



Deposition of:
Alabama Power Hearing

March 9, 2020

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

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ALABAMA PUBLIC SERVICE COMMISSION

MONTGOMERY, ALABAMA

ALABAMA POWER COMPANY.

Applicant.

DOCKET NO. 32953

IN RE:

PETITION FOR A CERTIFICATE OF CONVENIENCE AND

NECESSITY

* * * * *

TESTIMONY AND PROCEEDINGS before the

Honorable John A. Garner, Chief Administrative

Law Judge, at the Carl L. Evans Chief

Administrative Law Judge Hearing Complex, 900 RSA

Union Building, 100 North Union Street,

Montgomery, Alabama, on Monday, March 9, 2020,

commencing at approximately 9:00 a.m., and

reported by Virginia Denese Barrett, Court

Reporter and Commissioner 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

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

APPEARANCES CONTINUED

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

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 ALJ GARNER: For the record we are
2 here this morning on March the 9th, 2020 for
3 a public hearing in Docket 32953. This
4 matter concerns the petition of Alabama
5 Power Company for a certificate of
6 convenience and necessity.

7 Interested parties were made aware
8 of today's hearing pursuant to the
9 procedural ruling entered under my signature
10 on February the 12th, 2020. Today's hearing
11 has been on the Commission's publicly
12 available calendar since that time.

13 As I stated earlier, this is a
14 formal contested hearing which I will in all
15 aspects be conducting. The Commissioners
16 may attended today's hearing to observe, but
17 they will not be engaging in any discussions
18 with anyone regarding matters under
19 consideration in this docket. This is, as
20 everyone knows, an important case, and I
21 would ask that all of you observe proper
22 decorum. That means that only the parties
23 of record and the Commission staff may

1 actively participate in today's hearing. No
2 one in the gallery is authorized to
3 interject in the proceedings in any way.
4 Also, there will be no distractions from the
5 gallery or elsewhere that will be tolerated.
6 That includes distracting conversations and
7 audible reactions to testimony.

8 In order to assist with proper
9 decorum and to ensure that the focus of this
10 and all other formal hearings remain on
11 compiling an accurate record from which the
12 Commission can later make its decisions at
13 public meetings, the Commission adopted a
14 media coverage plan for formal hearings of
15 the Commission on an interim basis. A
16 docket has been established to consider
17 permanent adoption of that plan, and that's
18 under informal Docket 25329.

19 In light of the fact that consent
20 to record or broadcast this proceeding was
21 not received from all parties of record to
22 this cause, there is no recording or
23 broadcasting of any kind of this hearing.

1 Further, under paragraph fifteen of the
2 Commission's media plan, only the attorneys
3 who are actively representing clients who
4 are parties of record in this cause in
5 Docket 32953 and their support staff may use
6 digital devices in the hearing room. This
7 means that no one else in attendance beyond
8 the attorneys and their immediate support
9 staff may use their cell phones or laptops
10 or other digital devices in the hearing
11 room. Per paragraph fourteen of the media
12 plan, no live audio or video broadcasting is
13 permitted and also no social media updates
14 of formal hearings is permitted from inside
15 the hearing room. You can use your digital
16 devices in the lobby or in the hallways, but
17 I would just ask that you turn them off now
18 or at a minimum put them on silent. Also,
19 there's no food to be consumed in the
20 hearing room. We would appreciate you
21 observing that decorum request as well.

22 Hopefully we won't have any issues
23 with the observance of proper decorum

1 including the Commission's media plan. If
2 there are violations, we will direct the
3 troopers from ALEA who are providing
4 security today to escort violators out of
5 the hearing room. But hopefully that will
6 not transpire. Depending on the nature of
7 the violation, we may or may not give a
8 warning before that happens.

9 Now turning to more substantive
10 matters, we've got a lot of appearances to
11 get entered for the record. Let's go ahead
12 and do that at this time. Who is appearing
13 on behalf of the applicant, Alabama Power?

14 MR. MCCRARY: Yes, sir. Good morning,
15 Judge Garner. My name is Dan McCrary of the
16 law firm Balch and Bingham. With me today
17 are my partners, Scott B. Grover and Abby C.
18 Fox.

19 ALJ GARNER: All right, sir. Thank
20 you. There are a number of intervenors who
21 have been granted party status in this
22 cause. I will call on each intervenor, and
23 at that time if each intervenor will enter

1 the appearances that we need for purposes of
2 the record. Intervenor Manufacture Alabama.

3 MR. CLARK: Yes, sir. George Clark.
4 I represent Manufacture Alabama.

5 ALJ GARNER: Thank you, Mr. Clark.
6 All right. The Alabama Industrial Energy
7 Consumers.

8 MR. HILL: Yes. My name is Rick Hill
9 from Capell and Howard law firm.

10 ALJ GARNER: Sierra Club.

11 MR. DILLARD: Your Honor, Joel Dillard
12 representing Sierra Club. And, Your Honor,
13 I also have pending before you applications
14 Pro Hac for Diana Csank, for Julie Kaplan
15 and for Ankit Jain, Your Honor.

16 ALJ GARNER: Yes, sir. Thank you for
17 reminding me of that. As we discussed
18 previously, I have reviewed those
19 applications for Pro Hac admission. All of
20 them are in order, and I will send out
21 orders granting admission for the three
22 attorneys you just named as we speak.

23 MR. DILLARD: Thank you, Your Honor.

1 And I'll deliver that order to the State Bar
2 as soon as I receive it. Thank you.

3 ALJ GARNER: We'll get that entered as
4 soon as we can, Mr. Dillard, so you can take
5 care of that business.

6 MR. DILLARD: Yes, sir. Thank you.

7 ALJ GARNER: At the first break I'll
8 give these orders to the secretary and that
9 should take care of it. All right. Who is
10 appearing on behalf of the intervenor Energy
11 Alabama and GASP?

12 MR. JOHNSTON: Good morning, Your
13 Honor. I'm Keith Johnston with Southern
14 Environmental Law Center, and my colleagues
15 with me representing Energy Alabama and GASP
16 are Kurt Ebersbach and Christina Tidwell.

17 ALJ GARNER: All right. Thank you,
18 sir. Who is appearing on behalf of the
19 intervenor Alabama Coal Association?

20 MR. CAGLE: Your Honor, Patrick Cagle
21 representing the Alabama Coal Association.

22 ALJ GARNER: Who is here on behalf of
23 the intervenor Energy Fairness.org?

1 MR. GRIFFIN: Your Honor, Paul
2 Griffin, executive director of Energy
3 Fairness.

4 ALJ GARNER: Mr. Griffin, you may want
5 to make your way up here a little closer.
6 I'll leave that up to you. But we'll
7 accommodate you if you want to sit up here.
8 It's up to you.

9 MR. GRIFFIN: Okay.

10 ALJ GARNER: All right. Who is
11 appearing on behalf of the intervenor Senior
12 Alliance?

13 MR. HOOPER: I am, Judge. My name is
14 Conwell Hooper, executive director of the
15 American Senior Alliance. And these
16 advocates are here with me today.

17 ALJ GARNER: Thank you, sir. Who is
18 appearing on behalf of the Alabama Solar
19 Industry Association?

20 MS. HOWARD: Good morning, Your Honor.
21 I'm Jennifer Howard with the Rimon, PC law
22 firm.

23 ALJ GARNER: Thank you, Ms. Howard.

1 And who is appearing on behalf of the Office
2 of the Attorney General?

3 MR. MARTIN: I'm Oliva Martin. I'm
4 here with Tina Hammonds and Zack Wilson on
5 behalf of the Attorney General, Steve
6 Marshall.

7 ALJ GARNER: All right. Thank you.
8 All right. Staff for the Commission.

9 MR. FREE: Yes, Judge Garner. My name
10 is John Free, director of the Electricity
11 Division of the Public Service Commission,
12 and seated with me is Mr. Chad Mason, an
13 attorney with the Electricity Division.

14 ALJ GARNER: Okay. And let me just
15 make everyone aware that since the
16 Commission is sitting as an impartial
17 tribunal in this cause, the staff's
18 participation will be limited to clarifying
19 questions as we do not take an adversarial
20 role in this or any other contested hearing.
21 All right. Is there anyone else who needs
22 to enter an appearance? I think I got them
23 all, but we've got so many it's kind of hard

1 to keep track. But did I get everyone? It
2 appears that I did.

3 All right. Now let's turn to
4 preliminary matters. I believe with the two
5 procedural rulings that I issued on Friday
6 -- one of which was not dated, but that was
7 an oversight -- I believe we've cleared up
8 all the pending procedural matters as of
9 last week. We do have a motion to deny the
10 petition of Alabama Power that was filed by
11 Sierra Club. Alabama Power filed a response
12 to that motion. But, Mr. Dillard, I'll let
13 you speak to that.

14 MR. DILLARD: Very briefly, Your
15 Honor. By its terms, that motion does not
16 ask to be taken up or considered until all
17 the evidence has been heard in this
18 proceeding. And it's not in our view ripe
19 for determination and won't be until the
20 Commission finally decides this case.

21 ALJ GARNER: All right. Thank you,
22 sir, for that clarification. With that, I
23 will hold that motion in abeyance and let it

1 ride with the case. Any other preliminary
2 matters? I'm sure I missed some. But let's
3 go ahead and deal with those or other
4 housekeeping that we may need to at this
5 point. None. Okay. All right. Let me
6 move on before somebody changes their mind.
7 We previously established the order of
8 presentation of the parties. And, of
9 course, the first presenter will be Alabama
10 Power by virtue of being the petitioner.
11 They will be followed by Manufacture
12 Alabama, the Alabama Industrial Energy
13 Consumers, Energy Fairness.org, American
14 Senior Alliance, the Alabama Coal
15 Association, Sierra Club, Energy Alabama and
16 GASP, the Alabama Solar Industry Association
17 and the Office of the Attorney General and
18 then the Commission staff. We previously
19 established that each party had the option
20 of presenting a very brief opening statement
21 no longer than three minutes. Are all the
22 parties intending to present an opening
23 statement?

1 MR. McCRARY: Yes, Your Honor.

2 ALJ GARNER: All right. Well, let's
3 proceed in the established order and begin
4 with Alabama Power's opening statement.

5 MR. McCRARY: Yes, Your Honor. Thank
6 you. And good morning, Commissioners. On
7 behalf of Alabama Power, I'm offering this
8 statement as a precursor to our case in
9 chief. As a regulated public utility,
10 Alabama Power has the responsibility to
11 provide service to its customers in a
12 reliable and cost effective manner. Through
13 the use of its long standing IRP process, a
14 process that I might note the Commission is
15 well familiar with, it having been used
16 numerous times in prior certification
17 proceedings before the Commission.

18 The company has properly
19 determined the amount of additional capacity
20 needed on its system for purposes of winter
21 reliability. These winter reliability
22 concerns have grown over the last decade as
23 the company has seen its customers' demand

1 transition from summer peaking to winter
2 peaking. Winter reliability can no longer
3 be addressed through summer focused planning
4 alone. Rather, reliable planning for the
5 Alabama Power system requires the
6 utilization of both a summer and a winter
7 target reserve margin. And as to the
8 latter, Alabama Power faces a capacity
9 deficit that it must address. Now, to
10 identify the best options to meet this need,
11 the company relied on market solicitations
12 for renewable resources, capacity resources
13 and turn key proposals. All viable options
14 were objectively evaluated through the use
15 of production cost modeling that captures
16 both cost and benefit thereby enabling the
17 company to select the best options for
18 customers. These resources are reflected in
19 the diverse portfolio for which
20 certification has been requested comprising
21 solar battery projects, gas fired resources
22 and demand-side management and distributed
23 energy resources. Equally diverse is the

1 form of these resources including six power
2 purchase agreements, an acquisition and new
3 construction.

4 By any measure, Alabama Power
5 through its direct and rebuttal testimony
6 presents substantial evidence in support of
7 certification. Even so, there are those who
8 oppose certification arguing that the
9 company should delay acting on its winter
10 reliability need because the risk giving
11 rise to that need may not come to bear or
12 because other alternatives could potentially
13 materialize. But the company cannot simply
14 ignore winter reliability risks giving rise
15 to this petition, nor should it forego the
16 significant benefits to customers resulting
17 from this portfolio of resources. Most
18 assuredly, the company should take advantage
19 of the abundant low cost supply of natural
20 gas that has made the United States
21 energy -- energy independent both now and
22 for decades to come. While renewable
23 resources have a role, gas fired resources

1 are and will remain critical to the
2 maintenance of a diverse fleet of
3 dispatchable generation. The proposed gas
4 fired resources along with the company's
5 existing coal fired, gas fired, nuclear and
6 hydroelectric facilities will enable Alabama
7 Power to continue to provide reliable
8 electric service to its customers. Thank
9 you.

10 ALJ GARNER: Thank you, Mr. McCrary.
11 All right. Any opening statement from
12 Manufacture Alabama?

13 MR. CLARK: Yes, sir, Your Honor.
14 Where would you like for me to do the
15 opening?

16 ALJ GARNER: Why don't you sit at the
17 table so we can get you to the microphone so
18 everyone can hear you, Mr. Clark. Pull the
19 microphone up close, if you will, sir.

20 MR. CLARK: Good morning, Your Honor.
21 My name is George Clark. I'm president of
22 Manufacture Alabama. Manufacture Alabama
23 represents the largest electric consumers in

1 the state of Alabama as well as many other
2 manufacturers as well. I also serve as
3 Governor Ivey's chairman of Alabama's Work
4 Force Investment Board. You might say,
5 Well, what's that got to do with anything.
6 While it consumes a lot of my time, it's
7 affirmative planning in economic development
8 and progress for the state of Alabama.

9 I'm here today in favor of this
10 petition of Alabama Power Company. I feel
11 that reliability and affordability and as
12 manufacturers, we like to add to that
13 competitiveness of electric rates is
14 absolutely essential. What do I mean by
15 competitiveness? My companies are all
16 multi-state and global, and we compete for
17 capital within our own organizations and
18 corporations. And the state that has the
19 work force development problem solved and
20 has the energy problem solved are going to
21 be the states that receive capital
22 investment and future economic growth for
23 the state of Alabama. We must be prepared

1 and Alabama Power Company must be prepared
2 for potential growth, economic growth in the
3 state. Governor Ivey has estimated on sound
4 data that over the next five years we're
5 going to need five hundred thousand --
6 that's a half a million -- new skilled jobs.
7 Unfortunately in my role as chairman of the
8 Work Force Investment Board, a lot of that
9 responsibility will fall upon my shoulders
10 and is falling upon my shoulders. I take
11 that job seriously. And Alabama Power
12 Company should take their role in the state
13 of Alabama seriously, and that is to be
14 prepared for economic growth and to serve
15 its existing customers and be prepared for
16 future economic growth.

17 We've enjoyed one of the longest
18 periods of economic stability and
19 reliability of electric rates and affordable
20 electric rates in my history. And my
21 history goes way back. It goes back to the
22 early days of George Wallace when we had
23 chaos. I would urge the Commission to

1 approve this in its entirety, the whole
2 twenty-four hundred megawatts. But if
3 something has to be shaved, I would say
4 shave the solar because it is not near as
5 reliable as natural gas. We all know that
6 natural gas right now is as cheap as it's
7 ever been and probably ever will be. And
8 natural gas can respond to peak demands very
9 quickly and solar cannot. And I appreciate
10 the opportunity to speak with you today,
11 Judge.

12 ALJ GARNER: Thank you, Mr. Clark.
13 While Mr. Clark is making his way, that
14 brings us to the Alabama Industrial Energy
15 Consumers.

16 MR. HILL: Yes, Judge Garner. My name
17 is Rick Hill. I'm a lawyer at Capell and
18 Howard law firm here in Montgomery. We
19 represent the Alabama Industrial Energy
20 Consumers also known as the AIEC. The AIEC
21 is an unincorporated voluntary association
22 of companies that own and operate industrial
23 facilities in the state of Alabama. The

1 AIEC was organized to respond to and address
2 issues relating to the provision of electric
3 utility services to industrial customers in
4 Alabama. The AIEC desires a reliable and
5 sufficient supply of electric power at a
6 competitive price. AIEC members purchased
7 substantial amounts of electricity from
8 Alabama Power Company, primarily for
9 manufacturing under various rate schedules.
10 Because approval of Alabama Power's proposed
11 certificate of convenience and necessity
12 will ultimately impact retail rates, AIEC is
13 very interested in the outcome of this
14 proceeding. The primary drivers for Alabama
15 Power's proposed capacity additions are,
16 one, substantial increase in the target
17 reserve margin; two, to replace an expiring
18 purchase power agreement; three, actual
19 planned generation retirements; and, four,
20 other contractual obligations over the 2020
21 to 2029 period.

22 The projected growth and retail
23 peak demand is not a primary driver for the

1 proposed capacity addition. Also, the
2 Southern Company does not need additional
3 capacity at this time. For some time
4 Alabama Power can meet its capacity
5 obligations by continuing to make reserve
6 equalization purchases under the Southern
7 Intercompany Interchange Contract. In
8 addition, it would be premature for Alabama
9 Power Company to adopt the twenty-six
10 percent long-term system winter target
11 reserve margin without conducting further
12 analysis and presenting that information in
13 a future proceeding. The AIEC believe that
14 the Public Service Commission should deny
15 the proposed CCN until additional capacity
16 is needed by the company. Thank you.

17 ALJ GARNER: Thank you, sir. Energy
18 Fairness.org opening statement.

19 MR. GRIFFIN: Good morning, Your
20 Honor. Appreciate the opportunity here to
21 make an opening statement. My name is Paul
22 Griffin, the executive director of Energy
23 Fairness. Energy Fairness is a national

1 non-profit advocacy group looking to have an
2 honest conversation with consumers and
3 policy makers about what it takes to
4 maintain affordable and reliable energy
5 supply. I am in favor of the proposal for
6 the additional generation expansion for
7 it -- in terms of what it would mean as far
8 as making the system more reliable and more
9 affordable. And just basically, you know,
10 the investment on the front end will yield
11 dividends on the back end. However, I'll
12 say if anything from our point of view needs
13 to be shed from the point of reliability
14 standpoint, it would be the solar PPA's.
15 But other than that, I am in favor of the
16 proposal. Thank you.

17 ALJ GARNER: Yes, sir. That brings us
18 to American Senior Alliance. Mr. Hooper.

19 MR. HOOPER: Good morning, Judge.

20 ALJ GARNER: Good morning.

21 MR. HOOPER: Madam Chair. It's a
22 treat to be with you today. My name is
23 Conwell Hooper. I am the executive director

1 of the American Senior Alliance. We're a
2 non-profit organization headquartered in
3 Atlanta, Georgia covering legislative
4 regulatory issues for older Americans from
5 Florida to Tennessee to Louisiana,
6 Mississippi, Alabama and Georgia. We're
7 here today because reliable energy -- we're
8 here today because reliable energy is a
9 concern for seniors, especially during
10 colder weather. We believe the data clearly
11 shows that additional generation is
12 warranted. We believe this additional solar
13 and gas generation is in the best interest
14 of Alabama seniors. We're grateful for the
15 Alabama Public Service Commission looking
16 out for our older Americans. Thank you,
17 Judge.

18 ALJ GARNER: Thank you, sir.
19 Appreciate your statement. That brings us
20 to the Alabama Coal Association. Mr. Cagle.

21 MR. CAGLE: Thank you, Your Honor.
22 I'm Patrick Cagle, and I'm president of the
23 Alabama Coal Association. The Alabama Coal

1 Association supports diverse generating
2 portfolio which includes natural gas, hydro,
3 renewable energy, nuclear and as you would
4 expect coal. However, our participation in
5 this proceeding is not on behalf of a fuel
6 supplier but rather on behalf of some of the
7 largest industrial customers in Alabama.
8 Our members operate the deepest underground
9 met coal mines, metallurgical coal mines in
10 North America. This met coal is used to
11 make steel. It's exported to steel makers
12 around the world through the port of Mobile.
13 Miners working in Alabama's met coal
14 industry earn an average salary of over a
15 hundred thousand dollars. And it's the
16 growing segment of the coal industry.
17 Recently there was a recent announcement of
18 a five hundred million dollar investment in
19 a new mine being built. Each of these mines
20 use around a million dollars per month in
21 electricity. Reliability is critical for
22 underground mines. Everything in an
23 underground mine including the complex

1 ventilation systems which keep personnel
2 safe and a hundred million dollar longwall
3 is electric. The longwall itself uses
4 forty-six hundred volts of AC electricity.
5 During the polar vortex, one of our members
6 -- at least one of our members had to shut
7 down because their load was cut under their
8 interruptible service agreement. On-site
9 backup systems can only power the
10 ventilation systems and the other systems
11 that are essential for safety. The
12 importance of reliability for an underground
13 mine cannot be overstated. If loss of load
14 was to become a regular occurrence for large
15 industrial customers like underground mines,
16 the safety of our members' employees would
17 be put unnecessarily at risk because there's
18 no backup to the backup when it comes to
19 on-site generation.

20 Our association has reviewed
21 Alabama Power's filings in this docket, and
22 we're supportive of its need to increase its
23 capacity to support a higher winter reserve

1 margin. The sources sought by Alabama Power
2 in this proceeding will not only increase
3 its supply of natural gas, it will also make
4 Alabama the national leader in utility scale
5 solar generation with on-site battery
6 storage. No other state in the nation has
7 five battery storage energy projects in
8 development right now.

9 With such a large investment in
10 emerging renewable energy technology, it's
11 puzzling why this docket has garnered so
12 much attention from environmental groups.
13 It's clear this opposition is never to
14 advance a broader national agenda in an
15 effort to support a more diverse energy
16 portfolio here in Alabama.

17 During the course of this hearing,
18 our association intends to show that a rush
19 to oppose the petition at issue, testimony
20 filed by Sierra Club and Southern
21 Environmental Law Center directly contradict
22 one another. And we feel this fact should
23 be considered in the ultimate disposition of

1 this proceeding. Thank you.

2 ALJ GARNER: Thank you, Mr. Cagle.
3 That brings us to Sierra Club.

4 MR. DILLARD: Your Honor and
5 Commissioners, I'm Joel Dillard. I
6 represent the Sierra Club and its thousands
7 of members here in Alabama who are also
8 customers of Alabama Power Company. We
9 oppose this petition because it attempts to
10 take the Commission down a forty-year path
11 and actually a forty-year trap into rate
12 hikes and frack gas pollution. That is not
13 consistent with the burden of proof that the
14 power company must meet in order to have
15 this petition granted.

16 We live in troubled economic
17 times. At the time this petition was filed,
18 the phrase coronavirus and the havoc that it
19 has wreaked on markets throughout the world
20 was unknown, and yet here we are today in
21 the throes of an economic crisis that none
22 of us could have predicted. For that reason
23 we contend that it is unacceptable folly for

1 the power company to try to shackle itself
2 -- and be assured that we will all be
3 shackled with it if it does so -- for not
4 five years, not ten years but forty years of
5 these huge gas plants that are described by
6 the petition without knowing where the gas
7 is going to come from, without knowing who
8 the supplier will be, without knowing what
9 the prices of natural gas will be one year
10 from now, five years from now, ten years
11 from now and forty years from now. All
12 conservative businesses -- and I point out
13 that all our commissioners were elected on
14 conservative business practices. Any
15 business, including Alabama Power, must be
16 nimble, must be aware of changing market
17 conditions at all times in our global
18 economy. And it is simply not consistent
19 with the burden of proof that it must meet
20 here in order for this petition to be
21 approved for it to seek to link itself to
22 forty years of unknowns involving these gas
23 plants. Now, there's been some talk --

1 Mr. Clark says he likes natural gas today.
2 Mr. Hill wisely says, Well, we don't know
3 what it's going to be tomorrow. And it's
4 certainly true that we don't know what it's
5 going to be tomorrow. Our evidence,
6 pre-filed evidence has shown and will show
7 during this hearing, Your Honor, that this
8 is a stranded asset waiting to happen. And
9 stranded assets we contend are just an
10 elegant phrase for wasted money. None of
11 our Commissioners were elected on a
12 conservative business platform of allowing
13 wasted money. And on that basis, we contend
14 that this petition is due to be denied.
15 There's been some talk in favor, and we
16 certainly favor renewables, solar and energy
17 efficient programs that are given very light
18 reference in this petition. But those are
19 already covered by a 2015 certificate that
20 has already been entered by this Commission.
21 So the focus doesn't need to be on who likes
22 solar and who doesn't like solar. The focus
23 needs to be, Your Honor -- and we contend

1 that our evidence will address the
2 inexcusable forty-year shackling of the power
3 company to natural gas at a time when we don't
4 know what forty years from now the conditions
5 will be.

6 ALJ GARNER: Mr. Dillard, you're going
7 over your time limit.

8 MR. DILLARD: Thank you. Thank you.

9 ALJ GARNER: You'll get a chance to
10 prove everything you want to, but we need to
11 move on to the next opening statement.

12 MR. DILLARD: Thank you, Your Honor.

13 ALJ GARNER: That brings us to Energy
14 Alabama and GASP.

15 MR. JOHNSTON: Good morning, Madam
16 Chair, Commissioners and Judge Garner. I'm
17 Keith Johnston with Southern Environmental
18 Law Center, and we're representing Energy
19 Alabama and GASP and the thousands of
20 members that they have in this case.
21 Alabama Power is proposing to massively
22 increase its electric capacity about roughly
23 twenty percent adding two thousand four

1 hundred megawatts of new capacity to its
2 system. This includes almost one thousand
3 nine hundred megawatts of new or existing
4 gas resources, including a new gas plant,
5 Barry Unit 8. Alabama Power's over one
6 billion dollar proposal is an effort to
7 build rate baits and revenue through
8 excessive, unnecessary and expensive gas
9 facilities. This is a burden to rate
10 payers. And, furthermore, the company has
11 other options. Alabama Power has the burden
12 to prove that this additional capacity is
13 needed. The company also has the burden to
14 prove that this additional capacity is a
15 reasonable means by which to satisfy that
16 need.

17 Alabama Power cannot meet this
18 burden. First, Alabama Power does not need
19 the amount of capacity that it has
20 requested. Alabama Power's peak load
21 forecast includes upward adjustments that
22 are flawed and should be rejected. In
23 addition, its twenty-five percent winter

1 target reserve margin is substantially
2 overstated. As much as one thousand four
3 hundred megawatts of the proposed new
4 capacity is simply unnecessary. Second, to
5 the extent of its true capacity needs,
6 Alabama Power should not be permitted to
7 lock its customers into a forty-year
8 mortgage for risky gas resources, resources
9 which are inherently subject to forced
10 outages and fuel supply constraints, two of
11 the very factors that the company cites is
12 driving its winter reliability risk. The
13 company should instead have cheaper, less
14 risky resources including clean, renewable
15 energy options and energy efficiency
16 measures which by the company's own data
17 have proven to be the least cost capacity
18 resources and are now what utilities across
19 the country are turning to.

20 Finally, this petition if granted
21 will significantly increase customer bills
22 which are already among the highest in the
23 country. Low income Alabamians carry very

1 high electricity burdens and need bill
2 relief. The evidence will show that Alabama
3 Power has done little to prioritize energy
4 efficiency which can both lower customer
5 bills and avoid the need for the expensive
6 supply-side investments presented here.

7 On the whole, we ask the
8 Commission to deny Alabama Power's proposed
9 petition for certificate of convenience and
10 necessity. The Commission should order
11 Alabama Power to correct its overstated peak
12 forecast and reserve margin and file a new
13 petition. Any resources proposed in the new
14 petition should be lower cost and lower risk
15 and, thus, more reasonable than gas.
16 However, if the Commission partially
17 approves the petition, it should approve the
18 least cost reasonable options, the solar
19 plus battery storage power purchase
20 agreements and the two hundred megawatts of
21 demand-side management and distributed
22 energy resources which still haven't been
23 identified by the company. Thank you for

1 your time.

2 ALJ GARNER: Thank you, Mr. Johnston.
3 That brings us to the Alabama Solar Industry
4 Association. Ms. Howard.

5 MS. HOWARD: Thank you. My name is
6 Jennifer Howard, and I represent the Alabama
7 Solar Industry Association. We ask the
8 Commission to approve the solar plus battery
9 storage projects that were proposed. We
10 also support the use of solar distributed
11 energy resource projects as part of the
12 demand-side management programs that the
13 petitioner has requested. There will be a
14 lot of talk about the petitioner's claims
15 that more capacity is needed in winter, but
16 the proposed solar plus battery projects
17 should go forward regardless of whether
18 winter capacity needs are as high as the
19 petitioner claims.

20 The evidence will show that aside
21 from the issue of winter reliability, there
22 is a summer reliability issue that needs to
23 be addressed. Solar is a great fit for

1 addressing summer reliability needs since it
2 produces the most energy at the time of day
3 when energy is most needed. But when
4 batteries are paired with solar generation,
5 solar is also a great way to meet any winter
6 reliability needs. Solar generally produces
7 energy best in cold temperatures and is less
8 vulnerable to forced outages in winter. And
9 whether it's summer or winter, solar
10 provides value to the grid. That's reason
11 enough to add these solar resources. The
12 evidence will show that the solar projects
13 are the most cost effective of the proposals
14 being made. It will save rate payers money
15 and offer value in terms of avoided costs
16 and capacity benefits. Moreover, customers
17 want solar. And the solar projects support
18 economic development in Alabama through
19 attracting new businesses, creating new
20 jobs, new tax revenue and modernized
21 infrastructure.

22 In contrast, we oppose the gas
23 burning projects which are too expensive and

1 too risky. We believe that the evidence
2 will show that gas burning plants risk
3 shutting down during cold weather due to
4 freezing equipment or lack of adequate fuel
5 supply. There's a risk of gas prices
6 increasing significantly and raising costs
7 to rate payers. In fact, there's a risk of
8 future regulations increasing the operating
9 cost of these plants and materially
10 impacting the availability and cost of gas.
11 And the cost of solar is already affordable
12 and decreasing so fast it may soon be
13 cheaper to build new solar plants than to
14 operate these gas burning plants.

15 Further, the evidence will show
16 that the petitioner has not adequately
17 analyzed which resources would best meet
18 rate payers' needs and has not adequately
19 studied the risk of gas burning plants or
20 the magnitude of these risks. We should not
21 invest massive amounts of money in building
22 and operating gas burning facilities that
23 could end up being a burden on rate payers

1 for forty years. We should take this
2 opportunity to start to harness the benefits
3 of solar energy and reject or at least delay
4 for further study the proposal to add more
5 gas burning capacity. Thank you.

6 ALJ GARNER: Thank you, Ms. Howard.
7 Does the Attorney General have an opening
8 statement?

9 MS. MARTIN: My name is Olivia Martin.
10 We are here on behalf of the Attorney
11 General. We represent all rate payers. So
12 we're here to observe and participate as
13 needed on behalf of all rate payers.

14 ALJ GARNER: Thank you, ma'am. Staff.

15 MR. FREE: Thank you, Your Honor. My
16 name is John Free, again, director of the
17 Electricity Division. The staff is here.
18 We are familiar with all the testimony
19 that's been provided in this case and we are
20 here as a neutral party as Judge Garner
21 stated earlier. And we may or may not have
22 clarifying questions depending on the
23 evidence as this proceeding goes. Thank

1 you.

2 ALJ GARNER: Thank you, Mr. Free. All
3 right. I believe that concludes the opening
4 statements. Are we ready to proceed with
5 the presentation of Alabama Power's case in
6 chief?

7 MR. McCRARY: Yes, Your Honor.

8 ALJ GARNER: All right. Do you have
9 an order of witnesses established yet?

10 MR. McCRARY: Yes, Your Honor.

11 ALJ GARNER: Are you at liberty to
12 provide that at this point in time?

13 MR. McCRARY: Sure.

14 ALJ GARNER: Okay.

15 MR. McCRARY: Our first witness is
16 going to be Mr. Weathers followed with
17 Mr. Carden, Ms. Burke, Mr. Kelley, Mr. Bush,
18 Mr. Looney and Ms. Baker.

19 ALJ GARNER: All right. I'll swear
20 each of those witnesses as they come to the
21 stand. And just consistent with prior
22 procedural rulings, let me kind of refresh
23 the ground rules. Each witness with any

1 pre-filed testimony that's been submitted
2 shall be called to the stand by the party
3 that's admitting their testimony. Direct
4 examination of those witnesses will be
5 limited to the establishment of the witness'
6 identity, any corrections to the testimony
7 that was pre-filed and the witness' adoption
8 of the testimony. Each witness will be
9 allowed to present a one-minute oral summary
10 of their testimony and its purpose prior to
11 sitting for cross. We will proceed with
12 cross in the order that we've established.
13 Cross will be conducted by one lead attorney
14 for each party, with each party being
15 allowed to utilize different lead counsel
16 for different witnesses. A repetitive
17 cross-examination will not be allowed.
18 Unfriendly cross-examination is strongly
19 discouraged. Alabama Power will conduct
20 cross-examination of all intervenor
21 witnesses last. All right. Let me advise
22 the gallery also that there's been a lot of
23 confidential information submitted in this

1 docket under seal. The parties have been
2 encouraged to work around
3 cross-examination regarding that
4 confidential information to the fullest
5 extent possible. Should a situation
6 arise where we're going to get into cross
7 regarding confidential information, the
8 parties will advise me and the hearing
9 room will have to be cleared. And only
10 individuals who have executed proprietary
11 agreements will be allowed to remain in
12 the hearing room. Should that situation
13 arise, we'll try to minimize the
14 inconvenience for all to the extent
15 possible, but it may be something we have
16 to work around. So we would appreciate
17 your patience in that regard. All right.
18 Mr. McCrary, let's go ahead and call your
19 first witness, Mr. Weathers.

20 MR. MCCRARY: Yes, sir. Before we
21 do that, just a point of clarification.
22 Last Friday the company filed an errata
23 and a supplement to certain portions of

1 its testimony. We can certainly handle that
2 with the witnesses on the stand, but our
3 hope was -- and some of that involves
4 confidential information -- that the
5 witnesses might just simply incorporate
6 those changes by reference rather than
7 having to clear the courtroom and handle it
8 orally from the witness stand if that's
9 acceptable.

10 ALJ GARNER: Yes. That is acceptable.
11 Not everyone has done that. So yeah. In
12 your situation, you did file the errata. So
13 unless there's some objection to that, that
14 seems to be the way to accomplish that. All
15 right.

16 MR. McCRARY: Mr. Glover will be
17 handling our first witness, your Honor.

18 MR. GROVER: Mr. Weathers.

19 ALJ GARNER: Let me swear you in
20 before you're seated, Mr. Weathers.

21 JEFFREY WEATHERS

22 The Witness, having been first duly sworn
23 or affirmed to speak the truth, the whole truth,

1 and nothing but the truth, testified as follows:

2 ALJ GARNER: You may be seated.

3 DIRECT EXAMINATION

4 BY MR. GROVER:

5 Q. Sir, would you state your name for the
6 record?

7 A. Yes. My name is Jeffrey Weathers.

8 Q. All right. Who is your current employer?

9 A. Southern Company Services.

10 Q. All right. And what's your business
11 address?

12 A. 600 North 18th Street, Birmingham, Alabama.

13 Q. All right. And did you cause direct
14 testimony to be filed in this proceeding?

15 A. Yes, I did.

16 Q. All right. And consistent with
17 Mr. McCrary's observation a moment ago, did
18 you have any corrections to that testimony
19 submitted as part of the Friday filing he
20 referenced?

21 A. Yes, I did. I had four corrections to two
22 of the tables in my exhibit to my direct
23 testimony.

1 Q. Okay. And you're referencing your Exhibit 1
2 to your direct testimony?

3 A. That is correct.

4 Q. Okay. No other corrections to your direct
5 testimony that you're aware of?

6 A. That is correct.

7 Q. So if I asked you those questions today,
8 would the answers be the same as they are as
9 reflected in the direct testimony?

10 A. Yes.

11 Q. Okay. And did you also cause rebuttal
12 testimony to be filed in this proceeding?

13 A. Yes.

14 Q. Okay. And I don't believe, but alas, did
15 you have any corrections to that rebuttal
16 testimony?

17 A. No, I did not.

18 Q. Okay. So if I asked you those same
19 questions that are reflected in your
20 rebuttal testimony today, would your answers
21 be the same?

22 A. Yes.

23 MR. GROVER: Okay. Judge, to the

1 extent necessary, we move for inclusion of
2 those testimonies into the record.

3 ALJ GARNER: Yes. Mr. Weathers'
4 pre-filed testimony will be admitted into
5 the record subject to cross-examination.

6 MR. GROVER: Wonderful. Thank you.

7 Q. Mr. Weathers, do you have a prepared summary
8 you'd like to provide?

9 A. Yes, I do.

10 Q. Please proceed.

11 A. Thank you. Good morning, Madam President,
12 Commissioners and Your Honor. For the past
13 several years the primary reliability risk
14 for Alabama Power's electric system has
15 shifted from the summer to the winter.
16 There are several reasons for this including
17 the growth in winter peak demand as compared
18 to summer peak demand and the existence of
19 generation supply constraints during the
20 winter that are not experienced to the same
21 degree in the summer. As a result, the
22 company has adopted seasonal planning to
23 ensure the appropriate focus on both summer

1 and winter seasons. With seasonal planning,
2 the company has established summer and
3 winter targets for its planning reserve
4 margin to ensure an adequate supply of
5 resources in all seasons. These target
6 reserve margins are based on both economic
7 and reliability for customers and are
8 determined through an extensive reserve
9 margin study. This study is specific to
10 Southern Company Service territory and
11 models the cost and reliability needs of our
12 customers. Modeling assumptions are rooted
13 in actual historical data and expected
14 future system conditions. The study and the
15 resulting target reserve margins properly
16 balance economics and reliability for
17 Alabama Power's customers. Thank you.

18 MR. GROVER: Okay, Your Honor. With
19 that, we would tender the witness for
20 cross-examination.

21 ALJ GARNER: All right. Let's proceed
22 in the established order. Manufacture
23 Alabama.

1 MR. CLARK: No, sir.

2 ALJ GARNER: All right. Mr. Hill.

3 MR. HILL: Yes, sir.

4 CROSS-EXAMINATION

5 BY MR. HILL:

6 Q. Mr. Weathers, where do you work?

7 A. I work for Southern Company Services in
8 Birmingham, Alabama.

9 Q. Is Southern Company Services a subsidiary of
10 Alabama Power?

11 A. It's not a subsidiary of Alabama Power.
12 It's a subsidiary of Southern Company.

13 Q. And is Alabama Power a subsidiary of
14 Southern Company?

15 A. Yes.

16 Q. Okay. Do you -- were you consulted and
17 involved in the filing of this request to
18 add capacity?

19 A. Yes. I submitted direct integral testimony.

20 Q. But before that, were you consulted about
21 your opinions about whether this should be
22 filed at all?

23 A. I don't know about whether it should be

1 filed or not. That's up to the company to
2 decide that. I participated in the study as
3 far as primarily through the reserve margin
4 analysis which was an input into the
5 situation.

