.

19 Q. A free market green. Let me get you to
20 turn to your testimony. I want to do a little bit of
21 housekeeping. Page 28.

22 A. I'm there.

23 Q. Okay. And it's the Q and A that begins

1 around line six. I ask you to be careful with the
2 numbers because in retrospect I feel like what you may
3 have quoted there may been confidential but just that
4 statement and the answer to the question there is a
5 recognition of what you believe could be recognized from
6 the implementation of additional energy efficiency and
7 demand side measures utilizing the total resource cost
8 test, correct?

9 A. Yes. I indicated that there are a lot
10 of resources available.

11 Q. Okay. And you go on to add that if the
12 rate impact measure test is used in lieu of the total
13 resource cost test, then those numbers would be
14 significantly lower, correct?

15 A. Yes.

16 Q. Okay. And the report that you're drawing
17 this discussion from is what's known as a technical
18 potential study performed by Nexen --

19 A. Right.

20 Q. -- which you included as an exhibit to
21 your testimony. Let me show you a page from that that
22 was marked confidential but I have confirmed with my
23 people that I can show you this. I will represent this

1 is a page from that study, page 20.

2 A. Okay.

3 MR. GROVER: Go ahead and include that,
4 Judge.

5 ALJ GARNER: You want this marked as an
6 exhibit?

7 MR. GROVER: If we can, Your Honor.

8 ALJ GARNER: Sure. It's not
9 confidential?

10 MR. GROVER: Correct. I'd like to keep
11 the remainder of that study confidential but that page
12 is not.

13 A. Okay.

14 Q. And you see the section 1.4.2 which says
15 rate impact?

16 A. Yes.

17 Q. Could you read that?

18 A. Yes, I read it.

19 Q. Okay. I mean -- and it's fair to say
20 that, summarizing it, the statement by Nexen included
21 with the study acknowledges that energy efficiency
22 programs can cause electricity rates to rise faster than
23 they would ordinarily and that the failure of the market

1 to accept programs can also impact rates and that if
2 technology impacts prove less than estimated that the
3 rate impacts could actually become severe?

4 A. Right.

5 Q. I've summarized it but that's generally
6 what it says, correct?

7 A. That's what this section 1.4.2 says.

8 Q. Okay. Turn now to page 27. Actually I'm
9 sorry. Twenty-six of your testimony.

10 A. Twenty-seven. Got it.

11 Q. I'm sorry. Twenty-six.

12 A. Twenty-six. I'm sorry. Okay.

13 Q. And here you should be looking at a chart
14 that's labeled potential and actual peak demand savings
15 in 2015 for utilities with leading demand response
16 programs. Do you see that?

17 A. Yes.

18 Q. Okay. And you can characterize your
19 testimony if I mischaracterize it. As I understand it
20 here, you're commenting that Alabama's inclusion,
21 Alabama Power's inclusion on this chart indicates that
22 there is unrealized potential insofar as the orange
23 portion of that bar is the demand response capability

1 whereas the blue portion of that bar represents what was
2 actually utilized?

3 A. Yes.

4 Q. Okay. So two things. Number one, you do
5 understand, do you not, that the entirety of the bar,
6 the blue and the orange together, represents the demand
7 response potential as a percentage of peak load, right?

8 A. Yes.

9 Q. Okay. And so in that, that's
10 representative of the amount of demand response that
11 could be called?

12 A. That could be called, right.

13 Q. Okay. Do you understand that the amount
14 of demand response is captured by Alabama Power as part
15 of its total aggregated portfolio of resources that are
16 included in the IRP?

17 A. Yes, I do. I saw tables in the IRP
18 document which included total amounts of megawatts
19 under contract.

20 Q. Okay. And lest there be any confusion,
21 anyone looking at this document shouldn't take from it
22 that, say, North Carolina Eastern MPA has a greater
23 potential demand response than the power company simply

1 by virtue of its location on the chart?

2 A. I believe it's a percentage. So it
3 could be a smaller utility and the percentage, their
4 percentage would be higher for their peak demand.

5 Q. But in terms of megawatts amounts
6 relative to it --

7 A. Right. This is not an indicator of the
8 megawatts. It's an indicator of the percentage.

9 Q. Great. Thank you, Mr. Rabago. So
10 actually I want to ask you this now. On page four of
11 your testimony, you list -- oh, you know what. I got
12 ahead of myself. I apologize.

13 A. Okay. Here's page four.

14 Q. You know what. I'm sorry, sir. It's
15 late in the day and I was going to do this entirely out
16 of my head. Let me show you a document.

17 A. Okay.

18 MR. GROVER: And, Judge, I'm not going
19 to admit this. This is a page from the reserve margin
20 study. I just want to use it for illustration
21 purposes.

22 ALJ GARNER: While you're handing that
23 out, the excerpt on the Nexen study you just marked is

1 Alabama Power Exhibit 53.

2 MR. GROVER: Thank you, Judge.

3 A. All right.

4 Q. I direct your attention, Mr. Rabago, to
5 the bottom of that page where it states that -- and I'll
6 go ahead and say as a point of reference, let's go ahead
7 and do ourselves a favor and stay away from the numbers
8 highlighted in yellow that are confidential.

9 The statement at the bottom of the page
10 discusses how interruptible services, that program is
11 split into three blocks so that not all contracts are
12 called simultaneously. Do you see that?

13 A. Let me see. Yes. Right.

14 Q. Okay. So in your testimony -- and maybe
15 you can help me relocate it because I misplaced the
16 location. You make an observation that the company's
17 interruptible program can only be called as a third of
18 the entirety of the program and I wanted to make sure we
19 were clear that -- do you have any reason to doubt that
20 rather than just being limited to one-third of the full
21 amount as this is stating, the company can actually call
22 on the program in blocks so as to not impose on a single
23 customer a full amount of a reduction when in fact it

1 could spread that across participants in one-third
2 increments?

3 A. Let me clarify if I understand your
4 question. You're saying that notwithstanding the fact
5 that there's a program designed that says they will
6 never call more than one-third at a time, they could
7 call more than one-third at a time? Is that what
8 you're asking?

9 Q. That's exactly what I wanted to get to.
10 You're very categorical statement there pointed to this
11 document and this page and I'm trying to understand how
12 you're drawing that conclusion when -- as I understand
13 the program based on what I know, the program actually
14 is called incrementally so that you don't necessarily
15 impose the full obligation on a single customer. You
16 spread it across the blocks. So ultimately in a given
17 situation, you could perhaps call it all if demand need
18 was that great?

19 A. Yeah. So drawing on personal
20 experience when I was at Austin Energy, I had about
21 95,000 residential customers under my control and we
22 routinely -- when we called them, we called them 20
23 minutes at a time and that actually served to sort of

1 manage the reductions across the grid and you didn't
2 have sudden drops on feeders because it was
3 residential customers.

4 I understand this to be a contract
5 service where there's a contract between the company
6 and the utilities. And I understand from the
7 discussion of this service, the program, that the
8 company is holding itself to never calling more than
9 one-third of the potential capacity under contract.

10 And what I was referring to in my
11 testimony is an opportunity to do even more if you
12 needed it in one of those very extreme circumstances
13 but that maybe the company had actually tied its own
14 hands with its contractual relationship.