6 Q. But it is your opinion, though, that Alabama
7 Power does need added capacity; is that
8 correct?

9 A. Yes.

10 Q. Can you please explain your reasons for
11 believing that Alabama Power needs to add
12 capacity?

13 A. Yes. As I mentioned in my summary, really
14 the -- the company is now experiencing
15 winter reliability risk to a greater degree
16 than it has in the past. In the past
17 customer reliability was the constraining
18 season on our system. That has shifted now
19 to the winter. In fact, Alabama Power is a
20 winter peaking utility. As a result of
21 that, we are no longer just looking at how
22 to satisfy our capacity needs of summer.
23 We're additionally looking at capacity needs

1 in the winter. So when you examine the
2 company's winter resource supply as compared
3 to its winter load and consider an
4 appropriate target reserve margin for the
5 winter, it results in a capacity need that's
6 been identified for the company. And that
7 capacity need was the basis of the proposals
8 and the proposed portfolios that are put
9 before this Commission.

10 Q. Do you have an opinion about whether the
11 Southern Company needs additional capacity
12 at this time?

13 A. I don't have an opinion, but I'm aware of
14 the Southern Company's capacity needs.

15 Q. Well, does Alabama Power have intercompany
16 exchange contracts with the Southern System?

17 A. Yes. Alabama Power participates in a
18 contract between the operating companies
19 called the intercompany interchange contract
20 which is an operating agreement which allows
21 the system -- each of the companies to
22 dispatch as a system.

23 Q. Those agreements allow Alabama Power to have

1 an increase in capacity when needed?

2 A. The contract does not prohibit the company
3 from having increasing capacity when needed.

4 Q. Does Alabama Power have other interchange
5 contracts with other entities besides the
6 Southern System such as TVA?

7 A. There's no interchange contract such as the
8 one that I referenced that it has with the
9 other operating companies of Southern
10 Company.

11 Q. But does Alabama Power have the ability to
12 increase capacity through companies or
13 entities that are not even in the Southern
14 System?

15 A. Sure. It could by purchasing power from
16 other companies as a way to increase
17 capacity.

18 Q. So there are a variety of ways that Alabama
19 Power could increase capacity without this
20 petition being granted; is that correct?

21 A. Well, this petition, what it does, it
22 secures resources for years and for decades.
23 Generally when I'm talking about purchasing

1 power from other utilities, those are
2 generally short-term purchases. Those are
3 generally not the type of purchases that
4 will -- that will go on from year after
5 year. Longer-term purchase power
6 agreements, those are considered in light of
7 a solicitation which is what the company did
8 in its proceeding to select the proposals
9 that it did.

10 Q. So rather than doing these petitions when
11 the capacity is needed, they need to do one
12 for an extended multi-decade period of time.
13 Is that what you're saying?

14 A. No. That's not what I'm saying. In fact, I
15 think that this capacity is needed for
16 winter reliability needs. The company
17 has -- has procured and secured the
18 resources that were the best value for
19 customers from the options that were
20 presented to the company through the various
21 solicitations.

22 Q. Why the timing of the capacity additions
23 now? Why is now the time to get this

1 additional capacity?

2 A. Well, there's a couple of reasons. One is
3 that through the identification of the
4 winter planning and establishment of winter
5 planning, as I mentioned, we're -- formerly
6 we look primarily at summer risk. Now we're
7 looking at winter risk. Winter planning has
8 identified that the company has a need for
9 winter capacity. And, also, you must take
10 into consideration the rest of our system is
11 not guaranteed to have sufficient capacity
12 to sustain reliability for Alabama Power's
13 customers into the future. So those things
14 are driving the need to act on the capacity
15 need at this time.

16 Q. And what year does Alabama Power need the
17 additional capacity?

18 A. This year.

19 Q. What happens if it doesn't get it this year?

20 A. Well, for -- for this year and for the
21 winter that we currently are experiencing
22 now, the winter season that we're in, the
23 original operating companies have capacity

1 to ensure the reliability of the system.

2 Q. That they can get through intercompany --
3 I'm sorry -- intercompany interchange
4 contracts, correct? In other words, if
5 nothing happened, Alabama Power could still
6 get capacity?

7 A. For this winter that's true.

8 Q. What about next winter?

9 A. Next winter -- and I don't want to get too
10 far into reliability of the system, but I
11 will say that the ability to get capacity
12 through the intercompany interchange
13 contracts in future years is less certain.
14 In fact, we're expecting that to not be the
15 case in the future the way it is today.

16 Q. But my next question is what about next
17 winter? What happens?

18 A. Next year -- next winter is still being
19 evaluated. There's still discussions among
20 the operating company. So I'm really not at
21 liberty to talk about some specifics of
22 those discussions.

23 Q. What about the winter of 2020 -- 2022?

1 A. Again, the overall reliability of our system
2 is actually confidential information as far
3 as exactly when the system has a need. But
4 I can tell you that it is within the time
5 frame that the company is proposing to bring
6 these resources online. The Southern
7 Company System also has a winter need.

8 Q. So it's confidential for us to know when
9 Alabama has a need for this petition to be
10 granted?

11 A. No. I said Alabama Power has an immediate
12 need.

13 Q. Can you give us the characteristics of this
14 capacity addition regarding renewables and
15 what capacity you can get out of renewables
16 and other -- other types of materials?

17 A. You're asking for the capacity amounts of
18 the renewables in this --

19 Q. Characterize it in terms of renewables.

20 A. In the specifics -- if you look in the
21 specific portfolio?

22 Q. Yes.

23 A. Okay. This portfolio includes four hundred

1 megawatts of solar resources that are paired
2 with energy storage.

3 Q. Okay.

4 A. I'm sorry. Could you please repeat the
5 question? I'm not sure I understand.

6 Q. Characterize the renewables when it comes to
7 the capacity addition. How do they play
8 into this increased capacity? Are they
9 dispatchable?

10 A. Are they dispatchable? The renewables that
11 the company is proposing are generally
12 not -- would not be considered dispatchable
13 in terms of being dispatched along with our
14 other units in our system. They do provide
15 some capacity value because of the battery
16 storage that is paired with those
17 renewables. But there's limits to the
18 dispatchability of those renewables.

19 Q. You talked about weather and winter and
20 peaks. Was a sensitivity analysis performed
21 about historical weather data and
22 sensitivity issues regarding that?

23 A. A sensitivity relative to what analysis?

1 Q. Historical weather data.

2 A. We do consider historical weather data in
3 our resource --

4 Q. But was one done here as far as this filing?
5 Was one done as far as of this filing?

6 A. Yes. The winter capacity needs is
7 predicated on a combination of the winter
8 peak demand forecast and the winter target
9 reserve margin. As part of the
10 determination of the winter target reserve
11 margin, we examined fifty-four years of
12 weather history that included a wide range
13 of variability of historical weather. And
14 we used that to determine what the load
15 response would be and what reserve
16 requirements would be if such weather
17 patterns that have occurred in the past were
18 to occur again in the future.

19 Q. Did you do a sensitivity analysis that
20 reflects current gas prices?

21 A. Are you asking about in terms of reserve
22 margin or in terms of examining the
23 resources?

1 Q. I'm asking you if a sensitivity analysis was
2 done regarding gas prices and when that was
3 done and what the highs and lows were and
4 those types of -- those types of issues.

5 MR. GROVER: Your Honor, just I'd
6 object and ask Mr. Hill maybe to ask the
7 question --

8 ALJ GARNER: More specific question.
9 Yeah. I think the witness probably needs a
10 little bit more direction on what the exact
11 question is.

12 Q. Did you do any analysis of, say, the last
13 twenty years of the weather when coming up
14 with your recommendations?

15 A. Yes. Again, when we determined what the
16 appropriate reserve margin would be, we
17 studied not only the last twenty years of
18 weather, but we studied the last fifty-four
19 years of weather.

20 Q. Why fifty-four?

21 A. Because that was the -- that was how much
22 weather data that we have able to use.

23 Q. Did you use one that focused on ten years of

1 weather and contrasted it with the
2 fifty-four?

3 A. No. We used all the weather data that we
4 had.

5 Q. Just the fifty-four?

6 A. Just the fifty-four.

7 Q. When were the gas forecasts done in this
8 analysis?

9 A. Again, if you could please clarify which
10 analysis you're talking about. Are you
11 speaking about the reserve margin or are you
12 speaking about -- which analysis are you
13 referring to?

14 Q. I'm talking about the sensitivity analysis
15 about gas prices that went into the filing.

16 A. Are you asking about evaluation of
17 proposals?

18 Q. It could be that another witness could
19 answer the question better.

20 A. Yeah. I just want to make sure I understand
21 which analysis that you're talking about.
22 Are you talking about the analysis that we
23 evaluated proposals?

1 Q. I'm not sure what you mean by that, but I
2 think that's right.

3 A. Is there a particular reference in the
4 petition that you can refer me to?

5 Q. I can, but it's more of a general question
6 if you knew the answer to it about what type
7 of analysis that was done regarding gas
8 prices and projecting future rates.

9 A. Yeah. I can -- I can speak to in general
10 terms, the company does produce a gas price
11 forecast on an annual basis. So we look at
12 each year doing an entire suite of planning
13 analysis each year that has a new vintage of
14 gas prices in it.

15 Q. And if you don't know, that's fine. But do
16 you know what year was used to come up with
17 the analysis in this particular filing?

18 A. Yeah. It would have been what we call our
19 budget 2019 vintage case.

20 Q. Do you know when that was done?

21 A. When the gas price was developed?

22 Q. The budget. When was the budget done?

23 A. The budget would have been completed in the

1 fall of 2018.

2 Q. Okay.

3 A. It would have been 2019 budget vintage.

4 MR. HILL: Thank you very much for
5 your time. I appreciate it.

6 ALJ GARNER: All right. That brings
7 us to Sierra Club.

8 MS. CSANK: Your Honor, if we may ask
9 to have this one instance for this one
10 witness for Energy Alabama and GASP to go
11 ahead of Sierra Club in the order.

12 ALJ GARNER: That's fine. Are you
13 ready?

14 MR. JOHNSTON: Yes, sir, we're ready.
15 I hope Ms. Tidwell is ready.

16 ALJ GARNER: Oh, you can answer for
17 somebody else. Oh, she's ready. She's got
18 her box.

19 CROSS-EXAMINATION

20 BY MS. TIDWELL:

21 Q. Good morning, Mr. Weathers.

22 A. Good morning.

23 Q. I am Christina Tidwell with the Southern

1 Environmental Law Center representing Energy
2 Alabama and GASP in this matter.

3 Mr. Weathers, you are the resource planning
4 manager for Southern Company Services?

5 A. That's correct.

6 Q. Your job responsibilities include reserve
7 margin analyses, correct?

8 A. Yes. That's correct.

9 Q. Southern Company Services performs a reserve
10 margin study for the Southern Company System
11 every three years?

12 A. Yes.

13 Q. And the most recent one was in 2018?

14 A. Yes.

15 Q. And I'll be referring to the 2018 reserve
16 margin study throughout this examination.
17 When I say 2018 reserve margin study, I'm
18 referring to Exhibit 1 to your pre-filed
19 testimony which is titled an economic and
20 reliability study of the target reserve
21 margin for the Southern Company System. Do
22 you have a copy of that exhibit in front of
23 you?

1 A. Yes, I do.

2 Q. And you have the version with updated
3 information that was sent out by Alabama
4 Power counsel last Friday?

5 A. Yes.

6 Q. Before the 2018 reserve margin study, there
7 was a reserve margin study conducted in
8 2015; is that right?

9 A. That's correct.

10 Q. And one in 2012?

11 A. Yes.

12 Q. And so on every three years?

13 A. Yes.

14 Q. Now, before you became resource planning
15 manager, you were not involved in reserve
16 margin analyses; is that right?

17 A. That is correct.

18 Q. You became the resource planning manager in
19 September 2016?

20 A. Yes. That's correct. I had to check.

21 Q. So you oversaw the development of the 2018
22 reserve margin study?

23 A. Yes.

1 Q. And the study was conducted by two employees
2 within your department?

3 A. Yes. That's correct.

4 Q. You were not involved in performing the 2015
5 reserve margin study, correct?

6 A. That is correct.

7 Q. And those employees who conducted the 2018
8 study were not involved in the 2015 study?

9 A. That is correct. They were not.

10 Q. And the reserve -- the 2018 reserve margin
11 study was conducted during calendar year
12 2018; is that right?

13 A. Yes.

14 Q. And it was finalized in January 2019?

15 A. Yes. That's when we published the report,
16 January 2019.

17 Q. The reserve margin is the difference between
18 the company's existing capacity and the
19 company's projected peak demand. Do I have
20 that right?

21 A. Yes. That's correct.

22 Q. And the target reserve margin is the reserve
23 margin that Alabama Power uses for

1 reliability planning. Do I have that
2 correct?

3 A. Yes. That's correct. Alabama Power as well
4 as the other companies of Southern Company
5 plan to the target reserve margin.

6 Q. So the target reserve margin remains fixed.
7 All the actual reserve margins vary due to
8 variations in peak demand and resource
9 availability?

10 A. Yes. That's correct. Yes. The target
11 reserve margin is used for planning
12 purposes. But in any given year a company
13 will have actual reserves that are --
14 correspond as you said to its capacity and
15 compared to its peak load.

16 Q. The reserve margin studies that you oversee
17 typically recommend target reserve margins;
18 is that right?

19 A. That's correct.

20 Q. In 2012 the reserve margin study recommended
21 a year round target reserve margin of
22 fifteen percent?

23 A. That is correct.

1 Q. And in 2015 the reserve margin study
2 recommended a year round target reserve
3 margin of seventeen percent?

4 A. That is correct.

5 Q. In 2018 the reserve margin study recommended
6 the use of seasonal planning for the first
7 time, correct?

8 A. Yes. That is correct.

9 Q. And seasonal planning means that there are
10 separate target reserve margins for the
11 summer and the winter?

12 A. Yes. That is correct. The annual reserve
13 margins that we previously had were summer
14 reserve margins. They were calculated based
15 on as a percentage of the summer peak load
16 projection. And so for this reserve margin
17 study, we retained the summer reserve margin
18 and also added winter reserve margin.

19 Q. And so for the 2018 reserve margin study,
20 Southern Company recommended -- Southern
21 Company Services recommended a sixteen point
22 two five percent summer target reserve
23 margin?

1 A. Yes.

2 Q. And a twenty-six percent winter target
3 reserve margin?

4 A. That's correct.

5 Q. In the 2018 reserve margin study, Southern
6 Company Services performed a study to
7 determine the economic optimum reserve
8 margin, right?

9 A. Yes. That's correct.

10 Q. And as part of that evaluation, it
11 determined the economic optimum reserve
12 margin specifically for the wintertime?

13 A. Yes. We determined it in the summertime and
14 the wintertime. And the economic optimum
15 reserve margin is simply the reserve margin
16 that as a result of our study -- and our
17 study involves over seven hundred thousand
18 different production cost simulations in our
19 reliability model. And whatever the lowest
20 cost is on an expected cost basis is the
21 economic optimum reserve margin. But then
22 we further also considered risk to customers
23 and the level of reliability in determining

1 the target reserve margin.

2 Q. The winter economic optimum reserve margin
3 study determined that a twenty-two point
4 five percent winter target reserve margin
5 was needed?

6 A. No. It didn't determine that that's what's
7 needed. It determined that was the economic
8 optimum reserve margin. Again, to determine
9 the reserve margin that's needed, you also
10 need to consider the risk to customers and
11 also the level of reliability that's needed.

12 Q. So the economic optimum reserve margin
13 determined that the -- well, let me rephrase
14 that. Your study found that the economic
15 optimum reserve margin for winter was
16 twenty-two point five percent, right?

17 A. That is correct.

18 Q. So Southern Company Services then conducted
19 a risk adjusted economic optimum reserve
20 margin, right?

21 A. We conducted a risk analysis which examined
22 that for a relatively small amount of cost,
23 that the reliability level can be increased

1 significantly. And so the risk to customers
2 of higher cost outcome can be minimized
3 for -- again, for a relatively small known
4 cost. That's the risk versus reliability
5 tradeoff that we do in the analysis.

6 Q. The risk adjusted economic optimum reserve
7 margin evaluation increased the reserve
8 margin about three point five percent from
9 twenty-two point five to twenty-six percent;
10 is that right?

11 A. That is correct. And the reason why we do
12 that is to provide value to customers. We
13 do a risk assessment because we can provide
14 additional value to customers in terms of
15 higher levels of reliability. And we're
16 less likely to be in a situation where we
17 need to turn the lights off on a cold winter
18 morning for a relatively small amount of
19 cost. That's why we do that. If you just
20 looked at the economic optimum reserve
21 margin, that is a -- that's an expected
22 value. There's -- roughly fifty percent of
23 the cases will be higher costs and fifty

1 percent lower cost. What we determined is
2 you can mitigate some of those higher cost
3 outcomes by increasing the reserve margin
4 level and the value that it brings to
5 customers through that reduced risk is
6 greater than what it costs customers.
7 That's the risk analysis that we do.

8 Q. So Southern Company Services conducted this
9 risk adjusted economic optimum reserve
10 margin study because you say that costs
11 could be higher than expected in the
12 economic optimum reserve margin evaluation;
13 is that right?

14 A. That is correct. A consideration of those
15 potential higher cost outcomes. We did a
16 risk analysis.

17 Q. Of course, those costs could also be lower
18 than expected?

19 A. They certainly could.

20 Q. And the costs might be lower than expected
21 if load didn't grow as quickly as expected?

22 A. It could.

23 Q. And loads have not grown as quickly in the

1 last ten years as they did before the
2 recession; is that right?

3 A. That is correct.

4 Q. The cost might also be lower than expected
5 if temperature was higher than expected in
6 the winter, right?

7 A. That is correct. Yeah. The -- the required
8 reserves and the costs could be higher or it
9 could be lower than what the economic
10 optimum has. I think that's -- that is a
11 fact. We're not trying to predict --
12 protect customers against the cost of lower
13 cost outcomes. Those are of benefit to
14 customers. They receive those benefits when
15 it costs less to deliver energy than what we
16 expect it to be. What we're trying to
17 protect against is for those higher cost
18 outcomes. If load is higher than expected,
19 if the weather is more extreme than what
20 we'd expect, then there's a real substantial
21 cost to customers in terms of capacity and
22 potentially reliability. Those are the
23 outcomes we're trying to protect against.

1 Q. So using this risk adjusted economic optimum
2 reserve margin results in additional costs,
3 right?

4 A. It results in additional expected costs, but
5 it also results in even higher level of
6 risky outcomes that have been mitigated.

7 Q. Ultimately Southern Company customers will
8 pay for these added costs, right?

9 A. Yeah. These are -- these are costs that
10 Southern Company customers will pay for.
11 But it will also say that is a good value
12 for customers. In fact, when we did the
13 analysis from moving from the economic
14 optimum reserve margin to the recommended
15 target reserve margin, it doubled the
16 reliability for customers. If you break
17 down the actual expected increase in cost on
18 a current customer basis across the system
19 from the Southern Company System, we're
20 talking about four dollars per customer per
21 year is the increase. And, again, that's
22 for double the reliability. It's where a
23 significant number of higher cost outcomes

1 have been mitigated by taking that action.

2 Q. And that includes all Alabama Power
3 customers, right?

4 A. All Alabama Power customers as well as the
5 other operating company customers within
6 Southern Company.

7 Q. Now, you said four dollars; is that right?

8 A. That's correct.

9 Q. That amount of added cost depends on what
10 resources the utility uses to address that
11 risk; is that right?

12 A. It certainly does. And the reserve margin
13 study is not -- the purpose is not to
14 determine what resources any company will
15 add to address their capacity needs. It's
16 to determine what the right amount of
17 reserves is, what is the amount of capacity
18 that the company needs.

19 Q. You'd agree that there are more and less
20 expensive ways of addressing the risk,
21 wouldn't you?

22 A. Than what? More expensive than what?

23 Q. More and less expensive. There's different

1 ways to address the risks, right?

2 A. There's different ways to address the risks
3 that have different costs. That's correct.

4 Q. The 2018 reserve margin study uses
5 fifty-four years of weather data to
6 determine the impact of weather on the load,
7 right?

8 A. Yes.

9 Q. And your weather data -- the weather data
10 that you used is from 1962 to 2015?

11 A. Yes. That's right.

12 Q. You did not use more recent weather data,
13 2016, 2017, because it was not available to
14 you when you did your study in 2018?

15 A. That's right. At the time of the study, the
16 most complete data set we had in the form
17 that we needed, it was through the year
18 2015.

19 Q. I'm looking at page three of your updated
20 Exhibit 1 to your testimony. I'm looking at
21 figure I2, historical -- sorry -- figure I1,
22 historical low winter temperatures. Do you
23 see that?

1 A. I'm getting there. I was on my testimony.

2 Page three?

3 Q. Yes, sir.

4 A. Figure 11. Yes. I see that.

5 Q. From 1962 to 1988 which is the first half of
6 that fifty-four years, it dropped below ten
7 degrees eight times; is that right?

8 A. I'm sorry. Can you give me the range of
9 years again that you're asking?

10 Q. Yes. 1962 to 1988.

11 A. Okay.

12 Q. The first half of that fifty-four years of
13 weather data.

14 A. You said ten times it dropped below ten
15 degrees?

16 Q. I said eight times.

17 A. I'm sorry. Eight times. Based on the
18 graph, I believe you're correct. I'm just
19 trying to do the count.

20 Q. Subject to check?

21 A. Yes. Subject to check.

22 Q. It dropped below five degrees six times?

23 A. Yes.

1 Q. But from 1989 to 2015, the second half of
2 the fifty-four years of weather history, it
3 has dropped below ten degrees only three
4 times?

5 A. I believe that is correct. We did go
6 through a significant period of time where
7 we have relatively mild winters.

8 Q. It's never dropped below five degrees in the
9 second half of that fifty-four years of
10 weather data; is that right?

11 A. During that period of time, it has not. I
12 think you can -- you can draw that line
13 wherever you want to. You've drawn it to
14 where the -- the temperature below five
15 degrees fell in the first half of your data
16 set, but yet in recent years it has not
17 fallen below five degrees. It did, however,
18 get down to ten degrees during the polar
19 vortex of 2014 which actually was a
20 significant reliability event. The polar
21 vortex helps illustrate the reason why we
22 need reserves to carry winter capacity. In
23 fact, during that time even though it was

1 not below five degrees, it only averaged ten
2 degrees across the Southern Company System,
3 the company had an excess of reserves at the
4 time. They had reserves that were above its
5 target reserve margin. If that had not been
6 the case, if the company had been at target
7 reserve margin, the lights would have gone
8 out and we would have had to have shed firm
9 load for customers. Those are the type of
10 events that we're trying to protect against.
11 It's not just the five degrees, but it's
12 even up to the ten degree range.

13 Q. The polar vortex was the only time it's
14 dropped below ten degrees in the last twenty
15 years; is that right?

16 A. That is correct. But the very next year in
17 2015 it was -- it was not -- I think the
18 temperature was about thirteen degrees
19 across our territory. It was the same type
20 of situation to where those cold
21 temperatures led us to have reliability
22 risk. And if we had not still had reserves
23 that were above our target reserve margin,

1 it would have been another reliability
2 event. It would have been another incident
3 to where the company would have had to have
4 shed firm customer load. So, in fact, three
5 of the past six years of the Southern
6 Company System has peaked during the
7 wintertime. Alabama Power is peaking on
8 weather normal basis. Winter has become a
9 real risk to us. It's not just those
10 extreme temperatures. However, it is
11 important for us to consider historical
12 extreme temperatures in our analysis. By
13 planning -- by considering the impact of
14 those type of temperatures, what they would
15 be if they were to occur again, we're
16 ensuring that we have a more reliable system
17 so that temperatures that do occur more
18 often on a more normal basis, that we have
19 adequate reserves to cover those
20 temperatures.

21 Q. I believe you mentioned a firm load shedding
22 event. Did you just mention that?

23 A. I mentioned there would have been the

1 potential to do that in 2014 and 2015.

2 Q. And a firm load shedding event is an
3 involuntary curtailment of firm load due a a
4 generation shortfall. Do I have that right?

5 A. That's correct.

6 Q. And during a firm load shedding event, some
7 customers lose power?

8 A. Yes.

9 Q. The last load shedding event in the Southern
10 Company System was in January of 1977; is
11 that right?

12 A. That is correct.

13 Q. That's roughly forty-three years ago?

14 A. That is correct. It was a winter
15 reliability event in 1977. However, again,
16 as I just said, there would have been firm
17 load shedding events in both 2014 and 2015
18 if the company had been at its target
19 reserve margin. That's why it's important
20 that we consider winter reliability and
21 consider an adequate reserve margin to
22 protect against the possibility of those
23 types of events for our customers.

1 Q. And I just want to make sure I'm clear.
2 Southern Company did not experience a firm
3 load shedding event during the 2014 polar
4 vortex, right?

5 A. That is correct. Southern Company had gone
6 through a period of the great recession and
7 had reserves that were above its target
8 reserve margin. It's because of those
9 reserves that it had that it was able to
10 keep the lights on for customers.

11 Q. And it has not experienced any firm load
12 shedding event since then, right?

13 A. No, it has not. However, the company has
14 offered -- the company has had winter
15 reliability risks. There have been -- of
16 the past twenty-six incidences of
17 operational type advisories which just means
18 from our operation center in Birmingham that
19 they recognize that there is a cautionary
20 event on the system either due to high lows
21 or different things like that, twenty-three
22 of those twenty-six have been in the winter.
23 So while we have not had to shed firm load

1 since 1977 as you mentioned, it's not
2 because there hasn't been risk. There were
3 significant risks in the past several years,
4 namely 2014 and 2015, to where if the
5 company had been at or close to its target
6 reserve margin, there would have been a load
7 shedding event.

8 Q. In the 2018 reserve margin study, Southern
9 Company Services estimated the cost of
10 expected unserved energy, right?

11 A. Yes.

12 Q. And this is also called the value of lost
13 load?

14 A. Yes.

15 Q. The value of lost load is one of the inputs
16 that goes into the economic optimum reserve
17 margin analysis, right?

18 A. That is correct. The reserve margin
19 analysis wants to consider total cost to
20 customers. So we're not really only
21 considering the cost for adding capacity and
22 then operating that capacity, but we
23 consider if we were not able to serve all of

1 our load, what is the cost to customers if
2 we do that? So that's the value of lost
3 load that you're asking about.

4 Q. And so the value of lost load numbers
5 themselves are a trade secret. So I'm going
6 to aim to speak generally about them and
7 avoid any actual numbers within this so we
8 do not have to clear the room.

9 ALJ GARNER: Thank you. Appreciate
10 that.

11 Q. To determine the value of lost load,
12 Southern Company hired Freeman, Sullivan and
13 Company to conduct a survey in 2011, right?

14 A. Yes.

15 Q. The 2011 survey, you surveyed Georgia Power
16 customers and Mississippi Power customers?

17 A. That is correct.

18 Q. It did not survey any Alabama Power
19 customers?

20 A. It did not survey Alabama Power customers.
21 Alabama Power elected to not have their
22 customers surveyed at that time. However,
23 the results were considered appropriate for

1 all customers across the Southern Company
2 System. And all -- all of the power
3 companies participated in the cost of that
4 survey and used the results of that survey
5 for their reliability planning.

6 Q. Alabama Power has a high percentage of
7 industrial customers, right?

8 A. I believe they do.

9 Q. And none of those industrial customers were
10 surveyed in this 2017 survey?

11 A. Again, none of Alabama Power's customers
12 were surveyed, but industrial customers of
13 Georgia Power and Mississippi Power were
14 both surveyed in this study.

15 Q. You also used the value of lost load
16 estimate in the 2015 reserve margin study?

17 A. Yes.

18 Q. And the estimated value of lost load
19 increased from the 2015 study to the 2018
20 study, right?

21 A. The -- the numbers that were used were --
22 were increased numbers, but the underlying
23 data was the same data. So the customer

1 survey was the same. The difference of
2 those two, the use of the numbers in our
3 2015 study and our 2018 study reflected an
4 updated weighting of the customer class of
5 Southern Company's customers, the weights
6 between the classes as well as escalated
7 dollars to the study year for the current
8 study as opposed to a study year for the
9 previous study.

10 Q. And both the 2015 reserve margin study and
11 the 2018 study used load weighted value of
12 lost load, right?

13 A. That's correct.

14 Q. And that means that you weighted the
15 customer classes based on their consumption
16 of kilowatt hours?

17 A. That's correct. The survey was performed
18 for -- for different classes of customers.
19 There's residential customers. There's
20 commercial customers. There was industrial
21 customers and then large business customers.
22 And there was a weighted average across all
23 of that customer data. So the residential

1 customers' responses and the costs that they
2 said an outage would cost them was weighted
3 in terms of the whole customer base by a
4 percentage that residential customers make
5 up of the total.

6 Q. And load weightings changed between 2015 and
7 2018. That's what you --

8 A. That's correct.

9 Q. -- just testified about?

10 A. That's correct.

11 Q. And so, for instance, the residential class
12 percentage dropped, right?

13 A. I don't have the two tables in front of me,
14 but I do know that they changed.

15 Q. You have the 2018 study in front of you,
16 right?

17 A. I have the 2018 reserve margin study
18 which -- which does include a table of those
19 numbers.

20 Q. That would be at page thirty-three.

21 A. Yes. Thank you. Yes. I do have those.

22 MS. TIDWELL: Judge Garner, for -- for
23 an exhibit that was pre-filed by one of our

1 witnesses but was produced in discovery by
2 Alabama Power, is that something that we
3 need to mark now or do we mark later when
4 our witness takes the stand?

5 ALJ GARNER: Do you want to use it for
6 purposes of cross right now?

7 MS. TIDWELL: Yes, Your Honor.

8 ALJ GARNER: Yeah. I'd go ahead and
9 just mark it right now. I'll do the
10 marking.

11 MS. TIDWELL: May I approach the
12 witness?

13 ALJ GARNER: Yes.

14 MS. TIDWELL: And this is a
15 confidential exhibit.

16 Q. Mr. Weathers, I have just handed you the
17 2015 reserve margin study; is that right?

18 A. Yes.

19 Q. Are you familiar with this document?

20 A. I am familiar with the document. As we
21 established earlier, I didn't produce this
22 document, but I am familiar with it.

23 Q. And is that a fair and accurate copy of that

1 document?

2 A. Well, I haven't read through all the pages
3 of this. It appears to be the document.

4 Q. Okay. And the value of load -- the value of
5 lost load estimates are on page twenty-four
6 of that 2015 reserve margin study?

7 A. Yes.

8 Q. And so my question was, you know, the load
9 weightings changed from 2015 to 2018, right?

10 A. That is correct.

11 Q. For instance, the residential class
12 percentage dropped; is that right?

13 A. That is correct. Yes.

14 Q. And the large business class percentage
15 increased?

16 A. Yes.

17 Q. Some of these changes impacted the class'
18 contribution. These changes impacted the
19 class' contribution to the weighted average,
20 right?

21 A. Yes, they do. Again, it's a weighted
22 average. So it weights each of the classes
23 appropriately in terms of the total cost of

1 outage. So to the extent that the weight is
2 changed between the 2015 study and the 2018
3 study, that would change the ultimate value
4 of lost load number.

5 Q. The 2011 survey included questions about
6 various outage scenarios; is that right?

7 A. Yes. That's correct.

8 Q. And some were scenarios where there was
9 advance warnings about outages?

10 A. Yes.

11 Q. The survey only asked about advance warning
12 outage scenarios during the summer; is that
13 right?

14 A. That is correct.

15 Q. For example, for summertime the survey asked
16 about a one-hour outage scenario with the
17 customer receiving a warning, right?

18 A. That is correct. It asked about if the
19 customer received a warning -- and the
20 warning would have been a twenty-four hour
21 warning. It asked about if customers
22 received no warning.

23 Q. The only winter outage scenario surveyed was

1 the one-hour no warning scenario, right?

2 A. That's correct.

3 Q. And Southern Company Services only included
4 the no warning scenario in its estimated
5 value of lost load in the 2018 reserve
6 margin study, right?

7 A. That is correct. We felt it was most
8 appropriate to use an outage scenario with
9 no warning. If we were to use the cost
10 provided with twenty-four hour warnings,
11 then that assumes that we will be afforded
12 the luxury of knowing twenty-four hours in
13 advance that there will be an event that
14 will curtail firm customer load. These type
15 of events aren't things that you always know
16 in advance. In fact, usually what happens
17 is you not only have load that exceeds your
18 forecast for load because of weather,
19 because of customer response to load, but
20 then you have other situations such as
21 outages that were unplanned at generating
22 units. When those things happen, you get to
23 a reliability event pretty quick. It

1 doesn't always afford the luxury of assuming
2 there will be a twenty-four hour warning.

3 So if we were to assume that in the study,
4 then we could be over estimating reliability
5 to the detriment of customers.

6 Q. You mentioned a twenty-four hour warning.
7 Is that what the survey was asking about?

8 A. Yes.

9 Q. Could you give a one-hour warning? Is that
10 an option?

11 A. It's -- it could be an option depending on
12 the situation. Every -- every reliability
13 event will be different. To the extent that
14 you know going into an event or going into
15 an hour there will be reliability issues,
16 certainly customers will be given any
17 warning that the company is able to provide.
18 What we did not assume was that in every
19 situation we'll be able to give twenty-four
20 hours of warning. So having the
21 situation -- having the cost assuming no
22 warning is a more conservative assumption
23 and makes sure that we're not -- that we're

1 not assuming something that will happen that
2 in planning for that when it doesn't happen,
3 then you're short on capacity.

4 Q. The value of lost load tends to be greater
5 in outage scenarios that lack a warning,
6 right?

7 A. Yes. Through the survey, if the -- if the
8 customers have a twenty-four hour warning,
9 they're able to generally make adjustments,
10 particularly if they were an industry that
11 can -- that can shift some production. Not
12 every industry, not every commercial
13 customer benefits from having that type of
14 warning. But I think in general the values
15 are a little bit lower given if there's a
16 twenty-four hour warning.

17 Q. The estimated value of lost load impacts the
18 economic optimum reserve margin; is that
19 correct?

20 A. Yes.

21 Q. If you used a lower value of lost load, you
22 would get a lower reserve margin, right?

23 A. You would get a lower economic optimum

1 reserve margin if you use a lower value of
2 lost load. And the opposite would be true
3 if you used a higher value of lost load,
4 which we actually did a sensitivity. We
5 compared against another estimate of value
6 of lost load in the industry market place.
7 We used one that is -- that is commonly used
8 that's available online. It actually
9 produced a higher value of lost load than
10 what our internal survey had. So we did a
11 sensitivity off of that to see what the
12 impact would be to the reserve margin.

13 Q. The 2018 reserve margin study also conducted
14 a sensitivity analysis using a significantly
15 lower value of lost load, right?

16 A. Yes. We looked at if we only used the cost
17 of residential customers, what would the
18 value be?

19 Q. And that sensitivity analysis indicates that
20 using a lower value of lost load would
21 reduce Southern Company's winter economic
22 optimum reserve margin, right?

23 A. Yes. If you use a lower value of lost load,

1 if you're not value reliability high, then a
2 lower target reserve margin would be the
3 result. However, I would say it's not
4 appropriate to only consider the cost to
5 residential customers in the target reserve
6 margin. It is more appropriate to consider
7 the cost to all customers which is what we
8 did.

9 Q. That sensitivity analysis that indicated the
10 lower reserve margin, it dropped the
11 economic optimum reserve margin by two
12 percent, right? I'm looking at page
13 fifty-seven of the 2018 reserve margin
14 study.

15 A. Yes. It did drop the economic optimum
16 reserve margin by two percent. However,
17 recall that the target reserve margin is a
18 function not just of the economic optimum
19 but also the risk assessment and the
20 reliability assessment. And reducing the
21 value of lost load component does not impact
22 the reliability. So the level of
23 reliability needed would still have been the

1 same.

2 Q. That two percent drop, what does that mean
3 in terms of megawatts?

4 A. Two percentage points of megawatts,
5 converted to megawatts? Well, the economic
6 optimum does not determine megawatt amounts.
7 Again, what determines the megawatts, the
8 capacity to add is the target reserve
9 margin. So the economic optimum is just one
10 of the factors that goes into the
11 determination target reserve margin. You
12 consider the economic optimum which is the
13 absolute lowest cost point. You consider
14 risk to customers and reliability. All of
15 those things are going to target reserve
16 margin. Just because the economic optimum
17 moves higher or lower, you still have to
18 consider the other component before setting
19 the target. So it's really not fair to
20 translate that into megawatts that we would
21 add additionally or megawatts -- or less
22 megawatts. That's just not how the process
23 works.

1 Q. The lower economic optimum reserve margins
2 would translate into a lower risk adjusted
3 economic optimum reserve margin, right?

4 A. It -- it would tend to do that. It's not
5 necessarily a -- a one for one difference.

6 Q. Okay.

7 A. The risk adjusted optimum reserve margin is
8 a separate analysis that we do to determine
9 as you increase the reserve margin, you
10 incrementally look at our analysis steps of
11 increment by increment. When you do that,
12 are you reducing cost? Are you reducing
13 risk to customers more than you're
14 increasing cost? We're looking at that
15 value proposition between reducing risk and
16 increasing cost. So it will have an impact
17 on it, but it's not necessarily going to be
18 a one for one impact. But, again, it did
19 not have an impact on a reliability metric.
20 So the level of reliability needed for
21 customers would not change whether or not
22 you used the lower EEV, the EE cost that we
23 didn't include or the higher EE cost as

1 well.

2 Q. Southern Company has long had concerns about
3 the reliability of natural gas, hasn't it?

4 A. Natural gas has proven to be a very reliable
5 source of fuel for our customers. So there
6 are risks in the fuel sources. There are
7 risks with natural gas that are taken into
8 consideration in our study. When we
9 consider winter reliability risks, we
10 considered those risks as well. However,
11 those risks are small in comparison to the
12 benefits we get from a reliable supply of
13 natural gas. And the units, the gas units
14 on our system that are dispatchable units
15 there are able to operate at all times of
16 the year.

17 Q. Southern Company began assessing natural gas
18 reliability issues as early as 2009. Do I
19 have that right?

20 A. I don't recall the exact. Is there a
21 reference you have for that date that you're
22 referring to?

23 Q. Yes, sir. I'm looking at page A-3 of the

1 2018 study.