15 Q. And what is the basis for that
16 understanding that the company has limited itself?

17 A. I just saw repeated assertions in the
18 estimate of the value and the amount under contract
19 and the description of the program that it was like
20 you said here within the category, the programs are
21 split into three boxes so that -- blocks so that not
22 all contracts are called simultaneously.

23 Q. So again where -- you said you saw a lot

1 of stuff. What did you see?

2 A. Say again.

3 Q. You say you saw a lot of stuff. I'm
4 asking what you saw.

5 A. I'm sorry. I can't do better than that
6 because I just remember seeing that it would be called
7 in thirds so maybe this is the only place I saw it. I
8 should be careful with my words.

9 Q. Okay. So to the extent, you know, like
10 commission staff or the commission or others have an
11 understanding that this -- it says what it says which is
12 that the third incremental calls are intended to keep
13 from the entirety being called simultaneously --

14 A. Right.

15 Q. -- or that is at the same time, it's not
16 a limitation that only one-third could be called?

17 A. I'm not ready to go that far with you.
18 It sounded like the program design is not going to let
19 more than one-third calls at any one time.

20 Q. But sitting here today, the only thing
21 you can think of -- and I realize you're just sitting
22 here today -- is what you're looking at right now?

23 A. Right.

1 Q. Let me get you now to turn to page four.

2 A. Where am I now?

3 Q. Page four. It's the top several lines
4 there and you give a listing of sort of your recent
5 testimony. Do you see that?

6 A. On page four. Which lines?

7 Q. Two through five.

8 A. Okay. Listing my recent testimony,
9 yes.

10 Q. What I didn't see there is participation
11 in recent proceedings regarding the certification of
12 generation.

13 A. You're right. I didn't list that.
14 Perhaps it was an economy of words. Perhaps it was an
15 effort to get -- to make some key points but I have
16 participated in some of those cases in a variety of
17 capacities.

18 Q. And one of which is the Okeechobee
19 certificate proceeding before the Florida Public Service
20 Commission?

21 A. Yes.

22 Q. Do you recall that?

23 A. Yes, I do. I mean very generally.

1 It's been a while.

2 Q. Let me refresh your recollection.

3 A. Thank you.

4 MR. GROVER: Judge, I have a copying
5 error so I will give you that when he's done with that
6 if that's okay.

7 ALJ GARNER: You want it marked as
8 Alabama Power 54?

9 MR. GROVER: Yes, sir.

10 ALJ GARNER: It will be so marked when I
11 get it.

12 Q. Feel free to refresh yourself with that.

13 A. Do you want me to focus on anything in
14 particular?

15 Q. In a second. I want to give you time to
16 look at it.

17 A. Give me a second.

18 Q. Yeah, please.

19 A. Okay.

20 Q. Okay. So in this proceeding, Mr. Rabago,
21 it appears that you were engaged by the Environmental
22 Confederation of Southwest Florida. Is that right?

23 A. Yes.

1 Q. And if we look through this document,
2 this is a pre-hearing statement on behalf of Eco
3 Southwest Florida?

4 A. It's --

5 Q. That's what --

6 A. I believe it's an extract of that. I'm
7 not sure. I don't know because I don't remember --
8 it's certainly not the full testimony so it's a
9 summary of.

10 Q. Right. We will look at your testimony in
11 a second.

12 A. Okay.

13 Q. I've got your statement here. And it
14 lists the prefiled exhibits which include your resume
15 and your testimony and a number of different exhibits.
16 What I want to call your attention to though is starting
17 on page five at the bottom.

18 A. Okay. I'm there.

19 Q. Okay. There's a statement of issues and
20 positions?

21 A. Which one again?

22 Q. With that section that starts with E that
23 says --

1 A. Oh, yeah. Okay, issues. Right.

2 Q. So and this basically ticks off, I think,
3 the issues raised in the proceeding and the position
4 of --

5 A. Yes.

6 Q. -- Eco Southwest Florida on whose behalf
7 you were testifying, correct?

8 A. Right.

9 Q. Okay. And I won't go through every one
10 but basically it seems like in response to the need for
11 the Okeechobee facility, Eco Southwest Florida's
12 position was no, the current system will meet
13 appropriate reliability integrity standard orders
14 without the unit?

15 A. Okay. I reviewed them.

16 Q. And just before I go on, do you have a
17 recollection of how large the Okeechobee facility was
18 proposed to be?

19 A. No, I don't.

20 Q. Would you have any reason to disagree
21 with it being approximately 1600 megawatts if not
22 larger?

23 A. Okay. I'll take your word for it

1 subject to check, whatever. Big plant.

2 Q. Big plant. And then if you turn to
3 page -- actually before you do, I'm sorry. At the
4 bottom, there's another issue. Are there any renewable
5 energy resources and technologies or conservation
6 measures taken or reasonably available to Florida Power
7 & Light which might mitigate the need for Okeechobee?

8 And on the next position -- or the next
9 page, Eco Southwest Florida's position is, yes,
10 renewable energy and conservation measures could obviate
11 whatever need would be met by the proposed unit and
12 essentially these positions -- and again the document
13 speaks for itself -- lays out the position of Eco
14 Southwest Florida and you with respect to the need for
15 that unit by FP&L.

16 A. Yes.

17 Q. Is that fair? Okay. And I mean suffice
18 it to say, you did not support that unit?

19 A. No, I did not.

20 Q. And we will talk about it in a second.
21 One of the critical bases on which you opposed the unit
22 was the fact that the stated reliability need by FP&L
23 giving rise to the unit was what you believe was a very

1 excessive reliability target?

2 A. Yes.

3 Q. Okay.

4 MR. GROVER: There you are, sir.

5 ALJ GARNER: This is Alabama Power 55.

6 Q. And familiarize yourself, please, Mr.

7 Rabago, but I will represent this is your sworn

8 testimony prefiled in that proceeding.

9 A. It appears to be that, yes.

10 Q. Okay.

11 A. Without going through it all. Okay.

12 Let's dig in.

13 Q. So if you turn to page three starting at
14 line eight along the lines of what I was alluding to a
15 moment ago, you state here in your summary that you
16 believe the company has created a system with
17 outrageously low loss of load probability values
18 guaranteeing that customers are paying for an over build
19 system that unfairly burdens customers with unnecessary
20 costs?

21 A. Yes.

22 Q. Is that what that says? As a point of
23 just orientation, in Florida, they use this metric loss

1 of load probability?

2 A. Yes.

3 Q. But that is more or less equivalent to
4 that loss of load expectation term we've heard --

5 A. Right. LOLE, LOLP are sometimes both
6 used or separately used, yes.

7 Q. But here in Florida, that's consistent?

8 A. Yes.

9 Q. That's that one in ten --

10 A. Right.

11 Q. -- or .1 metric?

12 A. Right.

13 Q. Okay. Make sure we're talking about --
14 and I found this -- if you will go to page 7 starting
15 about line 5, it appears that you had done a calculation
16 where you had concluded that the reliability basis upon
17 which Florida Power & Light was predicating its request
18 was the reliability equivalent of, as you say it, risk
19 of death caused by falling meteor?

20 A. Yes.

21 Q. And you did a calculation to determine
22 that?

23 A. I can't remember how I got this but I

1 attached -- apparently I attached an exhibit that
2 showed a calculation that said that, yeah.

3 Q. Okay. But you go on to say, do you not,
4 in the question that's starts line 16 that in and of
5 itself the LOLE -- I don't mean to confuse it -- the
6 LOLP .1 metric in and of itself is not the wrong metric
7 to use?

8 A. It's not -- in line 16, I say are you
9 suggesting that the .1 LOLP is inappropriate. No, it
10 is appropriate. I'm -- what I was talking to is that
11 they were seeking to vastly exceed that.

12 Q. Right.

13 A. Right.

14 Q. And in that question and answer right
15 there starting on line 16, you reference a document I
16 think in support of the statement regarding the LOLP?

17 A. Yes.

18 Q. And who was the document developed by?

19 A. I'm sorry. Say again.

20 Q. Who is the document developed by?

21 A. I cited it here on line 19, a NARUC --
22 I'm sorry. It was co-written -- well, to be complete,
23 it was a product written by a consulting firm for the

1 Eastern Interconnection States Planning Council and
2 NARUC.

3 Q. And I think it says on line 18 who that
4 consulting firm is?

5 A. Astrape.

6 Q. Astrape?

7 A. I don't know.

8 Q. You don't know?

9 A. Don't know.

10 Q. Okay. Would it surprise you to know that
11 Astrape Consulting is in Mr. Carden's firm?

12 A. That's great. Good. Should have done
13 more of that work.

14 Q. All right. Mr. Rabago, let me get you to
15 turn to page 11.

16 A. Which page?

17 Q. Eleven.

18 A. Eleven. I'm there now.

19 Q. Okay. In all fairness, there's a
20 question on the prior page.

21 A. Oh, okay.

22 Q. And in response to that question, you say
23 that the company's application is characterized by

1 results-oriented arguments. It uses the reserve margin
2 criteria as a vehicle for justifying a power plant
3 building campaign. Did I read that correctly?

4 A. Yes.

5 Q. So to cut to the chase, did the Florida
6 Public Service Commission accept your positions and that
7 of Eco Southwest Florida?

8 A. No. The Florida Public Service
9 Commission voted with FPL.

10 Q. They did? And let me ask you this. That
11 was in the 2015 time frame?

12 A. Okay. I don't remember the exact date
13 but, yes.

14 Q. Subject to check?

15 A. Yeah. Document 16.

16 Q. Do you have an understanding of whether
17 Florida Power & Light returned to the Florida Public
18 Service Commission approximately three years later?

19 A. I'm sorry. They what?

20 Q. Do you have an understanding of whether
21 Florida Power & Light returned to the Public Service
22 Commission of Florida about three years later with
23 another request for new gas-fired generation?

1 A. I don't know. I don't know what they
2 have done since that time.

3 Q. So you're not familiar with the Dania
4 Beach facility?

5 A. I am not. I have not tracked it.

6 Q. So you have no reason to know one way or
7 the other whether a second unit has been certificated by
8 the Florida Public Service Commission?

9 A. I don't know.

10 Q. Okay. And all that is publicly available
11 information out there.

12 A. Okay.

13 Q. All right. And lastly, do you have an
14 awareness whether to what extent the Florida Public
15 Service Commission in addition to Okeechobee and in
16 addition to Dania Beach, subject to check, has also
17 authorized Florida Power & Light to pursue a battery
18 storage facility?

19 A. I do believe -- I heard something about
20 a large battery project in Florida.

21 Q. Okay. So not aware of the gas-fired
22 facility at Dania Beach but you are aware of the battery
23 storage facility?

1 A. You know, Florida Power & Light adding
2 another gas plant is not unusual but Florida Power &
3 Light doing solar or large storage, that's unusual so
4 that's probably why it stuck in my head.

5 Q. And would it surprise you, Mr. Rabago,
6 that the combined megawatt addition of Okeechobee and
7 Dania Beach is approximately 2800 megawatts?

8 A. No. I don't have any basis to be
9 surprised or not surprised but --

10 MR. GROVER: Thank you, Mr. Rabago.
11 That's all I have.

12 ALJ GARNER: Redirect.

13 MR. JOHNSTON: Got a few, Your Honor.

14 REDIRECT EXAMINATION

15 BY MR. JOHNSTON:

16 Q. At the beginning of Mr. Grover's
17 cross-examination, he called you a clean energy
18 advocate. Could you describe some of the work you've
19 done in utility planning and the work you've done as a
20 commissioner?

21 A. Sure. I guess my first experience was
22 as a commissioner reviewing utility proposals, you
23 know, applications. In Texas in those days, we had

1 notice of intent proceedings and then certificate of
2 need proceedings as well as of course prudence, you
3 know, in rate cases to follow.

4 After I left the commission, I did work
5 at the federal government level as a deputy assistant
6 secretary on the implementation of 1995 EPAC Energy
7 Policy Act which included program work to help
8 utilities and regulatory commissions do integrated --
9 implement integrated resource planning. We sponsored
10 research and government studies and things like that
11 that would help them do that.

12 Also as a utility executive much later
13 at Austin Energy, I participated as part of the
14 executive team and doing resource planning efforts,
15 integrated resource plans, if you will. Like I say, I
16 was part of the team and also through my role as being
17 responsible for meeting certain of the objectives like
18 delivering on the energy efficiency and the
19 distributed renewables and helping advise on the large
20 scale renewable contract procurements.

21 I have acted as an expert witness for
22 the Virginia office of SELC on a number of dominion
23 IRPs over the course of five or six years watching

1 that. So I've seen it from a lot of different places.

2 Q. And Mr. Grover just went through your
3 experience down in Florida with FL&P, correct?

4 A. With what?

5 Q. With your experience in Florida in
6 that --

7 A. FP&L.

8 Q. FP&L. Sorry.

9 A. Yes.

10 Q. And have you ever been involved in
11 planning for natural gas plants?

12 A. I'm not recalling specifically. I know
13 that new gas was on the table when we did the resource
14 planning while I was at Austin Energy. It was
15 something we considered but we didn't have to do it
16 because we had been very successful with energy
17 efficiency.

18 I know that -- I believe that some of
19 the -- when I was at AES Corporation, we worked in 27
20 different countries on regulatory affairs and I have a
21 recollection that one or two cases in one or two
22 countries involved power plant approvals and
23 construction and things but I can't remember any

1 specifics.

2 Q. Mr. Grover had directed your attention to
3 one page of the Nexen study.

4 A. Yes.

5 Q. And he was discussing energy efficiency.
6 He had you read the energy efficiency program piece
7 there. Is that correct?

8 A. Yeah. This was the rate impact page?

9 ALJ GARNER: Alabama Power 53 for the
10 record.

11 Q. The rate impact page. That's correct.
12 And talking about energy efficiency. What's your
13 understanding of energy efficiency programs at Alabama
14 Power and how those rank with other utilities around the
15 country?

16 A. Alabama Power does pretty poorly on
17 energy efficiency. I cited it in my testimony as one
18 of the factors that's contributing to this winter
19 peak, that more could be done. I will also say on
20 this particular paragraph, this is kind of like a
21 disclaimer paragraph.

22 You know, I've commissioned technical
23 potential and economic potential studies from

1 consultants like Nexen before and they always put in
2 sort of, you know, actual mileage might vary kind of
3 claims because they don't want a litigious utility to
4 come after them and say you promised 50 megawatts in
5 this program and we only got 49.

6 So what they're doing here is pointing
7 out that it's an uncertain world we live in and that
8 things can change and maybe you won't realize 50
9 megawatts. Maybe you only realize 49.