2 A. All right. Thank you. You said A-3?

3 Q. Yes, sir.

4 A. Okay.

5 Q. At the bottom of the page it states that
6 Southern Company began performing these
7 assessments?

8 A. Yes. I see it now. Yes. Yes. So what
9 this refers to is the company does summer
10 reliability assessments and winter
11 reliability assessments every year. And as
12 early as 2009 it was first identified that
13 there were possible scheduling restrictions
14 on the gas pipelines associated with gas.
15 The scheduling restrictions are as it
16 relates to relying on non-firm or
17 interruptible gas supply to the unit. We
18 have -- the company has a fuel policy in
19 place that governs how much firm gas
20 transportation we procure of each of our
21 units. That fuel policy adherence to that
22 policy mitigates the risk of a curtailment
23 of pipeline impacting our customers.

1 Q. In 20 -- in the 2015 reserve margin study,
2 Southern Company Services noted the issue of
3 increased reliance on natural gas, right?

4 A. Yeah. The company in the 2015 study said
5 that was one of the five drivers of winter
6 reliability risks that were mentioned. In
7 fact, those drivers were -- one is that the
8 winter peak loads, the summer peak loads,
9 the difference of those two was narrowing.
10 We also found the winter loads to be much
11 more volatile than summer loads. In fact,
12 if you look at summer loads in comparison to
13 the normal, summer loads may be up to around
14 seven percent higher whereas winter loads
15 can be as much as twenty-two percent higher
16 based on historical data. We also looked as
17 you mentioned with the increase of natural
18 gas usage on our system, that there is --
19 when the gas pipelines experience extreme
20 temperatures, they will often curtail --
21 they will limit the gas take off those
22 pipelines to firm transportation, firm
23 contracted transportation. And that's --

1 that's the risk we consider. So we consider
2 that in the setting of our fuel policy to
3 ensure we have the appropriate amount of
4 firm transportation in each of our plants.

5 Q. When Southern Company noted the issue of
6 increased reliance on natural gas in the
7 2015 study, it was basing that off of
8 Southern Company's usage of gas at that
9 time, right?

10 A. That is correct. As of the study year at
11 that time.

12 Q. Increased reliance on natural gas is also
13 discussed as a winter reliability concern in
14 the 2018 reserve margin study, right?

15 A. That is correct.

16 Q. And you agree that there are risks
17 associated with increased reliance on
18 natural gas?

19 A. I do agree that there are risks. It's one
20 of the six reasons that we identified why
21 winter reliability is more prominent than
22 the summer reliability risk. But it's also
23 true that the company has mitigating

1 measures in place for that risk. And namely
2 through our adherence to our fuel policy
3 which determines the appropriate amount of
4 firm gas or on-site backup fuel or gas
5 storage that each plant site needs to ensure
6 that it can deliver reliable energy to our
7 customers.

8 Q. Is one reason why there is a risk associated
9 in the increased reliance on natural gas
10 because there's more gas generation now than
11 there was in years past?

12 A. I don't think it's necessarily because
13 there's more gas generation. It's --
14 because the pipelines are also adequate for
15 that generation. So Southern Company for
16 our natural gas use, for our combined cycles
17 which is gas technology that we expect to
18 generate throughout most of the day, we'll
19 procure an amount of firm transportation
20 that's adequate to cover the expected
21 operation of those plants. Now, you have
22 some gas units that we call peak units.
23 Now, these are combustion turbine units.

1 These units are only expected to operate
2 generally across peak load periods of time.
3 Now, for those units you may not procure as
4 much firm transportation because you're not
5 expected to use them all hours of the day.
6 It's a cost versus risk tradeoff. But the
7 fact that you don't procure firm
8 transportation for every hour of the day for
9 every hour of the year for a peaking unit,
10 it leaves some winter reliability risk
11 there. That risk is taken into account in
12 our reserve margin study, but I will also
13 say that the impact of that risk is a very
14 small impact on our target reserve margin in
15 comparison to the other reliability drivers.

16 Q. Gas facilities can be subject to gas
17 delivery constraints, right?

18 A. Can you give me an example of a gas delivery
19 constraint? Are you asking what I've been
20 talking about with the gas -- the gas
21 pipelines issuing guidance?

22 Q. Sure. So if you'll look at the 2015 reserve
23 margin study which is --

1 MS. TIDWELL: Judge Garner, is that
2 Exhibit 1?

3 ALJ GARNER: Yes, it is. Energy
4 Alabama and GASP Exhibit 1.

5 Q. So are you at page fifty-one of the Exhibit
6 1?

7 A. Yes.

8 Q. I'm asking about it states on this page the
9 increased reliance on natural gas increases
10 exposure to gas delivery constraints,
11 especially during winter peak conditions.

12 A. Yes.

13 Q. I'm asking about that. So those -- so my
14 question was gas facilities are subject to
15 gas delivery constraints, right?

16 A. Yes. These gas delivery constraints are
17 what we refer to as operational flow orders.
18 And that happens when temperatures get very
19 cold or very hot. The gas pipelines because
20 of the increased gas demand, particularly
21 from the local distribution companies on
22 their pipelines, they will limit the
23 utilities to only taking natural gas off of

1 the pipeline that corresponds to their firm
2 transportation reservation. So to the
3 extent that you have firm gas transportation
4 reserve on those pipelines, that gas will be
5 delivered. To the extent you don't have
6 that firm transportation, then you won't be
7 able to get the gas at least for all hours
8 of the day.

9 Q. At extremely cold or hot temperatures, some
10 gas resources may not be running at full
11 capacity; is that right?

12 A. If you don't have, for example, some gas
13 facilities -- there are peaking facilities
14 that would be exposed to this. They also
15 have fuel oil as a backup fuel. So to the
16 extent you have a backup fuel that you can
17 use to generate, you can continue to operate
18 those facilities.

19 Q. Will the proposed combined cycles in this
20 have that backup capability?

21 A. I am not familiar with all of them. But I
22 -- for example, the Barry 8 unit, I don't
23 believe it does. However, the Barry 7 unit

1 has also gas storage in close proximity. So
2 it has an even higher level of reliability
3 in terms of gas supply than other gas units
4 in our system.

5 Q. How about the other gas resources that have
6 been proposed?

7 A. I don't recall specifically on whether those
8 do or not. You may have to ask another
9 witness about that.

10 Q. Another issue was increased reliability on
11 natural gas is essential for a force majeure
12 event, right?

13 A. There is always potential of a force majeure
14 event which would be an extremely unusual
15 event on the gas pipeline that prohibits the
16 pipeline from delivering even its firm
17 supply of gas. However, the pipelines --
18 the pipelines are sized such that they will
19 be able to deliver firm gas to customers at
20 all times. So that's the way they're
21 designed. That's the way they're built, and
22 that's the way they're operated.

23 Q. An example of a force majeure event might be

1 a weather event damage to a pipeline. Is
2 that an example?

3 A. I'm not familiar with the nature of the
4 contracts we have with the pipelines. It
5 would seem to me that might qualify as a
6 force majeure event. But, again, that type
7 of event, storm damage can impact any
8 resource we have. Tornadoes can impact
9 solar panels. There are a number of
10 different events like that that can occur.
11 It's not just unique to a gas pipeline. In
12 fact, gas pipelines are generally going to
13 be protected against those things and not as
14 exposed as, say, a solar panel in an open
15 field.

16 Q. The winter peak period only lasts for two to
17 three hours; is that right?

18 A. It depends on the event. It depends on the
19 weather situation, the event. There are --
20 there are winter days, years when the winter
21 peak period is of a very short duration.
22 There are days when it's longer. In fact,
23 during the winter our load profile, it will

1 generally peak in the morning between six
2 and seven o'clock in the morning and again
3 in the evening. The duration of those peaks
4 vary and the amount that the load dips
5 actually between the peaks can vary also
6 depending on the weather situation.

7 Q. The peak is typically in the morning, right?

8 A. Yeah. The peak in the winter is typically
9 in the morning.

10 Q. And how long is that morning peak?

11 A. Well, it depends on how you define morning
12 peak. I mean, we will define a single hour
13 as being the peak hour of a day. But if
14 you're in an extreme winter weather
15 situation, the reliability of risk
16 associated with that weather situation might
17 last for several hours. It just depends on
18 the weather event that you're experiencing.

19 Q. How do you define several hours?

20 A. I mean, it could be -- it just depends.

21 Q. Has it ever been four hours?

22 A. I would think so. I don't have data on the
23 length of every reliability event. But I

1 would -- I would -- my opinion is it
2 probably has been at least four hours in the
3 past at some point in time.

4 Q. But you don't have data to back up that
5 opinion?

6 A. Not in front of me I don't. But we have --
7 we certainly have that data and would
8 include all of that data in our reserve
9 margin study. I just don't have those
10 numbers in front of me.

11 Q. But sitting here today, you can't say with
12 one hundred percent confidence that it's
13 been four hours before?

14 A. I can't say, but I also can't say that it
15 hasn't been. In fact, my opinion would be
16 that it probably has been.

17 Q. Typically how long is the morning winter
18 peak?

19 A. Well, again, it depends on the weather
20 situation. But the morning winter peak
21 generally is -- is the early hours of the
22 morning, five, six, seven o'clock in the
23 morning, eight o'clock in the morning. But

1 we usually experience our peak demand for
2 the winter generally between six and seven
3 in the morning. And depending on how you
4 define winter peak, that peak period can be
5 significant. In fact, you know, the system
6 operator's experience, some of the
7 challenges in the winter are the steep ramp
8 into the winter peak and the steep ramp out
9 of the winter peak. So as the load is
10 changing on a minute by minute basis, the
11 load is growing as the temperatures are
12 dropping, and as customer load is
13 increasing, the capacity needed, the
14 generation needed on our system to ramp into
15 that requires it to be very flexible, very
16 dispatchable, very responsive to the low
17 signals that our operators are sending it.
18 So there's a lot of dynamics that go into
19 operating the system on a cost of winter
20 peak. Again, to answer your question, it
21 just depends on how you define what period
22 of time is the peak.

23 Q. Typically it's somewhere between six and

1 eight a.m.?

2 A. Yeah. The absolute peak hour is between six
3 and eight. In fact, you know, for last
4 year, 2019, the peak hour occurred between
5 six and seven in the morning. The absolute
6 peak for that day was at six
7 thirty-five a.m.

8 Q. Was that central time?

9 A. Central time. That's correct.

10 Q. And you're talking about implementing this
11 twenty-six percent winter target reserve
12 margin for that two to three hour period of
13 time during a couple months out of the year;
14 is that right?

15 A. Well, the winter target reserve margin will
16 provide reliable capacity for the whole
17 year. It's not just for this period of
18 time. That's when the capacity -- when
19 you're talking about the winter peak period,
20 that's when you'll need that capacity the
21 most because that's the time when you're
22 experiencing that winter peak. However, our
23 reserve margin study takes into account the

1 frequency of winter reliability risk and
2 winter weather events in the assessment. So
3 we do a probabilistic assessment of
4 fifty-four years' worth of weather history
5 and fifty-four years' worth of corresponding
6 solar power and hydropower and the
7 performance of our units associated with
8 those time periods. And to the extent that
9 some winter risk and reliability events
10 occur infrequently or across short
11 durations, those are taken into account in
12 our study. The study determines the optimum
13 reserve margin based on economics and also
14 the level of reserve margin that's needed
15 based on the reliability criteria that we
16 use.

17 Q. Neighboring regions, some neighboring
18 regions typically peak in a different hour
19 from Southern Company; is that right?

20 A. They certainly may peak in different hours.
21 You will experience them as far as in
22 central time it being different because of
23 their proximity to where they are

1 locationally. That's correct.

2 Q. And just to make sure we're on the same
3 page, that peak means the hour of their
4 maximum capacity for a given day, right?

5 A. Yes.

6 Q. Okay. And so when they peak in a different
7 hour from Southern Company, that means the
8 hour of their maximum capacity is at a
9 different time than that of the Southern
10 Company?

11 A. Yes. Let me clarify. It's probably more
12 appropriate to say the hour of their maximum
13 load.

14 Q. Okay.

15 A. So the maximum demand during that day. So
16 generally they're going to have online and
17 have capacity to meet that load. So there
18 will be some correlation there. But when we
19 talk about when the system peaks, it's the
20 peak load for the day.

21 Q. Okay. And so let's just make sure I'm
22 clear. So that means if the neighboring
23 region peaks at a different time, then their

1 maximum load for the day is at a different
2 time than the maximum load for the day in
3 Southern Company territory, right?

4 A. Yes.

5 Q. And so the 2018 reserve margin study is
6 modeled so that they expect to be able to
7 buy power from those regions; is that right?

8 A. That is correct. When we do our reserve
9 margin study, we consider the fact that we
10 have neighboring utilities that depending on
11 the load that they're experiencing in
12 relation to our load and the timing as you
13 said of when they peak, the diversity with
14 when our system peaks, that they have excess
15 power available, then our operating company
16 would be able to purchase that power from
17 them. That's a benefit to the reliability
18 of our system that we consider in our
19 reserve margin study.

20 Q. The operating companies within Southern
21 Company also peaks at different times of the
22 day, correct?

23 A. They do. We call that load diversity. And

1 that's one of the things -- the reason why
2 each operating company actually is required
3 to bring a lower level of reserves than our
4 system target reserve margin. It's because
5 we have diversity within our pool. And when
6 each operating company brings their level
7 reserves, their requirement, the system as a
8 whole will be more reliable and will reach
9 the higher target.

10 Q. To break this down, Georgia Power peaks at a
11 different time from Alabama Power, right?

12 A. It generally would be expected to.

13 Q. Because -- partially because it's in eastern
14 time and Alabama Power is in central time?

15 A. Well, yeah. Because they're a little bit
16 east of Alabama Power. And so the time --
17 the time change when their businesses start,
18 when their customers get up in the morning
19 and turning on their lights, turning up
20 their heat, it's just going to be a little
21 of a timing difference, a little diversity
22 in the peak load.

23 Q. Right. I think you just addressed this.

1 But that creates an opportunity for Alabama
2 Power to buy excess power from Georgia Power
3 because they're peaking at different times?

4 A. I mean, it could. It's a difference between
5 capacity reserves and then actually buying
6 power. So on a realtime basis, our system
7 is operating as a pool. So each of the
8 operating companies' lows are combined and
9 the operating companies' generators are
10 combined and the combination of all the
11 generators are dispatched economically to
12 meet the combined load. So to the extent
13 one operating company can purchase from
14 another operating company on an energy basis
15 cheaper than it can produce it, it does that
16 and it saves customers money. What I was
17 talking about on the capacity side and from
18 a planning perspective, the operating
19 companies' target reserve margin in the
20 winter is twenty-five and a quarter. So to
21 the extent that they're able to meet a
22 twenty-five and a quarter planning reserve
23 margin, the system will experience that

1 level of reliability consistent with
2 twenty-six percent. That's the benefit of
3 planning a system that has inherent load
4 diversity within that system that provides
5 reliability and cost benefits to each of the
6 participants.

7 Q. You say Alabama Power is now a winter
8 peaking utility, right?

9 A. That is correct.

10 Q. And Georgia Power is still a summer peaking
11 utility, right?

12 A. Yes.

13 Q. Reserve margin studies do not prescribe a
14 certain type of generation to meet its
15 recommended target reserve margin, right?

16 A. That's correct. The purpose of the reserve
17 margin is to determine the appropriate level
18 of reserves for the system to carry. It's
19 not -- its purpose is not to determine how
20 each company will meet those reserves. Each
21 company will determine the capacity to meet
22 those reserves in light of their regulatory
23 frame work. You know, issuing solicitations

1 for proposals, those types of things. Those
2 things determine what capacity will meet it,
3 not the reserve margin study. So they just
4 determine what level is the appropriate
5 level of reliability and economics for
6 customers.

7 Q. So the reserve margin study did not say that
8 Alabama Power needed these -- the certain
9 types of resources that are in its petition,
10 right?

11 A. That's correct.

12 Q. And the Public Service Commission could
13 decide that it's too risky to increase
14 reliance on natural gas, right?

15 A. This Commission can decide whatever they
16 feel appropriate. The reserves -- the
17 reserve margin itself is a result of an
18 extensive study, and I'm here to testify
19 that it is the appropriate reserve margin
20 that balances economics and reliability for
21 customers. Other witnesses can testify
22 about the resources that were selected.
23 This Commission has within its authority to

1 rule what it deems appropriate.

2 MS. TIDWELL: All right. No further
3 questions. Thank you.

4 ALJ GARNER: Do you want to go ahead
5 and move for the admission of your Exhibit
6 under seal, of course?

7 MS. TIDWELL: Yes.

8 ALJ GARNER: Any objections from
9 Alabama Power?

10 MR. GROVER: No objection, Your Honor.

11 ALJ GARNER: The document is admitted.

12 MS. TIDWELL: All right. Thank you.

13 CROSS-EXAMINATION

14 BY MS. CSANK:

15 Q. Good afternoon, Mr. Weathers.

16 A. Afternoon.

17 Q. Can you hear me all right?

18 A. Yes.

19 Q. My name is Diana Csank. I'm counsel for
20 Sierra Club, and I have a few questions for
21 you. Following up on some of the
22 conversations you've already had this
23 morning, first, I was curious. Have you

1 participated in the planning for the event
2 that the Commission denies the company's
3 petition in this case?

4 A. I'm sorry. Could you repeat the question,
5 please?

6 Q. Yes, sir. Have you participated in any
7 planning concerning a situation where the
8 Commission denies the company's petition in
9 this case?

10 A. No. No. I have not participated in
11 planning that event.

12 Q. But you are in the process of doing
13 additional updated analysis as compared to
14 the analysis presented to the Commission in
15 this case; is that correct?

16 A. I'm not sure if I understand. I apologize.
17 What updated analysis are you referring to?

18 Q. Absolutely, sir. So you referenced a 2019
19 budget. Do you recall that?

20 A. Yes.

21 Q. And is it the annual planning that's
22 undertaken?

23 A. Yes, there is. And in terms of developing

1 our annual integrated resource planning
2 process and annual budget vintages, those
3 take place on an annual basis. However, the
4 latest budget vintages all assume that these
5 resources will be added to the system
6 because they're needed for reliability.

7 Q. So in terms of the myriad of data in place
8 that went into your analysis that you're
9 presenting in this proceeding, you don't
10 know one way or another how those data are
11 going to change as a result of the current
12 updating that you're doing?

13 A. Well, if you're referring to the myriad of
14 data in our -- in my analysis, I think you
15 may be talking about the reserve margin
16 study --

17 Q. Yes, sir.

18 A. -- that I testified about. The reserve
19 margin study is performed every three years.
20 So the next time we perform a reserve margin
21 study will be in the year 2021. That study
22 will, again, just as this study did, refresh
23 the data and take a look at the current

1 system and the system as it's planned to be
2 and, again, assess the resource adequacy and
3 determine the appropriate level of target
4 reserve margin going forward. That work has
5 not been done. That won't be done until
6 2021.

7 Q. And is there any requirement of this
8 Commission that those studies only be
9 performed on a three-year basis?

10 A. Not that I'm aware of.

11 Q. So that's at your option that you choose to
12 do that. That is Southern Company Services
13 every three years?

14 A. It has been our practice to do that and it
15 is a rather lengthy study unlike our annual
16 planning process which is accomplished in
17 the fall of each year. This is a study
18 that's several months in development. And
19 it determines the reserve margin that is
20 most appropriate for the next several years.
21 In fact, the year -- around the time frame
22 when the system is expected to add capacity
23 is about the same time frame that we

1 studied. And it is used for planning
2 purposes during those three-year periods.
3 It's determined to be an appropriate
4 frequency for that type of study.

5 Q. Southern Company Services decided that
6 that's appropriate is what you're saying?

7 A. Well, we participated in coordinated
8 planning within Southern Company. So each
9 of the retail operating companies along with
10 Southern Company Services who is the agent
11 participates in coordinating planning
12 activities. So it's a system we determined
13 that every three years is an appropriate
14 frequency for performing the reserve margin
15 study.

16 Q. So you just said the analysis can be
17 performed in a matter of months?

18 A. Yes. It takes a matter of months to do the
19 study.

20 Q. There's no technical reason why you couldn't
21 do it more frequently; is that correct? Yes
22 or no?

23 A. We could do it more frequently, but --

1 Q. Sounds like a yes?

2 A. It is a yes that we could perform more
3 frequently. It's not really necessary to
4 perform more frequently because our
5 operators have determined that every ten
6 years is appropriate for our planning
7 purposes.

8 Q. There's no Commission requirement that you
9 only limit your reserve studies to every ten
10 years; is that correct?

11 A. I am not aware of any.

12 Q. All right. And, sir, do you remember
13 earlier you were having a conversation I
14 believe with Mr. Hill regarding renewables
15 and he was asking you to characterize
16 renewables. I'll get to the question in a
17 moment. I'm just laying the predicate going
18 back into context and not repeat ourselves.
19 And I believe you were saying something
20 along the lines of limits to the
21 dispatchability of renewables. Do you
22 recall that?

23 A. I recall the conversation. I don't recall

1 my exact words there.

2 Q. Well, let me represent to you that I at
3 least heard you say limits to renewable
4 dispatchability. And my question is simply
5 this, sir. In terms of your opinion that
6 there are such limits, do you have any
7 documentary evidence to present to the
8 Commission to substantiate that opinion?

9 A. Well, in terms of -- I can give a couple
10 examples in terms of solar generation.

11 Q. Sir, forgive me. Just for time sake, if you
12 would be good enough to just answer my
13 question. You can certainly explain your
14 answers.

15 MS. CSANK: Madam Reporter, if you'd
16 read back my question to the witness for
17 efficiency sake.

18 THE COURT: Just give your answer.
19 I'll give you a chance to recently
20 elaborate. But just answer the question and
21 then proceed on the elaboration.

22 MS. CSANK: Thank you, Your Honor --
23 (Whereupon, the court reporter

1 read the requested portion of
2 the record.)

3 A. Not in front of me, but we do have
4 significant amounts of documentation
5 illustrating that solar resources are not
6 dispatchable to the extent that natural gas
7 resources are.

8 Q. And can you point to any pre-filed exhibits
9 in this case?

10 A. The data underlying our reserve margin study
11 contains solar profiles. We're talking
12 about voltaic solar that is not
13 dispatchable. It generates as the sun
14 shines. That data is underlying in our
15 reserve margin study.

16 Q. In terms of -- I should have been clearer --
17 solar paired with batteries, is that
18 something that you have documentary evidence
19 to substantiate there are limits to the
20 dispatchability of that combination of
21 resources?

22 A. Yes. We have studied solar paired with
23 batteries. We do assessments on that. I

1 don't have it in front of me, but it's what
2 we do. Battery -- it depends on what type
3 of battery you're looking at. What's the
4 duration of batteries? What's the size of
5 the battery in relation to the solar
6 facility? Our team has done reliability
7 assessments of those batteries. So the
8 range -- there's a range of dispatchability
9 associated with batteries.

10 Q. All right. And so I just -- I think for the
11 purpose of my question which was whether
12 there's documents in this case that you can
13 point to, it sounds like the answer is no;
14 is that right?

15 A. I don't think we've submitted documents in
16 this case.

17 Q. All right. So back to the data. I believe
18 you referenced a large figure, seven hundred
19 thousand production cost runs. Do you
20 recall that?

21 A. Yes.

22 Q. And just for those of us who aren't as
23 familiar with the jargon, what are

1 production cost runs?

2 A. We have a model called SERVVM which is a
3 production cost software system. And the
4 inputs to that model include system loads.
5 They include all of the generators on our
6 system, the cost of those generators as well
7 as the loads and generators of our
8 neighboring utilities and performs a
9 simulation. It performs a dispatch of the
10 generating fleet to meet the load.

11 Q. So that sounds like a robust analysis of the
12 supply-side of the system; is that correct?

13 A. We include the existing supply-side as well
14 as all of our existing demand response
15 programs as well.

16 Q. But not incremental additions to demand-side
17 resources?

18 A. That is correct. The only incremental
19 additions are a reliability CT. And that is
20 a placeholder for the additional capacity.
21 We're looking at what is the appropriate
22 addition of capacity to meet our required
23 reliability levels. We're not looking at

1 what type of capacity that might be, whether
2 it be might be a demand-side resource or a
3 different supply-side resource. We're just
4 looking at capacity.

5 Q. All right. And CT for the record is
6 combustion turbine?

7 A. Yes.

8 Q. And the company has combustion turbine on
9 its system currently; is that correct?

10 A. Yes.

11 Q. And you also have combined cycle units,
12 correct?

13 A. Yes.

14 Q. And both of those types of technology
15 typically burn gas?

16 A. They do typically burn gas. Some facilities
17 can also burn oil.

18 Q. Can you give us an estimate of roughly how
19 much oil as compared to gas is used by those
20 CT's, combustion turbines?

21 A. I --

22 Q. Predominantly gas?

23 A. It is predominantly gas. Gas is more of --

1 less expensive than oil. So generally
2 facilities that can burn both will only burn
3 the fuel oil if it's a reliability type
4 situation where natural gas is not
5 available.

6 Q. Do you recall the conversation you were
7 having with Ms. Tidwell, I believe, about
8 the availability of firm fuel supply as a
9 result of the company's fuel policy?

10 A. Yes. I generally recall that.

11 Q. Okay. And I think what I heard you say was
12 that the combustion turbines on the system
13 may not have access to firm capacity; is
14 that right?

15 A. Not exactly. The combustion turbines on our
16 system are required to have firm gas
17 transportation. What I was saying is they
18 will have enough firm gas transportation to
19 cover every hour of the year, every hour of
20 the day, every hour of the year.

21 Q. And pipelines limit supply during peak and
22 extreme cold conditions to firm contracts;
23 is that right?

1 A. Yes. Generally speaking that is the case.
2 When temperatures get extreme, the pipelines
3 issue operational low orders which will
4 limit the utilities to only taking gas off
5 the pipeline that corresponds to the amount
6 of firm transportation they've contracted
7 for.

8 Q. And you're representing that these
9 combustion turbines -- excuse me -- combined
10 cycle units that are proposed in the
11 company's petition, that they will be fully
12 covered in the firm capacity contract?

13 A. Yeah. They will have an adequate amount of
14 firm gas transportation contracts. And in
15 addition, the proposed unit at Plant Barry
16 will have access in close proximity to gas
17 storage which further enhances the
18 reliability of that particular facility.

19 Q. And you talk about adequate firm capacity.
20 Are there already contracts executed as we
21 sit here today?

22 A. I am not aware of the -- of the particular
23 contracts that may have been executed, but

1 it is our expectation that there will be
2 firm transportation. In fact, it is a
3 requirement for the combined cycles in our
4 system to have that level of firm
5 transportation. And to my knowledge, that
6 is not -- this will be the case for those
7 units as well.

8 Q. Is there a company witness in this case who
9 is responsible for those firm capacity
10 contracts; do you know?

11 A. I don't think any of our witnesses are
12 responsible for the contracts. That would
13 be through our gas services department.

14 Q. So you're simply speculating that those firm
15 capacity contracts will be available and
16 secured?

17 A. No. I would not say it's speculation. In
18 fact, you could talk with other witnesses
19 that are more familiar with the facilities.
20 But it is -- it is our policy and it is what
21 is the approach the company uses to procure
22 firm transportation of natural gas for each
23 of those facilities.

1 Q. But you don't know how much that capacity is
2 going to cost, do you?

3 A. I do not personally know the amount, but the
4 cost of that is included in the analysis.

5 Q. Cost in a contract that may or may not yet
6 exist?

7 A. The cost of procuring firm transportation
8 which is a business that the company is in,
9 it has and does on a regular basis. It has
10 firm gas transportation contracts and it
11 manages gas across the pipelines on a daily
12 basis.

13 Q. And you said Southern is in the business of
14 firm capacity, fuel capacity gas?

15 A. Southern -- as part of Southern's business
16 of operating its fleet, it procures firm
17 transportation for our gas units and then
18 schedules and operates those gas units in
19 accordance with the gas available on the
20 pipelines.

21 Q. Do you have any documentation on whether
22 adding combined cycle units to Alabama
23 Power's system is going to exacerbate the

1 availability of firm fuel supplied to the
2 existing CT's on its system?

3 A. No. I don't have any documentation, but I
4 do not believe that that would be the case.

5 Q. And what's your belief based on?

6 A. Based on our fuel policy of procuring firm
7 transportation for its facilities. In fact,
8 when we do our reserve margin study, we're
9 taking into consideration the risk that gas
10 units bring to our system, and then we also
11 mitigate that risk through our fuel policy.

12 Q. But as we sit here today, you don't know the
13 magnitude of that impact of the combined
14 cycles taking gas that otherwise could have
15 gone to the existing CT's? Yes? No? I
16 don't know?

17 A. I'm sorry. Please -- can you repeat that
18 question, please?

19 MS. CSANK: Madam Reporter, would you
20 please read back the question.

21 (Whereupon, the court reporter
22 read the requested portion of
23 the record.)

1 A. Yeah. I think we're talking -- you're
2 asking about two different things. One is
3 the combined cycles procure firm
4 transportation and the pipelines are
5 guaranteed to be sized to handle that type
6 of firm transportation. The gas that might
7 go the CT's, you must be referring to CT's
8 that don't have enough firm transportation
9 to cover all of their expected output.
10 Those are two different things. We plan for
11 firm supply of generation. As far as the
12 impact of that, I don't know the -- the
13 impact of incremental resources. But the
14 impact of that fuel supply risk on our
15 target reserve margin is very small. It was
16 a small percentage of the risks that go into
17 the determination of target reserve margin.

18 Q. Okay. You just said a lot. So let me --
19 let's make sure that I understood it all.
20 The last thing you said was the incremental
21 impacts are very small. Do you have any
22 document -- document to tell us exactly how
23 small?

1 A. Yes.

2 Q. And what is that document?

3 A. In the reserve margin study, there is --
4 there is a pie chart that illustrates the
5 relative contribution to the target reserve
6 margin for various factors that go into the
7 determination. For example, weather. What
8 is the impact of weather on the target
9 reserve margin? What's the impact of unit
10 outages? One of those risks is fuel supply.
11 That risk of fuel supply is the risk that
12 we're talking about that when gas pipelines
13 limit the utilities to their firm
14 transportation, what is the impact of that?
15 That number was a very small number.

16 Q. And can you tell us all the factors that go
17 into that fuel supply, risk factors you were
18 just talking about?

19 A. Yeah. That was the -- again, it was the --
20 it was the risk associated with natural gas
21 plants not being able to have all the gas
22 needed for every hour of the year. So to
23 the extent the pipelines curtail or they

1 limit the utilities to taking natural gas
2 that only corresponds with their contracted
3 firm transportation, if the utility needs
4 any other gas and that gas is not available,
5 that's the risk that we're talking about.

6 Q. Okay. And what gas plants are you talking
7 about there? Are they existing gas plants
8 on the system?

9 A. Yes. It's all the existing gas plants in
10 the system.

11 Q. So you don't have a figure for existing gas
12 plants plus proposed gas plants?

13 A. Not these particular proposed gas plants,
14 but the reserve margin study evaluates the
15 addition of gas plants. So we're talking
16 about doing the study that considers the
17 existing system and then you're looking at
18 increasing levels of capacity and you're
19 looking at adding those gas plants to the
20 system and what's the reliability risk
21 associated with that.

22 Q. So the answer is no, you didn't analyze
23 that? That wasn't part of your --

1 A. Of these particular gas plants?

2 Q. Yes.

3 A. I did not. But these particular gas plants
4 are combined cycles and the risk is -- it's
5 significantly mitigated for combined cycles
6 as opposed to combustion turbines because of
7 the practice we have of procuring firm
8 transportation for those units.

9 Q. Okay. But besides you pointing us to a
10 policy and promising to abide by it, is
11 there any document to support that -- those
12 statements?

13 A. I don't have a documented --

14 Q. Analysis?

15 A. I don't have documents to support those, but
16 I can tell you that is the way that we
17 operate our business.

18 Q. Okay.

19 A. That's the requirement that the operating
20 companies have to hold each other
21 accountable for assuring that each operating
22 company is bringing firm resources to the
23 pool to operate. If the operating company

1 says, Well, I'm not going to abide by that,
2 that capacity won't be counted as firm
3 capacity and the operating company will be
4 required to procure other resources to -- to
5 make up for that. The operating companies
6 hold each other accountable through the
7 intercompany interchange contract to do
8 that.

9 Q. Sorry. Are you a lawyer?

10 A. No, ma'am, I'm not.

11 Q. And were you a participant in the
12 negotiation of the intercompany interchange
13 contract?

14 A. No.

15 Q. So these representations that you're making
16 about that contract, what are they based on?

17 A. My previous role before I came into the
18 planning group. I was a manager of
19 financial contract services. Part of that
20 role involved the administrative --
21 administration and invoicing of the
22 intercompany interchange contract. So I was
23 familiar with that contract through --

1 through the invoicing side, through the
2 administration side. I also worked in our
3 operations center through the actual
4 implementation of that contract through our
5 dispatch of our units. I supported
6 operators that dispatched the units as well
7 as in the wholesale marketplace procuring
8 power and managing our wholesale power to
9 ensure the operation of our fleet in
10 accordance with that contract.

11 Q. Okay. Do you have any documentation of how
12 that contract was implemented during the
13 various responsibilities that you just
14 described?

15 A. There is a lot of documentation.

16 Q. That you're presenting in this case to the
17 Commission to support your statements about
18 how that contract is implemented?

19 A. I don't have documentation to support how
20 the contract was implemented.

21 Q. And let me ask you, sir. Does Southern
22 Company own any pipeline companies; do you
23 know?

1 A. Southern Company Gas has a stake in the --
2 in a pipeline.

3 Q. In an intrastate pipeline?

4 A. They have -- they have ownership, I think.
5 I'm not an expert in this area. I think
6 they have ownership or a percentage of
7 ownership through a partnership with Kinder
8 Morgan.

9 Q. I see. And so does that mean that the
10 Southern Company stands to make some kind of
11 profit -- strike that -- additional gas
12 generation on the electric grid expand the
13 market for the gas in pipelines, correct?

14 A. Yes. There will be more gas demand by
15 adding a gas generating resource if that's
16 what you're asking.

17 Q. Yes. And Southern Gas is a for profit
18 company, correct?

19 A. Southern Company Gas is a for profit
20 company. That's correct.

21 Q. And so they're in the pipeline business for
22 profit?

23 A. They are. I'm not -- I don't believe that

1 Southern Natural Gas is -- actually will be
2 serving these. I'm not familiar with the
3 pipeline. You'd have to ask another witness
4 about which pipelines will be serving the
5 proposed plant. I do not believe it's the
6 one that Southern Company Gas has an
7 interest in. But you can ask another
8 witness that.

9 Q. Thank you, sir. And there's no comparable
10 profit in renewables like solar, is there,
11 for Southern?

12 A. I don't think it's a valid question. I
13 don't think there's profit on the gas side
14 either. You asked about will Southern
15 Company profit from the gas expansion in
16 terms of the pipeline side. And, again, I'm
17 not the expert on that. I don't believe
18 there is. So I don't think it's fair to ask
19 is there a comparable profit on the solar
20 side. We don't think that either one of
21 them are profit opportunities.

22 Q. And who would be the witness for us to talk
23 to about the economics of pipelines and the

1 impact of Southern Company's bottom line?

2 A. Well, I think that in terms of the pipeline
3 that will be serving Plant Barry which is
4 the only additional gas unit we're proposing
5 that's not in existence today, I think
6 Mr. Bush could probably answer that
7 question.

8 Q. But you need fuel to supply the existing gas
9 plants that you're proposing to add to your
10 system, don't you?

11 A. That is correct.

12 Q. So that's the extension of pipeline capacity
13 needs that --

14 A. Those plants are operating today. So
15 they're getting gas today. So to the extent
16 that they already have firm gas, there's no
17 additional firm gas needed.

18 Q. Do you know one way or another if the
19 company -- if the Commission were to deny
20 the company's petition how much longer those
21 existing plants would run?

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

23 Q. Earlier you were talking about forced outage

1 rates on existing conventional supply-side
2 resources. Do you recall that?

3 A. I don't recall specifically the
4 conversation, but maybe if you could get to
5 a question, that will help me.

6 Q. Sure. I think you identified forced outages
7 as one of the factors that you formed or
8 rolled up into the winter reserves that
9 you're proposing in this case; is that
10 correct?

11 A. That is correct. The incremental outages
12 during extremely cold temperatures of our
13 units is one of the factors that drives
14 winter reliability units.

15 Q. Specifically when you said units there, were
16 you referring to existing supply-side fossil
17 fuel burning units primarily?

18 A. Yes.

19 Q. You weren't talking about solar units?

20 A. I'm not talking about solar units.

21 Q. Do you have any analysis of the forced
22 outage rates of renewable units as compared
23 to those fossil fuel burning units that

1 exist on the system?

2 A. I do not. But -- but I don't have data on
3 the forced outage rates of those units in
4 the winter months.

5 Q. Okay. And I think we're coming close to the
6 end, I'm sure much to the delight of
7 everyone in the room. You referred to these
8 potential load shedding events in 2014 and
9 2015. Do you recall that conversation?

10 A. Yes.

11 Q. And I'm curious. Do you have any
12 documentation of just how close we got to
13 load shedding in those years?

14 A. Yes. In our reserve margin study, that was
15 discussed. On page A-3 of the reserve
16 margin study refers to both of those events.
17 It refers to the amount of reserves we had
18 at the time and what the impact might have
19 been without that level of reserves.

20 Q. Do you have any other analysis about those
21 events besides what's on page A-3 to
22 substantiate that potential shedding?

23 A. Sure. In discovery the company has produced

1 more detailed descriptions of those events
 2 and the -- the time line of the events that
 3 occurred, the actions that the operator took
 4 and how close we got to a really dire
 5 reliability situation.

6 Q. But you're not giving that information to
 7 the Commission in this case?

8 A. Through discovery the company presented
 9 that. I don't have it with me.

10 Q. Pardon me while I confer with counsel. Sir,
 11 I have no further questions.

12 ALJ GARNER: How many further
 13 cross-examinations do we have? You've got
 14 some. Anyone else? How long is yours?

15 MS. HOWARD: I'm terrible at
 16 estimating, sir, but my guess would be less
 17 than ten minutes.

18 ALJ GARNER: Let's go ahead and get
 19 yours. And then is that going to be the --
 20 you've got --

21 MR. FREE: Just a couple questions.

22 ALJ GARNER: All right. Let's try to
 23 do a clean break here. I hate to keep

1 pushing everybody. Are you all right,
2 Mr. Weathers? Are you hanging in there?

3 THE WITNESS: Yes, sir, I'm fine.
4 Thank you.

5 CROSS-EXAMINATION

6 BY MS. HOWARD:

7 Q. Hello, Mr. Weathers. I'm Jennifer Howard,
8 and I represent Alabama Solar Industry
9 Association. Do you recall that your 2018
10 reserve margin study discussed that history
11 had demonstrated that under extremely cold
12 conditions outage rates can increase as
13 instrumentation and controls or other plant
14 equipment begins to freeze, correct?