10 So the real question that comes up when
11 looking at something like this is the relative risk of
12 performance and the ability -- a term that was used
13 earlier, the flexibility inherit in energy efficiency.
14 And having run energy efficiency programs where I had
15 executive responsibility for delivering megawatts
16 every single year, I can tell you that you know what
17 could drive things crazy. You look at it constantly
18 but energy efficiency is a lot easier to adjust for
19 than power plant construction.

20 MR. JOHNSTON: Your Honor, from the
21 same study, I would like to discuss another page from
22 that same study that Mr. Grover just pulled a page out
23 of but he said the rest was marked confidential. I

1 would rather not clear the room to have Mr. Rabago
2 review this page and provide his opinion on it but may
3 I approach Mr. Grover and see if he will drop the
4 confidentiality?

5 MR. GROVER: Well, before I even
6 consider that, I feel like based on Mr. Rabago's
7 answer there that we've strayed beyond redirect.

8 MR. JOHNSTON: I think we're still
9 within redirect. He asked a question about the Nexen
10 study and --

11 MR. GROVER: My specific question --

12 ALJ GARNER: Wasn't it a specific
13 question though? I mean --

14 MR. JOHNSTON: It does relate to this
15 specific question.

16 ALJ GARNER: Let me see what you've got.
17 Talk to Mr. Grover first about the confidentiality and
18 let me see what you've got.

19 MR. JOHNSTON: I only have one page here,
20 Your Honor, but I would like to --

21 ALJ GARNER: Do I understand you don't
22 object?

23 MR. GROVER: I do not object to it nor do

1 I object to the confidentiality. I will waive it on
2 that document. I do want it admitted though as an
3 exhibit.

4 ALJ GARNER: All right.

5 MR. GROVER: Thank you, Your Honor.

6 Q. Mr. Rabago, I'm going to have you read
7 the first couple of lines from the conclusions there of
8 that same Nexen report.

9 ALJ GARNER: That will be marked as
10 Alabama Energy & GASP 62.

11 A. So you would like me to read this out
12 loud?

13 Q. Yes.

14 A. Okay. This is page 19 of the study.
15 It is section 1.4. It's titled conclusions. It says
16 a potential for increased energy efficiency exists in
17 Alabama where the economy could benefit from effects
18 associated with reduced energy consumption.
19 Participating customers could specifically benefit
20 from any financial incentives that might be offered by
21 programs intended to accelerate markets for the
22 purchase and installation of high efficiency measures.
23 It continues.

1 Q. Okay. That's it.

2 MR. JOHNSTON: Your Honor, if you would
3 give me one second to confer with my colleagues.

4 ALJ GARNER: Can I get that sheet?

5 MR. JOHNSTON: Mr. Rabago, could you
6 give --

7 ALJ GARNER: Can you hand that over your
8 shoulder? We are informal here.

9 MR. JOHNSTON: No further redirect, Your
10 Honor.

11 MS. CSANK: Your Honor, if I may just for
12 the record, since there was questioning -- this witness
13 was asked questions about a Florida docket. There was a
14 companion docket in which that company, Florida Power &
15 Light, sought and was granted an exemption from
16 Florida's bid rule. That's a public record and Sierra
17 Club would seek official recognition of that final order
18 from the state of Florida.

19 I can -- I don't have a hard copy because
20 I didn't anticipate this line but I think the record
21 would benefit from that reference and again it's a
22 government record.

23 MR. GROVER: Your Honor, my general

1 understanding is that you all, the commission, your
2 staff can take notice of government records so I don't
3 think there is a requirement one way or the other
4 needing -- or any sort of special dispensation for Ms.
5 Csank's request.

6 ALJ GARNER: I can take judicial notice
7 of that.

8 MS. CSANK: If you would like, Your
9 Honor, I can give you the docket number right now.

10 ALJ GARNER: Please do.

11 MS. CSANK: It's Docket 2017-0225-EI and
12 I don't have the final order number but I can provide
13 that.

14 ALJ GARNER: If you will provide that
15 post hearing just so we have the correct reference, I
16 can take judicial notice.

17 MS. CSANK: Yes, Your Honor, gladly.

18 ALJ GARNER: If there's nothing further
19 of Mr. Rabago, you are excused. Thank you for your
20 testimony. His prefiled testimony and exhibits are
21 admitted and I believe we have Alabama Power 53 through
22 55. Any objection to the admission of those?

23 MR. JOHNSTON: We would move to have all

1 those exhibits admitted.

2 ALJ GARNER: Okay. Then they are
3 admitted. And then we also have four -- the exhibit
4 that was just marked, 62, the excerpt from the Nexen
5 study.

6 MR. JOHNSTON: Yes, sir, we'd have that
7 moved to be admitted.

8 MR. GROVER: No objection. Thank you.

9 ALJ GARNER: All right. And I need to
10 get the document that I need to mark as Alabama Power
11 54. It is the position statement in the Florida case.

12 MR. GROVER: Yes. Thank you.

13 ALJ GARNER: I don't have a copy of that
14 one.

15 MR. GROVER: You didn't run off with it,
16 did you, Mr. Rabago?

17 MR. RABAGO: I think I left all my --

18 MR. GROVER: You did. Thank you. Here
19 you go.

20 ALJ GARNER: This is 54?

21 MR. GROVER: Yes, sir.

22 ALJ GARNER: Be with you in just a
23 minute, sir. Housekeeping here. You are Mr. Howat?

1 THE WITNESS: Yes, sir.

2 MR. EBERSBACH: We call Mr. John Howat.

3 JOHN HOWAT,

4 having been first duly sworn, was examined and testified
5 as follows:

6 DIRECT EXAMINATION

7 BY MR. EBERSBACH:

8 Q. Mr. Howat, if you would state your name
9 and full business address for the record.

10 A. Sure. My name is John Howat. I am
11 senior policy analyst at National Consumer Law Center,
12 7 Winthrop Square in Boston, Massachusetts.

13 Q. And by whom are you employed, sir?

14 A. National Consumer Law Center.

15 Q. If you would just make sure you speak
16 into the mic.

17 ALJ GARNER: Yes. Please do, sir. It's
18 late in the day.

19 Q. And you are here to testify on behalf of
20 GASP & Energy Alabama?

21 A. That's correct.

22 Q. Did you cause -- did you prepare and
23 cause to be prefiled in this docket public and redacted

1 testimony of 28 pages of direct testimony?

2 A. Yes, I did.

3 Q. Did you also cause to be prefiled along
4 with that testimony seven exhibits marked Exhibit JH 1
5 through 7?

6 A. Yes.

7 Q. Do you have any changes to your prefiled
8 direct testimony or exhibits at this time?

9 A. No, I don't.

10 Q. If I were to ask you the same questions
11 that appear in your prefiled testimony under oath, would
12 your answers be the same?

13 A. They would.

14 MR. EBERSBACH: Your Honor, we'd move
15 to have Mr. Howat's testimony entered into the record.

16 ALJ GARNER: Mr. Howat's prefiled
17 testimony and exhibits will be admitted subject to
18 cross-examination.

19 Q. Did you prepare a summary of your
20 testimony, sir?

21 A. I did.

22 Q. Would you please read it?

23 A. Sure. Good afternoon, Commissioners,

1 Your Honor. My name is John Howat. I'm senior policy
2 analyst at National Consumer Law Center. That's a
3 nonprofit organization that seeks to advance economic
4 security for low income families.