15 A. Yes. Yes. And, in fact, that's one of the
16 reasons why winter reliability risk is more
17 prominent in the summer. It's not just the
18 peak demands during the winter and the
19 volatility of this, but it's the impact on
20 the generation. When temperatures get very
21 cold, we tend to have more unplanned
22 outages. And that has an impact on the
23 capacity available to meet the load.

1 Q. So a gas burning plant can have a forced
2 outage in cold weather due to equipment
3 freezing even if it has sufficient fuel,
4 correct?

5 A. That is correct.

6 Q. And do you agree that gas plants have a
7 higher risk of forced outages in cold
8 weather than solar generators?

9 A. That is my understanding. And we -- and in
10 our study we assume that there will be
11 increased risk of the outages for gas
12 plants. Now, we do -- we do have in place
13 across our system a freeze protection
14 standard of excellence, and that was put in
15 place after the polar vortex. And what that
16 does is ensures that each plant manager has
17 system experts that are involved in
18 determining the appropriate freeze
19 protection practices for their generating
20 unit, whether that be heat tracing, whether
21 that be wrapping pipes, whatever is
22 appropriate for their unit to ensure that
23 they minimize the impact of cold weather on

1 the reliability of their units. However,
2 there is still risk remaining when
3 temperatures get very cold that units could
4 have issues. And we've taken that risk into
5 consideration in our reserve margin study.

6 Q. And you are not aware of any analysis that
7 Alabama Power has done as to whether solar
8 assets have any vulnerability to forced
9 outage in winter, correct?

10 A. Not in terms of forced outage. But also
11 consider that the solar plants generate when
12 the sun shines. And when we have our
13 coldest winter reliability events, it's
14 generally six to seven in the morning. The
15 sun is either not up or it's just coming up.
16 So solar is not going to be able to provide
17 the positive contribution to reliability
18 that natural gas plants have.

19 Q. You're speaking now of plain solar panels,
20 not solar paired with batteries, correct?

21 A. That is correct. Panels paired with
22 batteries increase the cost of that. But
23 depending on the size of the batteries,

1 they'll have various contributions to
2 reliability.

3 Q. And you are not aware of any actual instance
4 of a solar generator failing due to freezing
5 equipment, are you?

6 A. I am not aware of any. Solar power, we just
7 talked about that they have other risks.
8 They have other limitations on reliability
9 other than cold temperatures.

10 Q. And are you aware of any incidents of a
11 forced outage of a solar voltaic facility in
12 winter?

13 A. I'm not aware of any, but, also, I don't
14 have an inscription of the solar related
15 outages on hand either. I do believe that
16 the solar is not prone to cold weather
17 outages to the extent natural gas plants
18 are. But, also, again, natural gas plants
19 deliver tremendous reliability benefits in
20 all hours of the day in all seasons of the
21 year. Solar just doesn't provide an
22 equivalent contribution to reliability as
23 gas plants. Now, solar plus batteries is

1 beneficial. This petition includes solar
2 plus batteries. But there is even a limit
3 to the amount of the type of batteries in
4 this petition where you can achieve the same
5 level of reliability benefits. The more
6 that you add, the more expensive those
7 batteries become because you need to have
8 longer duration batteries.

9 Q. You're aware that given equal amounts of
10 sunlight, you will get more electricity
11 output from solar panels in cold
12 temperatures than in hot temperatures,
13 correct?

14 A. That's my understanding based on the
15 equivalent amount of sunlight in the two
16 seasons.

17 Q. In your rebuttal testimony at page twelve,
18 I'll give you a second to flip over.

19 A. Okay.

20 Q. You characterize the gas burning assets as
21 providing a flexible supply of generation.
22 And you say that the same level of
23 flexibility cannot be achieved with the

1 renewable generation resources that one
2 intervenor suggests should be used instead.
3 But in that statement you're speaking of
4 solar panels alone, not solar paired with
5 battery projects, correct?

6 A. I am primarily there speaking of solar
7 panels alone, which the reference that --
8 that I made to the intervenor's testimony,
9 part of their proposed solution was solar
10 panels alone. I believe they also had solar
11 paired with storage in a proposal as well
12 which does have reliability benefit. It's
13 not going to be generally the same as a
14 natural gas plant unless it is a longer
15 duration storage device. But primarily I
16 had in mind solar without storage. But the
17 same statement can apply to both, just to a
18 different degree.

19 Q. And if you'll flip over in Exhibit 1 to your
20 pre-filed testimony on page A-9.

21 ALJ GARNER: Direct or rebuttal
22 exhibit?

23 MS. HOWARD: Direct.

1 A. Okay.

2 Q. On page A-9, it also says that solar
3 generation is not well correlated to winter
4 peak load periods which occur around dawn or
5 dusk. But, again, that's talking about
6 plain solar panels rather than solar plus
7 batteries, correct?

8 A. That is correct. This was -- when we -- in
9 our reserve margin study, we studied the
10 minutes that are on our system or expected
11 to come online on our system. And so we're
12 looking at in terms of this statement over
13 three thousand megawatts of solar
14 generation, and they are playing -- they are
15 not paired with storage. Those solar
16 facilities are not.

17 Q. And, in fact, solar plus battery projects
18 store the energy that's generated during the
19 day and then it can discharge it at dawn or
20 dusk or whenever that energy is needed,
21 correct?

22 A. It can. There are many different uses of
23 battery storage devices. That is a use of

1 battery storage. And assuming that you
2 didn't have significant cloud cover the
3 previous day, then that would provide --
4 that will store that energy to use that
5 winter morning. Clouds obviously complicate
6 the situation. So it's not -- what I'm
7 saying is it's not the same level of
8 reliability as a natural gas plant and
9 provides as much flexibility in reliability
10 benefits as natural gas plants do. The way
11 that we look at other resources, we compare
12 them to the reliability contribution of a
13 natural gas combustion turbine. The way we
14 evaluate demand-side, we evaluate resources
15 that are intermittent. We compare them to a
16 CT.

17 Q. It would depend on how much battery capacity
18 there was, correct?

19 A. It certainly does. And the more -- but the
20 more battery capacity that you consider, the
21 more expensive it will be.

22 Q. Going back to some of your earlier testimony
23 about force majeure events. You don't know,

1 do you, whether a cold weather event or snow
2 could be examples of force majeure events
3 that could prevent the plant from getting
4 its firm transportation of gas?

5 A. I don't know specifically.

6 Q. And if you'll look at your rebuttal
7 testimony at page twelve, line six through
8 seven. You offered the opinion that a force
9 majeure event that would interrupt gas
10 supply would be rare. But the only basis
11 for that opinion that you have is the fact
12 you've not experienced or heard of that
13 occurring very often, correct?

14 A. No. Actually, that was based on what was
15 communicated to me from our gas operations
16 personnel, that in their experience, the
17 only time when firm transportation has been
18 curtailed in the past has been for a force
19 majeure situation. And they said that that
20 has occurred very rarely.

21 Q. And you're talking about what you've heard
22 from others, correct?

23 A. What the -- those that are -- their job is

1 to operate, schedule our natural gas. And
2 they do that every day. What they told me
3 was consistent with the statement.

4 Q. You have no documentation or other study
5 about the occurrences of such force majeure
6 events that would support your testimony
7 that such force majeure events would be
8 rare, do you?

9 A. I don't have that type of documentation on
10 hand, but, again, that's not what I do on a
11 daily basis. There are people that do that
12 on a daily basis. And I feel certain they
13 would have documentation of those types of
14 force majeure events.

15 Q. And you have no knowledge about gas pipeline
16 failure rates, do you?

17 A. I am not an expert on gas pipeline failure
18 rates. I don't have that documentation.

19 Q. And your study does not include an analysis
20 of the rate of pipeline failures, does it?

21 A. No. Our study does not include that in
22 our -- our study considers a wide range of
23 risks to customers. It doesn't consider

1 every single risk to customers, but it does
2 consider a large number of risks. And we do
3 a significant number of iterations of
4 production cost analyses to make sure that
5 we have as robust of a study as we can. In
6 fact, our study not only considers our base
7 assumption, but we consider a number of
8 different sensitivities.

9 ALJ GARNER: Mr. Weathers, you're
10 getting a little long winded in your answer.

11 THE WITNESS: I apologize, Judge.

12 MS. HOWARD: Thank you, Mr. Weathers.
13 I have nothing further.

14 THE WITNESS: Thank you.

15 ALJ GARNER: You're ranging pretty far
16 from the questions.

17 THE WITNESS: Thank you for the
18 reminder.

19 CROSS-EXAMINATION

20 BY MS. HAMMONDS:

21 Q. Good afternoon.

22 A. Good afternoon.

23 Q. I'm Tina Hammonds with the Attorney

1 General's office. I have a few questions.

2 A. Okay.

3 Q. You testified that you do a risk assessment
4 analysis where for smaller costs you can
5 increase reliability and significantly
6 minimize risk to the customer and just
7 provide value to customers. Higher levels
8 of reliability for a small amount of
9 increased cost. In your study did you
10 include interruptible customers as a part of
11 firm load?

12 A. Not as a part of firm load. They're
13 included as a part of non-firm load. So we
14 do -- we have interruptible customers
15 modeled in our study, and those customers
16 would be -- their power would be reduced
17 before we get to firm customers, firm
18 customer load.

19 Q. Okay. So are the -- is the interruption of
20 service pursuant to interruptible contracts,
21 then, considered to be one of the costs
22 incurred by customers in the risk assessment
23 analysis?

1 A. Yes.

2 Q. Okay. Do you know what an hour of delayed
3 start would cost each of your interruptible
4 customers?

5 A. Well, no. We generally have an economic
6 point in which those customers are curtailed
7 in the model for modeling purposes. Now, as
8 far as what it costs those customers, only
9 they would know that. What it cost the --
10 that general set of customers would be
11 accounted for generally within our cost of
12 expected unserved energy that is -- we
13 mentioned earlier we surveyed customers in
14 2011 to ask them what would it cost you to
15 shed firm load. There's an assumed economic
16 point where they will shed load. It varies
17 by the contract. It varies by the
18 customers. We modeled those in our case.
19 It's not going to be each customer
20 specifically, but we generally modeled
21 those.

22 Q. And each one of these contracts has a lower
23 price point because of the opportunity for

1 it to be interrupted versus firm load; is
2 that correct?

3 A. That is my understanding.

4 Q. Okay. So if not considered, would the power
5 company consider a curtailment of these
6 interruptible customers during the winter
7 peak in order to meet demands?

8 A. Yes. In fact, the company has done that in
9 the past. In 2014 the polar vortex we
10 talked about earlier, there were
11 interruptible customers that were called
12 during that event. And that helped prevent
13 us from having to shed the load of firm
14 customers.

15 Q. And that would be something that you could
16 do in the future as well?

17 A. Yes.

18 Q. Who has directed that the power company
19 switch to seasonal planning? Was it a
20 particular person or a department at the
21 Southern Company? Or how was that change
22 made?

23 A. It was a decision made by the operating

1 companies together. And the result is a
2 result of the 2018 reserve margin study
3 where we determined that it would be an
4 appropriate measure to implement the
5 seasonal planning instead of just planning
6 for one season. My team presented that as a
7 recommendation to the operating companies,
8 and they jointly made that decision
9 together.

10 Q. So your team presented it as an option?

11 A. That's correct.

12 Q. Okay. How long until all of the components
13 of this plan are online and they're fully
14 functional for the record?

15 A. You may ask Mr. Kelley that. He may know
16 better than I do. I understand they'll be
17 online by 2024. That's the number we've
18 been hearing.

19 Q. And you said that it was approximately a
20 four dollar per customer per year cost for
21 the implementation of these new pieces?

22 A. No. Actually, the four dollars per
23 customer, I was talking about we do the risk

1 analysis to our target reserve margin to
2 determine how much -- what the value to
3 customers by increasing the reserve margin
4 compared to the expected cost. We got
5 roughly two for one benefits versus costs.
6 And the incremental cost of those reserves
7 if you break it down per every customer in
8 Southern Company, it was about four dollars
9 per customer per year.

10 Q. For how long?

11 A. Well, for our study year which we used for
12 planning purposes, that's not indicative of
13 the -- of this petition. That's just the
14 additional reserves in the Southern Company.

15 Q. And that's what we wanted you to do is
16 better explain that four dollars per year.

17 A. Okay. Thank you for the opportunity.

18 Q. And could you explain a little bit of the
19 type of forecasting or modeling you've done
20 to help show that the load levels that we
21 get to in 2024 will last the company for a
22 while without needing to ask for more
23 generation quickly thereafter?

1 A. Could you repeat to make sure I understand
2 and answer the right question?

3 Q. Just basically what you've asked for to get
4 you to a certain level for 2024.

5 A. Okay.

6 Q. And so could you tell us a little bit about
7 the type of modeling or analysis that you've
8 done in order to show us that you won't need
9 to ask for more in 2026 or 2028, that this
10 is going to serve you for some time?

11 A. Okay. Okay. So the company does an
12 integrated resource planning process on an
13 annual basis. And within that process --
14 and the vintage behind this study being the
15 2019 budget. It considers a twenty-year
16 forecast of customer load. And you're
17 comparing that to the resources that you
18 have and are forecasted to have. And so if
19 you look at that in light of your required
20 reserve margin, you can determine what the
21 capacity needs are on an annual basis. The
22 B-19 vintage shows that these resources will
23 be sufficient at least for the next several

1 years. Mr. Kelley could probably speak
2 better about Alabama Power's expectations
3 beyond the next several years as his group
4 has responsibility for Alabama Power's
5 resource -- integrated resource planning.

6 MS. HAMMONDS: Thank you. No further
7 questions.

8 THE WITNESS: Thank you.

9 ALJ GARNER: Mr. Free.

10 MR. FREE: Is it okay if I just stand
11 right here and ask a couple questions?

12 ALJ GARNER: Yes.

13 CROSS-EXAMINATION

14 BY MR. FREE:

15 Q. Good afternoon, Mr. Weathers.

16 A. Good afternoon.

17 Q. Thanks for being here. Generally when
18 there's a reliability constraint period or
19 event over a wide area such as the 2011
20 event and the 2014 polar vortex event,
21 usually a report comes out afterwards about
22 the event and the causes of the event. Do
23 you recall those two reports that they wrote

1 after the 2011 event and 2014 event and 2018
2 event when they came out with
3 recommendations? In the 2018 report they
4 even said these recommendation are
5 essentially the same as the 2011 report.
6 But evidently people aren't following them,
7 and so we're going to reiterate them again.
8 And they did. And even in Appendix G, they
9 came out with specific resource advocacy
10 requirements. Are you familiar with those?

11 A. I am generally familiar with those reports.
12 I have read those reports. What the
13 specific requirements in the Appendix G are
14 I don't recall exactly. But I do know that
15 generally they recommend winter
16 weatherization actions and attention to
17 winter reliability risk in those reports.

18 Q. You're right. It generally says that
19 utilities who are planning need to focus on
20 the winter with the same urgency as they
21 focus on in the summer. Do you recall that?

22 A. Yes, sir.

23 Q. And resource advocacy should be a main part

1 of that. Moving from that on the weather
2 data, if you would, turn to page two of your
3 reserve margin study. It's the last
4 sentence of the first half paragraph when it
5 says, These one hundred and eight data sets
6 or weather years were given equal
7 probability of occurrence.

8 A. Yes.

9 Q. Okay. And then on your rebuttal testimony,
10 page fourteen of seventeen -- and we're on
11 about line ten. Are you there with me?

12 A. Yes.

13 Q. Okay. And so consequently, extreme polar
14 events such as those experienced in the
15 '80's are included in the study but they are
16 not over emphasized. Rather, they are
17 properly weighted based on historic
18 frequency of occurrence. Temperatures that
19 occurred infrequently were assigned very low
20 probability in the study while temperatures
21 that occurred more frequently with a very
22 low probability of the study were assigned
23 higher probability. So it seems -- I'm

1 confused between the two statements --

2 A. Okay.

3 Q. -- on probability between low frequency
4 events.

5 A. Okay. I think I can help clarify that.

6 Q. Okay.

7 A. First of all, the hundred and eight year --
8 weather years that we talked about in the
9 first paragraph you mentioned, we look at
10 fifty-four years of weather history and we
11 look at what if those weather patterns were
12 to start on a Tuesday, the year starts on a
13 Tuesday and one on a Saturday. The purpose
14 is to make sure when a peak occurs, at least
15 one of those two will be during the week
16 because loads are higher during the week
17 than they are on the weekend. So that's a
18 hundred and eight data sets. They're each
19 assigned an equal probability of occurrence
20 in our model. And the second passage that
21 you read, it talked about how if
22 temperatures occurred very infrequently in
23 the data set, they will have low

1 probabilities of occurring again. For
2 example, if a temperature -- like our lowest
3 temperature experienced on our system within
4 those fifty-four years was minus three
5 degrees. That's only occurred in one year.

6 Q. Right.

7 A. So in our model, the probability of that
8 occurring again is one year out of every
9 fifty-four years.

10 Q. Right.

11 A. However, temperatures like, say, thirty
12 degrees are very common in the winter. So
13 you'll have many, if not all the years will
14 experience a probability of experiencing
15 thirty degree temperatures. So the second
16 part -- that's what I mean by the
17 temperatures that occur very infrequently
18 historically have a low probability of
19 occurring again just the way the assigned
20 probability is being equal. But
21 temperatures that occur more frequently in
22 the historical data set occur in more of
23 those weather years. So they'll be --

1 they'll have the probability of occurring
2 more often. Does that help?

3 Q. Yeah. The rebuttal testimony made more
4 sense to me. It made sense that those that
5 occur once every fifty-four years should
6 have a low probability.

7 A. Right.

8 Q. But when I read the reserve margin, it says
9 all events are given equal probability.

10 A. Well, all weather years were given equal
11 probability. For example, the weather
12 experienced in 1990, you know, is given
13 equal probability to experience the weather
14 of 19 -- I'm sorry -- 2004.

15 Q. Weather and temperature being two different
16 things, I guess?

17 A. Well, the temperature -- a weather year
18 being associated with the temperatures that
19 occurred every day on that year. So each
20 year the weather experienced in that year,
21 the temperature experienced in that year is
22 given equal probability in terms of an
23 annual period of time. But if it -- if a

1 temperature only happened one time in
2 fifty-four years -- and in our study it's
3 only happened one time, one out of
4 fifty-four.

5 Q. Okay. That's good. Can you turn to page
6 A-14. Last question. The reserve margin
7 study, A-14.

8 A. Okay.

9 Q. Okay. So earlier there were some questions
10 surrounding fuel policy?

11 A. Yes.

12 Q. That for CT's versus CC's -- and this -- it
13 was my understanding that this kind of
14 summarized the fuel policy surrounding firm
15 transportation, the CT's versus CC's and the
16 Southern Company Services fuel policy?

17 A. That's correct.

18 Q. That if it didn't have firm transportation,
19 it wouldn't be counted as capacity?

20 A. That is correct.

21 MR. FREE: Okay. Thank you. That's
22 all I have, Judge Garner.

23 ALJ GARNER: All right. Any redirect?

1 MR. GROVER: Just a few questions, if
2 you'll permit, Your Honor. And I will be as
3 efficient as I can.

4 REDIRECT EXAMINATION

5 BY MR. GROVER:

6 Q. I'm going to go in reverse with you,
7 Mr. Weathers. Let's start with this. I
8 just want to make sure the record is clear
9 and everyone in the room is clear. When
10 you're referring to solar generation, you
11 were just talking about that resource
12 independent of any other supportive
13 technology that might be deployed alongside
14 with it, correct?

15 A. Yes, I am. That's the way we studied it.
16 But that's -- the solar generation we have
17 on our system is solar resource without any
18 other, you know, battery storage device
19 paired with it.

20 Q. So when you made that distinction, either
21 referring to solar with batteries or
22 referring to solar without batteries, the
23 intention was to draw a distinction between

1 the two technologies, correct?

2 A. That's correct.

3 Q. All right. And I was just curious. Your
4 referenced the peak on the Southern system I
5 think you said in 2019 it was six
6 thirty-five a.m. central time?

7 A. That was the instantaneous peak in 2019.

8 Q. Okay. What would be your expectation of the
9 amount of solar production without batteries
10 occurring at that time?

11 A. Well, generally for the amount of solar we
12 have in our system, the expectation would
13 have been -- we would get about a hundred
14 and fifty megawatt hours of generation
15 across our peak in the winter. However, the
16 peak of 2019, that particular day was a very
17 cloudy day. They only got eight megawatt
18 hours of solar generation in that hour. And
19 at the time of the instantaneous peak which
20 was six thirty-five a.m., solar only
21 generated two megawatts out of the nominal
22 capacity of around thirteen hundred
23 megawatts.

1 Q. Thank you. Another question that was
2 explored and I want to, again, make sure the
3 record is clear, there was a reference to
4 Southern Company Gas and a partnership that
5 it may have with an intrastate pipeline. Do
6 you recall that?

7 A. I recall that. Yes.

8 Q. Okay. And you referenced Kinder Morgan and
9 then shortly thereafter you referenced
10 Southern Natural Gas. Who are those two
11 entities, if you know?

12 A. Yeah. And this is the area where I said I
13 was not an expert in this area. My
14 understanding is that Kinder Morgan owns
15 and/or operates the Southern Natural Gas
16 Pipeline that serves some facilities in the
17 southeast and Southern Company Gas has an
18 equity partnership within the Southern
19 Natural Gas pipeline.

20 Q. Okay. So Kinder Morgan is the owner and
21 Southern Natural Gas is the pipeline. Is
22 that your understanding?

23 A. That is my understanding.

1 Q. Okay. Do you know who regulates the prices
2 charged by Southern Natural Gas for its
3 transportation services?

4 A. I do not. I'm sorry. I don't know who
5 regulates that.

6 Q. Okay. That's fine.

7 A. For intrastate natural gas deliveries, I
8 would assume there's some oversight from
9 FERC, but I'm not familiar with the
10 regulation there.

11 Q. That's fine. That's fine. And let's see.
12 I covered that with you. You discussed your
13 previous position in the Southern Company
14 service team and the context of pool
15 billing; is that right?

16 A. That's correct. Financial Contract Services
17 which included an area called pool billing
18 which administers the intercompany
19 interchange contract.

20 Q. And that was my next question. So in
21 connection with that service, you had
22 familiarity with management and
23 implementation of the IIC, with the

1 intercompany interchange contract?

2 A. Yes.

3 Q. And, again, so everything is clear, counsel
4 at the start asked you about I think
5 contracts plural. There is just a single
6 IIC; is that correct?

7 A. There is just a single IIC.

8 Q. Okay. Do you understand how sales or
9 purchases are made between and among the
10 operating companies of the Southern system
11 under the IIC?

12 A. Yes.

13 Q. Are those sales and purchases made prior to
14 an individual operating company's needs for
15 capacity or energy, or is it in a different
16 manner?

17 A. No. No, it is not. In fact, these
18 are after the fact accounting for surpluses
19 and deficits in the pool, both on the
20 capacity side and on the energy side. So
21 the companies make their resource plan.
22 They implement those plans. And after the
23 fact from a capacity standpoint there's a

1 comparison done to the relative length of
2 each of the operating companies and there's
3 a settlement process done. Same way on the
4 energy side. The combined generating units
5 of all the Southern Companies operate
6 together as a fleet to serve our combined
7 load. After the fact it's examined for each
8 operating company. Did they have more or
9 less generation than what their load was?
10 And there's a settlement process between the
11 operating companies to account for that.

12 Q. And in your experience with the IIC, are you
13 familiar with reserve sharing --

14 A. Yes.

15 Q. -- arrangements that are made between
16 operating companies?

17 A. Yes.

18 Q. Okay. Are those arrangements, are those
19 made more on an advanced basis or are they
20 after the fact like what you just described?

21 A. The IIC provides for the settlement of
22 reserve sharing which is an after the fact
23 determination. However, the operating

1 companies do participate in coordinated
2 planning. And so to the extent that there
3 is inherent diversity in the pool, low
4 diversity like we talked about earlier,
5 that's an advantage to the operating
6 companies. They don't have to add as much
7 capacity as they would stand alone. Those
8 type of considerations, you know, the size
9 of units that are built in relation to the
10 exact capacity need, those are taken into
11 account in the coordinated planning process.
12 Reserve sharing is an after the fact
13 mechanism to account for the temporary
14 surpluses and deficits in the pool.

15 Q. But the reserve sharing, does it provide the
16 operating companies with sort of a long-term
17 basis upon which to rely on capacity?

18 A. It does not. That is not the intention of
19 reserve sharing. It's to account for
20 temporary surpluses and deficits in the
21 pool.

22 Q. And similarly, does that reserve sharing
23 mechanism provide any sort of energy

1 entitlement or guarantee for the operating
2 companies?

3 A. It does not. It's simply a capacity
4 calculation. Energy is totally separate.
5 It's based on the ownership of the units by
6 each operating company.

7 Q. Okay. Earlier on you discussed in the
8 context of the EORM that there was also a
9 factor that needed to be examined which is
10 the level of reliability needed.

11 A. Yes.

12 Q. Do you recall that?

13 A. Yes.

14 Q. Is there a metric or term that's used in
15 your reserve margin study that is often seen
16 as synonymous with that description?

17 A. Yes. It's what's called the loss of load
18 expectation or LOLE standard. And the
19 industry practice is for a point one LOLE
20 which means utilities planned for no more
21 than one reliability event every ten years.
22 And I say reliability event. The shedding
23 of firm customer load every ten years.

1 Q. And when you were discussing the EORM in
2 response to the questions from GASP, the
3 EORM, where does that come out on the curve
4 that's reflected in your reserve margin
5 study? Where did that come out relative to
6 the loss of load expectation?

7 A. The EORM, economic optimum reserve margin
8 was lower than the level required to meet
9 the one in ten reliability standard.

10 Q. And what was a level corresponding to the
11 LOLE?

12 A. What was the percentage reserve margin?

13 Q. Yes, sir. Thank you.

14 A. It was twenty-five and a quarter.

15 Q. Okay. And that's the diversified reserve
16 margin, target reserve margin for Alabama
17 Power, correct?

18 A. That is equivalent to Alabama Power's
19 diversified target reserve margin.

20 Q. Okay. And just to close this out and we'll
21 be through, you were not directly involved
22 in the performance of the capacity
23 solicitations by Alabama Power, correct?

1 A. That is correct. I was not directly
2 involved in that.

3 Q. Nor were you directly involved in the
4 evaluation of the resource options that
5 were presented to Alabama Power for
6 consideration?

7 A. Not directly, no.

8 MR. GROVER: Okay. That's all I
9 have, Your Honor.

10 ALJ GARNER: Okay. I take it you
11 move for the admission of the pre-filed
12 exhibits?

13 MR. GROVER: Thank you, Your Honor.
14 Yes.

15 ALJ GARNER: There is one direct
16 exhibit and one rebuttal exhibit.

17 MR. GROVER: That's correct, Your
18 Honor.

19 ALJ GARNER: They're marked as
20 Alabama Power Exhibits 1 and 2 and are
21 admitted into the record.

22 MR. GROVER: Thank you.

23 ALJ GARNER: All right. We'll take

1 a break. Let's come back at two fifteen.

2 (Lunch recess)

3 ALJ GARNER: We have concluded with
4 the testimony of Alabama Power Company's
5 witness Mr. Weathers. We're now ready to
6 move to the testimony of Mr. Carden, I
7 believe.

8 MR. GROVER: Yes, sir.

9 ALJ GARNER: If you'll call your
10 witness.

11 MR. GROVER: Yes, sir. Alabama Power
12 Company will call Kevin Carden.

13 ALJ GARNER: Let me swear you in
14 before you're seated, sir.

15 KEVIN CARDEN

16 The Witness, having been first duly sworn
17 or affirmed to speak the truth, the whole truth,
18 and nothing but the truth, testified as follows:

19 DIRECT EXAMINATION

20 BY MR. GROVER:

21 Q. Mr. Carden, will you state your name for the
22 record, please?

23 A. Kevin Carden.

1 Q. All right. And who is your current
2 employer?

3 A. I'm employed by Astrape Consulting.

4 Q. And what is your business address?

5 A. Business address is 3000 Riverchase
6 Galleria, Suite 575, Hoover, Alabama.

7 Q. Did you cause rebuttal testimony to be filed
8 in this proceeding?

9 A. I did.

10 Q. Okay. And do you have any corrections to
11 that rebuttal testimony?

12 A. I do not.

13 Q. And if I asked you the same questions that
14 were set forth in that testimony, would the
15 answers you provide be the same?

16 A. They would.

17 MR. GROVER: Okay. Your Honor, with
18 that, we will move to include Mr. Carden's
19 testimony for the record.

20 ALJ GARNER: Mr. Carden's testimony
21 will be admitted subject to
22 cross-examination.

23 Q. And have you prepared a summary for

1 presentation this afternoon?

2 A. I have.

3 Q. Okay. Would you present that, please?

4 A. Yes. Good afternoon. My firm, Astrape
5 Consulting, specializes in resource adequacy
6 planning for the electric utility industry.
7 Over the past fifteen years we've run
8 studies for and licensed the SERV model for
9 several ISO's including MISO and SBC and
10 ERCOT as well as utilities such as Duke,
11 TVA, PG&E and Alabama Power. Now, resource
12 adequacy is a prized attribute of the North
13 American Electric Grid as supplied by
14 Alabama Power to senior citizens, industrial
15 customers and other customers as well.
16 However, rotating outages due to a lack of
17 capacity in recent history has placed a
18 renewed emphasis on planning for
19 reliability. As has been mentioned already,
20 there were outages in ERCOT in 2011, BJM in
21 2013, KEG in 2014, New York City in 2019,
22 all related to capacity shortages as well as
23 several entities in the southeast

1 experiencing near misses in 2014, 2015 and
2 2018. Critically, these events occurred
3 when regions had long reserves and
4 reliability models predicted very little
5 liability risk. That is why I believe
6 planning for reliability requires
7 significant rigor and the inclusion of a
8 broad range of potential risk factors. So I
9 ask when Southern Company performed its
10 study, did they adequately represent the
11 weather related and economic forecast area
12 related load variability? Did Southern
13 Company accurately capture generator
14 performance risks? Did they capture market
15 support appropriately? These are questions
16 that I addressed in my testimony at the
17 request of Alabama Power. The answer was a
18 resounding confirmation. Not only was the
19 study performed in conformance with industry
20 best practices but also appropriately and
21 rigorously captured risk to driver
22 liability. I did not find evidence of
23 assumptions biased to a higher reserve

1 margin target. On the contrary, some of
2 their assumptions likely reduced the reserve
3 margin target. I am looking forward to the
4 opportunity today to provide further
5 confirmation on the appropriateness of the
6 reserve margin target put forward by Alabama
7 Power. Thank you.

8 MR. GROVER: Okay. Your Honor, with
9 that, we will make Mr. Carden available for
10 cross-examination.

11 ALJ GARNER: All right. Does anyone
12 with Manufacture Alabama have any cross?

13 MR. CLARK: No, sir, Your Honor.

14 ALJ GARNER: All right. That brings
15 us to Alabama Industrial Energy Consumer.
16 Yes, sir.

17 CROSS-EXAMINATION

18 BY MR. HILL:

19 Q. My name is Rick Hill. I represent the
20 Alabama Industrial Energy Consumers, and I
21 just have a few questions. Okay?

22 A. Okay.

23 Q. Astrape Consulting, what -- what is your job

1 title there?

2 A. I'm the director.

3 Q. Okay. And what is your educational
4 background?

5 A. I have a Bachelor of Science from the
6 University of Alabama, industrial
7 engineering.

8 Q. And what you specialize in is resource
9 adequacy planning; is that correct?

10 A. That's correct.

11 Q. And were you retained by Alabama Power to
12 review this petition?

13 A. I was.

14 Q. Okay. What was the scope of your consulting
15 and resource adequacy planning with regard
16 to this petition?

17 A. I was requested to perform due diligence on
18 the study that was performed by Southern
19 Company with respect to conformance to
20 industry standards, best practices, accuracy
21 and thoroughness of the analysis that was
22 performed.

23 Q. Would it be fair to say that your main focus

1 was on the concept of reliability when it
2 comes to this petition, or was it -- was it
3 more than that?

4 A. It was primarily reliability. That's
5 correct.

6 Q. Okay. Any other issues, any other areas of
7 analysis that you did with regard to this
8 petition other than with respect to
9 reliability?

10 A. To the extent economics is formed through
11 reliability questions, we looked at that as
12 well.

13 Q. So let's focus on reliability since that
14 seems to be your primary focus. For what
15 reasons do you think Alabama Power needs to
16 add capacity at this time in 2020?

17 A. We do see a significant risk as Jeffrey
18 Weathers mentioned in his testimony. Absent
19 extended reserves in the 2014, 2015 and 2018
20 time frame, we do believe there would have
21 been reliability risks in the system. Our
22 analysis of the reserve margin study
23 accurately demonstrates the reliability

1 exposure that we have if we were to
2 experience temperatures similar to what we
3 saw in 2014, 2015 and 2018.

4 Q. Who is we? You and Alabama Power? Who is
5 we?

6 A. So I have several staff in my firm that
7 assist me in various studies. But in the
8 context of looking at these.

9 Q. Do you consider yourself to be independent
10 from Alabama Power or part of the team?

11 A. Absolutely independent.

12 Q. So you think that they need to add capacity
13 because of things that occurred in the
14 northeast and New York and in the southeast?
15 Is that what you were saying earlier?

16 A. That's correct.

17 Q. Okay. Did you mention Alabama or Alabama
18 Power in any of your examples of reliability
19 problems in the past?

20 A. Yes. Certainly the 2014 event was Alabama
21 Power, Southern Company specific. The 2018
22 event, there were very tight reserves
23 remaining during the January 2018 event.

1 Q. And do you think but for this petition that
2 Alabama Power will be in that situation
3 again or even worse? Is that what you're
4 saying?

5 A. I do.

6 Q. Okay. When would this occur? When would
7 the Doms Day occur? Would it be tomorrow
8 or next year or the year after that? Do you
9 have an opinion on that?

10 A. There isn't a specific date or time when we
11 expect an event to occur. But in the
12 context of subsequent years, we certainly
13 see the potential of probability that there
14 is a risk of firm load shed. If we
15 experience the same temperatures again, I do
16 expect there's a possibility of reliability
17 risks.

18 Q. Two, three, four, five years from now?

19 A. Yes. I haven't studied the resource ledger
20 for the next year, two years. I just
21 recognize the 2024 identification need.

22 Q. Would you say that Alabama Power is in an
23 emergency situation right now when it comes

1 to reliability?

2 A. An emergency situation?

3 Q. That's right.

4 A. I do. Given that these decisions need to be
5 made four years in advance, it's critical
6 that they make this decision immediately.

7 Q. So the decision is critical, but the
8 emergency is four years down the road? Is
9 that what you're saying?

10 A. That's correct.

11 Q. Okay. Are you familiar with intercompany
12 interchange contracts in the Southern
13 system?

14 A. Vaguely.

15 Q. So that would not be an area of your
16 expertise?

17 A. That's correct.

18 Q. Do you know how those contracts might affect
19 reliability or capacity?

20 A. On a surface level.

21 Q. Are you aware of any other agreements that
22 Alabama Power might have outside the
23 Southern system?

1 A. Can you give specific examples of what types
2 of agreements?

3 Q. I was asking you to give specific examples.

4 A. Sure. I don't have any examples.

5 MR. HILL: Okay. Thank you. I don't
6 have any further questions.

7 ALJ GARNER: Sierra Club.

8 MR. DILLARD: Thank you.

9 CROSS-EXAMINATION

10 BY MR. DILLARD:

11 Q. Mr. Carden, I'm Joel Dillard. I represent
12 Sierra Club.

13 A. Nice to meet you.

14 Q. I only have a few. Are you being paid for
15 your testimony here today?

16 A. Yes, sir, I am.

17 Q. And how are you being paid?

18 A. Financially.

19 Q. Are you paid by the hour? That's a good way
20 to go. Do you have an hourly rate?

21 A. I do have an hourly rate. Yes.

22 Q. And what would that rate be?

23 A. So my hourly rate is two hundred and thirty

1 dollars an hour.

2 Q. And is that whether you're here to testify
3 or preparing for your testimony?

4 A. That's correct. Yes, sir.

5 Q. And when were you first retained by the
6 power company in this particular matter?

7 A. Summer of 2019.

8 Q. All right. And in the course of your
9 consulting services to the power company,
10 did you visit the Barry 8 steam plant down
11 in South Alabama?

12 A. I have not.

13 Q. Did you visit any of the sources of power
14 about which you've testified?

15 A. Have I visited any facilities? I have
16 visited some of the Southern Company's
17 facilities in the past.

18 Q. In Alabama?

19 A. I have.

20 Q. Which ones?

21 A. Barry 6 and 7 back in 2000, I think. Year
22 2000.

23 Q. And what was your purpose at that time?

1 A. Just to understand the facility as it was an
2 informational visit.

3 Q. Did you think it would be helpful to visit
4 the Barry 8 plant in connection with your
5 testimony here today?

6 A. No, sir.

7 Q. And why is that?

8 A. In planning perspective we understand the
9 risks in a statistical manner. Our -- our
10 analysis is the bigger picture. Certainly
11 we understand kind of the minutia of events
12 that occur in the system. There's no need
13 to visit the plant to understand those
14 risks.

15 Q. Well, let me ask you this. In your training
16 and experience, have you found that
17 technology generally improves over time?

18 A. Sure.

19 Q. And in that connection, would you consider
20 incremental improvements to sources to be in
21 the best interest of the customer as opposed
22 to a forty-year increment?

23 A. So certainly all the technological

1 opportunity as well as the risks inherent in
2 various technology should be incorporated.
3 I believe that it was fully considered in
4 the selection of resources in this.

5 Q. Well, so if I understand you correctly, if
6 the company were disallowed this petition by
7 the Public Service Commission, have you
8 engaged in any planning for that event?

9 A. No. Southern Company specifically, we do
10 planning for a number of other organizations
11 as well as looking at all sorts of different
12 opportunities, different resources classes,
13 and they all carry their inherent risks. So
14 we certainly appreciate and understand those
15 risks.

16 Q. So you're available to the power company if
17 the Commission denies this petition or as
18 it's entitled to do restrict it in its
19 magnitude. You'd be available to the power
20 company to consult with them on that as
21 well, would you not?

22 A. As much as I appreciate my own skill set, I
23 don't believe that I'm a silver bullet to

1 help the company recover from not being able
2 to certify this resource. I'm not sure the
3 direction of the question that's being
4 asked.

5 Q. Well, and I realize you concentrated on the
6 RSM. Did you consider the elements of the
7 petition in its entirety, or did you just
8 zero in on your silver bullet?

9 A. This is reserve -- my feedback in this
10 process, my involvement in this process is
11 specific to reliability. So we looked at it
12 in the context of what is the magnitude of
13 resources that are required to maintain
14 system reliability. We were not involved
15 with respect to identifying different
16 resource mixes and different technologies to
17 meet that particular need.

18 Q. I believe that's almost all I have. Did you
19 find that currently the power company is
20 meeting its customers needs?

21 A. Yes.

22 MR. DILLARD: Okay. Thank you.

23 ALJ GARNER: Energy Alabama and GASP.

1 CROSS-EXAMINATION

2 BY MS. TIDWELL:

3 Q. Good afternoon, Mr. Carden.

4 A. Good afternoon.

5 Q. I'm Christina Tidwell, and I'm representing
6 Energy Alabama and GASP in this matter.
7 You've been the director of Astrape
8 Consulting since 2005?

9 A. That's correct.

10 Q. Prior to becoming director of Astrape
11 Consulting, you worked for Southern Company
12 Services, correct?

13 A. That's correct.

14 Q. As a reliability engineer?

15 A. That's correct.

16 Q. Your responsibilities included performing
17 the reserve margin studies for the Southern
18 Company system, right?

19 A. That's correct.

20 Q. While you were an employee at Southern
21 Company Services, how many reserve margin
22 studies did you perform using SERVVM?

23 A. One.

1 Q. What year was that?

2 A. 2003.

3 Q. You left your position as reliability
4 engineer in August 2005, correct?

5 A. That's correct.

6 Q. And you started Astrape Consulting in August
7 2005?

8 A. That's correct.

9 Q. Between August and November of 2005, Astrape
10 put in a bid to Southern Company Services to
11 become the licensor of SERVVM?

12 A. That's correct.

13 Q. In November of 2005, three months after you
14 left Southern Company Services, Astrape's
15 bid was approved?

16 A. That's correct.

17 Q. And at that time Astrape became the licensor
18 of SERVVM?

19 A. That's correct.

20 Q. Astrape currently owns the SERVVM model,
21 correct?

22 A. That's correct.

23 Q. So Astrape has the exclusive legal rights

1 over the SERVVM model?

2 A. Southern Company owns a patent that is
3 related to software services, and we have a
4 license to that patent and we own the SERVVM
5 software.

6 Q. What's the patent that they own?

7 A. The patent is on the particular method used
8 for sampling generator outages.

9 Q. Does Astrape -- does Astrape aim to buy that
10 patent from Southern Company?

11 A. Expectations is the patent will retire or
12 lose its protection in eight or nine years.
13 At that point Southern Company will no
14 longer have any intellectual property
15 associated with that software.

16 Q. When did Southern Company get that patent?

17 A. I believe it was around 2008 or '9.

18 Q. So after you had started Astrape?

19 A. That's right.

20 Q. And after you had become the licensor of
21 SERVVM?

22 A. That's right.

23 Q. So Southern Company Services used the SERVVM

1 model to perform its 2018 reserve margin
2 study, correct?

3 A. That's correct.

4 Q. And Southern Company Services has used the
5 SERVVM model to perform its reserve margin
6 studies since Astrape became the licensor in
7 2005?

8 A. That's correct. They've been using that
9 SERVVM model and its predecessor since the
10 mid '80's.

11 Q. Southern Company Services pays Astrape for
12 the use of its SERVVM model; is that right?

13 A. That's correct.

14 Q. Now, Astrape also markets the SERVVM model to
15 other entities, right?

16 A. That's correct.

17 Q. And once you market the model, some of these
18 entities then become your clients?

19 A. That's correct.

20 Q. So then those clients use the SERVVM model?

21 A. That's correct.

22 Q. These clients enter into contracts with
23 Astrape for the right to use the SERVVM

1 model?

2 A. That's correct.

3 Q. The majority of your clients are utilities,
4 right?

5 A. On a strictly number basis, possibly.
6 Revenue basis, I wouldn't say so.

7 Q. Okay. So who are the majority of your
8 clients on a revenue basis?

9 A. We split it up. We do a lot of work for
10 independent system operators MISO and SPB,
11 ERCOT, Electric System Operator. We do a
12 lot of work for battery developers, do a lot
13 of work for public utility commissions,
14 California Public Utilities Commission. We
15 certainly cover a broad range of client
16 base.

17 Q. Alabama Power is not part of a regional
18 transmission organization, are they?

19 A. They're not.

20 Q. When I say 2018 reserve margin study, I'm
21 referring to Exhibit 1 to Mr. Weathers'
22 pre-filed testimony entitled an Economic and
23 Reliability Study of the Target Reserve

1 Margin For the Southern Company System.

2 Okay?

3 A. Okay.

4 Q. Do you have a copy of the 2018 reserve
5 margin study with you?

6 A. I don't with me.

7 MS. TIDWELL: Judge Garner, may I
8 approach the witness?

9 ALJ GARNER: Yes, you may.

10 MS. TIDWELL: Since this is Exhibit 1
11 to Mr. Weathers' testimony, can we just use
12 it without entering it?

13 ALJ GARNER: Yes.

14 MR. GROVER: We have a copy. Thank
15 you.

16 ALJ GARNER: I believe that's the
17 document that's marked as Alabama Power
18 Exhibit 1.

19 MR. GROVER: Yes, Your Honor.

20 MS. TIDWELL: Alabama Power. Yes.
21 Yes.

22 Q. You are familiar with the 2018 reserve
23 margin study, correct?

1 A. I am.

2 Q. Are you familiar with the updates made to
3 the 2018 reserve margin study that were
4 filed by Alabama Power on Friday?

5 A. The errata?

6 Q. Right. The errata.

7 A. Yes.

8 Q. Southern Company performed the 2018 reserve
9 margin study during calendar year 2018?

10 A. That's correct.

11 Q. And the final version of the 2018 reserve
12 margin study is dated January 2019, correct?

13 A. Correct.

14 Q. And you were hired by Alabama Power Company
15 to perform your analysis in mid 2019,
16 correct?

17 A. That's correct.

18 Q. You conducted your analyses in July of 2019?

19 A. Yes.

20 Q. That's roughly seven months after the 2018
21 reserve margin study was finalized?

22 A. That's correct.

23 Q. Astrape provided some inputs on specific

1 aspects of the 2018 reserve margin study,
2 right?

3 A. That's correct.

4 Q. Astrape developed the scarcity price curve?

5 A. That's correct.

6 Q. And Astrape also developed the load and
7 generator assumptions for neighboring
8 electric utilities?

9 A. That's correct.

10 Q. And I believe some of the corrections made
11 by Alabama Power included changes to some of
12 the tables dealing with the neighboring
13 electric entities; is that correct?

14 A. To the best of my recollection.

15 Q. Did you make those corrections?

16 A. I did not.

17 Q. So those were corrections made by Southern
18 Company Services?

19 A. That's correct.

20 Q. Other than the scarcity pricing curve and
21 the load and generator assumption for
22 neighboring electric entities, you did not
23 provide input or guidance on any other

1 inputs into the 2018 reserve margin study?

2 A. To the best of my recollection, that's
3 correct.

4 Q. Instead Southern Company Services staff
5 conducted and performed the 2018 reserve
6 margin study?

7 A. That's correct.

8 Q. And Astrape was available to provide
9 guidance during that time?

10 A. Correct.

11 Q. Southern Company Services maybe called two
12 or three times during the course of the 2018
13 reserve margin study?

14 A. That's my recollection. Correct.

15 Q. You consider Southern Company as a client to
16 be very hands off, right?

17 A. With respect to in my deposition, certainly
18 I mentioned that they do most of the work
19 independently was the intent of that
20 comment.

21 Q. That's in contrast to Astrape's role with
22 some other clients. Would you agree?

23 A. Yes. We have a mix of -- a mix of clients

1 that are independent and clients that rely
2 more heavily on our expertise.

3 Q. So for some utilities, Astrape actually
4 performs the reserve margin study, right?

5 A. That's correct.

6 Q. And in your rebuttal testimony you state
7 that there are two typical approaches to
8 reserve margin -- margin planning. Do I
9 have that correct?

10 A. Yes.

11 Q. One is identifying a reserve margin that
12 meets a physical reliability standard?

13 A. That's correct.

14 Q. And Southern Company Services uses a one
15 event in ten years loss of load expectation
16 as its physical reliability standard?

17 A. Correct.

18 Q. And this approach is the most common
19 industry practice, right?

20 A. That's correct. I would say it represents
21 ninety-five percent. All of the load
22 represented in the U.S. use that for
23 reliability threshold.

1 Q. The other approach you mentioned is
2 calculating the reserve margin that balances
3 the risk adjusted costs and benefits of
4 supplying reliability?

5 A. Yes. It's primarily supporting mechanisms
6 for physical reliability targets.

7 Q. That would be something like the economic
8 optimum reserve margin, right?

9 A. That's correct.

10 Q. One of the key drivers of the one event in
11 ten year standard is weather related load
12 uncertainty, right?

13 A. That's correct.

14 Q. And the 2018 reserve margin study used
15 fifty-four years of weather data to develop
16 its synthetic load curve, right?

17 A. That's correct.

18 Q. From 1962 to 2015?

19 A. Correct.

20 Q. In the most extreme winter synthetic load
21 profile, the reserve margin study expected
22 winter peak demand to be twenty-two percent
23 above normal winter peak?

1 A. Correct.

2 Q. And that expectation of winter peak demand
3 will be twenty-two percent above the normal
4 is based on the minimum system average
5 temperature experienced since 1962?

6 A. That's correct.

7 Q. And that temperature was minus three degrees
8 in 1985?

9 A. Correct.

10 Q. You agree that minus three degrees is an
11 extreme temperature for Southern Company
12 territory, right?

13 A. Yes.

14 Q. It's only been experienced once in the
15 weather data that was used?

16 A. Yes.

17 Q. And hasn't been experienced at all in the
18 last thirty-five years?

19 A. Has not. Not one day in thirty-five years
20 reflected in the probability that goes into
21 that study.

22 Q. Okay. And in 1985 was the only time in
23 actually all fifty-four years that it went

1 below zero degrees, right?

2 A. Yes.

3 Q. In other reserve margin studies that Astrape
4 performed, you create weather load shapes
5 with data going back to 1980, not all the
6 way back to 1962?

7 A. That's correct. The public data sources
8 that we have available for most of our
9 clients only goes back to 1980. So some of
10 our clients have data that goes back further
11 beyond 1980. We don't have access to that
12 for a number of studies that we do.

13 Q. In your rebuttal testimony you state that
14 you performed a sensitivity analysis with
15 the results of the 2018 reserve margin study
16 excluding data for the years prior to 1980.
17 Is that accurate?

18 A. Was that in my rebuttal testimony or the
19 work papers?

20 Q. In your rebuttal testimony on page nine,
21 lines nineteen to twenty-one.

22 A. What line numbers?

23 Q. Let me double check. So page nine, lines

1 nineteen to twenty-one.

2 A. Yes. Right.

3 Q. So you performed that sensitivity analysis
4 excluding data for years prior to 1980?

5 A. That's correct.

6 Q. And you stated that the result was a higher
7 indicated reserve margin?

8 A. That's right, given the load temperatures in
9 the early '80's. If that was your window
10 that you used for the reserve margin study,
11 it would require a higher reserve margin
12 target.

13 Q. Did you perform the sensitivity analysis
14 excluding data for any other years?

15 A. I did. I did look at if you were to cherry
16 pick specific data sets, what would the
17 reserve -- how would the reserve margin
18 target change. Our general recommendation
19 is that the maximum amount of data that's
20 available should be used. From a
21 statistical confident standpoint, it makes
22 sense to include as much data as possible.

23 Q. So you did a sensitivity analysis that

1 excluded weather years prior to 1990?

2 A. Yes.

3 Q. And what did that show?

4 A. There were various thresholds. In general,
5 there were some variations in the reserve
6 margin target that would result depending on
7 which period of years you looked at. So it
8 went from twenty-five and a quarter to meet
9 the one day in ten to twenty-two perhaps. I
10 don't have the number in front of me. But
11 in the range of three percent adjustment if
12 you cherry picked the most mild period.

13 Q. Do you remember what it was for 1990?

14 A. I don't.

15 Q. What happened after 1980?

16 A. What happened after 1980?

17 Q. Right. When you say it was higher than what
18 the recommended --

19 A. If you exclude the really cold years, then
20 you could get to a reserve margin that met
21 the one day in ten with as much as I think
22 it was two and three quarters percent lower
23 reserve margin.

1 Q. What would that be? What would that reserve
2 margin be?

3 A. Twenty-five and a quarter minus two and
4 three quarters. Between two and a half.

5 Q. As part of your analysis, you looked at the
6 relationship between temperature and load
7 using Southern Company data, correct?

8 A. Correct.

9 Q. What temperature range did you study?

10 A. We studied all the historical temperatures
11 that had been experienced back to 2014, I
12 believe.

13 Q. All temperatures?

14 A. Yes.

15 Q. Did you look specifically at extreme
16 temperatures?

17 A. We did.

18 Q. What range of extreme cold temperatures did
19 you study?

20 A. I believe it was twenty-five degrees and
21 below.

22 Q. Did you look at what load response would be
23 if you only used loads thirteen degrees and

1 below?

2 A. I believe we looked at multiple lines. So
3 carving that up into different levels for
4 which you do the regression. So if I look
5 at only thirteen below, twenty and below,
6 twenty-five and below, we certainly look at
7 that. Now, more robust data set is going to
8 give you a better relationship between
9 weather load.

10 Q. So if you look at twenty degrees and below,
11 did that change your overall analysis of how
12 load relates to temperature?

13 A. It certainly wouldn't be dependable. I
14 don't recall what the numbers might be. But
15 I think there were only two data points
16 where the temperature was below thirteen
17 degrees in the history that we looked at.

18 Q. And you were modeling what happened beyond
19 that since you didn't have actual data?

20 A. Yes. We extrapolated to colder
21 temperatures.

22 Q. So there haven't been -- there's only been
23 two times that it's been below thirteen

1 since 2014, right?

2 A. That's my understanding.

3 Q. You looked at whether there was a point at
4 which there would be reduced load growth in
5 relation to extreme temperatures, correct?

6 A. I did.

7 Q. You did not identify any saturation points
8 whether there would be reduced load growth
9 in relation to extreme temperatures, right?

10 A. That's right. We did not see that exhibit
11 in the data. As the temperature gets
12 colder, the load continues to grow.

13 Q. And you did not do any analysis of weather
14 under extreme temperatures from schools,
15 stores, governments may open late or remain
16 closed, did you?

17 A. We did not.

18 Q. The reserve margin study uses a load
19 forecast uncertainty assumption, right?

20 A. That's correct.

21 Q. And that load forecast uncertainty
22 assumption is intended to reflect the
23 additional uncertainty about the accuracy of

1 the load forecast and the risk of under
2 forecasting should the economy grow faster
3 than expected?

4 A. That's correct.

5 Q. The reserve margin study used four years of
6 economic growth related to load uncertainty?

7 A. That's correct.

8 Q. Surveys can reflect four years of economic
9 load uncertainty, right?

10 A. Yes.

11 Q. Am I correct that SERVVM does not simulate
12 utility and market reaction to unexpected
13 load growth?

14 A. That would be incorrect. SERVVM does model
15 reaction to unexpected load growth. We
16 simulate discretely those scenarios where we
17 missed the load forecast. In those cases
18 the market is expected to respond within the
19 simulation. So we make expected purchases
20 on a short-term basis from the marketplace.

21 Q. And that's within your four years of
22 economic load uncertainty?

23 A. Yes. So using those values, we are going to

1 simulate scenarios as if we missed the load
2 forecast. What would the support from the
3 market look like?

4 Q. The 2018 reserve margin study uses four
5 years of load growth uncertainty because new
6 conventional resources could not be planned,
7 permitted and constructed in less than three
8 to four years?

9 A. New combustion turbine resources and
10 conventional resources, that's correct.

11 Q. So you're not saying that battery storage
12 can't be planned, permitted and constructed
13 in less than three to four years?

14 A. Not necessarily. Batteries have their own
15 development risks and other things. But the
16 time frames would likely be different for
17 batteries even than they would for
18 combustion turbine.

19 Q. Solar power can be planned, permitted and
20 constructed in less than three to four
21 years?

22 A. That's correct. Again, resource classes
23 have different reliability contributions.

1 So comparison may not be accurate.

2 Q. That includes utility skill solar?

3 A. That's correct.

4 Q. That includes rooftop solar?

5 A. Yes.

6 Q. Includes other distributed generation solar?

7 A. Sure.

8 Q. Wind power can be planned, permitted and
9 constructed in less than three to four
10 years?

11 A. I would say the transmission restrictions on
12 wind power makes it a longer term resource
13 in a lot of context. So in order to get the
14 transmission, in order to get that power
15 delivered to your customers, I think you're
16 looking at longer times for Alabama Power.

17 Q. How long?

18 A. It could be ten years. Depends on the
19 project and location.

20 Q. What's your source for that information?

21 A. We've worked with other clients. The
22 transmission constraints. Once the
23 transmission has been fully utilized, the

1 limitations on getting capacity, the
2 planning cycle for transmission assets is --
3 it takes those types multi years.

4 Q. Alabama Power could enter into power
5 purchase agreements in less than three to
6 four years, right?

7 A. Those opportunities are reflected in the
8 SERVM simulation, in the short-term market
9 representation.

10 Q. But generally speaking, Alabama Power can
11 enter into power purchase agreements in less
12 than three to four years, right?

13 A. They can. The context of reliability
14 planning, all that would do is change the
15 allocation of that resource. We already
16 consider that the reliability of the system
17 has access to that resource and
18 assimilation. So there's no new net
19 improvement to system reliability
20 consideration of Alabama Power's short-term
21 market opportunities.

22 Q. So every market opportunity is within the
23 reserve margin study?

1 A. Every market opportunity? No.

2 Q. Ever power purchase agreement?

3 A. Every potential power purchase agreement. I
4 don't think anyone has considered what that
5 full universe of possibilities could look
6 like.

7 Q. Alabama --

8 A. In general, the opportunities that utilities
9 have to make short-term purchases, those --
10 those resources are reflected in the reserve
11 margin studies.

12 Q. Alabama Power could plan and implement
13 demand response measures in less than three
14 to four years?

15 A. Possibly.

16 Q. So this variety of resources that we've just
17 discussed, the battery storage, solar power,
18 wind power, purchase agreements, demand
19 response, those are all ways of responding
20 if load grows faster than expected, right?

21 A. I think in the context of resource adequacy
22 planning. There's certainly an input
23 question in terms of what type of resource

1 you're going to use to fill that need. That
2 analysis is generally done on the front end
3 before you perform a reserve margin study.
4 Typically, it's -- honestly, it's pretty
5 simple and you can do it on the back of an
6 envelope because the capacity cost of other
7 resource opportunities or their capacity
8 contribution like for solar are such that it
9 is clear that the resource that best meets
10 this marginal need is a combustion turbine.
11 It's hard to do that for batteries or to do
12 that for solar. Market opportunities, they
13 wouldn't present the same economics,
14 reliability, other attributes that we're
15 looking for in reserve margin study.

16 Q. Right. Reserve margin study uses a
17 combustion turbine, correct?

18 A. So the analysis, the mixed analysis, it's
19 done before the reserve margin study to
20 identify what's the appropriate marginal
21 resource.

22 Q. But Alabama Power hasn't proposed any
23 combustion turbines, correct?

1 A. That's correct. Just to say that the
2 reliability analysis is agnostic to the type
3 of technology, that decision is made
4 beforehand. Mixed analysis identify the
5 right technologies. We're looking at what's
6 the magnitude of the resource that's
7 necessary.

8 Q. Mr. Wilson who is an expert for Energy
9 Alabama and GASP, he recommends using a one
10 year load forecast error distribution
11 instead of a four year distribution used in
12 the 2018 reserve margin study, correct?

13 A. That's correct.

14 Q. Is it also true that the one-year load
15 forecast uncertainty is the approach used by
16 PJM in its resource adequacy modeling?

17 A. I believe so.

18 Q. And in the 2018 reserve margin study,
19 Southern Company Services conducted a
20 sensitivity analysis using a one-year load
21 forecast error distribution, did they not?

22 A. They did.

23 Q. And that sensitivity analysis indicates that

1 moving to a one-year load forecast error
2 distribution would reduce Southern Company's
3 economic optimum reserve margin, correct?

4 A. By a half percent. That's correct.

5 Q. In the 2018 reserve margin study, Southern
6 Company Services estimated the cost of
7 expected unserved energy, correct?

8 A. Correct.

9 Q. And that's also called the value of lost
10 load?

11 A. Yes.

12 Q. This is the cost or the value that customers
13 place on receiving service?

14 A. There are a number of ways to define it, but
15 basically yes.

16 Q. Okay.

17 A. In the event of an outage, was the customer
18 willing to pay or was the customer going to
19 accept credit for? What is the value of
20 lost production? There are a number of ways
21 of looking at the value of lost load.

22 Q. And to estimate the cost -- to estimate the
23 value of lost load used in the reserve

1 margin study, Sullivan, Freeman and Company
2 conducted an outage cost survey?

3 A. That's correct.

4 Q. And that was in 2011?

5 A. Yes.

6 Q. And that was before the 2014 polar vortex,
7 right?

8 A. That's correct.

9 Q. You were involved in the 2011 survey, right?

10 A. I did perform some secondary support for
11 that study.

12 Q. And your secondary support included
13 reviewing survey questions to make sure they
14 covered the scenarios that you wanted to
15 look at?

16 A. That's correct.

17 Q. There are a lot of heat pumps in Southern
18 Company territory?

19 A. There are.

20 Q. You don't exactly know how many, do you?

21 A. I don't.

22 Q. Or what percentage of Alabama Power
23 customers have heat pumps?

1 A. I don't. I have a heat pump.

2 Q. These heat pumps require supplemental
3 meeting methods when temperature drops below
4 thirty-two degrees, right?

5 A. Yeah. The comprehensive design of a heat
6 pump is designed so that they're able to
7 meet the heating needs of the home in the
8 event of temperatures below thirty-two
9 degrees. Thermodynamically it's not able to
10 provide heat below those temperature
11 thresholds. So the systems are designed
12 with that backup support for heat.

13 Q. And this supplemental heating method
14 includes devices that are attached to the
15 heat pump, right?

16 A. Yes.

17 Q. And it also includes things like portable
18 space heaters or strip heat along the walls?

19 A. That's not part of the design of a heat pump
20 system.

21 Q. But when the temperature goes below
22 thirty-two degrees, is that one of the
23 supplemental heating methods that people

1 with heat pumps use?

2 A. Not just heat pumps. I would say any type
3 of heating mechanism. A lot of customers go
4 buy portable heaters and so forth.

5 Q. These supplemental heating devices add a
6 significant amount of load, correct?

7 A. They do.

8 Q. And is it correct that these devices are
9 either on or off?

10 A. I have a portable heater in my office that
11 can change temperature.

12 Q. What about the supplemental heating method
13 on the heat pump? It's either on or off.

14 A. It cycles on or off. Yeah.

15 Q. Alabama Power offers financing for heat
16 pumps, right?

17 A. Yes.

18 Q. It offers financing for heat pumps
19 throughout the state of Alabama and not just
20 for Alabama Power customers?

21 A. I'm not aware.

22 Q. And if you're an Alabama Power customer, you
23 can add your payment for your heat pump to

1 your monthly power bill; is that right?

2 A. I'm not aware. I assume that's correct.

3 Q. Are you aware that Alabama Power's smart
4 neighborhood builder program promotes the
5 installation of heat pumps in new homes?

6 A. I'm not.

7 Q. In your testimony, you state that Alabama
8 Power has a significant penetration of
9 demand response -- demand response
10 customers, correct?

11 A. Correct.

12 Q. And you state that those resources have
13 annual --

14 A. Correct.

15 Q. Do you know how often those customers are
16 called upon?

17 A. I believe they're called infrequently. I
18 don't know the specific numbers.

19 Q. You don't know what Alabama Power's
20 potential for peak demand savings were in
21 2018, do you?

22 A. Peak demand savings from interruptible
23 customers?

1 Q. Yes, sir.

2 A. I don't know the megawatts specifically.

3 No.

4 Q. And you don't know how many megawatts were
5 saved in 2018 through Alabama Power's demand
6 response program?

7 A. No. I believe I've seen the numbers looking
8 at the 2014, 2018 historical event, but I
9 don't recall what the demand response calls
10 were, what the magnitude of the response
11 was.

12 MS. TIDWELL: All right. I have no
13 further questions. Thank you.

14 ALJ GARNER: Anything from Alabama
15 Coal Association?

16 MR. CAGLE: No, sir.

17 ALJ GARNER: Energy Fairness.

18 MR. GRIFFIN: No.

19 ALJ GARNER: American Senior Alliance.

20 MR. HOOPER: No questions, Your Honor.

21 ALJ GARNER: That brings us to Alabama
22 Solar Industry Association.

23 MS. HOWARD: Yes, sir. A few.

CROSS-EXAMINATION

BY MS. HOWARD:

Q. Hello, Mr. Carden. I'm Jennifer Howard representing Alabama Solar Industry Association.

A. Good afternoon.

Q. Good afternoon. You are aware that gas burning plants are at risk of going out in cold weather?

A. I am.

Q. And, in fact, you have an analysis of historical incidences where generating resources including gas burning generators were forced to shut down in the cold weather?

A. That's correct. The analysis that was performed by the Southern Company fully addresses or fully considers the risks of generator performance during cold weather events, and that informs their decision or the recommendation that was made in the study.

Q. And that's found in your rebuttal testimony

1 at page sixteen, figure three, correct?

2 A. That's correct.

3 Q. Do you have any evidence of solar generating
4 assets being at risk of going out in the
5 cold weather?

6 A. I don't have any evidence of solar assets
7 being either available or in terms of
8 production capability during cold weather
9 events or generator -- I'm sorry -- outages
10 during cold weather.

11 Q. You don't have any evidence either way?

12 A. Either. That would be correct.

13 Q. And you believe that solar plus battery
14 resources can also be permitted and
15 installed in less than three to four years,
16 correct?

17 A. I do. I advocate significantly for battery
18 developers. I do think that they have their
19 own inherent risks in terms of development
20 time lines of one to two years. Maybe a
21 question depending on the site. They have
22 their other risks in terms of relying too
23 heavily on batteries. I think, yeah,

1 certainly they have their own specific
2 attributes that need to be considered here.

3 MS. HOWARD: Thank you. I have
4 nothing further.

5 CROSS-EXAMINATION

6 BY MS. HAMMONDS:

7 Q. Good afternoon.

8 A. Good afternoon.

9 Q. I am Tina Hammonds with the Attorney
10 General's office. I'll ask you a few
11 questions. Due to the fact the power
12 company has been able to handle the load the
13 last couple of years and will handle the
14 load in 2021 and 2022, has the power company
15 over estimated their needs for the winter
16 load?

17 A. No. I think the estimation -- well, so the
18 load forecast error from the great recession
19 in 2008 and 2009 resulted in significant
20 excessive resources, but those resources
21 were critical in order to be able to meet
22 those high loads during 2014 and 2018. So
23 absent that forecast error, we would shed

1 firm load.

2 Q. So in your calculations did you consider
3 whether the power company should look at the
4 curtailment of interruptibles during the
5 winter peak? For example, maybe
6 implementing a delay of an hour start for
7 such customers when making your reliability
8 analysis?

9 A. I didn't perform the reliability analysis.
10 Specifically I do believe that in
11 Mr. Weathers' analysis, his group's
12 analysis, they fully incorporated
13 interruptible customer response. So they
14 have every single interruptible customer
15 modeled. In the event of a situation, those
16 are the customers that are prioritized for
17 interruptions before you get to shedding
18 firm load customers. And I do believe it's
19 fully addressed in the study.

20 Q. And is there a lower cost option to meet
21 need other than -- rather than construction
22 or acquiring new facilities?

23 A. Yes. Given that it's fully considered in

1 the analysis and there's no economic impact,
2 they don't assign the value of unserved
3 energy. When you model an interruption to
4 an interruptible customer, they're not
5 penalizing. They're not assigning the cost
6 of unserved energy in that example. So I
7 would say that it's fully addressed. You're
8 already taking into account the maximum
9 value possible from using those
10 interruptible customers during reliability
11 situations. There's not additional
12 opportunities available to take advantage
13 of.

14 Q. Okay. Did you consider other options for
15 meeting future needs like possibly a request
16 for half the generation to be paid for in
17 half the time and then a re-evaluation of
18 circumstances when you're looking at whether
19 this is the most cost effective reliability
20 answer for the power company?

21 A. I wasn't tasked with looking at the cost
22 effectiveness of this particular solution.
23 The --

1 Q. You do look at reliability?

2 A. We look at reliability. So in terms of what
3 magnitude of resources were needed, that was
4 what I was asked or tasked with assessing
5 and agreed with the company's conclusion.

6 Q. So you basically looked at what was
7 presented to you to determine if that was
8 within industry standards without really
9 looking at other options of ways to meet the
10 future needs of the power company?

11 A. That's correct. As I mentioned before, I do
12 think the other opportunities are being
13 considered by the company in terms of
14 looking at battery technologies and other
15 solicitation and so forth. But in terms of
16 the marginal resource selection, I think
17 it's -- that decision was appropriately made
18 in terms of the fully dispatchable
19 conventional resource. You're able to serve
20 a large range created with that resource.
21 Battery has duration constraints. If you
22 have too much battery, you have issues.
23 Demand response, how much additional

1 opportunity is there assigned to customers?
2 But as the marginal resource, it was
3 appropriate to use that.

4 Q. And since -- you looked at weather related
5 load stability when you're looking at
6 reliability, correct?

7 A. Yes.

8 Q. Okay. So did you as a part of your analysis
9 study at all how long the capacity that's
10 being asked for should be adequate for the
11 power company?

12 A. So reserve margin study is the
13 identification of need and that's presumed
14 to continue for future years. So retirement
15 of new resource -- retirement of old
16 resources, other load growth and other
17 things will transpire over the years. Part
18 of it remains the same. So that resource is
19 presumably needed for the duration. I'm not
20 sure if I answered the question.

21 MS. HAMMONDS: No further questions.

22 THE WITNESS: Thank you.

23 ALJ GARNER: Does the staff have any

1 clarifying questions?

2 MR. FREE: No, sir.

3 ALJ GARNER: All right. Redirect.

4 MR. GROVER: Just a couple, Judge.

5 Thank you.

6 REDIRECT EXAMINATION

7 BY MR. GROVER:

8 Q. Mr. Carden, I want to ask you a question.

9 There was some discussion about the timing
10 of the load forecast error, the three to
11 four year window it sounds like that was
12 employed by Southern and then maybe a
13 shorter window that you've seen in other
14 areas like PJM. Do you recall that?

15 A. Yes.

16 Q. For the work that you do for your clients,
17 is there a common metric that tends to shake
18 out in what you see or you're asked to do?

19 A. Yeah. Almost all the work that we do, it is
20 the same three to four year time frame for
21 looking at load forecast error risks
22 consistent with the development cycle for a
23 new resource.

1 Q. And you were asked about the effect of --
2 strike that. So you testified regarding the
3 time required to address transmission
4 considerations associated with the
5 integration of wind facilities. Do you
6 recall that?

7 A. I do.

8 Q. Does the consideration of the time required
9 to integrate new resources into a
10 transmission system, is that limited just to
11 wind facilities?

12 A. It's not. Other resources' technologies
13 would face the same challenges.

14 Q. So ultimately are transmission
15 considerations a necessary component with
16 the addition of any new resource to a
17 system?

18 A. Yes.

19 Q. You also testified that Alabama Power was
20 meeting its electricity service needs today.
21 Do you recall that?

22 A. I do.

23 Q. In the context, though, of target reserve

1 margin for the wintertime, is Alabama Power
2 meeting that target right now?

3 A. I'm not aware. Again, my analysis was
4 limited to the 2024 time frame.

5 Q. So you don't know one way or the other if
6 Alabama Power is carrying a deficit in the
7 wintertime relative to its target reserve
8 margin?

9 MR. DILLARD: Your Honor, object to
10 leading the witness.

11 ALJ GARNER: I'll overrule it.

12 A. I'm not aware.

13 Q. Okay. Thank you. That's fine. And on that
14 note, Mr. Dillard, he asked you a question
15 about visiting Barry 8. You understand that
16 Barry 8 is the proposed unit to be
17 constructed?

18 A. That's right.

19 Q. Is there a plant to visit right now?

20 A. It's not.

21 Q. My last question is this. You referenced
22 reliability events that occurred in the
23 2014, '15 and '18 time frames. Do you

1 recall that?

2 A. I do.

3 Q. Do you have an understanding of how much
4 gas capacity was unavailable during those
5 events?

6 A. All the gas resources that Southern
7 Company had were available from a -- they
8 had sufficient fuel supply during those
9 events, whether it was from gas or
10 backup.

11 Q. So the presence of the extreme winter
12 conditions had not impacted the supply
13 of, say, fuel to those resources for
14 purposes of their operation?

15 A. That's correct.

16 Q. And lastly, with respect to the SERV
17 model, how are gas resources modeled in
18 terms of their availability in extreme
19 winter conditions?

20 A. So the connection of gas pipelines
21 modeled, oil backup opportunities are
22 modeled. And the actual simulation when
23 they look at those extreme cold weather

1 events, the model did not forecast the event
2 of lack of fuel to be a driver of
3 reliability for the Southern Company. So in
4 all simulations we projected that the gas
5 resources were able to -- they had access to
6 the fuel that they needed in order to
7 provide reliability.

8 Q. And if they had forecast unavailability,
9 what would that have done to the reserve
10 margin?

11 A. It would have increased the reserve margin.

12 MR. GROVER: Nothing further.

13 ALJ GARNER: Do you move for the
14 admission?

15 MR. GROVER: Yes. Thank you, Your
16 Honor. I do. I move for the admission of
17 Mr. Carden's exhibits.

18 ALJ GARNER: There are twelve of
19 those. They will be marked as Alabama Power
20 Exhibits 3 through 14. And they are
21 admitted.

22 MR. GROVER: Thank you. Thank you,
23 Mr. Carden.

1 ALJ GARNER: You're excused,
2 Mr. Carden. Are we ready for Ms. Burke?

3 MR. McCRARY: Yes, Your Honor.

4 MR. GROVER: Yes, sir, Your Honor.

5 ALJ GARNER: Raise your hand, please.

6 MARIA BURKE

7 The Witness, having been first duly sworn
8 or affirmed to speak the truth, the whole truth,
9 and nothing but the truth, testified as follows:

10 DIRECT EXAMINATION

11 BY MR. McCRARY:

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

14 A. I'm Maria Burke.

15 Q. And by whom are you employed and in what
16 capacity?

17 A. I work for Alabama Power. I'm load
18 forecasting manager.

19 Q. Ms. Burke, have you previously submitted in
20 this proceeding rebuttal testimony?

21 A. I have.

22 Q. Do you have any addition or correction to
23 make to that testimony?

1 A. I do not.

2 Q. Ms. Burke, if I were to ask you these
3 questions set forth in your prepared
4 testimony here today, would your answers be
5 the same as previously filed?

6 A. They would.

7 Q. Did you also include with your testimony a
8 number of exhibits, MBJ-1 through MBJ-5?

9 A. That's right.

10 MR. McCRARY: Your Honor, we'd ask
11 that Ms. Burke's testimony be included in
12 the record.

13 ALJ GARNER: Ms. Burke's pre-filed
14 rebuttal testimony will be admitted subject
15 to cross-examination.

16 MR. McCRARY: And I assume you're
17 going to withhold on her exhibits until --

18 ALJ GARNER: I will. Yes.

19 MR. McCRARY: Very good.

20 Q. Ms. Burke, do you have a summary of your
21 testimony to present?

22 A. I do. Is it okay to read it now?

23 Q. Yes.

1 A. Okay. Good afternoon. I'm Maria Burke.
2 I'm Alabama Power manager of load
3 forecasting. Alabama Power's load forecast
4 is a foundational element of our resource
5 planning process. The B-19 forecast, my
6 team and I developed a forecast that's
7 reflective of the changing customer energy
8 usage and peak demands which have really
9 transitioned our company into a winter
10 peaking utility. The forecast positions the
11 company to recognize the winter peak and
12 provide reliability service to our customers
13 in the winter months. So using the
14 available tools in combination with all the
15 appropriate adjustments, we developed the
16 B-19 forecast with results that are both
17 reasonable and reliable. As further
18 validation of our peak forecast, we later
19 verified our B-19 peak demand results using
20 a new Itron peak demand forecast model. I
21 have a high degree of confidence in our
22 results, and I look forward to answering any
23 questions that you may have this afternoon.

1 Thanks for having me.

2 MR. McCRARY: Ms. Burke is tendered
3 for cross-examination, Your Honor.

4 ALJ GARNER: Any cross, Mr. Clark?

5 MR. CLARK: No, Your Honor.

6 ALJ GARNER: Okay. All right. That
7 takes us to AIEC. Do you have any
8 questions?

9 MR. HILL: No, sir.

10 ALJ GARNER: Sierra Club.

11 MR. DILLARD: No questions for this
12 witness.

13 ALJ GARNER: All right. Energy
14 Alabama and GASP.

15 MS. TIDWELL: Yes.

16 ALJ GARNER: Ms. Tidwell, will you
17 make sure you get close to the microphone as
18 you're doing your cross. Thank you.

19 MS. TIDWELL: Yes, Your Honor.

20 ALJ GARNER: We had a request from the
21 back of the room. Thank you.

22 CROSS-EXAMINATION

23 BY MS. TIDWELL:

1 Q. Good afternoon, Ms. Burke. My name is
2 Christina Tidwell, and I'm representing
3 Energy Alabama and GASP in this matter. You
4 are employed by Alabama Power Company,
5 correct?

6 A. That's correct.

7 Q. As the forecasting manager?

8 A. That's right.

9 Q. You've been the forecasting manager since
10 2005?

11 A. That's correct.

12 Q. You are under the direction of Mr. John
13 Kelley?

14 A. That's right.

15 Q. And he submitted direct testimony in this
16 matter, right?

17 A. That's correct.

18 Q. He also submitted rebuttal testimony?

19 A. That's correct.

20 Q. Your responsibilities as forecasting manager
21 include development of Alabama Power's
22 forecasts, right?

23 A. That's correct.

1 Q. The forecast includes demand forecast,
2 energy forecast, customer forecast and
3 revenue forecast?

4 A. That's correct.

5 Q. Those forecasts are used by Alabama Power in
6 its integrated resource planning process,
7 correct?

8 A. That's right.

9 Q. Your peak demand forecast is included in the
10 2019 IRP?

11 A. That's right.

12 Q. And your peak demand forecast is used in
13 determining Alabama Power's projected
14 capacity needs, correct?

15 A. That's right.

16 Q. Weather normalized historical peak loads are
17 estimates of what peak loads would have been
18 had they occurred under typical peak
19 producing weather; is that right?