5 Over the past 20 years at NCLC, I've
6 managed regulatory, legislative, and advocacy projects
7 across the country in support of low income consumers
8 affordable access to utility services.

9 In this case, I found that while
10 residential electricity prices in Alabama are close to
11 the national average, usage expenditures and home
12 electricity burdens are among the highest in the
13 nation. High home electricity burdens in Alabama are
14 driven not only by high expenditure levels but also by
15 the prevalence of low household income and high
16 poverty rates. In Alabama, households living at a
17 hundred and fifty percent of the federal poverty level
18 carries an electricity burden of nearly three times
19 the national average.

20 In order to enhance affordability of
21 electricity and the home energy security of low income
22 Alabama customers, I recommend increasing energy
23 efficiency offerings directly to these households and

1 systemwide. I wish to thank the commission for this
2 opportunity to appear here today.

3 MR. EBERSBACH: Thank you, sir. The
4 witness is now available for cross-examination.

5 ALJ GARNER: Cross from any other
6 intervenors? Seeing none. Mr. McCrary.

7 CROSS-EXAMINATION

8 BY MR. MCCRARY:

9 Q. Good evening, Mr. Howat. How are you?

10 A. Good late afternoon to you, sir.

11 Q. When you compare data, would you agree
12 with me it's important to do so on a consistent basis?

13 A. Yes.

14 Q. Could you give me a -- you understand the
15 difference between median and average, do you not?

16 A. Median is one of generally three
17 averages that people use to describe data. The median
18 average is the midpoint in a series of data whereas
19 the mean average -- when people just say average, they
20 often refer to the mean average, which is the sum
21 divided by the number of records.

22 Q. Very good. And since those two values
23 are not the same -- I guess they could be but it would

1 be luck maybe. Since they are generally not the same,
2 it would be inappropriate to mix those two values when
3 comparing data. Would you agree with that?

4 A. Give me an example, please.

5 Q. I'm just trying to establish a principle.

6 A. Well, if you're using the median to
7 describe one dynamic and the mean to describe the same
8 dynamic and it's the same data set, yes, I would
9 question that.

10 Q. On page eight of your testimony, you say
11 that the average 2018 residential electricity price in
12 Alabama was 12.18 cents per kilowatt hour, correct?

13 A. Yes.

14 Q. And you say then that that average
15 statewide price is very close to the national median?

16 A. Right. And I suppose you could use the
17 median or the mean and come up with the same
18 conclusion.

19 Q. All right. Did you calculate the
20 national average so that it would be reflective of the
21 same number that you had for Alabama?

22 A. I'm sorry. Can you repeat that?

23 Q. Sure. What's the national average price

1 as opposed to the national median price?

2 A. Trying to go look at the data set I
3 relied on here.

4 Q. And are you looking at Exhibit JH 2?

5 A. I am.

6 Q. Column -- well, the thing that says 2018
7 residential price per kilowatt hour?

8 A. Residential price. Yes.

9 Q. So if I wanted the national average as
10 opposed to the national mean, I would have to add that
11 column and then divide it by --

12 A. The number of records. That's correct.

13 Q. Would you accept, subject to check, that
14 the national average is 13.63 cents?

15 A. Yes.

16 Q. So whereas you say Alabama's average
17 electricity price is very close to the national median,
18 if you compare it to the national average, the 13.63
19 cents, then would you accept, subject to check, that
20 Alabama is approximately 11 percent below that national
21 average?

22 A. If you want to use the mean average,
23 subject to check, sure.

1 Q. Okay.

2 A. The point is that Alabama is sort of
3 within the pack. It's within the middle on prices but
4 not with respect to expenditures and usage.

5 Q. Yes, sir. In fact, you characterize
6 Alabama's price as relatively modest?

7 A. That's correct. And I would -- you
8 know, I would continue -- whether you use a mean or a
9 median average in looking at both the Alabama price
10 and the national price, I would -- I think that that
11 holds. In Alabama, you're pretty much in the middle
12 of the pack with respect to the per kilowatt hour
13 residential price.

14 Q. And just for fun because some other
15 witnesses in this case have liked talking about
16 Colorado, we can look on your charts here and see that
17 Alabama price of 12.18 cents is very close to the price
18 indicated for Colorado, 12.15 cents, correct?

19 A. That's correct.

20 Q. But the usage in Alabama is considerably
21 larger than the usage in Colorado, right?

22 A. It certainly is.

23 Q. In fact, if you're looking at usage, if I

1 were to pick out the top usage states, I'm seeing
2 Alabama, Kentucky is 46, Louisiana is 50, Mississippi is
3 49, Tennessee is 51, Texas is 47. There's sort of a
4 pattern of southern states there, is there not?

5 A. There is indeed.

6 Q. Do you think that might have anything to
7 do with our hot humid climate?

8 A. It certainly has a lot to do with your
9 hot humid climate and that's exactly what led me to
10 the conclusion that in order to bring that usage level
11 and therefore expenditure level and home energy or
12 electricity burden level down that increased energy
13 efficiency in low income homes would accomplish
14 exactly that.

15 Q. But there are other contributors to usage
16 in Alabama, are there not?

17 A. Other contributors to --

18 Q. To electricity usage besides the climate.

19 A. Other than heat and climate?

20 Q. Yes.

21 A. Sure. The energy efficiency of the
22 equipment that's being used, the state of the building
23 stock. There are a range of contributing factors,

1 some of which I think are within the control of the
2 company and subject to policy and investment decisions
3 that can improve that high usage and high burden
4 level.

5 Q. You're aware having -- well, I don't know
6 how long you've been here during this proceeding but
7 have you been here in this proceeding and heard that
8 Alabama Power is a winter peaking utility?

9 A. I have -- my work in this case hasn't
10 focused as much on -- I'm looking at the dual peaking
11 nature, the seasonal peaking nature. I haven't looked
12 as much at reliability aspects of this case. I've
13 looked more at expenditures among some of your most
14 vulnerable and lowest income customers and the ways
15 that some of those customers might benefit and see
16 their energy insecurity, really, situations improved.

17 Q. Yes, sir. Are you aware that Alabama
18 Power is a winter peaking utility and that one of the
19 reasons for that is a high penetration of heat pumps
20 among our customers?

21 A. I haven't -- I haven't examined that --
22 that usage.

23 Q. All right. You would have no reason to

1 dispute that, would you?

2 A. No.

3 Q. Customers have choices when they elect
4 what kind of home heating to use, do they not?

5 A. I think that's complicated. It depends
6 on whether you're a renter or a homeowner. It depends
7 on the extent to which natural gas lines are available
8 or not. So they're really -- I think there's more
9 than a matter of customer choice involved with the
10 answer to your question.

11 Q. All right. But to the extent a customer
12 has electric heat for the wintertime, then they are
13 obviously not consuming other fuels for heat, are they?

14 A. If there's some sort of propane tank or
15 propane auxiliary that's available, it's possible but
16 I think in general you're right. If a customer has
17 electric resistance heat in the home and there's no
18 other source, then sure. They use electricity for
19 both heating and other end uses including lighting,
20 running appliances.