20 A. That's correct.

21 Q. Weather normalized peak loads are used to
22 understand changes in customer behavior?

23 A. That's right.

1 Q. And changes in load?

2 A. Same thing.

3 Q. So that's right?

4 A. That would be right.

5 Q. And the weather normalized peak loads are
6 used as a check on the peak demand forecast?

7 A. That's right. You want to be able to
8 understand the forecast is -- is really
9 close to what is actually happening.

10 Q. Right. Because forecasted peak loads are
11 intended to reflect what peak loads will be
12 if they occur under typical peak producing
13 weather, right?

14 A. That's right.

15 Q. So if weather normalized peaks are higher
16 than the peak forecast, then you may need to
17 look more closely at the peak forecast,
18 right?

19 A. Sat it again. Weather normalized peak.

20 Q. So if weather normalized peak loads are
21 higher than what the loads are in the peak
22 forecast, you may need to look more closely
23 at the peak forecast?

1 A. Yes.

2 Q. And that's what happened when you ran the
3 B-2019 peak forecast, correct?

4 A. Yes.

5 Q. The peak demand model that you used for 2019
6 showed results that were lower than your
7 weather normalized peak loads. So you
8 needed to make upward adjustments to the
9 peak forecast, right?

10 A. Right. That actually happened to us the
11 year before, also.

12 Q. Okay. So that happened in 20 -- peak
13 forecast in 2018 as well?

14 A. Right.

15 Q. Did you make adjustments to the 2018
16 forecast?

17 A. Yes. We -- well, there were different kinds
18 of adjustments. But yes, we ended up having
19 to do that as well.

20 Q. What kind of adjustments were they?

21 A. Well, we ended up not being able to use the
22 PDM model for the B-18 peaks. We used the
23 B-17 peak from the PDM model.

1 Q. So if the opposite happened, if weather
2 normalized peaks were lower than the peak
3 forecast, you would also need to re-examine
4 the peak demand forecast?

5 A. That's right. If the PDM, if the model had
6 given us numbers that were too high, we
7 would be doing the same thing. That's
8 right.

9 Q. And you would be making downward
10 adjustments?

11 A. That's right. The model is just a
12 simulation. So if the simulation gives us
13 numbers that don't make sense, then you have
14 to make adjustments.

15 Q. So Alabama Power's weather normalized
16 historical peak loads are presented in the
17 2019 IRP, correct?

18 A. That's right.

19 Q. Alongside Alabama Power's projected peak
20 demand?

21 A. That's right.

22 Q. And the -- those weather normalized peak
23 loads and the peak demand forecasts are

1 presented in figure 3(b)(1) of the 2019 IRP?

2 A. That's right.

3 Q. Figure 3(b)(1) has been corrected from its
4 -- from its original version; is that right?

5 A. That's right.

6 Q. You developed the weather normalized peak
7 loads, correct?

8 A. That's correct. I did that calculation.

9 Q. Your weather normalization methodology is
10 not documented anywhere, is it?

11 A. We don't have a written document that
12 explained the documentation process.

13 Q. So you've not written it down?

14 A. No.

15 Q. When did Alabama Power begin calculating
16 weather normalized historical peak loads?

17 A. Well, the process that we're using today we
18 began in 2015.

19 Q. Alabama Power did not use a weather
20 normalization approach in the 2016 IRP?

21 A. We did not do that back then. That's why
22 it's not included in the 2016 IRP document.

23 Q. In the 2015 IRP, you used actual historical

1 peak, correct?

2 A. In that illustration that you were
3 describing, figure 3(b)(1), we used
4 historical peaks. That's what was used in
5 the illustration.

6 Q. Okay. And you're discussing the 2016 IRP
7 just for the record, right?

8 A. Yes.

9 Q. So the 2019 IRP was the first IRP that you
10 used the weather normalization approach?

11 A. That's correct.

12 Q. And so figure 3(b)(1) in the 2019 IRP shows
13 historic weather normalized peak loads?

14 A. Yes. We wanted to be able to illustrate the
15 fact that the -- the peak demand was
16 changing over time. In the 2016 IRP, we
17 were still talking about a summer peak being
18 the primary focus of our reliability. And
19 so for that reason, there was not a need to
20 be able to show weather normalized peaks.
21 But for the B-2019, for the 2019 IRP, the
22 whole discussion was about the fact that we
23 were really beginning to talk about a winter

1 peak demand reliability issue. And so this
2 was why. We'd be able to talk about how
3 that weather normal peak demand had really
4 kind of changed things.

5 Q. So you didn't need to look at the weather
6 normalized peak loads in 2016 because
7 Alabama Power was summer peaking then?

8 A. No. The forecast was -- the B-2016 forecast
9 for Alabama Power was actually a winter peak
10 forecast, but it was pretty much -- it was
11 really close. It was -- I can't even
12 remember how close it was. But for the
13 system, the reliability need was still a
14 summertime reliability need. So the focus
15 of that IRP document was still about
16 summertime reliability needs. So all of the
17 previous documents, that figure 3(b), had
18 been about historical summertime peak. That
19 was the first document we had ever put two
20 blue dots on for the historical winter peak.

21 Q. But you did not use summer weather
22 normalized peak load?

23 A. No. It had always been actuals.

1 Q. Generally speaking, to calculate winter
2 weather normalized peak loads you have to
3 determine how customers' demand for
4 electricity responds to low temperatures,
5 correct?

6 A. How it responds to temperatures at all, yes.

7 Q. And so one of the first steps is developing
8 a temperature response slope; is that right?

9 A. That's right.

10 Q. So the temperature response slope tells you
11 that for every degree that the cold weather
12 temperature drops below twenty-five degrees,
13 the demand should increase by a certain
14 number of megawatts?

15 A. That's right.

16 Q. So to determine the temperature response
17 slope, you developed a regression model by
18 plotting a set of hourly loads, right?

19 A. That's right.

20 Q. And you focused solely on temperature
21 sensitive load for residential, commercial
22 and wholesale customers?

23 A. Well, what we did was we took the total

1 territorial load and we just subtracted out
2 industrial. So that pretty much left
3 residential, commercial and wholesale. But
4 it was really just a total territorial load
5 minus industrial. We think of it as the
6 total load minus industrial.

7 Q. And you've gathered daily peaks on weekdays
8 where the temperature was at or below
9 twenty-five degrees?

10 A. We gathered hourly data where the
11 temperature was below twenty-five degrees.
12 So it might not have been the peak hour.

13 Q. So any hour that it was below twenty-five
14 degrees?

15 A. Well, if you remember the graph that's in my
16 testimony, we focused on hours six, seven
17 and eight that the temperature was below
18 twenty-five degrees.

19 Q. And your chart actually just shows seven,
20 correct?

21 A. Just hour seven?

22 Q. Is that right?

23 A. I don't know. We can flip to it. I've got

1 so many graphs. My team deals with a lot of
2 data. Let's see. Yes. It is only hour
3 seven. It's MJB-1.

4 Q. Thank you. You used three years of data?
5 2010, 2014 and 2015?

6 A. That's right.

7 Q. And you didn't use 2011, 2012 or 2013
8 because there were not enough times where
9 the temperature was less than twenty-five
10 degrees, right?

11 A. That's right. It seems like 2011 there may
12 have been. So we may have removed that one
13 just because it wasn't a consistent slope.

14 Q. Do you remember what that slope was?

15 A. I don't remember off the top of my head.
16 I'm sorry.

17 Q. And you specifically looked at hour seven
18 which I believe you just said may or may not
19 have been the hour of the daily peak, right?

20 A. That's right.

21 Q. The end result of your regression model was
22 a temperature response slope of about a
23 hundred and sixty megawatts per degree?

1 A. That's right.

2 Q. Thus, according to your calculations, for
3 every degree that it drops below twenty-five
4 degrees, the demand should increase about
5 approximately a hundred and sixty megawatts?

6 A. That's right.

7 Q. And in your rebuttal testimony, you state
8 that your temperature response slope showed
9 a correlation of greater than seventy-five
10 percent in temperatures below twenty-five
11 degrees. Is that accurate?

12 A. That's right. That's shown on the graph as
13 well.

14 Q. And the seventy-five percent correlation
15 factor is based on coincident temperature,
16 the temperature at the same time as the
17 load?

18 A. That's right.

19 Q. Using the same data set that you used for
20 the seventy-five percent correlation, did
21 you test the correlation of load on any
22 other temperature other than coincident?

23 A. No.

1 Q. Would you be surprised if using the same
2 data set that you used the correlation to
3 the temperature an hour earlier as opposed
4 to the coincident temperature was higher
5 than seventy-five percent?

6 A. I would not be surprised, but I -- I really
7 wouldn't care because my models, the PDM did
8 model, for example, runs on coincident
9 temperature. So it really wouldn't have any
10 significance to me.

11 Q. In addition to calculating the temperature
12 response slope of roughly one hundred and
13 sixty megawatts, you also had to determine
14 what you called the design temperature; is
15 that correct?

16 A. That's right.

17 Q. And in your rebuttal testimony, you referred
18 to sixteen point five nine degrees
19 Fahrenheit as the design temperature?

20 A. That's right.

21 Q. And this sixteen point five nine degrees
22 reflects the typical minimum temperature
23 expected in Alabama Power service territory

1 in the winter; is that right?

2 A. It is from our typical meteorological year.
3 That's from our design as we're trying to
4 put together a forecast for the peak demand.
5 We use a typical meteorological year that's
6 picked from a long study that we did based
7 off of what we think a typical January might
8 look like.

9 Q. But that's -- the sixteen point five nine is
10 the typical minimum temperature expected; is
11 that correct? I'm looking at page five of
12 your rebuttal testimony, the top line. I
13 guess it begins --

14 A. It comes from a typical meteorological year.
15 That's where it comes from.

16 Q. And my question is just is that the typical
17 minimum temperature?

18 A. Well, the typical -- the actual minimum when
19 we were doing the calculation was based off
20 of the same design set, that same fifty-four
21 years that the reserve margin data set is
22 based off of. And we looked at the minimum
23 temperatures across that same data set.

1 That was actually sixteen dot eight eight.
2 So we looked for a January that was kind of
3 in the recent range that would have a
4 temperature that was kind of close to that
5 sixteen dot eight eight. We were also
6 looking for a January that would have a
7 number of heating degree hours in a January
8 that would be kind of close to kind of our
9 average from 1980 forward. So it kind of
10 would match our energy forecast kind of
11 range.

12 Q. But your testimony does say that -- starting
13 on page four, line twenty. Then we applied
14 a temperature response slope of negative one
15 sixty point three three megawatts per degree
16 to determine what the identified daily peak
17 would have been if the system had
18 experienced a temperature of sixteen point
19 five nine degrees which reflects the typical
20 minimum temperature expected in Alabama
21 Power service territory in the winter.
22 That's your testimony, right?

23 A. That's fine. That's our design temperature.

1 Q. Right. Is the sixteen point five nine
2 number updated year to year?

3 A. No.

4 Q. And when was it determined?

5 A. I would probably say probably 2016. We have
6 looked at what the -- whether that number
7 would change significantly based off of like
8 adding two or three more January's to it, and
9 it did not.

10 Q. So for every degree, the actual temperature
11 differs from the design temperature of
12 sixteen point five nine degrees. You adjust
13 the temperature by roughly one hundred and
14 sixty megawatts per degree to get the
15 weather normalized value?

16 A. To get the adjustment.

17 Q. To get your eventual what your weather
18 normalized historical peak load calculation
19 is, right?

20 A. Can you say that again?

21 Q. Sure. So I -- I was just trying to make
22 sure we were on the same page. So for every
23 degree the actual temperature differs from

1 the design temperature of sixteen point five
2 nine degrees, you adjust the temperature by
3 roughly a hundred and sixteen megawatts per
4 degree to get your eventual weather
5 normalized calculation; is that right?

6 A. Well, I just don't think of it as adjusting
7 the temperature. I think of it as taking
8 just that temperature differential between
9 -- you know, say we're one degree off.

10 Okay. Then I think of that as taking that
11 hundred and sixty, you know, difference and
12 I think of that as making an addition or
13 subtraction to the actual peak that we had
14 that day. So I don't think of it as making
15 a temperature differential. I think of it
16 as making a peak demand differential.

17 Q. Okay. So if the temperature associated with
18 the winter peak day is warmer than sixteen
19 point five nine degrees, the weather
20 normalized value would be greater than the
21 actual peak?

22 A. I would add that megawatts. But yeah.

23 Q. That's yes?

1 A. That's yes.

2 Q. And the opposite is also true. If the
3 temperature associated with the winter peak
4 day is colder than sixteen point five nine
5 degrees, the weather normalized value will
6 be less than the actual?

7 A. That's right. I would take it off the peak.

8 Q. Alabama Power's weather normalization
9 calculation is based on temperatures
10 coinciding with peak load, correct?

11 A. That's right.

12 Q. But the design temperature is based on the
13 minimum temperature?

14 A. Again, the design temperature is based off
15 of the coincident temperature because that's
16 what my model is based off of.

17 Q. So your testimony says -- that we just read
18 says that the sixteen point five nine
19 degrees reflects the typical minimum
20 temperature expected in Alabama Power's
21 service territory; is that not right?

22 A. Okay. So I think you're taking things out
23 of context. So when I'm looking at the

1 historical temperatures over time, I'm
2 trying to design my peak, what's going to
3 happen with my winter peak based off of
4 what's going to happen historically across
5 that minimum temperature. Okay. So looking
6 for what's going to happen -- what has
7 happened historically in Alabama in that
8 same time frame that my reserve margin study
9 is done in, so I'm kind of trying to look at
10 the same consistent data set. I'm trying to
11 pull all of that together. But I'm supposed
12 to be looking at the minimum temperature
13 because that's what the wintertime is all
14 about is about that winter peak that's going
15 to happen at that minimum temperature. So
16 I'm looking at all of those minimum
17 temperatures that have happened through time
18 and I try to take an average of those
19 minimum temperatures through time. That
20 number for us was sixteen dot eight eight.
21 And then I tried to go find a January that
22 had a sixteen -- something close to that
23 sixteen dot eight eight. Okay. And that's

1 how I try to design a forecast of a peak
2 demand. Okay. So that doesn't have
3 anything to do with how I do a weather
4 normalization other than when I'm doing a
5 weather normalization, I want to figure out
6 if I -- now that I've actually had a peak
7 demand happen in a January, how does that
8 compare to what I forecasted to happen in a
9 January at this sixteen dot five nine that I
10 designed? I designed the sixteen five nine.
11 How does that compare to what really
12 happened and whatever temperature it really
13 happened at?

14 Q. But Alabama Power's weather normalization
15 calculation is based on temperature
16 coinciding with peak load, right?

17 A. That's correct.

18 Q. Did you consider using the coincident
19 temperature that you expect to see on a
20 winter day for your design temperature?

21 A. That is what the sixteen point five nine is.
22 How is that different from what I just said?

23 Q. You just said you use the minimum

1 temperature based on the fifty-four years of
2 weather data. No?

3 A. I don't see -- I don't see the difference
4 in --

5 Q. Okay.

6 A. -- what I've just described and what you
7 just asked me.

8 Q. Okay.

9 ALJ GARNER: Ms. Burke, make sure you
10 speak directly into the microphone.

11 THE WITNESS: Okay. I'm sorry.

12 Q. To calculate your winter weather normalized
13 peak loads, you must identify the daily peak
14 and temperature that you are going to apply
15 the temperature response slope and design
16 temperature to; is that right?

17 A. That's right.

18 Q. How do you identify the daily peak and
19 temperature to which you were going to apply
20 the temperature response slope?

21 A. So we look specifically for weekdays where
22 there's a temperature that's below
23 twenty-five degrees. We prefer weekdays.

1 We occasionally had a peak day that actually
2 happened on a weekend. But that's obviously
3 not what we've designed in the peak demand
4 model for a peak to happen at. But, you
5 know, mother nature just sends us
6 temperatures when she sends us temperatures.
7 She doesn't know what day of the week it is.
8 So -- so that's -- that's just the way that
9 it happens. So for -- we do focus on
10 weekdays, though. And so we'll take a
11 weekday. We know that the temperature on a
12 weighted basis across Alabama was that
13 twenty-five degrees Fahrenheit. So we'll
14 try to take a look at what that adjusted --
15 adjustment might be and how close was that
16 temperature to or that adjustment on peak
17 demand to what we forecasted for the year.
18 We'll also look at the next day. We call
19 that the day two peak because sometimes the
20 second day in a weather event -- when a cold
21 front comes through Alabama, sometimes the
22 second day can really be just as cold inside
23 a home once that cold wind has blown through

1 the attics of the homes. The second day can
2 be colder inside the home to the consumers.
3 And then ultimately the electric consumption
4 can be really just as high on the second day
5 even if the outside ambient air temperature
6 is warmer. So we've actually seen sometimes
7 that day two is actually a weather normal
8 peak higher than day one even though you
9 wouldn't think that. So we've been studying
10 day one and day two and trying to understand
11 how the buildup is an issue for our
12 consumers.

13 MS. TIDWELL: Judge Garner, may I
14 approach the witness?

15 ALJ GARNER: Yes.

16 MS. TIDWELL: This is for you to mark.

17 ALJ GARNER: This is going to be
18 Energy Alabama/GASP 2.

19 MS. TIDWELL: Yes, Your Honor.

20 ALJ GARNER: Is this confidential?

21 MS. TIDWELL: I believe this is
22 non-confidential.

23 ALJ GARNER: Okay.

1 MS. TIDWELL: Is that correct?

2 MR. GROVER: If it's based on our
3 exchange, then correct.

4 MS. TIDWELL: Yes.

5 MR. GROVER: Okay.

6 Q. This is not pre-filed, so I don't have
7 copies. I may need a copy for myself.
8 Ms. Burke, is this your updated work paper
9 for your weather normalized calculations?

10 A. It is.

11 Q. And you created this document?

12 A. I did.

13 Q. And is this a fair and accurate copy of your
14 updated work paper?

15 A. I guess since it's not provided
16 electronically, I will just assume that it
17 is.

18 Q. Your work paper has been updated since we
19 last discussed your weather normalized
20 calculations during your deposition; is that
21 right?

22 A. That's correct.

23 Q. And there's three pages of this work paper,

1 right? The first page is the summer peaks
2 of B-2019 development updated?

3 A. That's correct.

4 Q. And the second page is figure 3(b)(1). Is
5 this the same chart that is included in the
6 updated 2019 IRP?

7 A. I hope so.

8 Q. And the third page is entitled winter peaks
9 B-2019 development updated; is that right?

10 A. That's correct.

11 Q. Okay. Let's stay on the third page. And
12 this -- this spreadsheet includes a chart
13 with the heading historical dash updated.
14 Do you see that?

15 A. The third page? Yes.

16 Q. Right. On the winter peaks page?

17 A. Yes.

18 Q. This is your calculation of the historical
19 weather normalized peak loads?

20 A. Yes.

21 Q. This chart includes the date of the weather
22 normalized load?

23 A. That's correct.

1 Q. And the actual peak demand for the day?

2 A. That's right.

3 Q. And then the coincident temperature, right?

4 A. That's right.

5 Q. Now, the name of this column, coincident
6 temperature, that's one of the changes you
7 made to the work paper; is that correct?

8 A. That's right.

9 Q. It previously said minimum temperature?

10 A. That's right.

11 Q. And then there's another column that says WN
12 demand. Do you see that?

13 A. That's right.

14 Q. And that stands for weather normalized
15 demand?

16 A. That's right.

17 Q. So for the winter you typically based your
18 weather normalization calculation on
19 temperatures coinciding with peak load?

20 A. That's right.

21 Q. But you don't always use the coincident
22 temperature, right?

23 A. I almost always use the coincident

1 temperature.

2 Q. For instance, in 2018 you used the average
3 of temperatures adjacent to the peak,
4 correct?

5 A. That's right.

6 Q. So there instead of using the coincident
7 temperature of nineteen degrees, you used
8 the average of hours six and eight --

9 A. That's right.

10 Q. -- which was in the -- that was sixteen
11 point seven five degrees?

12 A. That's right.

13 Q. That's close to the design temperature of
14 sixteen point five nine, right?

15 A. That's right.

16 Q. And the actual peak load for 2018 was eleven
17 thousand nine hundred and eighty-nine
18 megawatts?

19 A. That's correct.

20 Q. In the weather normalized load that you
21 calculated for the sixteen point seven nine
22 degrees -- seven five degrees is close to
23 the actual peak load of eleven thousand nine

1 hundred and eighty-nine megawatts, right?

2 A. That's right. It's a small adjustment.

3 Q. But when you weather normalize the
4 coincident temperature of nineteen degrees,
5 you got a weather normalized peak load that
6 was twelve thousand three hundred and
7 seventy-six megawatts?

8 A. That's right.

9 Q. And that's more than three hundred and fifty
10 megawatts higher than the actual peak load
11 in 2018?

12 A. That's higher because it's at nineteen
13 degrees. So it took a larger adjustment.

14 Q. On your original work paper you didn't
15 consistently use the coincident temperature
16 to calculate weather normalization; is that
17 right?

18 A. On my original work paper, I had some
19 mistakes where I had been off by an hour
20 occasionally.

21 Q. And sometimes you were using the minimum
22 temperature to calculate the weather
23 normalized peak loads?

1 A. Sometimes that meant that -- being off an
2 hour meant that I was using the minimum
3 temperature by mistake.

4 Q. On the amended version you changed several
5 temperatures from the minimum to the
6 coincident temperature, right?

7 A. I did make that correction.

8 Q. You changed the temperature for 2007?

9 A. I can't tell from this copy what has been
10 changed.

11 Q. Okay. I'm going to go ahead and --

12 MS. TIDWELL: May I approach?

13 ALJ GARNER: You may.

14 Q. On the original work paper, are you claiming
15 confidentiality?

16 A. Yes.

17 MR. GROVER: Per the witness, yes.

18 ALJ GARNER: It will be treated as
19 such and marked as Energy Alabama/GASP 3.

20 MS. TIDWELL: What's your basis for
21 claiming confidentiality on this original
22 work paper?

23 MR. GROVER: It contains proprietary

1 confidential information for business.

2 MS. TIDWELL: But the updated one
3 doesn't?

4 MR. GROVER: You can ask the witness.
5 She can probably confirm it for you.

6 A. Yes. I just didn't go backwards and try to
7 clean up this one.

8 MS. TIDWELL: And this is also
9 pre-filed in Mr. Wilson's exhibits, Judge
10 Garner.

11 Q. So I was asking, you changed the temperature
12 for 2007; is that right?

13 A. Yes.

14 Q. And for 2008?

15 A. 2007, 2008, and it looks like 2009 moved
16 point three degrees as well.

17 Q. And 2013?

18 A. 2013 had a completely different issue.

19 Q. What was the issue?

20 A. 2013 had a difference in loads that were --
21 the loads were updated between the version
22 that was filed with the IRP and the version
23 that was filed when -- when we updated the

1 date request. So that was a vintage issue.

2 That was not a data request issue.

3 Q. And the temperature changed for 2013,
4 correct?

5 A. The loads changed as well.

6 Q. So both loads and temperature changed for
7 2013?

8 A. Right.

9 Q. And you changed the temperature for January
10 7th, 2014; is that right?

11 A. Yes.

12 Q. And for January 8th, 2017?

13 A. It appears that that one also changed. But
14 one was a Sunday, so it didn't matter.

15 Q. January 8th, 2017?

16 A. Is a Sunday.

17 Q. And these changes to your work papers
18 changed the weather normalization peak
19 demand numbers, didn't they?

20 A. Some of them changed the graph and some of
21 them did not.

22 Q. And you had to amend figure 3(b)(1) to
23 reflect these changes?

1 A. We did make some -- we did amend the
2 temperature. Yes. It did not change the
3 forecasted value.

4 Q. Right.

5 A. It just changed the historical trend.
6 Didn't even change the trend. The trend
7 stayed the same.

8 Q. So looking at your updated work paper which
9 is Energy Alabama and GASP Exhibit 2, there
10 are some years that have two weather
11 normalization calculations; is that right?

12 A. That's right.

13 Q. When there are multiple dates listed for one
14 year, you picked the higher weather
15 normalized peak load as the winter?

16 A. That's right.

17 Q. For instance, for 2014 you have information
18 for both January 7th, 2014 and January 8th,
19 2014; is that right?

20 A. That's right.

21 Q. And for January 8th the load is lower than
22 January 7th; is that right?

23 A. On the corrected one or on the one that --

1 the old one that you like, the one that you
2 are --

3 Q. I don't like one better than the other.
4 Exhibit 2, the updated work paper.

5 A. Okay. The updated work paper has January
6 8th as higher.

7 Q. Load was higher. The load was -- the actual
8 load was lower on January 8th, correct?

9 A. That's true.

10 Q. And the temperature was higher than the
11 temperature on January 7th?

12 A. That's true.

13 Q. And the weather normalized calculation is
14 higher for January 8th than January 7th,
15 right?

16 A. The weather normalized peak load is higher.

17 Q. On January 8th, 2014 and January 7th, 2014?

18 A. That's right.

19 Q. And so you used January 8th, 2014 as the
20 weather normalized peak load?

21 A. That's right.

22 Q. There are also multiple dates listed for
23 2015. Do you see that?

1 A. I do.

2 Q. There on the second day, January 9th, the
3 load is lower, right?

4 A. That's right.

5 Q. The temperature is higher?

6 A. Yes.

7 Q. And the weather normalization calculation is
8 higher, right?

9 A. Right. This goes into that whole day two
10 kind of thing that I just talked about.

11 Q. So you used the higher figure for your
12 weather normalization number?

13 A. Right. I mean, the point here is what is my
14 peak demand actually doing. What are my
15 customers actually demanding from my
16 electric utility grid? So I need to know
17 that, and I need to know if my peak demand
18 model can give me these numbers.

19 Q. So where there are two calculations for one
20 year, one of the lines is blue, right?

21 A. Yes.

22 Q. And the blue line is the weather
23 normalization number that you used in your

1 figure?

2 A. That was what I attempted to do. Yes.

3 Q. Right. And in your original work paper,
4 Exhibit 3 for 2016, the blue line is on
5 January 12th, 2016, right?

6 A. Yes.

7 Q. And in your updated work paper, Exhibit 2,
8 you used the other 2016 option, January
9 19th, 2016; is that right?

10 A. That's right.

11 Q. Why did you make this change?

12 A. Because the eleven four seventy was higher
13 than the eleven three thirty-one.

14 Q. In your updated work paper, you also
15 corrected some of the peak load numbers. I
16 believe we got into this a little bit
17 earlier; is that right?

18 A. That's right.

19 Q. Because on your original work paper you used
20 some preliminary numbers for peak load,
21 right?

22 A. That's right. The 2017 numbers were still
23 preliminary.

1 Q. And on the amended version you fixed your
2 spreadsheet so it now contains the final
3 peak load numbers?

4 A. That's right.

5 Q. When you list a coincident temperature
6 that's higher than twenty-five degrees, you
7 cap the temperature at twenty-five degrees.
8 Do I have that right?

9 A. We did.

10 Q. So that means that the temperature listed as
11 higher than twenty-five degrees, you used
12 twenty-five degrees in your weather
13 normalized calculation?

14 A. Right.

15 Q. Do you apply this twenty-five degree cap
16 consistently?

17 A. Probably not.

18 Q. Did you begin implementing the twenty-five
19 degree cap in a specific year?

20 A. No.

21 Q. In 2006 it appears that you did not apply
22 the twenty-five degree cap; is that correct?

23 A. I don't know. I don't -- I can't see the

1 calculations. So I just have to trust
2 you're telling me that. So you think in
3 2006 I did not apply the cap?

4 Q. Yes, ma'am.

5 A. Okay. I'll write that down.

6 Q. If you had, subject to check, the correct
7 weather normalization calculation would have
8 been significantly less about almost one
9 thousand megawatts?

10 A. (Witness nodding head in the affirmative.)

11 ALJ GARNER: Is that a response?

12 A. So you think the number should be at one
13 thousand megawatts lower?

14 Q. Roughly.

15 A. Or higher?

16 Q. The weather -- if you had applied the
17 twenty-five degree cap, the correct weather
18 normalization calculation would have been
19 significantly less?

20 A. By a thousand megawatts you say?

21 Q. Yes, ma'am.

22 A. Okay.

23 Q. Do you want to do the calculation? Are

1 you --

2 A. I'm not bothered by this line of questioning
3 at all. It doesn't -- the weather
4 normalization numbers don't affect the
5 forecast at all. This is kind of a crazy
6 line of questions. But keep going.

7 Q. In 2013 it also appears that you did not
8 apply the twenty-five degree cap correctly.

9 A. Okay.

10 Q. If you had, subject to check, the correct
11 calculation would have been almost six
12 hundred megawatts less?

13 A. Okay.

14 Q. If you'll look on the second page of your
15 updated work paper which is Exhibit 2. Are
16 you there?

17 A. I'm not sure what page you're on.

18 Q. On your -- the one that's figure 3(b)(1),
19 the second page?

20 A. The graph?

21 Q. Yes.

22 A. Okay.

23 Q. It appears that the winter weather

1 normalized load jumps about one thousand
2 megawatts between 2013 and 2014; is that
3 correct?

4 A. Yes.

5 Q. It also appears that the winter weather
6 normalized load drops by about a thousand
7 megawatts from 2015 to 2016; is that
8 correct?

9 A. Yes.

10 Q. You don't know why there are these large
11 swings in the weather normal values, do you?

12 A. I know that I have about forty percent of my
13 total load that's industrial class that can
14 be doing very different things at seven or
15 eight o'clock in the morning. And so there
16 can be easily a thousand megawatts worth of
17 difference from one year to the next in what
18 that mix of customers is doing. And so I'm
19 not surprised that there's a thousand
20 megawatts of difference. I know that it is
21 troublesome to many people that are looking
22 at these graphs and thinking that there
23 should be a smooth trend line across these

1 numbers because I've taken weather out of
2 here, but the industrial class for Alabama
3 Power is so large and there's so many very
4 large customers that can have any number of
5 problems year over year really from day to
6 day or hour to hour. And so expecting to
7 have a smooth and consistent industrial
8 class year over year on a coincident peak
9 basis is really not realistic. So believing
10 we are going to have a smooth trend line is
11 really very difficult to -- to really have
12 as a realistic expectation for this graph.

13 Q. In addition to determining the weather
14 normal peak loads for Alabama Power, you are
15 also responsible for developing a peak load
16 forecast, correct?

17 A. Yes.

18 Q. And that includes the 2019 peak load
19 forecast?

20 A. Yes.

21 Q. When did you create the B-2019 peak load
22 forecast?

23 A. In the summer of '18.

1 Q. And for that peak load forecast, you started
2 by running the peak demand model?

3 A. I started by forecasting the energy peak
4 load.

5 Q. And you use a peak demand model; is that
6 right? The PDM model?

7 A. I forecast the energy by class and then we
8 load that energy that we forecast on a
9 monthly basis into a model, the peak demand
10 model that -- that converts that into an
11 hourly shape.

12 Q. Is that peak demand model a model that
13 Southern Company Services provides?

14 A. That's right.

15 Q. Is that peak demand model also used by other
16 Southern Company retail operating companies?

17 A. I believe it is.

18 Q. Is this peak demand model an Itron tool?

19 A. No, it's not.

20 Q. It's -- who created the tool?

21 A. It's a SAS based tool. It is -- Southern
22 Company Services operates it. We imported
23 it into SAS from a tool that was the old

1 HELM model, hourly -- HELM, hourly energy
2 load model.

3 Q. I'm sorry. What month did you say you
4 created the B-2019 peak forecast?

5 A. The peak is the last thing that we do. So
6 it probably would have been August.

7 Q. So you determined in August of 2018 that the
8 2019 peak demand model was not giving you
9 accurate results; is that right?

10 A. Well, we knew from our previous years and
11 experience that we were having -- that we
12 were going to have trouble with the peak
13 demand model. We had trouble in it the
14 previous year, and that's why we had
15 initiated several things to try to see if we
16 couldn't get this model to kind of line up a
17 little bit better. And so we had even had
18 in our back pockets before we started with
19 the peak steps of our forecast the
20 benchmarking step. So we had some
21 benchmarking tools in our back pockets
22 before we even got results from the peak
23 demand model for B-19.

1 Q. So part of the reason that the peak demand
2 model was not giving you accurate results
3 was because it was giving you results that
4 were not in line with your weather
5 normalized peak loads?

6 A. That's right.

7 Q. So you included several adjustments to the
8 peak demand forecast, right?

9 A. That's right. The benchmark told us
10 outright that the peak demand model was
11 going to be off by three hundred and fifty
12 megawatts in January.

13 Q. Right. Right. And these adjustments that
14 you made, they increased your peak forecast,
15 right?

16 A. They -- they moved the results to be more in
17 line with the observations that we were
18 actually seeing. Yes.

19 Q. So your peak forecast was higher than the
20 peak demand model forecast, right?

21 A. Yes.

22 Q. And, for instance, for January 2019, the
23 adjustments increased the peak forecast

1 about roughly five hundred megawatts?

2 A. That's probably about right.

3 Q. And I'm looking at your rebuttal Exhibit

4 4 --

5 A. Okay.

6 Q. -- when I say that just so you know where I
7 got that.

8 A. Okay. It sounds right.

9 Q. And so for the first adjustment you compared
10 the 2017 actual hourly peak demand and the
11 actual hourly temperatures with the hourly
12 model results from the peak demand model for
13 the weather sensitive classes; is that
14 right?

15 A. That's correct. We took the -- what we did,
16 before we even got results for B-19, we fed
17 the model, the PDM model, the actual 2017
18 temperatures. We had what the load results
19 were for the weather sensitive classes. And
20 so we fed it the actual temperatures and we
21 let the model simulate what the results
22 would be for those weather sensitive classes
23 and then we compared what the model results

1 were to the -- to the actual results that we
2 had for those classes. And just the
3 comparison of those, the model simulation to
4 actual, we knew that we were going to be off
5 by three hundred and fifty in January, three
6 forty-nine. But the same thing.

7 Q. So through that you determined you needed to
8 increase January loads in your forecast by
9 three hundred and forty-nine megawatts?

10 A. That's right.

11 Q. You also analyzed January 2018, right?

12 A. That's right.

13 Q. And that January 2018 analysis showed that
14 the PDM model over forecasted January by
15 three hundred and fourteen megawatts; is
16 that correct?

17 A. I wouldn't have said that at all. The
18 numbers that we had for the January of '18
19 numbers were out of sequence. So the -- the
20 actual numbers that we had from the load
21 forecasting team were all very preliminary.
22 And so I really discounted those results for
23 the January 2018.

1 Q. So that data was preliminary, right?

2 A. Right.

3 Q. Have you done any further analysis with the
4 January 2018 data?

5 A. I have not.

6 Q. Would the final data be available now?

7 A. It might be.

8 Q. The second adjustment you made to the peak
9 forecast was just for January loads,
10 correct?

11 A. Right.

12 Q. And it was based off of the weather
13 normalized peak load for January of 2018?

14 A. That's right.

15 Q. Was it based off preliminary numbers or
16 final numbers for January 2018?

17 A. It was based off of that weather normal
18 number.

19 Q. Which was based off of final numbers?

20 A. It was based off of final numbers.

21 Q. So there are also two load additions in the
22 B-2019 peak forecast; is that right?

23 A. That's right.

1 Q. And that's a one hundred and forty megawatt
2 addition in 2021?

3 A. That's right.

4 Q. And a one hundred and forty megawatt
5 addition in 2022?

6 A. That's right.

7 Q. Are these additions to the forecast
8 documented anywhere?

9 A. In what way?

10 Q. Have you documented them anywhere?

11 A. I have documented them in my book and in my
12 discussions with management counsel.

13 Q. What was the methodology for determining
14 that these loads should be added on top of
15 econometric projections?

16 A. The loads were added. The loads were added
17 in the same time frame that we would add any
18 of our economic development additions. They
19 were added very similarly to any of our
20 economic additions.

21 Q. When did you add these? You were doing the
22 forecast in mid 2018?

23 A. Yes.

1 Q. So these loads would have been two and a
2 half years out and three and a half years
3 out?

4 A. Yes.

5 Q. Do you know if IHS market was aware of these
6 new loads?

7 A. I don't know.

8 Q. So you don't know whether the new loads are
9 either partially or fully reflected in the
10 various IHS market economic forecasts?

11 A. I don't believe that they would have had
12 access to the information that the
13 expansions were going to be happening.

14 Q. As part of peak demand projections for
15 B-2020, you performed an alternate peak
16 demand forecast, correct?

17 A. Yes.

18 Q. You signed a scope of work with Itron in
19 December 2018?

20 A. That's correct.

21 Q. You provided the information that went into
22 the model, correct?

23 A. That's right.

1 Q. And Itron provided the model and the frame
2 work?

3 A. That's right.

4 Q. Itron did not review your final forecast; is
5 that correct?

6 A. That's right.

7 Q. You provided us with the data for that
8 forecast graphic, correct?

9 A. That's right.

10 Q. And this data did not include the input data
11 that you used in the model, right?

12 A. You've already had a lot of input data
13 because I had already given you everything
14 from B-19. We used those same B-19 data
15 assumptions to drive it. That was the
16 assumptions that we had at the time to go
17 off and try to see if we couldn't find an
18 alternate peak demand model, a different
19 kind of model to forecast a peak demand.

20 Q. In addition to peak demand forecast, you
21 were also responsible for Alabama Power's
22 sales forecasts?

23 A. The energy forecast is the sales forecast.

1 So yes. I had to do the sales forecast in
2 order to have something to base the peak
3 demand on.

4 Q. And this includes industrial sales?

5 A. Correct.

6 Q. Is that right? And you used three sources
7 for your industrial sales forecast?

8 A. I used a lot of sources. Can you be more
9 specific?

10 Q. Sure. And I'm referring to some -- in your
11 rebuttal testimony. I'm on page sixteen of
12 your rebuttal testimony, line sixteen. It
13 states that Alabama Power's monthly
14 industrial energy forecast relies on three
15 sources of industrial information. Do you
16 see that?