21 Q. So you say in your testimony that the
22 reason why the electric bills are high is not because of
23 the price because the price is modest. It's because of

1 the level of usage, correct?

2 A. I would -- yes, that's true and the
3 high level of usage as we've been discussing is
4 attributable to a number of different factors.

5 Q. And then on page nine, you do some
6 calculations about what you characterize as average
7 electricity burden and you do it in the context of homes
8 with an annual income of seventy-five thousand dollars
9 and then a household at a hundred and fifty percent of
10 the federal poverty level and then a household at
11 seventy-five percent of the federal poverty level,
12 correct?

13 A. That's correct.

14 Q. And so you calculate an average
15 electricity burden for the seventy-five thousand dollar
16 income home of 2.4 percent, right?

17 A. Yeah, and for clarification, I used the
18 words average and median interchangeably here. Going
19 back to our discussion earlier, I consider median to
20 be an average. Some people look at that term as just
21 referring to a mean, but as used in this context,
22 these are all median calculations of energy burden --
23 of electricity burden. Beg your pardon.

1 Q. Previously when we were talking about it,
2 did you consider median and mean to be interchangeable?

3 A. No, not at all. I used the median
4 because of the number of outliers and the level of
5 outliers when looking at usage and expenditures and I
6 think using a median under those circumstances is a
7 more appropriate approach.

8 Q. So you calculate a 2.4 percent burden you
9 say on line three and then you say that a household
10 living at a hundred and fifty percent of the federal
11 poverty level carries a burden of 7.3 percent, three
12 times higher than the 2.4 percent, right?

13 A. That's correct.

14 Q. And then you do a further calculation for
15 households at seventy-five percent of the federal
16 poverty level and you say that's six times higher?

17 A. That's correct.

18 Q. Is that a unique burden relationship for
19 Alabama?

20 A. Burden relationship? No. The
21 electricity burden is a calculation of the proportion
22 of household income devoted to electricity, home
23 electricity service, and so if income -- if we're

1 talking about the same size household -- use as an
2 example a two person household, income at a hundred
3 fifty percent of the poverty level is twice that at
4 seventy-five so doubling the burden level, assuming
5 the expenditure level holds and stays the same, that
6 follows and that's not unique to Alabama.

7 Q. Right. So I could take any of these
8 percentages that you have in the far right side of your
9 Exhibit 2 and do the divisions between the seventy-five
10 thousand and the hundred and fifty percent and the
11 seventy-five percent as described for any state in the
12 nation and I would get the same three times relationship
13 and six times relationship you've laid out here for
14 Alabama?

15 A. That's very true but the difference
16 between Alabama and the other -- and most of the other
17 states reflected in that table is that the baseline
18 for Alabama, that electricity burden level whether
19 it's seventy-five percent of poverty or a hundred and
20 fifty is very, very high and it's within the realm of
21 programs and policies to try and reduce that high
22 burden level and bring it closer into line with other
23 states reflected on the chart.

1 Q. You have a definition of home energy
2 security on page ten of your testimony, do you not?

3 A. It appears that I do.

4 Q. All right. Would you consider
5 reliability to be a component of home energy security?

6 A. Yes, I would. The definition here is
7 uninterrupted access to necessary service. That's a
8 component of it and I would agree with you that
9 reliable service fits in with that definition.

10 Q. In the next Q and A on that same page,
11 you talk about -- the question is what are some of the
12 consequences of high electricity burdens and
13 unaffordable utility bills. Do you see that?

14 A. I do.

15 Q. So when you say utility bills, I mean
16 utilities, that covers a wide range of services, does it
17 not?

18 A. Sure.

19 Q. I mean there are electricity utilities,
20 there's gas, there's water, there's sewer, there's
21 telephone. All of those are utilities?

22 A. Sure.

23 Q. So is that what you're referring to here

1 in this question?

2 A. I am referring primarily to electric
3 utility bills in the context of the answer to this
4 question. This refers to the consequences of high
5 electricity burdens.

6 Q. Right. And then in the answer, you say
7 the consequences of high home energy burdens. So now
8 we're back talking about energy. We were talking about
9 electricity. Then we start talking utilities and now
10 we're talking about energy. There are other forms of
11 energy, are there not?

12 A. Of course.

13 Q. And do you try to capture energy burdens
14 in any of your calculations here or are you limiting
15 yourself to electricity?

16 A. This is an electric utility case. I'm
17 talking about electricity burdens in this testimony
18 and proposing programs specific to this electric
19 utility in order to lower those energy burdens among
20 some of the most vulnerable of your residential
21 customers.

22 Q. Then later in that answer, you refer to
23 the residential energy consumption survey, do you not?

1 A. I do.

2 Q. And that's an east, south, central census
3 division?

4 A. You can sort the direct data by census
5 divisions, census regions. Depending on the vintage
6 of the survey, you can even get more granular than
7 that.

8 Q. Okay. But what you have presented here
9 is calculations based on the east, south, central census
10 division. Is that right?

11 A. That's correct. From the 2015
12 residential energy consumption survey results.

13 Q. Sure. Comprising it looks like in
14 footnote 13 of Kentucky, Tennessee, Mississippi and
15 Alabama?

16 A. Right.

17 Q. So when you have the calculation 10.6
18 percent of households that reported a service
19 disconnection notice, how many of those are in Alabama?

20 A. I can't answer that.

21 Q. And do you know whether data reflects
22 notices for all utility suppliers or all energy
23 suppliers or only electricity suppliers?

1 A. Subject to check, this is electric
2 service suppliers, electric distribution companies. I
3 would have to look again at the wording of the
4 question on the survey but my recollection at this
5 point is that that's electric services providers.

6 Q. Backing up to page nine, line eight, you
7 make a reference to a national median home electricity
8 burden?

9 A. Yes.

10 Q. Where does that come from?

11 A. That's a calculation using residential
12 energy consumption survey variables. The nature of
13 the calculation is -- assuming that's your question.

14 Q. Sure.

15 A. But you can get a total electricity
16 expenditure that's one of the variables in the recs.
17 In the 2015 survey, there are household income
18 brackets and the way I calculated this burden number
19 is to take the midpoint of those income brackets as
20 the component of the ratio of expenditure to income
21 and then you take number of households and go from
22 there.

23 Q. So this is a calculation that you did

1 somewhere and you just provided the results here?

2 A. I created the burden variable. It's a
3 calculated variable using existing recs variables.
4 Happy to provide that documentation if that's of
5 interest.

6 Q. On page 13 of your testimony, you make
7 reference to the EIA Form 61?

8 A. Yes.

9 Q. And this you indicate are the 51 electric
10 utilities in Alabama. This is data from the 51 electric
11 utilities in Alabama?

12 A. That's correct.

13 Q. And on lines 6 and 7, you say you found
14 that in 2018 Alabama Power reported an average price of
15 twelve dollars and eighty-one cents which is about 11.5
16 percent higher than the statewide median price of eleven
17 dollars and forty-nine cents, right?

18 A. That's correct.

19 Q. So is that median a real median or is
20 that a median that's really an average?

21 A. The median is correct but the Form 861
22 provides -- this is their terminology -- average price
23 in cents per kilowatt hour in the exhibit I provided

1 along with that but again I used the median in order
2 to create this ranking.

3 Q. Would you accept, subject to check, that
4 the average is really 11.66 cents?

5 A. Sure. I would accept that. Is that a
6 weighted average or is that just a straight average
7 because I think it's very important to weight this
8 given the high number of customers Alabama Power
9 serves in which case I'd like to -- you know, I would,
10 you know, want to back up a little bit if I may. I
11 accept that the unweighted mean average is what you
12 said it was.

13 Q. Yes, sir.

14 A. But I would suggest that's an
15 inappropriate -- an inappropriate measure here in
16 light of the fact that Alabama Power serves, I
17 believe, a majority of the residential customers in
18 the state.

19 Q. Looking back on page 8, you indicate that
20 the average residential price in Alabama is 12.18 cents,
21 correct?

22 A. Where are you? I'm sorry.

23 Q. Line 13.

1 A. Okay. Thank you. Yes.

2 Q. But yet the average of these 51 utilities
3 gets you 11.66 cents. How come those numbers are not
4 the same?

5 A. So you're going back to 11.66 being the
6 mean average of the -- of all the prices you see
7 listed in this exhibit?

8 Q. Yes, sir.

9 A. Again I don't think that's an
10 appropriate measure to use a mean average without
11 weighting it but -- so you're saying 12.18 is
12 different than -- you say 11.66.

13 Q. Well, 12.18 you indicate on page 8 is the
14 average 2018 residential electricity price in Alabama,
15 do you not?

16 A. 12.18.

17 Q. That's on line 13 of your page 8.

18 A. Oh, my. As we're going through this, I
19 see the need for a correction in my testimony. On the
20 table that I provided as an exhibit, the average
21 Alabama price as reported in Form 861 is 12.81 cents
22 per kilowatt hour, and in testimony on page 8 here,
23 what I wrote down dyslexically perhaps was 12.18 cents

1 per kilowatt hour.

2 Q. So are you saying the line 13 should be
3 12.81 instead of 12.18?

4 A. Yes.

5 MR. MCCRARY: Just a moment, Your
6 Honor.

7 Q. Mr. Howat, let me ask you -- the number
8 that you just changed on line 13, is that an Alabama
9 Power price or is that a state of Alabama price?

10 A. That -- according to the information
11 Alabama Power provided, the energy information
12 administration is the average residential price of
13 electricity for 2018.

14 Q. Yes, sir, but my question is, is that the
15 in the state of Alabama or is that for Alabama Power?

16 A. Alabama Power and that's the number I
17 used to come up with the rankings you see reflected in
18 testimony, the in-state rankings.

19 Q. Well, does the value shown on your
20 Exhibit JH-2 -- is that an Alabama Power? It says
21 state. It doesn't say Alabama Power.

22 A. JH-2 is a different exhibit.

23 Q. Right.

1 A. That is an exhibit reflecting each of
2 the states, the state residential prices and
3 expenditures.

4 Q. Right. That's the exhibit you are
5 referring to on page 8, line 13, is it not?

6 A. No. I'm referring to Form 861 data
7 provided by Alabama utilities.

8 Q. If it was provided by Alabama utilities,
9 it would be statewide, would it not?

10 A. What is this exhibit number, please, so
11 I can refer to it?

12 ALJ GARNER: Do you need your prefiled
13 to refresh your memory? Is that what you're looking
14 for?

15 MR. EBERSBACH: Looking for the
16 exhibit.

17 ALJ GARNER: I've got it here. Yeah.

18 THE WITNESS: Thank you.

19 ALJ GARNER: That's your prefiled.

20 ALJ GARNER: JH-2, correct.

21 MS. TIDWELL: I think he has a copy.

22 ALJ GARNER: And for the record, that
23 will be Energy Alabama GASP 64.

1 A. The exhibit is JH-7 where you see that
2 table. That JH-7 lists each of the Alabama instate
3 utilities, that file Form 861.

4 Q. Okay. But over on page 8, you're talking
5 about average electricity price in Alabama and you refer
6 to a ranking of 25 among U.S. states. Is that not a
7 reference to JH-2?

8 A. That's a reference to JH-2.

9 Q. All right.

10 A. Both are based on Form 861 filings.
11 One is simply the Alabama utilities. JH-7 and JH-2
12 reflects a compilation by the energy information
13 administration of all the filings from around the
14 country sorted by state.

15 Q. So why on line 13 would you include an
16 Alabama Power specific price and connected that with a
17 statewide ranking among other states and the District of
18 Columbia?

19 A. What line are you referring to?

20 Q. Line 13, the one that you changed a
21 moment ago. I submit you had it right the first time.

22 A. On page 13, that's not where I'm making
23 a change.

1 Q. A moment ago, I believe you changed the
2 number on page 8?

3 A. Yes. Page 8, that number was 12
4 point -- should be 12.81 rather than 18 but now you
5 have me on page 13 so --

6 Q. Let's go back to page 8.

7 A. All right.

8 Q. Line 13. That whole answer is referring
9 to JH-2, is it not?

10 A. Yes.

11 Q. And what's the average 2018 residential
12 electricity price in Alabama shown on JH-2?

13 A. 12.18.

14 Q. Which is what you had a moment ago before
15 you changed it?

16 A. That's correct.

17 Q. Can we agree that the value on line 13,
18 page 8 was correct as it was originally presented as
19 12.18?

20 A. Yes, and I apologize for the confusion.
21 The Alabama Power price is 12.81.

22 Q. It's not helpful the numbers are so
23 close, is it?

1 A. Yes. It's not. And again it's late.
2 I apologize for the confusion.

3 Q. Comparing -- well, withdraw that. The
4 entities shown on JH-7, Alabama Power is the only
5 investor-owned utility shown there, is it not?

6 A. That's correct.

7 Q. And there are differences in the cost of
8 service that an investor-owned utility would have as
9 opposed to governmental entities. Isn't that true?

10 A. Well, you have to pay shareholders.
11 There are structural differences between
12 cooperatively-owned and municipally-owned utilities
13 versus an investor-owned but the fact is the prices
14 fall out where they do with Alabama Power higher than
15 the statewide median.

16 Q. Right. But some of the governmental
17 entities, for example, may not have to pay taxes that
18 would affect their price, would it not?

19 A. You know, I can't really speak to the
20 taxation differences between cooperatives,
21 municipalities and IOUs.

22 Q. So you don't know?

23 A. I'd have to take a closer look at it to

1 comment on it.

2 Q. All right. Similarly they may have the
3 ability to issue tax-free bonds?

4 A. Sure.

5 Q. And they may be organized in such a way
6 that they offer multi-utility services and there may be
7 some cross subsidization between or among the
8 departments --

9 A. I can't speak to that. I imagine
10 that's a case-by-case basis with respect to those.

11 Q. -- your recommendation that Alabama Power
12 make an annual investment in energy efficiency equal 2.7
13 percent revenue in sales, what does that turn into in
14 terms of an annual expense amount?

15 A. Subject to check, it would be over a
16 hundred million dollars.

17 Q. Would you accept, subject to check, it's
18 more like a hundred and fifty million dollars?

19 A. Okay. I will accept that.

20 Q. And that would be an annual expenditure
21 under your proposal, correct?

22 A. Right, which would bring Alabama Power
23 into an expenditure level consistent with many of the

1 large investor-owned utilities in the nation. You
2 would not be a unique outlier were you to invest to
3 that level or that proportion of your revenues into
4 energy efficiency.

5 Q. Are you aware of the cost effectiveness
6 measures employed in Alabama with respect to energy
7 efficiency in demand side management programs?