17 A. Okay. And your term survey data,
18 operational expectations and monthly
19 econometric regression models. Got it.

20 Q. And you relied more heavily on the
21 industrial surveys for two to three years in
22 the future?

23 A. That's right.

1 Q. You've tested the accuracy of these
2 industrial surveys, correct?

3 A. Yes.

4 Q. Some representatives provide more accurate
5 results than others?

6 A. That's right.

7 Q. And some customers give inaccurate
8 information as well, correct?

9 A. Some customer give more accurate forecasts
10 than others.

11 Q. For instance, if you have a large three
12 hundred gigawatt hours, your customer's load
13 can fluctuate drastically from year to year,
14 Right?

15 A. Yes.

16 Q. Sometimes your surveys don't accurately
17 account for those large populations?

18 A. Sometimes they do not.

19 Q. And another source you used for the
20 industrial sales forecast is monthly
21 economic models?

22 A. Well, yes. The econometric models that I
23 use are monthly. My results are monthly.

1 Q. And you rely more heavily on these monthly
2 econometric models for the longer term sales
3 forecast, right?

4 A. Well, my -- my surveys that I do for the
5 large industrial customer, we only survey
6 two hundred and fifty of more than six
7 thousand customers. So I can't only rely on
8 the surveys for the near term because if I
9 did that, I would be leaving the other five
10 thousand seven hundred and fifty customers
11 out. So I have to be able to do industrial
12 surveys, do the economic equations even
13 through the short term to be able to cover
14 all of my customers. But I get a lot of
15 great information about -- really about the
16 economy and what's really happening on the
17 ground through those surveys.

18 Q. Surveys of the two hundred and fifty
19 customers, right?

20 A. Right.

21 Q. So you would say you rely on the monthly
22 econometric models for short-term and
23 long-term forecasting?

1 A. That's right.

2 Q. And you use some national data by IHS Market
3 for this information?

4 A. That's right.

5 Q. And you also used some Alabama information
6 data from IHS market?

7 A. That's right.

8 Q. But this data does not include IHS market
9 Alabama industrial production forecast for
10 eighteen industrial subsectors, right?

11 A. So the models that we run, we run them by
12 subsectors. That means that for the next
13 sector I might have a textile subsector
14 model and I might have a chemical subsector
15 model and I might have a -- I have all kinds
16 of different subsector models. But I do not
17 have industrial production index by each one
18 of these industrial sectors. Sometimes even
19 I have one, it doesn't statistically
20 correlate in the equations for the models.
21 But I do have national industrial production
22 indexes. And so where appropriate, I can
23 use the industrial production index.

1 Sometimes -- sometimes the Alabama
2 employment models fit nicely in those
3 equations. And so sometimes I'm able to use
4 those. So different models just pick up
5 different economic data.

6 Q. And it is the case that sometimes Alabama
7 industrial forecast differs from the
8 national industrial forecast, right?

9 A. Sometimes.

10 Q. And you give an examine in your rebuttal
11 testimony of military bases in Alabama?

12 A. That's right. That's one of the cases where
13 the surveys came out to be a really
14 excellent source of data.

15 Q. In your testimony you stated Alabamians tend
16 to use more electricity than people in other
17 states. Do you remember that?

18 A. That's true. Household, residential
19 households, residential customers.

20 Q. If residential customers install energy
21 efficiency measures, they can save on their
22 energy costs, right?

23 A. On their energy costs? That's true.

1 MS. TIDWELL: All right. No further
2 questions. Thank you.

3 ALJ GARNER: And do you move for the
4 admission of Energy Alabama/GASP 2 and 3?

5 MS. TIDWELL: Yes, Your Honor.

6 ALJ GARNER: Any objection?

7 MR. McCRARY: No, Your Honor.

8 ALJ GARNER: The documents are
9 admitted. Thank you.

10 Any questions from Alabama Coal
11 Association?

12 MR. CAGLE: No, sir.

13 ALJ GARNER: No. American Senior
14 Alliance?

15 MR. GRIFFIN: No questions, Your
16 Honor.

17 ALJ GARNER: I skipped Energy
18 Fairness.org. Alabama Solar Industry
19 Association?

20 MR. HOWARD: No questions, Your Honor.

21 ALJ GARNER: Attorney general?

22 MS. HAMMONDS: No questions.

23 MR. FREE: No questions.

1 ALJ GARNER: Okay. All right.

2 Redirect.

3 MR. McCRARY: Yes, Your Honor. Just a
4 few quick questions.

5 REDIRECT EXAMINATION

6 BY MR. McCRARY:

7 Q. Ms. Burke, you were asked a number of
8 questions about the weather normalization
9 process and the resulting data shown in
10 figure 3(b), were you not?

11 A. I was.

12 Q. So just to be clear, let me ask you. Is the
13 weather normalization data used in the
14 development of the peak load forecast?

15 A. It is not.

16 Q. What's the purpose of the weather
17 normalization data? Why do you prepare it?

18 A. Well, we prepared it in this case just to be
19 able to show how the trend has been changing
20 over time for our customers.

21 Q. But, again, the weather normalization data
22 is not be a predicate for your peak load
23 forecast, correct?

1 A. We don't use it to create a peak demand
2 forecast.

3 Q. You were asked a number of questions about
4 your corrected work paper. All of that
5 related to the -- to the weather
6 normalization; is that right?

7 A. It did.

8 Q. What in particular I wanted to ask you
9 about, the application of the twenty-five
10 degree cap.

11 A. Yes.

12 Q. And I think you were directed to January of
13 2006 where the temperature was at thirty-one
14 point two one degrees?

15 A. Yes.

16 Q. All right. And I think you were asked
17 except subject to check that the cap was not
18 applied there?

19 A. That's what she said.

20 Q. All right. If that's true, if the cap had
21 been applied, what would have been the
22 effect on the resulting weather normalized
23 load? Would it have been higher or lower if

1 the cap were applied?

2 A. Well, I think what she was saying, if I
3 understood it right, was that the -- that
4 the peak demand, the weather normal peak
5 demand would have been a thousand megawatts
6 lower which is difficult to explain.

7 Q. All right. This indicates that the actual
8 temperature was thirty-one degrees; is that
9 right?

10 A. Right.

11 Q. And that would mean that there would be a
12 hundred and sixty megawatt adjustment per
13 degree?

14 A. Right.

15 Q. Down to what level?

16 A. It would have been between sixteen point
17 five nine and twenty-five degrees.

18 Q. All right.

19 A. So the adjustment, the difference in the
20 weather normalization adjustment would have
21 been a smaller adjustment than whatever we
22 had calculated here.

23 Q. Okay. So in other words, if the cap was not

1 applied to the thirty-one degrees, would
2 that have caused the resulting weather
3 normal demand to be higher or lower than had
4 the cap -- the twenty-five degree cap been
5 applied?

6 A. If the twenty -- if the twenty-five degree
7 cap had been applied, then the weather
8 normal demand would actually be lower.

9 MR. McCRARY: All right. No further
10 questions, Your Honor.

11 ALJ GARNER: All right. You're
12 excused, Ms. Burke. Thank you. Your
13 pre-filed testimony will be entered into the
14 record including Exhibits 1 through 5. All
15 right. I see Mr. Kelley over here with his
16 notebook. He's ready to go. Let's take a
17 ten-minute break and then we'll start with
18 Mr. Kelley.

19 (Brief recess)

20 ALJ GARNER: I believe you had a
21 clarification on the exhibit.

22 MR. GROVER: Mr. McCrary is going to
23 take care of it for me.

1 MR. McCRARY: Yes, sir. We have a
2 few little housekeeping, Your Honor,
3 before we get started. First of all, on
4 Energy Alabama/GASP Exhibit 3, I think we
5 had it marked as confidential. We'll
6 waive confidentiality on that one.

7 ALJ GARNER: Good.

8 MR. McCRARY: Also -- and this is a
9 housekeeping matter on our filing that we
10 made on Friday. Mr. Kelley's direct
11 testimony which reflected a number of
12 items that -- for which we had removed
13 confidentiality, there are still a few
14 remaining items. I don't believe each
15 page of his testimony shows non-public
16 version, but I'm assuming the parties
17 understand since there was a cover page
18 that indicated non-public. So there is
19 still some redactions in his version that
20 was filed on Friday, even though every
21 page is not marked non-public.
22 Similarly, Mr. Weathers' Exhibit 1, we
23 removed a number of redactions from the

1 originally filed reserve margin study, but
2 it still contains some confidential
3 information. I believe some of the pages
4 but not all reflect trade secret. But it's
5 our intent that the whole document remains a
6 non-public document.

7 ALJ GARNER: Yes. That hasn't
8 changed.

9 MR. McCRARY: No, sir.

10 ALJ GARNER: All right.

11 MR. McCRARY: And finally, Your Honor,
12 I don't believe we marked and ruled on the
13 admissibility of Ms. Burke's exhibits.

14 ALJ GARNER: I thought we did, but
15 let's just make sure. They are admitted for
16 the record. It never hurts to do it twice.
17 Her testimony is entered into the record and
18 the exhibits are admitted.

19 MR. McCRARY: Very good. Thank you,
20 sir. So we would call John Kelley to the
21 stand.

22 ALJ GARNER: All right.

23 JOHN KELLEY

1 The Witness, having been first duly sworn
2 or affirmed to speak the truth, the whole truth,
3 and nothing but the truth, testified as follows:

4 ALJ GARNER: Be seated.

5 DIRECT EXAMINATION

6 BY MR. McCRARY:

7 Q. Would you state your name for the record,
8 please?

9 A. Yes. My name is John Kelley.

10 Q. Mr. Kelley, by whom are you employed and in
11 what capacity?

12 A. I work for Alabama Power. I am the director
13 of forecasting and resource planning.

14 Q. Mr. Kelley, in connection with this
15 proceeding, have you previously prepared
16 direct testimony that has been filed in this
17 docket?

18 A. Yes.

19 Q. And were there exhibits, a number of
20 exhibits included along with your testimony?

21 A. Yes.

22 Q. Did you also submit rebuttal testimony in
23 connection with these proceedings?

1 A. Yes.

2 Q. Were there exhibits in connection with that
3 testimony?

4 A. Yes.

5 Q. Mr. Kelley, you are aware last Friday we
6 filed certain errata and supplements to your
7 testimony?

8 A. I am.

9 Q. In the -- acknowledging that filing last
10 Friday, would the questions set forth in
11 your direct and rebuttal testimony, would
12 the answers to those questions be the same
13 today if I were to ask you live on the
14 stand?

15 A. Yes.

16 MR. McCRARY: Your Honor, we'd ask
17 that Mr. Kelley's direct and rebuttal
18 testimony as revised last Friday be included
19 in the record.

20 ALJ GARNER: Mr. Kelley's revised
21 direct and rebuttal testimony will be
22 entered subject to cross-examination. And
23 that extends also to the exhibits.

1 MR. McCRARY: Very good. Thank you,
2 Your Honor.

3 Q. Mr. Kelley, do you have a summary of your
4 testimony?

5 A. I do.

6 Q. Please go ahead.

7 A. Madam President, Commissioners, Your Honor,
8 good afternoon. My name is John Kelley.
9 I'm here today in further support of Alabama
10 Power's proposed resource portfolio. As I
11 and the other company witnesses have
12 demonstrated, Alabama Power has identified a
13 cost effective and reliable portfolio of
14 resources to meet the winter needs of our
15 customers. Alabama Power utilized our
16 ongoing integrated resource planning process
17 to identify these needs, and we canvassed
18 the market to find the appropriate resources
19 to meet these needs. These efforts included
20 responses from a capacity based RFP that was
21 issued in the fall of 2018, a renewable RFP
22 that was issued in the fall of 2018, a self
23 build turn key option that resulted in still

1 another separate RFP, our ongoing DSO and
2 EER analyses. And all of these results from
3 these solicitations were compared against
4 each other, and the most economic portfolio
5 that was selected includes twenty-four
6 hundred and nineteen megawatts of reliable
7 capacity. And I look forward to answering
8 any questions regarding those today.

9 MR. McCRARY: With that, Your Honor,
10 Mr. Kelley is tendered for
11 cross-examination.

12 ALJ GARNER: All right. And Mr. Clark
13 had to leave us. So that brings us to
14 Alabama Industrial Energy Consumers.

15 MR. HILL: Yes, Your Honor. If I may,
16 Judge Garner, I have a document here that
17 was submitted as an exhibit to Jeff
18 Polluck's testimony. It's already in the
19 record, and I didn't want to make it an
20 exhibit. I just wanted to talk to the
21 witness about it.

22 ALJ GARNER: If it's already part of
23 his pre-filed testimony and you intend to

1 enter it later, I don't see the need to
2 duplicate that. If you'll just kind of
3 refresh Mr. Kelley's memory.

4 MR. HILL: May I approach the witness?

5 ALJ GARNER: You may.

6 MR. HILL: This is 2018. It's JP-4.
7 Do you want to look at it, Dan, before I --

8 MR. McCRARY: Yeah, if you don't mind.
9 I didn't bring Mr. Polluck's testimony with
10 me.

11 MR. HILL: I'm sorry.

12 MR. McCRARY: Thank you.

13 CROSS-EXAMINATION

14 BY MR. HILL:

15 Q. Mr. Kelley, are you familiar with this
16 document here?

17 A. I see. I see the document.

18 Q. Have you ever seen it before?

19 A. I don't know if I've seen it before.

20 Q. Okay. Well, look on the second page, would
21 you?

22 A. Okay.

23 Q. And what is -- what are you looking at?

1 A. I'm looking at a bar chart with a lot of
2 colors and by region. It says key findings.

3 Q. How many different entities would you say
4 are listed in that bar chart?

5 A. Fifteen maybe. Fifteen to twenty.

6 Q. Okay. And in looking at that chart, do
7 other utilities plan for twenty percent or
8 less reserve planning margin?

9 A. I'm not sure what I'm looking at here. Hold
10 on. I'm looking at a bar chart.

11 Q. Twenty percent or less of reserve --

12 A. Yeah. I'm looking at the chart. It says --
13 excuse me -- anticipated and prospectively
14 reserved margins for 2023 peak by assessment
15 area.

16 Q. Can you look at the line where it says
17 reference, reference margin level?

18 A. Okay.

19 Q. And do other utilities plan for twenty
20 percent or less reserve planning margin?

21 A. I can't -- I can't really tell from the
22 chart. I'm sorry.

23 Q. Go to the next page and see if you can

1 answer my question by looking at that.

2 A. Okay. Reference margin level.

3 Q. Okay.

4 A. I see twenty percent PCC Maritimes. I don't
5 know what that is.

6 Q. Do you see one?

7 A. I see one, and I see the see the number
8 twenty percent.

9 Q. What are the other numbers?

10 A. They are all in the teens. I don't know
11 what a reference margin level is, by the
12 way. I don't even know what that means.

13 Q. That's fine. We've talked about IIC's --

14 A. Uh-huh.

15 Q. -- and Alabama Power's use of those. How
16 long have those been around?

17 A. You're referring to the intercompany
18 interchange contract?

19 Q. Yes.

20 A. I think it's been around for a long time. I
21 don't know the exact date, but I think
22 longer than I've been around.

23 Q. Decades?

1 A. Decades.

2 Q. And how long do you think that they'll be
3 around or when do you think they'll be going
4 away?

5 A. There's one contract, intercompany
6 interchange contract. And as long as we
7 have a pool that operates and shares
8 benefits and burdens with the each other, I
9 assume there will be an intercompany
10 interchange contract.

11 Q. And you wouldn't be surprised if that was
12 for decades to come, correct?

13 A. It could be.

14 MR. HILL: Thank you. I have no
15 further questions.

16 ALJ GARNER: Could I get that back,
17 please?

18 THE WITNESS: Oh, sure.

19 MR. HILL: Thank you.

20 ALJ GARNER: Sierra Club.

21 MS. CSANK: Yes, Your Honor. If I
22 could just have a moment to get set up.

23 CROSS-EXAMINATION

1 BY MS. CSANK:

2 Q. Good afternoon, Mr. Kelley.

3 A. Good afternoon.

4 Q. My name is Diana Csank. I'm counsel for
5 Sierra Club. Thank you for your time this
6 afternoon. Alabama Power Company is a
7 subsidiary of Southern Company, right?

8 A. Yes.

9 Q. You've worked for Alabama Power for over
10 thirty years?

11 A. I've worked with the Southern Company for
12 over thirty years.

13 Q. Your entire career?

14 A. I've worked with Southern Company my entire
15 career.

16 Q. And you're also a Southern Company
17 shareholder, correct?

18 A. I am.

19 Q. You own or have access to around seven
20 thousand Southern Company shares?

21 A. That's about right.

22 Q. And as you stated, you're the director of
23 forecasting and resource planning, correct?

1 A. Yes.

2 Q. That means you direct Alabama Power's
3 forecasting and resource planning, right?

4 A. Yes.

5 Q. And the forecasting and planning that you
6 direct resulted in Alabama Power's supposed
7 expansion under review?

8 A. Correct.

9 Q. That forecasting and planning involved a lot
10 of analysis, right?

11 A. It did.

12 Q. That analysis was done by lots of people?

13 A. It was.

14 Q. Company staff, for example?

15 A. Yes.

16 Q. Consultants like Southern Company Services
17 staff?

18 A. Yes.

19 Q. Outside consultants like Charles Rivers
20 Associates?

21 A. Yes.

22 Q. You directed their analysis?

23 A. I directed the development of Alabama

1 Power's resource plan. I didn't necessarily
2 direct the analysis of Charles Rivers and
3 Associates. That was -- they were
4 contracted by Southern Company Services who
5 works in concert with Alabama Power.

6 Q. So insofar as that analysis is relevant to
7 the integrated resource plan, you --

8 A. Yes.

9 Q. -- directed it or at least reviewed it,
10 correct?

11 A. Yes. I was part of that review.

12 Q. And just so that we're clear, what does it
13 mean that you direct such analysis?

14 A. Well, I don't know if I'd say I direct their
15 analysis. I direct the development of
16 Alabama Power's resource planning function.

17 Q. And what does that mean?

18 A. That means that I am responsible for the
19 work that is done, the development of the
20 integrated resource plan, supply-side
21 integration, identifying the needs,
22 identifying the most cost effective way to
23 meet those needs.

1 Q. So you hold primary responsibility of the
2 company for identifying and evaluating the
3 cost of resource options, correct?

4 A. Yes.

5 Q. Including the cost of the resources that
6 you're proposing in this case?

7 A. That is part of the -- that is a part of the
8 analysis, yes, cost and the benefits.

9 Q. And to be clear, the analysis that you
10 directed rolled up into forecast and
11 resource plans?

12 A. To be clear, the analysis I directed was
13 part and parcel of the development of our
14 resource plan, the IRP.

15 Q. Okay.

16 A. And the forecast was part of that as well,
17 peak load forecast.

18 Q. And it's your opinion that those forecasts
19 and plans support the company's proposed
20 expansion?

21 A. Yes.

22 Q. And to be clear, you used the word
23 integrated resource plans?

1 A. That's correct.

2 Q. That's a term of art. It means planning for
3 demand-side and supply-side changes at the
4 same time, right?

5 A. That's right. That's integrating both
6 supply-side options with demand-side options
7 to meet a reliability need.

8 Q. And why is that integration important?

9 A. We're looking for the most cost effective
10 options for our customers. And demand-side
11 options can provide capacity as well as
12 supply-side options.

13 Q. Onto the legal side of this case. And we'll
14 start by confirming that you're not a
15 lawyer, right?

16 A. I am not a lawyer.

17 Q. So my questions do not seek legal
18 conclusions. Rather, given your testimony
19 and your role as director of resource
20 planning and development, I -- excuse me --
21 resource -- director of forecasting and
22 resource planning, I'm looking for your
23 understanding of the standards that apply to

1 the petition under review. All right?

2 A. Okay.

3 Q. And with that clarification, this is not
4 your first certification case, right?

5 A. This is not my first time in a certification
6 proceeding. That's correct.

7 ALJ GARNER: Ms. Csank, I have a
8 request for you to speak more directly in
9 the microphone. If you could bend it down.
10 There you go.

11 Q. So, sir --

12 MS. CSANK: Your Honor, should I
13 repeat the last question?

14 ALJ GARNER: If Mr. Kelley remembers
15 it, he can go ahead.

16 A. This is not the first time that I've
17 testified in a certification proceeding.

18 Q. So you know that when Alabama Power
19 petitions the Commission like it did here
20 for a certificate of convenience and
21 necessity under Section 37-4-28 Alabama
22 Code, the company has to show that its
23 proposed changes merit a certificate?

1 A. Yes.

2 Q. And specifically Alabama Power has to make
3 two showings, right?

4 A. That's my understanding.

5 Q. The company must show that customers have
6 unmet needs?

7 A. We identify a reliability need.

8 Q. And how do you define reliability?

9 A. I define reliability by going through the
10 process that we've been discussing this
11 morning. What is the target reserve margin?
12 How far away are we from that over time? If
13 there is a deficit, we look to meet that
14 deficit through the most cost effective
15 means practical.

16 Q. So you're proposing a new standard for
17 winter resources in this case, correct?

18 A. Yes.

19 Q. That's a new reliability standard that
20 you're proposing to this Commission?

21 A. That is correct.

22 Q. So can you point me to anything in the
23 Commission's rules or other legal standards

1 that specify that winter reserves or that
2 the reserve margin specifically is the right
3 approach to solving your claim for
4 reliability needs?

5 A. Through this process we are -- it's my
6 understanding we are looking to provide cost
7 effective and reliable service to Alabama
8 Power customers. And we've identified
9 through this -- you know, Mr. Weathers
10 talked about the liability study.
11 Mr. Carden talked about the models. The
12 standard there that was presented, the
13 twenty-five dot two five reserve margin for
14 Alabama Power, that is the -- on the winter
15 and fourteen dot eight nine percent for the
16 summer. Meeting these reliability targets
17 is my understanding of the best way to meet
18 reliability, meet our standard.

19 Q. But nothing in terms of Commission precedent
20 says that you have to have additional
21 reserves per se as a way to meet a projected
22 capacity deficit, does it?

23 A. Well, going back, you identified I'm not a

1 lawyer. So I'm about to go from memory here
2 from the Code of Alabama where it talks
3 about providing reliability -- service for
4 the customers of Alabama and I believe the
5 word reserve is even used in there. So
6 reserve capacity by inference is
7 reliability. And we make this case. We
8 make this showing to the Public Service
9 Commission for their decision to make
10 whether to approve or deny the petition that
11 we've set forward.

12 Q. But the word capacity is not -- is inferred?

13 A. Capacity? Well, capacity is reliability.
14 That's -- that's -- those are
15 interchangeable.

16 Q. What's your authority for that?

17 A. Oh, that's -- what's my authority for that?

18 Q. Or what's -- what's your basis for that
19 opinion, sir?

20 A. Okay. I'm going to go back to it. Because
21 I've been doing this for a long time, the
22 long time that I've been doing this type of
23 work. Capacity and reliability.

1 Q. No document?

2 A. I don't know about a document.

3 Q. Okay.

4 A. There probably is. In a lot of data
5 responses we provided, the words capacity
6 and reliability are probably used
7 interchangeably throughout.

8 Q. That's all for clarification. So going back
9 to the two showings you were talking about
10 under Section 37-4-28. Besides an unmet
11 need, the company also must show that its
12 proposal is the least cost means to meet
13 those needs; is that right?

14 A. Yeah. Cost effective. Cost effective is
15 what the -- the term I use.

16 Q. But you also have used in testimony lowest
17 cost, least cost?

18 A. I use those interchangeably.

19 Q. Okay. Is there a difference in your mind
20 between least cost and cost effective?

21 A. No, not in my mind.

22 Q. Any direction from the Commission one way or
23 another on those terms that you know of?

1 A. Not that I'm aware.

2 Q. And is your opinion based on the analysis
3 that you directed or otherwise reviewed from
4 those outside consultants of Southern
5 Company Services that the company makes
6 these showings, right?

7 A. Yes.

8 Q. And we are here now so that you can present
9 your analysis to the Commission?

10 A. That's right.

11 Q. But Alabama Power has already presented some
12 of its analysis to the Commission for this
13 hearing, right?

14 A. Could you clarify?

15 Q. The company has made at least two
16 presentations to staff. One was last spring
17 on or around May 30 to 31. May 30th and
18 31st, 2019; do you recall?

19 A. I don't remember the exact dates.

20 Q. Do you recall in spring of 2019 meeting with
21 Commission staff to discuss this proposed
22 expansion?

23 A. It's entirely possible. I'm sorry I don't

1 remember. There's been a lot that's
2 happened in the past several months.

3 Q. I appreciate that, sir. In terms of the --
4 and remember, you're under oath.

5 A. Yeah. I'm not trying to be evasive. I'm
6 trying -- it would not surprise me that we
7 met with the staff. Perhaps I even met with
8 the staff. I don't know.

9 Q. You are familiar with the testimony and
10 pre-filed exhibits of Sierra Club witness
11 Ms. Wilson, correct?

12 A. Yes.

13 Q. And perhaps what may help refresh your
14 recollection is that Ms. Wilson sponsored
15 Exhibit RW-9 which was a confidential
16 exhibit which was styled as questions from
17 discussions with APSC staff on May 30 to 31,
18 2019. Does that ring a bell?

19 A. I don't recall the specific thing you're
20 talking about. Do you have it?

21 Q. I do. But I just want to --

22 A. Okay.

23 Q. -- first understand kind of the nature of

1 your involvement in these types of
2 presentations. But it doesn't surprise you
3 one way or another that such a presentation
4 occurred?

5 A. It would not.

6 Q. Okay. And as we sit here, you wouldn't know
7 whether that was a public meeting, that
8 presentation to staff?

9 A. No. I mean, we meet with the Public Service
10 Commission staff on a routine basis. They
11 oversee the things that we do and what's
12 going on. So they are involved up until the
13 time we, you know, filed for the -- for the
14 petition.

15 Q. Do you know --

16 A. So there are a lot of meetings. I'm sorry.
17 Excuse me.

18 Q. Thank you for that clarification. And, sir,
19 do you need some water?

20 A. No. It's fine.

21 Q. Okay. In terms of that spring, was that --
22 as far as you can recall, was that the
23 earliest time that you were coming to staff

1 with a presentation about the specific
2 proposed resources that are in the petition?

3 A. I don't know if that was the earliest time
4 or not.

5 Q. And at the time would you have been making
6 presentations to other customers?

7 A. No.

8 Q. Why not?

9 A. That's -- that is not the process that we
10 employ.

11 Q. You don't have a website dedicated to the
12 proposed resource additions, do you?

13 A. Not to my knowledge.

14 Q. Nor did you conduct any public informational
15 meetings about your proposed resources
16 additions before this hearing?

17 A. No. Not that I -- not to my knowledge.

18 Q. Did you survey customers about what they
19 needed systematically before making your
20 presentation to this Commission about unmet
21 needs?

22 A. No.

23 Q. Again, last fall in 2019 shortly after the

1 company filed its petition under review, the
2 company submitted a related request for cost
3 recovery. You're familiar with that
4 request, right?

5 A. Which request was that, now?

6 Q. This is the one that refers to construction
7 work in progress?

8 A. Yes. I'm familiar with it.

9 Q. Okay. And that request was specifically for
10 Barry 8, the new power plant that you want
11 to add to your existing site near Mobile?

12 A. Yes.

13 Q. Your September request was for Barry 8's,
14 again, so-called, quote, unquote,
15 construction work in progress cost, right?

16 A. I think that's right.

17 Q. Did Alabama Power meet with Commission staff
18 about that request before the request was
19 filed?

20 A. I don't know. I was not involved in that.

21 Q. And you wouldn't know whether that was a
22 public meeting?

23 A. I would not know.

1 Q. Okay. And in any event, the Commission
2 granted your request, right?

3 A. I don't know the status of that request.

4 Q. You do not know whether the Commission
5 issued an order granting some cost recovery
6 for Barry 8?

7 A. I don't know for certain the details behind
8 what has been granted and what is the status
9 of that request. I don't.

10 Q. Okay. Is there another company witness who
11 could speak to that issue?

12 A. I would think that Ms. Baker would be able
13 to speak to that.

14 Q. Anyone else?

15 A. That's -- that's -- no. That's who I think
16 would know.

17 Q. All right. Thanks. Let me in an abundance
18 of caution just because I can't predict
19 exactly the scope of Ms. Baker's knowledge
20 explore a little further your understanding
21 of the status of that request and that
22 order. We'll do the best we can. In terms
23 of -- let me represent to you that that

1 order references Barry 8's estimated
2 in-service costs. Are you familiar with
3 that terminology?

4 A. Yes, I am.

5 Q. And it also refers to the total project.
6 Have you heard of that term before?

7 A. I am not familiar with that term.

8 Q. So the company doesn't use total project
9 versus some --

10 A. I know what in-service cost means, but I
11 don't know what total project means.

12 Q. Okay. What does in-service cost mean to
13 you?

14 A. That would be the cost of when the project
15 is completed and declared commercial. It
16 would be ready for service.

17 Q. All right. And I'd like to avoid clearing
18 out the hearing room. So please listen
19 carefully to my next questions.

20 A. Okay.

21 Q. There are additional operating maintenance
22 costs associated with Barry 8 besides those
23 in-service costs, right?

1 A. Yes.

2 Q. And those costs would span decades, four
3 decades even?

4 A. Yes.

5 Q. And we -- let me represent to you that that
6 October order from the Commission granting
7 the company's construction work in progress
8 cost recovery request allow the company to
9 spend up to five percent of the estimated
10 in-service cost of Barry 8.

11 MR. McCRARY: Your Honor, if I may,
12 I'm going to object at this point. I've
13 been allowing this to just go, but we're
14 talking about a separate filing in a docket,
15 an accounting authorization by the
16 Commission. The witness has indicated he's
17 not familiar with it. And I'm going to
18 object to it at this point.

19 MS. CSANK: Your Honor, if I may
20 respond to that.

21 ALJ GARNER: Sure. Go ahead.

22 MS. CSANK: Barry 8 as the witness
23 just told us is part of the company's

1 petition. It's clearly under review in this
2 case. And if you'd allow me just a tiny bit
3 more latitude, I'm almost done with this
4 line. And so I beg your indulgence.

5 ALJ GARNER: Yeah. I understood you
6 were just being cautious in case that the
7 other witness to which the question was
8 referred does not know the answer. So if
9 you'll tighten it up and get through pretty
10 quickly.

11 MS. CSANK: Yes, sir.

12 Q. So, Mr. Kelley, do you need me to repeat
13 that predicate?

14 A. Yes, please.

15 Q. All right. So in October of last year the
16 Commission issued an order granting that
17 construction work in progress accounting
18 requested by the company. And in that order
19 the Commission imposed a condition that the
20 company may incur up to five percent of the
21 estimated in-service cost of Barry 8 and be
22 guaranteed payment of those costs. And now
23 my question is, sir, again, without

1 verbalizing the actual cost estimate,
2 whether we can agree that five percent of
3 the estimated in-service cost of Barry 8 is
4 many millions of dollars?

5 A. Define many. You know, I don't know what
6 you think is many millions of dollars. So I
7 can't answer that.

8 Q. Is it more than a million dollars, sir?

9 A. I would venture to guess it's more than a
10 million dollars.

11 Q. Is it safe to say maybe tens of millions of
12 dollars?

13 A. I don't know what tens of millions -- I --

14 Q. Okay.

15 A. You know, it's not my -- it's not something
16 that I'm close to, honestly.

17 Q. But you hold primary responsibility for the
18 cost associated with the proposed resource
19 additions, correct?

20 A. Cost, not benefits.

21 Q. So wouldn't you want to keep track of what
22 costs were being incurred?

23 A. I am vaguely -- I'm generally familiar with

1 things. I'm trying to be careful as you
2 suggested about what I know and don't know.
3 So I answered it structured in that way.
4 But, again, I'm not -- I'm not familiar with
5 that order, that request, the details.

6 Q. And so in terms of Alabama Power's counsel
7 who was making filings in that other docket,
8 would they come to you for information about
9 the status of those costs or would they go
10 to Ms. Baker?

11 A. No. They didn't come to me. They would
12 actually probably go to Mr. -- Mr. Bush.

13 Q. All right. Thank you for that additional
14 guideline on who to go to. Let me just ask
15 one more question about this and then we can
16 move off this line. The Sierra Club as you
17 may know petitioned for reconsideration of
18 that October order and the company filed a
19 reply in November. And the company in its
20 reply states that the Commission is aware
21 that the cost contemplated under that order
22 are, quote, unquote, non-construction costs.
23 And I just want you to clarify if you have

1 an understanding of what non-construction
2 costs might mean in that context.

3 A. As I stated, I'm not familiar with -- wasn't
4 directly involved. Non-construction. I can
5 see site preparation and things of that
6 nature.

7 Q. But just to be clear, you don't see any
8 reason why that would refer to operation and
9 maintenance costs, right? Those would come
10 after and they wouldn't make sense to be
11 pre-authorizing at this point?

12 A. I shouldn't be even -- I'm not going to
13 offer an opinion on that.

14 Q. All right. So before filing the petition in
15 this case, Alabama Power gave presentations
16 to certain customers, correct?

17 A. I believe we did. Yes.

18 Q. And specifically you gave presentations to
19 the Alabama Industrial Energy Consumers and
20 Manufacture Alabama. Does that sound right
21 to you?

22 A. That does sound right. I don't know if I --
23 I don't know if I gave the presentation, but

1 I'm aware that they were done.

2 Q. All right.

3 A. And the Office of Attorney General, if I'm
4 not mistaken.

5 Q. But, again, you did not make similar
6 presentations to the general public?

7 A. No, we did not.

8 Q. Why would you need to give presentations to
9 these entities before filing? And you
10 meaning the company, not you specifically,
11 sir.

12 A. Oh, I understand. Yeah. I understanding.
13 The AIEC as you mentioned and Manufacture
14 Alabama represent large consumers of
15 electricity that have large customers that
16 are -- use a lot of electricity. RJ Energy
17 Consumers and -- for Alabama Power and are
18 interested in the -- and they're important
19 for the ongoing development of the economy
20 for Alabama. And the Office of Attorney
21 General is a vehicle for which our customers
22 can -- they represent the consuming public,
23 whatever the legal term is. So that's why

1 we gave those presentations.

2 Q. You gave those presentations to AIEC,
3 Manufacture Alabama and the Attorney
4 General's office once the proposed resource
5 additions had been identified and evaluated
6 and were about to be proposed by the
7 company?

8 A. I think that's right.

9 Q. And I think as we've established, there are
10 three gas burning power plants in the
11 proposed expansion, right?

12 A. Yes.

13 Q. And the company did not conduct any outreach
14 to the communities who live, work and
15 recreate by those facilities, right?

16 A. Not that I'm aware of.

17 Q. That includes the residents of Africatown
18 who live near Hog Bayou?

19 A. Right.

20 Q. So that didn't factor into your analysis at
21 all what those communities -- what their
22 interests are one way or another?

23 A. Well, no. Hog Bayou is -- that facility has

1 been in service for some twenty years
2 already. So it's an existing power plant.

3 Q. What's the typical useful life of a power
4 plant, sir?

5 A. It depends. It's not a -- there's not a
6 standard answer. So it really does depend.
7 I mean, we're assuming for natural gas
8 combined cycle, we're assuming forty years.

9 Q. Okay. So what's the basis for that
10 assumption?

11 A. It's -- you know, we really haven't -- the
12 first combined cycle power plants were
13 constructed I believe in the 1990's. So we
14 haven't even hit that forty years yet. But
15 the basis for it has to do with engineering
16 studies and accounting depreciation and
17 expected useful life of equipment.

18 Q. So besides the assumptions as you're stating
19 it here for us today, do you have any
20 documents of what -- whether Hog Bayou, for
21 example, would continue to run but for your
22 proposed power purchase agreement?

23 A. It would be reasonable it would continue to

1 run. I know they've been offering that unit
2 for sale in other solicitations.

3 Q. Thank you, sir. I do have quite a few
4 questions for you, and I'd like to get
5 through them efficiently. So if you'd
6 listen to my question and answer the
7 question, then I think we'll get through it
8 faster.

9 A. Okay. Sure.

10 Q. And so my question actually was whether you
11 have anything besides your assumption that
12 documents analysis one way or another about
13 how much longer Hog Bayou would run if you
14 weren't proposing this power purchase
15 agreement?

16 A. I don't have any documents. Just my
17 experience.

18 MS. CSANK: Okay. Your Honor, I think
19 the next line would be difficult to ask
20 without getting into confidential
21 information.

22 ALJ GARNER: Okay. Is that the only
23 confidential information that you have for

1 Mr. Kelley that you foresee?

2 MS. CSANK: To the best of my ability,
3 yes. But, I mean, maybe we should go off
4 the record. However you want to do it. I
5 understand this is the first time we're
6 delving into confidential information.

7 ALJ GARNER: Right. Can you hold it
8 to the end of your cross-examination, or
9 does that work against what you're trying to
10 accomplish? I don't want to compromise you.
11 But if it can be deferred, that might be the
12 better thing to do. But I understand if it
13 can't.

14 MS. CSANK: Yes. Let's try to defer
15 it and then we'll go back.

16 ALJ GARNER: I'll give you latitude to
17 come back to it.

18 MS. CSANK: Thank you, Your Honor.

19 Q. Mr. Kelley, Alabama Power currently has
20 about fourteen thousand megawatts of
21 capacity on its own system, correct?

22 A. Plus or minus. That's close.

23 Q. So to address your projected needs, you're

1 proposing to add, again, more than
2 twenty-four hundred megawatts by 2023?

3 A. Twenty-four hundred megawatts by 2024
4 winter.

5 Q. So you're proposing roughly a twenty percent
6 expansion of the company's capacity?

7 A. Yeah. I was calculating that earlier, the
8 detail. I think we have about thirteen
9 thousand five hundred megawatts capacity.
10 We're looking to add another twenty-five
11 hundred -- twenty-four hundred. Excuse me.
12 It's about a fifteen percent expansion of
13 our capacity.

14 Q. And that figure, whether it's fifteen or
15 twenty, depends on whether you're including
16 demand-side resources?

17 A. Demand-side options and the status of the
18 PPA that's expiring, et cetera.

19 Q. Okay. And just for the record, those -- the
20 current capacity is identified in your
21 Exhibit 1, the 2019 IRP report?

22 A. Yes.

23 Q. And, sir, you do not know of any regulated

1 utility commission in this country that has
2 approved adding two thousand or more
3 megawatts all at once like you're proposing
4 to do to meet a new winter reserve margin
5 target, right?

6 A. I don't know.

7 Q. Did you look?

8 A. I'm looking to see what we have. You're
9 referring -- did I look to see if another
10 entity? I didn't.

11 Q. So did you conduct any sort of benchmarking
12 analysis to ensure that what you're
13 proposing here is in line with what other
14 utilities are doing across the country?

15 A. I didn't, not in that context. I know I did
16 benchmarking. A lot of utilities are adding
17 natural gas. Some are adding solar with
18 batteries. And I know our -- what we're
19 offering here is -- I think I do know that
20 there was -- there's about eight hundred
21 megawatts of batteries currently operating
22 in the United States. We're suggesting four
23 hundred megawatts which is a fifty percent

1 increase. That seemed pretty substantial.