8 A. Somewhat. My understanding is there's
9 a heavy reliance on the REM test or sometimes called
10 the no losers test in Alabama.

11 MR. MCCRARY: No further questions,
12 Your Honor.

13 ALJ GARNER: All right. Redirect.

14 MR. EBERSBACH: Yes, Your Honor. Just a
15 few.

16 REDIRECT EXAMINATION

17 BY MR. EBERSBACH:

18 Q. Mr. Howat, there was a lot of discussion
19 a moment ago -- most of the discussion I think was
20 about -- most of the discussion was about the price of
21 electricity, Alabama Power versus statewide median
22 versus mean. Do you recall that discussion generally?

23 A. I certainly do.

1 Q. Is your testimony a critique of the price
2 of electricity in the Alabama Power service territory?

3 A. No, it's not.

4 Q. Or were you more concerned about the lack
5 of energy efficiency and its availability to manage
6 energy burden?

7 A. Yes. And the purpose of my testimony
8 was to highlight the high home energy burdens among
9 low income Alabamians and to suggest that energy
10 efficiency is a solution, help rectify that situation.

11 Q. And there was also a discussion about the
12 issue of high electric usage in Alabama and Mr. McCrary
13 asked you about contributors to that factor. Do you
14 recall that?

15 A. Yes.

16 Q. And he also noted that Alabama Power is
17 winter peak, correct?

18 A. Yes, he noted that and I noted that I
19 wasn't -- I hadn't studied that issue personally.

20 Q. He asked you about the high penetration
21 of heat pumps, for example, in the Alabama Power service
22 territory?

23 A. Yes.

1 Q. Would incentives offered by the utility
2 for the adoption of things like heat pumps, would that
3 also be a contributor to high usage particularly in
4 winter?

5 A. Depending on how, you know, how the
6 incentives were structured and response and so forth,
7 it certainly could contribute to increased winter
8 peak.

9 Q. Would a declining block rate also be such
10 a contributor?

11 A. Yes.

12 Q. You were also asked about electricity
13 burden or energy -- well, let's say electricity burden
14 in other areas of the country. Do you recall that?

15 A. Yes.

16 Q. Does the fact that energy burden exists
17 elsewhere make it any less of an issue in Alabama?

18 A. No.

19 Q. You were also asked about the reference
20 in your testimony to home security. I believe Mr.
21 McCrory asked you if reliability was a component of
22 that?

23 A. Yes.

1 Q. And you agreed that it was?

2 A. Yes.

3 Q. In your view, should measures taken to
4 ensure reliability nevertheless be the lowest cost of
5 the options available?

6 A. Absolutely.

7 MR. EBERSBACH: Your Honor, I think
8 that's all I have. We would just move for admission
9 of the exhibits attached to Mr. Howat's testimony
10 which I think would be Energy Alabama GASP 63 through
11 70.

12 ALJ GARNER: You're spot on.

13 MR. EBERSBACH: Thank you, sir.

14 ALJ GARNER: Actually I think it's 69.

15 MR. EBERSBACH: Right.

16 ALJ GARNER: 63 through 69. His prefiled
17 testimony and prefiled exhibits are admitted. Thank
18 you, Mr. Howat. You are excused. Thank you for your
19 testimony. By my estimation, this concludes all the
20 prefiled testimony.

21 MR. GROVER: Yes, Your Honor.

22 ALJ GARNER: All right. I am not
23 inclined to have closing statements given the lateness

1 of the hour. At one point in time, I think we had built
2 into the schedule post-hearing briefs.

3 MR. GROVER: Yes, Your Honor.

4 ALJ GARNER: Is there a desire for
5 submission of post-hearing briefs?

6 MR. HILL: Yes.

7 MR. DILLARD: We have been confused
8 because a later order didn't include all of that and we
9 would like some clarification if we may.

10 ALJ GARNER: It's because the schedule
11 got moved around and didn't see how that shook out.

12 MR. DILLARD: We are part of that, too.
13 We understand.

14 ALJ GARNER: Right, right, right. The
15 original schedule had a definitive time frame for
16 post-hearing briefs. So because of the movement though,
17 it was left open-ended so we're going to close that
18 loop. The transcript won't be ready for I think ten
19 business days is the contract and we didn't expedite
20 because of the cost and all. This transcript is going
21 to be voluminous.

22 Just looking at the dates, I would throw
23 out April 17th and I would probably prefer, unless the

1 parties have a different perspective, that the briefs be
2 submitted in the form of proposed orders. That would be
3 preferable to the commission. That's more helpful to
4 the staff in particular.

5 MR. MCCRARY: Yes, sir. I believe -- if
6 I'm remembering correctly, I believe that was the way
7 you described it in your original scheduling order.

8 ALJ GARNER: I can't remember exactly how
9 it was laid out but it probably was because that's
10 always the preference and that's the most helpful. So
11 any objection or any comments to that, briefs in the
12 form of proposed orders?

13 MR. HILL: No objection.

14 All right. I know I threw out the 17th
15 of April is the date for those to be submitted to the
16 commission.

17 MR. GROVER: No objection here, Your
18 Honor.

19 ALJ GARNER: No objections. Okay. All
20 right. And we would welcome post-hearing briefs in the
21 form of proposed orders to be filed with the commission
22 no later than April 17, 2020.

23 MR. MCCRARY: Yes, sir.

1 MR. GROVER: Thank you, Your Honor.

2 ALJ GARNER: Anything else we need to
3 address before we close out? I would note that,
4 Mr. Hill, I think you are going to get some
5 clarification on the AIEC and, Manufacture Alabama, you
6 still want to provide some clarification on that post
7 hearing or are we set with what you established on the
8 record today?

9 MR. HILL: I will be glad to provide that
10 if you would like it, Judge. I feel confident that all
11 the members listed support our position. If you would
12 like me to demonstrate that, I will.

13 ALJ GARNER: I don't need any other
14 papers so, you know, if you're not inclined to, I'm good
15 leaving it where it is.

16 MR. HILL: Okay.

17 ALJ GARNER: All right. And Sierra Club
18 is going to get me clarification on the Florida order
19 that you wanted me to take judicial notice of.

20 MS. CSANK: Do you have any direction how
21 would you like me to --

22 ALJ GARNER: By letter and copy all the
23 parties. That should do it. All right. Anything else

1 we need to address before we close out? Let me express
2 my appreciation to the parties for working around the
3 confidential information. That was very helpful. We
4 only had to clear the hearing room a couple of times so
5 thank you for your professionalism and working around
6 that and I thought everybody did a very good job of
7 presenting their cases.

8 So thank you for your participation. A
9 lot of hard work has gone into it and we have a lot of
10 hard work to do. So if there's nothing further to be
11 added, the matter will be taken under advisement and
12 that will conclude the hearing. Thank you all.

13 (Whereupon, the proceedings concluded at
14 6:05 p.m.)

15
16 END OF PROCEEDINGS
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C E R T I F I C A T E

STATE OF ALABAMA)

MOBILE COUNTY)

I hereby certify that the above
proceedings were taken down by me and transcribed by me
and that the above is a true and correct transcript of
the said proceedings given by said witness.

I further certify that I am neither of
counsel nor of kin to the parties nor in anywise
financially interested in the outcome of this case.



JAN A. MANN

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