2 Q. And I believe at your deposition we
3 discussed some practices that you have of
4 sharing best practices with other utilities
5 and resource planning?

6 A. Yes.

7 Q. And I believe you mentioned sharing best
8 practices, for example, with a municipal
9 utility in Florida, Orlando Utilities
10 Commission. Do you recall that?

11 A. Well, I remember I mentioned to you that I
12 worked a consulting project for them
13 thirty-four years ago.

14 Q. Indeed. And so -- but do you have a
15 practice of -- of going to industry
16 conferences and talking to peer resource
17 planners?

18 A. Yes.

19 Q. And exchanging information about current
20 practices and resource planning?

21 A. Yes.

22 Q. And so have you attempted to stay abreast of
23 developments such as studies on how

1 additional solar alone as opposed to solar
2 paired with batteries performs on a utility
3 system?

4 A. Yes.

5 Q. And do you have analysis as we sit here
6 today to present to the Commission on how
7 much additional solar could be integrated
8 economically on the company system?

9 A. Well, we are here for a capacity need, and
10 the -- you know, and I think we've talked
11 this morning that the solar by itself is not
12 going to provide much help for us for the
13 winter capacity need that we have. So it's
14 not a very good fit to have solar by itself
15 to meet capacity needs for a winter
16 reliability need.

17 Q. But you are aware that other utilities are
18 adding solar -- large scales citing the
19 money saving opportunity for customers?

20 A. Yes.

21 Q. And so capacity deficit or not, wouldn't you
22 want to ensure that you were capturing and
23 optimizing those types of money saving

1 options for your customers?

2 A. That's correct. And that's why we have
3 the -- as I mentioned, the RGC process that
4 we go through where we try to find solar
5 projects that can be -- that we can partner
6 with some of our customers to purchase the
7 renewable output of those facilities.

8 Q. Okay. And I may just take a moment to
9 identify an exhibit.

10 MS. CSANK: Your Honor, I'd like to
11 mark a document that has not been pre-filed.

12 ALJ GARNER: All right.

13 MS. CSANK: It is titled Investigating
14 the Economic Value of Flexible Solar Power
15 Plant Operation. It's dated October 2018.
16 It was offered by Energy and Environmental
17 Economics. And I have a copy for the
18 witness and his counsel.

19 ALJ GARNER: Okay. If you'll go ahead
20 and give me a copy and counsel as well.

21 MS. CSANK: Yes, Your Honor. Just a
22 moment. May I approach?

23 ALJ GARNER: Yes. And you want this

1 marked as Sierra Club Exhibit 1?

2 MS. CSANK: Yes, Your Honor.

3 Q. Thank you for your patience, sir. In the
4 interest of time, sir, maybe while your
5 counsel reviews that document, I'll just ask
6 you a couple of questions related to this
7 document that you're about to be handed.

8 Sir, do you -- are you familiar with the
9 Tampa Electric Company?

10 A. Yes.

11 Q. And are you familiar with an analysis that
12 E3, the author of this document that I
13 passed out, conducted in concert with Tampa
14 Electric on solar on their system?

15 A. No. I didn't hear what you said. Health 3?

16 Q. E3.

17 A. E3. No.

18 Q. Are you familiar with that consulting firm?

19 A. No.

20 Q. No.

21 MR. McCRARY: Your Honor, if I could
22 ask. Has the witness been given a copy of
23 the document as well?

1 ALJ GARNER: Well, I thought he had.

2 THE WITNESS: No. No.

3 ALJ GARNER: I can't see that.

4 Q. You see the document?

5 A. I do.

6 Q. And you haven't seen it before?

7 A. I have not.

8 Q. I'll give you a moment to review it.

9 A. Okay. Honestly, I would need more than a
10 moment to review it.

11 Q. All right.

12 A. I see that it has a lot of graphs and a lot
13 of words.

14 Q. I think earlier you said that you're aware
15 that it's feasible to conduct analysis of
16 how much solar alone as opposed to solar
17 paired with batteries could be economically
18 added to a system but that such analysis has
19 not yet been performed for Alabama Power; is
20 that right?

21 A. Please repeat your question.

22 MS. CSANK: Madam Reporter, would you?

23 (Whereupon, the court reporter

1 read the requested portion of
2 the record.)

3 A. Did I say that just a few minutes ago or are
4 you talking about --

5 Q. I'm asking --

6 A. Oh.

7 Q. -- if that's the case.

8 A. Okay. We can do analysis on anything. So
9 I'm a little confused by the question. We
10 can do analysis on solar only. Yes.

11 Q. But you have not done so?

12 A. We've done analysis on solar only.

13 Q. In the context of the RGC was your answer,
14 right?

15 A. In the context of the RGC and even in the
16 context of this capacity solicitation. But
17 like I told you, there's really little to
18 zero capacity value for solar only for
19 winter reliability.

20 Q. But capacity value aside, in terms of other
21 economic attributes and benefits to adding a
22 solar system, do you have a study as we sit
23 here today that identifies the optimal

1 amount of solar that you could add to your
2 system?

3 A. I don't know the optimal amount. I don't
4 know if we have something that says the
5 optimal amount, but we have analysis because
6 of the RGC of projects that we have that are
7 solar only.

8 Q. Okay. And since you've referred to the RGC
9 a couple of times, that's the renewable
10 generation certificate?

11 A. Correct.

12 Q. In other words, that's the 2015 order that
13 granted the company's request to do a series
14 of procurements for renewable generation
15 mainly yielding solar projects?

16 A. That's correct. Issuing RFP's to find
17 renewable projects and to identify if we can
18 partner with our customers on those -- on
19 those projects.

20 Q. And you intend to conduct another solar RFP
21 this fall?

22 A. That's correct.

23 Q. And you wouldn't do that, would you, if you

1 thought you'd already exhausted all of the
2 economic solar that's available to your
3 company; is that right?

4 A. We're doing it because that's what the
5 Commission ordered. Every two years we're
6 to issue an RFP.

7 Q. As we discussed at your deposition, I
8 believe the order expressly allows you to
9 come in and make changes to the -- that
10 authorization and the type of procurement.
11 So if it doesn't make sense, you wouldn't do
12 it. You would seek a change, right?

13 A. If something didn't make sense, we would
14 talk. We would have conversation. I'm not
15 sure what didn't make sense. I'm sorry.
16 I'm having trouble following you.

17 Q. Let me make sure I understood you correctly.
18 So you're saying as the director of
19 forecasting and resource planning, it is
20 your understanding that you will go to the
21 market in the fall to test the availability
22 of cost effective solar?

23 A. That's correct.

1 Q. So you don't know whether you've exhausted
2 cost effective solar available to the
3 company?

4 A. No. We have projects from our last RPF that
5 we are marketing even as we speak to
6 customers to see if there is interest in
7 paying for the solar and the renewable
8 attributes. And that will be updated per
9 the order. When we go through the RFP
10 process this fall and then sometime next
11 year, we'll have additional projects. Maybe
12 they'll be better. Maybe they won't.

13 Q. But you could add cost effective solar to
14 your system regardless of whether there was
15 a customer on the other side ready to buy
16 attributes of it, right?

17 A. We would have to ask the permission from the
18 Commission to do that.

19 Q. Sir --

20 A. And your -- and what you're referring to, no
21 capacity benefits but just energy benefits.

22 Q. Right, sir.

23 A. Okay. That is a -- an option that we can

1 look at just energy benefits. We'd have to
2 make a showing, make a case to the
3 Commission. But we have -- you know, we
4 have some experience with that. I think we
5 talked about this at the deposition. When
6 you -- when you enter into those types of
7 transactions, you know, you are locking
8 yourself into a series of costs for a long
9 period of time.

10 Q. And that could be a hedge, for example,
11 against the volatility of fuel cost, for
12 example?

13 A. It could be. If your fuel costs end up
14 being higher than those, than that PPA in
15 your example, then you have done a good
16 thing. If your fuel costs are lower, then
17 you would wish you wouldn't have done that.
18 And that's the value of being able to
19 economically dispatch certain resources like
20 a combined cycle as opposed to just a solar
21 only where you're -- you cannot economically
22 dispatch. When the sun shines, it
23 generates.

1 Q. Right. And going back to those energy
2 benefits of solar. You do not have analysis
3 that estimates the magnitude of available
4 economic solar, do you?

5 A. Available economic. We have projects that
6 came from our most recent, the renewable RFP
7 that we did in 2018, the fall of 2018. And,
8 again, we have those projects and we're
9 actively marketing them to customers.

10 Q. Right. But that renewable RFP, sir, had
11 certain constraints on it. So, for example,
12 projects that bidded and had to be eighty
13 megawatts or less, right?

14 A. That's correct.

15 Q. So if there were economies of scale at sizes
16 north of eighty megawatts, you wouldn't know
17 it because you only asked the market for
18 eighty megawatts or less, right?

19 A. Right. We were following the order as it's
20 written.

21 Q. But, again, you have the latitude to come in
22 and seek amendments to those orders and to
23 the constraints on your procurement, right?

1 A. I don't know how much latitude we have. I'm
2 going to have to defer that one to somebody
3 else, a regulatory person.

4 Q. Okay. So let's put the law aside. But in
5 terms of your job responsibility which is to
6 secure least cost resource options for your
7 customers, you do not have analysis on
8 additional energy benefits that you could be
9 securing for your customers through solar,
10 do you?

11 A. I mean, there are cases where it could be
12 good. There are cases where it -- you know,
13 it's questionable. We talked about in terms
14 of, you know, low gas. If you have a low
15 gas forecast, that puts pressure on even
16 just a solar only because the concept of
17 avoiding cost which we've talked about, what
18 are you avoiding when you put in solar?
19 You're avoiding energy -- energy costs. And
20 if the gas prices are low, then you're not
21 avoiding as much than if gas prices are
22 high. So it depends is the answer.

23 Q. And to start to evaluate and understand the

1 answer, you'd want to do analysis, something
2 like what Tampa did, right?

3 A. Like this? Yeah. I don't -- I'm not -- I
4 haven't read this.

5 Q. I understand that you haven't, sir. But you
6 said any type of analysis --

7 A. Sure.

8 Q. -- is technically feasible?

9 A. Yeah.

10 Q. But you haven't endeavored to start this
11 analysis?

12 A. We have a lot of analysis. But, again,
13 we're using the RGC. Again, I keep going
14 back to that. What we're doing is we're
15 taking the best projects that came out of
16 that, the solar only projects and, again,
17 looking to partner with customers. That's
18 the direction that we're operating under.

19 Q. So let me try this way. In terms of the
20 pricing of solar available in the market to
21 the company over the study period, the only
22 analysis you have to present to the
23 Commission today is the results of the 2018

1 RGC?

2 A. Yeah.

3 Q. RFP.

4 A. Yes. We have through the 2018 RGC, but we
5 do have people that come and give us
6 proposals outside of that process. We get
7 unsolicited proposals.

8 Q. And you'd agree that solar costs have
9 plunged since 2008 or so?

10 A. Yes. Since 2008? Yes.

11 Q. Yes, sir.

12 A. Oh, yes.

13 Q. And would you agree that projections are
14 that solar costs will continue to decrease?

15 A. That's something I don't know if I can agree
16 or disagree. I know that they have
17 decreased since 2008.

18 Q. Wouldn't you want to know what the cost
19 projections are for a resource like solar as
20 part of your job responsibilities?

21 A. That's why we're issuing the RFP in 2020,
22 this fall. We'll find out.

23 Q. And so if you're successful and you get

1 great bids that are cost effective and are
2 projected to save customers money, that
3 could when integrated into your system have
4 impacts on your existing resources and the
5 proposed resource additions, could they not?

6 A. It wouldn't help the capacity solicitation
7 for what we're here for today. It wouldn't
8 affect that. It could help with our fuel
9 costs.

10 Q. And it could change the economics of the
11 fuel costs of the existing gas plants?

12 A. I wouldn't think so. No.

13 Q. What is the basis for that opinion, sir?

14 A. Thirty-five years of doing this kind of
15 thing. It's just not that big of an impact
16 on our system. It's a big system.

17 Q. Right. And out of your fourteen thousand
18 megawatts, how many of those are solar as we
19 sit here today?

20 A. Ninety-two megawatts. Ninety. Ninety-two.

21 Q. So that is small?

22 A. I think it's pretty big. And if we're
23 successful with the -- if this petition is

1 granted, we'd have another four hundred
2 megawatts added of solar with battery
3 pairings.

4 Q. But you don't know if that's the optimal
5 amount of solar paired with batteries to add
6 because you're still going to test the
7 market to see what else is out there?

8 A. Well, I do know -- and we talked about with
9 the -- you know, for capacity reasons, for
10 reliability, you know, we went through this
11 process. As a result of what we've done,
12 our portfolio includes four hundred
13 megawatts of solar paired with batteries. I
14 mean, as we've talked about, those are two
15 hour batteries. And we mentioned -- we've
16 talked that our system can handle about five
17 hundred megawatts of two hour batteries
18 before the value of those two hour batteries
19 becomes much less. We talked in terms -- we
20 used the term a cliff. You hit a cliff when
21 you hit five hundred megawatts. The
22 capacity equivalent of those two hour
23 batteries drops off significantly. So the

1 next time we would do a solar battery type
2 solicitation, they would need to be four to
3 eight hour batteries. So I think we have
4 hit the optimal amount of solar battery
5 combinations thus far as represented in this
6 portfolio.

7 Q. All right. You said a lot, sir. In terms
8 of the announcements you were just
9 referencing, is that among your exhibits or
10 the exhibits of other company witnesses?

11 A. Yes. I think that's in Mr. Looney's
12 analysis.

13 Q. Mr. Looney. Right.

14 A. I talk about it quite a bit, though, in my
15 testimony, as well in my rebuttal testimony.

16 Q. I'm aware. And in terms of that cliff,
17 beyond that threshold capacity that you've
18 identified, additional two hour batteries
19 added to the system still have value, do
20 they not?

21 A. Still have value but significantly less.

22 Q. But you don't have a head to head comparison
23 of those additional two hour batteries to

1 various resource combinations, do you?

2 A. Yes.

3 Q. And where is that, sir?

4 A. That's in the information we provided in
5 response to data request.

6 Q. And that's in your analysis?

7 A. No. I think that was actually my work
8 papers. I think we talked about as a result
9 of what we did through this process, we
10 evaluated over a thousand, nearly a thousand
11 megawatts of solar battery combinations. We
12 selected four hundred megawatts and rejected
13 five hundred and sixty. And the five
14 hundred and sixty that we rejected were
15 because they were not as economic as the
16 other components of our portfolio.

17 Q. And in terms of that analysis because -- and
18 we'll get past the analysis that you're
19 referencing. The main basis for comparison
20 was the company's benchmark case; is that
21 correct?

22 A. We compared the -- well, actually, yeah. We
23 used the benchmark case to develop what the

1 avoided energy cost would be. I recall
2 looking at a variety of gas forecasts and
3 even carbon costs. And we looked at the
4 relative economics of those projects and
5 compared them to what's in the portfolio.
6 So we compared them to Barry 8. We compared
7 them to Hog Bayou. We compared them to
8 Central Alabama, et cetera.

9 Q. You did that one by one?

10 A. Yes.

11 Q. You didn't do different combinations,
12 resource combinations and compare different
13 resource portfolios, if you will, to one
14 another, did you?

15 A. We did not. The way we did it is -- is --
16 gives a credible answer.

17 Q. What's your basis for that opinion, sir?

18 A. Thirty-five years of doing this kind of
19 work. And, also, I will defer -- I know
20 we're talking and I'm passing things along
21 to other witnesses, but I think this is the
22 basis of Mr. Looney's testimony as well.

23 Q. Okay. But as the director of forecasting

1 and resource planning, I think as you said
2 earlier, there's no benchmarking analysis to
3 present to the Commission that the way
4 Mr. Looney at your direction went about his
5 alternative analysis is the -- conforms with
6 industry best practices?

7 A. I feel very confident that it conforms with
8 industry best practices and I feel confident
9 in the portfolio that we have submitted. I
10 feel very confident that we've got -- you
11 said what's the optimal amount of solar. I
12 think we've got with the solar battery
13 combinations -- I keep going back to the
14 capacity benefits with the solar battery
15 combinations. I feel very confident that we
16 have found the optimal amount through this
17 process.

18 Q. And, again, the basis for that opinion is
19 the procurement process described in your
20 testimony?

21 A. That's correct. That's right. Surveys, the
22 canvassing of the market, the analysis, the
23 two-hour limits of the batteries, the cliff,

1 the transmission problems, all of those
2 things we've talked about.

3 Q. All right. And in terms of those
4 transmission problems, for example, is there
5 a witness here who is a transmission expert,
6 a company witness, that is?

7 A. I don't think anybody is here as a
8 transmission expert.

9 Q. But one of the bases for your petition is
10 transmission analysis conducted by someone
11 who is not here at this hearing; is that
12 right?

13 A. That's correct.

14 Q. And just to be clear, the procurements that
15 you're referencing, the 2018 capacity RFP,
16 the 2018 renewable RFP, the 2018 turn key
17 procurement, those are all looking at this
18 near term and up to 2024, right?

19 A. That's right. Having capacity by 2024.

20 Q. You didn't go to the market and say what
21 about the year 2025 or '26?

22 A. That's right. We did not.

23 Q. Nor did you do another analysis to unearth

1 what pricing might be available, what
2 projections are for resource costs in those
3 later years?

4 A. No. Our focus was between now and 2024.

5 Q. Okay.

6 A. And when I say 2024, I'm really talking
7 about January of 2024, the winter.

8 Q. Okay. And January 2024 is important because
9 in the -- at least in this decade, that's
10 the highest projected --

11 A. That's as soon as we can practically get
12 most of these projects online. That's the
13 winter. I don't know if that's the highest
14 or not, but it's -- it is -- it's one of the
15 highest.

16 Q. Okay.

17 A. As soon as we can get the projects on deck,
18 the construction of Barry 8 is by January
19 2024. Actually by November of '23, Central
20 Alabama, described in my testimony, by the
21 winter of '24, three of the five solar
22 battery projects are scheduled to come
23 online about January of 2024 as well.

1 Q. Okay. And we talked a lot about solar.

2 A. I'm sorry. Hog Bayou is earlier. I
3 apologize. I'm just going down the list.

4 Q. Okay. Since you mentioned Hog Bayou, the
5 company had an expectation that the
6 Commission would have approved its petition
7 by now, correct?

8 A. I mean, we have -- we have an expectation
9 that our petition will be approved in due
10 order. I don't know if we had an
11 expectation it would be approved by now. I
12 mean, I don't know.

13 Q. Well, let me go at it this way. You said
14 that there's an immediate projected capacity
15 deficit this winter, right?

16 A. Well, yes. But this winter is pretty much
17 done. So --

18 Q. We're in March.

19 A. Yes.

20 Q. January, right. And this is a hypothetical,
21 but let me put it to you. If the Commission
22 had approved Hog Bayou earlier, you would
23 have been taking power off of that combined

1 cycle unit already this winter, right?

2 A. Yes.

3 Q. Under your proposal?

4 A. If it had been approved much earlier.

5 Q. Right. But you've deferred that as a result
6 of the time line of this proceeding?

7 A. Yes. It became impractical. I don't think
8 it was actually very -- it wasn't a real
9 possibility. We're really talking about the
10 winter of '21 now.

11 Q. Okay. So we made it through the winter?

12 A. Uh-huh.

13 Q. And you improvised and you ended up not
14 needing that proposed --

15 A. It was a mild winter.

16 Q. Okay. And what about next winter?

17 A. Is it going to be mild? I'm sorry? What is
18 your question? What about next winter?

19 Q. You are in the forecasting business.

20 A. I can't forecast the weather.

21 Q. All right. In terms of the -- let's go to
22 your testimony about Alabama Power's access
23 to capacity in the Southern Power pool. All

1 right?

2 A. Okay.

3 Q. And that pool includes Georgia Power and
4 Mississippi Power, correct?

5 A. The pool includes actually Gulf Power,
6 Southern Power in addition to Georgia Power
7 and Mississippi Power.

8 Q. All right. And Georgia Power and
9 Mississippi Power are both subsidiaries of
10 Southern Company?

11 A. Correct.

12 Q. Gulf Power is no longer a subsidiary of
13 Southern Company?

14 A. Correct.

15 Q. There's a mutli-year transition period that
16 it's going to NextEra instead?

17 A. Well, they're still in the pool. They are
18 owned by NextEra. Gulf Power is owned by
19 NextEra. But they are still part of our
20 pool. I believe there are negotiations for
21 a period for them exiting the pool in the
22 next several years.

23 Q. Right. And do you recall when that

1 transition started?

2 A. I know that they were sold -- I know that
3 Gulf Power was sold January 1st of 2019.
4 And I believe I -- I recall there was an
5 agreed five to seven-year period or
6 something of that nature of them
7 transitioning out of the pool. I know
8 there's supposed to be an orderly transition
9 out of the pool five to seven years.

10 Q. And do you have any reason to dispute that
11 if any other entity in the pool were
12 likewise to be sold or transitioned out,
13 that they, too, would be subject to some
14 orderly transition process?

15 A. That would be my --

16 Q. -- over the years?

17 A. That would be my expectation.

18 Q. And one of the purposes of the pool is to
19 share capacity across these entities; is
20 that right?

21 A. One of the purposes of the pool is to share
22 temporary surplus to meet temporary
23 deficits.

1 Q. And we already established that you're not a
2 lawyer, sir, right?

3 A. We did.

4 Q. And so I'm not going to be asking you for
5 legal questions, legal conclusions, just
6 your knowledge.

7 A. Okay.

8 Q. So if you don't know, just tell me. There's
9 an agreement between the pool members that
10 has been referenced a lot today, and that's
11 the intercompany interchange contract, the
12 IIC, right?

13 A. Yes.

14 Q. And that's so far as you know the document
15 that controls this capacity sharing in the
16 pool?

17 A. That is the -- that is the document that
18 describes this -- it's an operating
19 agreement that takes care of the accounting
20 of capacity after the fact. Yes.

21 Q. And you were here this morning when
22 Mr. Weathers testified about his previous
23 role on the administration side of the pool?

1 A. Yes.

2 Q. Did you agree with his testimony of how he
3 described it?

4 A. Yes.

5 Q. And what's -- what's your agreement based
6 on?

7 A. What's my agreement based on? The things
8 that he said matched my understanding of the
9 IIC, how it operates. It's an operating --
10 it is an operating agreement. It's not a
11 planning document. It is an after the fact
12 accounting mechanism to share resources.
13 But, you know, that's how he described it
14 and that's what I agreed with.

15 Q. Okay. And besides that after the fact
16 accounting mechanism, doesn't that IIC also
17 reference coordinated planning?

18 A. I'm certain that the words coordinated
19 planning are in there. Actually, it was
20 included as an exhibit here in the IIC.
21 So --

22 Q. Right. And if you'd turn to page eight of
23 that document, Section 3.1. And I'll just

1 read this into the record and you can verify
2 if I've read it correctly. But it states
3 that one of the purposes of the contract is
4 to, quote, achieve the maximum possible
5 economies consistent with the highest
6 practicable reliability of service with a
7 reasonable utilization of natural resources
8 and effect on the environment and to provide
9 a basis for equitably sharing amongst the
10 operating companies the cost, et cetera. Do
11 you see that?

12 A. I don't. I'm sorry. What page?

13 Q. Eight.

14 ALJ GARNER: While you get to that,
15 how are we going to mark this? As Rebuttal
16 Exhibit 2?

17 MR. McCRARY: Yes, Your Honor.

18 Q. It's the Section 3.1, sir.

19 A. 3.1.

20 ALJ GARNER: For purposes of this
21 cross, this document is going to be marked
22 as JBK Rebuttal 2, Alabama Power Number 30.

23 A. Yeah. I see it. Different page on mine.

1 Yeah. I see that. Section 3.1.

2 Q. Do you have an understanding of how maximum
3 possible economies is used in that?

4 A. Yeah. The IIC in addition to, you know, the
5 capacity, the reserve sharing as we've
6 talked about, it helps dictate as we do with
7 what we call economic dispatch. The system
8 is dispatched. All resources are
9 dispatched. Economically I use the term
10 merit order dispatch. That's all part of
11 maximizing the economy.

12 Q. And you refer to this temporary versus
13 long-term?

14 A. Right. Section 7.1.

15 Q. Do you know -- those terms aren't defined in
16 the contract, right?

17 A. I don't think they are expressly defined.

18 Q. Is there any other document that you use
19 among the contracting parties to understand
20 the terms that are used in this contract?

21 A. No. I think this is the -- I think this is
22 the document.

23 Q. Okay. To your knowledge, this contract

1 doesn't prohibit relying on full capacity
2 for three consecutive years, does it?

3 A. To my knowledge, it doesn't prohibit that.
4 I think I talk in my testimony a lot about
5 the issues that it starts -- starts arising.
6 We have an obligation to meet our needs.
7 The farther outside we go, it is -- there's
8 a prudence issue about whether that capacity
9 is even going to be there. I know it says
10 that it does. It says that we're supposed
11 to meet -- provide adequate resources and
12 meet our needs, and that's why we're here.
13 We're trying to -- we're trying to implement
14 what our responsibilities are here and also
15 for Alabama Power because we're -- you know,
16 we've got to show there's an identified
17 need.

18 Q. What did you or Southern Company do to
19 explore the option of modifying this
20 contract?

21 A. I didn't explore the option of modifying
22 this contract.

23 Q. But your opinion is that this contract would

1 have to be modified to allow -- to allow you
2 to rely on the pool in 2024?

3 A. Well, again, this doesn't provide -- this
4 contract as is currently structured does not
5 provide entitlements in any way. I think
6 that Mr. Weathers mentioned that this
7 morning. There's no energy or capacity
8 entitlements to this. So it's not part of
9 our stack. It's not part of our resource
10 ledger. If we were to purchase capacity
11 from one of our sister operating companies,
12 that would have to be a separate transaction
13 outside of the IIC.

14 Q. And did you explore such transactions for
15 purposes of this proposal today?

16 A. Well, of course, we had no -- there was no
17 response to that in our RFP. It's my
18 understanding the transactions of that type
19 that we just discussed would have to be done
20 at cost because of the nature of our --
21 because it would be an affiliate
22 transaction. That would not be economic to
23 the -- that would not be economic compared

1 to the options we have.

2 Q. Okay. Again, you said a lot, so I'm just
3 going to try to break it down. So you said
4 that one of the bases for your opinion that
5 you cannot rely on surplus from the pool is
6 that the other -- your sister companies
7 didn't respond to the 2018 capacity RFP?

8 A. Yes. I said I couldn't rely -- we couldn't
9 rely on them for entitlement of capacity.
10 We are not entitled to any of their surplus.
11 If it's there, we can use it. It's
12 structured and governed by this and how it
13 goes through this process. But we are not
14 entitled to that capacity. They can sell it
15 to somebody else off system. They could
16 choose to retire the capacity and remove it
17 in which case we don't have access to it
18 anymore. But the farther out in time we go
19 to rely on that, the less likely -- the more
20 dangerous it is that it's not there. That's
21 why we're trying to act quickly now.

22 Q. Okay. And so, again, the basis for your
23 opinion, one of the bases for your opinion

1 that you cannot continue to rely on the pool
2 is that the pool members did not respond to
3 your 2018 capacity RFP?

4 A. That's true.

5 Q. Okay. And --

6 A. That's a fact.

7 Q. If you, sir, would be good enough to just
8 turn now to your pre-filed Exhibit 2 which
9 is the capacity RFP.

10 A. Uh-huh.

11 Q. And you're familiar with this document,
12 correct?

13 A. Yes.

14 Q. Did you help identify and select the terms
15 in this capacity RFP?

16 A. Yes.

17 Q. So you reviewed it before it issued?

18 A. Yes.

19 Q. So, sir, if you'd be good enough, please, to
20 turn to page three in the introduction.
21 Specifically about the middle of the page
22 there's a paragraph that begins all
23 proposals. And the last sentence, I'm going

1 to read it to you and you tell me if I read
2 it correctly. Okay?

3 A. I'm sorry. On page three of -- I think I'm
4 in -- I'm sorry. I'm way off.

5 ALJ GARNER: It's in your direct
6 testimony.

7 THE WITNESS: Yeah. I know. I'm
8 looking -- I've got it. Here we go. Here
9 we go.

10 Q. Take your time, sir. And if you need water,
11 let us know.

12 A. Page three?

13 Q. Yes. And so you see there's that middle
14 paragraph that begins all proposals. And
15 I'm going to read the last sentence to you
16 and you tell me if I read it correctly.
17 This RFP is not open to any affiliate of the
18 company including but not limited to
19 Southern Power Company.

20 A. Yes.

21 Q. Did I read that correctly?

22 A. Yes, you did.

23 Q. And to an earlier line of questioning, if

1 you now look in the first paragraph, I think
2 it's the second to last sentence. And,
3 again, I'll read it to you and tell me if I
4 read it right. The company is seeking
5 capacity that is available to commence
6 service in the 2019 to 2023 time frame. Do
7 you see that?

8 A. Yes.

9 Q. So you weren't even looking specifically for
10 resources that would be available in 2024?

11 A. Oh, well, you know, again, by January 2024.
12 So by December 31st, 2023. I think we would
13 check that off as counting.

14 Q. All right. And you described at a high
15 level in your pre-filed testimony that has
16 been entered into the record that -- you
17 describe this process at a high level, but I
18 believe there was a fair amount of
19 discussion with bidders and maybe others
20 that ensued that led to the proposed
21 resource additions, correct?

22 A. (Witness nodding head in the affirmative.)

23 Q. You're nodding your head?

1 A. Yes.

2 Q. And those discussions weren't public, right?
3 Those were bilateral conversations?

4 A. That's correct.

5 Q. And you're not providing documentation of
6 those negotiations as part of this case, are
7 you?

8 A. I don't think -- I don't think we did.

9 Q. Okay. And nor did you provide, you know,
10 E-mails and the like, meeting notes in
11 discovery, did you?

12 A. I -- I think we provided all properly
13 responsive information.

14 Q. All right. But you'd agree that it's
15 difficult to -- or strike that. Your
16 position is basically that we should trust
17 you that those negotiations were the best
18 that you could do for customers?

19 A. Yes.

20 Q. But there's no way to verify what you're
21 saying in terms of the negotiations and who
22 was involved and the various alterations
23 that you made to the terms after this public

1 procurement process?

2 A. So we had five thousand megawatts in
3 responding to our capacity RFP. Every one
4 of those was evaluated. And I think through
5 Mr. Looney's testimony, the evaluations, you
6 can see what they -- the results of those
7 offers were, where they ended up. We have a
8 thousand megawatts of solar battery on top
9 of that, and we evaluated those and went to
10 those -- that's where a lot of the
11 discussions was, was with those solar
12 developers to work with them to craft their
13 proposals to make a capacity benefit that
14 could be useful for Alabama Power customers.
15 We were able to identify four hundred
16 megawatts out of that nine hundred and sixty
17 megawatts that were offered.

18 Q. And, again, you --

19 A. But yes. You can -- I'm asking you to trust
20 me.

21 Q. All right. And in terms of the renewable
22 bids that you rejected, those were rejected
23 on the basis of primarily a comparison to

1 the avoided energy costs in the benchmark
2 plan?

3 A. Yes. And the transmission was the big
4 reason I think we talked. All of the ones
5 that we rejected had either transmission
6 issues or customer proximity issues.

7 Q. Do you have any documents on the -- from the
8 transmission analysts at Southern Company
9 Services or at Alabama Power to present to
10 the Commission?

11 A. Those were provided in the data responses,
12 the results of the transmission studies.

13 Q. But you don't -- the results -- but not the
14 studies themselves, correct?

15 A. Yeah. The results of the studies. I mean,
16 when you say the studies themselves, the --
17 the contingency that they ran, the overloads
18 that they observe, I'm not sure exactly what
19 -- you know, what type of studies you would
20 be referring to.

21 Q. Indeed those, sir. Like I said, it's
22 possible to conduct, you know, many
23 imaginable type of analysis.

1 A. Uh-huh.

2 Q. Certainly intervenors and customers could
3 retain experts to review and verify or even
4 -- well, to verify such analysis. But you
5 didn't provide the analysis to be verified,
6 did you?

7 A. We did not provide the studies, the actual
8 technical studies.

9 Q. And going back -- I know we're skipping
10 around a little bit. So bear with me and
11 let me know if you're following or hanging
12 as we said before. The -- when we're
13 talking about your access to the Southern
14 pool, you also referred to these additional
15 affiliate transactions that you decided not
16 to explore, correct, because you thought
17 they were impracticable?

18 A. And very expensive.

19 Q. And the basis for that opinion is, again,
20 your experience?

21 A. Yes, because affiliate transactions would
22 have to be conducted -- have to be
23 transacted at cost, not at market.

1 Q. And when was the last time such an affiliate
2 transaction was undertaken by the company?

3 A. I don't know that we've ever had an
4 affiliate transaction on a purchase power
5 agreement between operating companies. I'm
6 not aware of one happening. I cannot
7 recall.

8 Q. Okay. So you don't have any documents
9 about --

10 A. Doesn't -- since then -- since -- I don't
11 think it ever existed. So there are no
12 documents.

13 Q. Sir, as we sit here today, can you say with
14 certainty that the cost of potentially
15 modifying the IIC or other affiliate
16 transaction would exceed the cost of
17 acquiring the new generation that you're
18 proposing which at least publicly we know
19 costs at least one point one billion
20 dollars?

21 A. Well, the one point one billion dollars is
22 simply the capital cost. Right. It's not
23 the -- that doesn't represent the benefits

1 that we -- I told you there's costs and
2 benefits. I just want to clarify that.

3 Q. And it doesn't -- right. Just to be -- for
4 completeness, it also doesn't identify
5 significant multi-decadal operation and
6 maintenance costs, right?

7 A. And fuel savings that are in the hundreds of
8 millions of dollars. I mean, there are a
9 lot of things there that we could talk
10 about.

11 Q. Right. But, I mean, as we established
12 earlier, you don't have an analysis of how
13 much additional fuel savings you could add
14 by simply adding more solar to your system,
15 do you?

16 A. I don't know if we -- I think we established
17 that I had -- we have analysis through the
18 RGC.

19 Q. That's the extent of it, sir, right?

20 A. Yes.

21 Q. You don't have something like the Tampa
22 study?

23 A. No. My point was -- my point was the -- you

1 mentioned the one point one billion. I just
2 wanted to put that in context. The fuel
3 savings -- the reason that we're doing in
4 addition to providing good solid capacity
5 from those resources, the expected fuel
6 savings from both actually three of those
7 gas plants are significant in the hundreds
8 of millions of dollars depending upon the
9 scenarios. So actually in some cases, in
10 one of our scenarios, the fuel savings
11 associated with the Barry combined cycle was
12 greater than the cost of building the plant.
13 So it had a negative cost. So I just want
14 to -- I just want to put that in
15 perspective. I know there's a lot of talk
16 about the one point one billion. But there
17 are a lot of savings out there, too. That's
18 a lot of fuel savings capturing the low cost
19 of natural gas. I went off on a little
20 thing there.

21 Q. You did.

22 ALJ GARNER: Just answer the question.

23 A. What was your question? What was your

1 question.

2 ALJ GARNER: You forgot the question?

3 THE WITNESS: I did. I'm sorry.

4 ALJ GARNER: Why don't we stick with
5 that.

6 A. I went off. What was the question?

7 Q. Sir --

8 A. Oh, changing the IIC. That's what you
9 asked.

10 Q. Yes.

11 A. Okay. I think we've established one thing
12 here, and that is I'm not a lawyer. And I
13 know if we were to endeavor to change the
14 IIC, that would require a lot of legal
15 reviews among five pool participants and
16 ultimately would have to be approved by I
17 believe the Federal Energy Regulatory
18 Commission. I think we're talking about a
19 multi-year type transaction. But I still
20 think it wouldn't address the issue of --
21 because we'd be talking about affiliates, we
22 would ultimately have to purchase the
23 capacity at -- at cost which is well above

1 the market that we can get capacity for
2 today. The type of thing that you had
3 talked about is wanting to procure, for
4 example, with Georgia Power. And we
5 mentioned -- that was in our discussions
6 before.

7 Q. Okay. And, you know, you're talking about
8 costs in the abstract. In terms of
9 short-term versus long-term, you don't have
10 an analysis that compares short-term
11 incremental cost versus the long-term cost
12 commitments you're making and advocating, do
13 you? Yes? No? And then you can explain,
14 sir.

15 A. Oh.

16 Q. Please.

17 A. I --

18 Q. Before we go off on a tangent again.

19 A. Okay. The -- again, I don't have an
20 analysis of short-term purchases from a
21 super critical coal plant.

22 Q. Nor do you have analysis of other short-term
23 purchases that are available to you. You

1 explicitly precluded your pool members from
2 responding to your capacity RFP. We don't
3 know one way or another, do we?

4 A. Well, again, I don't think they would offer
5 -- they would not offer their best to us.
6 They would offer their highest cost surplus
7 to us, and it's not very cost competitive
8 with what we have. It's not even close.
9 So --

10 Q. So we have your opinion, but we don't have
11 any documents to verify that?

12 A. That's right. You have my opinion.

13 Q. And furthermore, we're talking these pool
14 members are all -- they're your sister
15 companies. They're all held by Southern
16 Company? Yes?

17 A. They are all -- yes, they are -- well,
18 Georgia and Mississippi Power.

19 Q. Right. And Southern Power, too?

20 A. Southern Power.

21 Q. And earlier you were talking about these
22 fuel savings and benefits, and I just want
23 to understand the basis for your opinions

1 about that. Could you please justify any
2 and all bases for that?

3 A. Sure. So we deal in terms of net present
4 value, that concept, net present value. So
5 we look at these -- the benefits and costs
6 over a period of time. Forty years in the
7 case of Barry 8, twenty-three odd years for
8 Central Alabama, nineteen years for Hog
9 Bayou. And they are -- we look at the
10 projected costs of those facilities and the
11 benefits that they create. Every one of
12 them dispatches natural gas. Every one of
13 them is efficient, especially Barry 8, which
14 is probably one of the most efficient
15 combined cycles -- would be one of the most
16 efficient combined cycle machines in the
17 country. By efficient it means it -- well,
18 it means it converts natural gas to
19 electricity at a high efficiency. And we
20 looked at -- into the cases that we looked
21 at, the savings at Barry 8 were anywhere
22 from five hundred million to a billion
23 dollars in net present value depending upon

1 the fuel scenarios that we looked at.

2 Q. And could you provide similarly that the
3 savings associated with the five solar
4 storage battery projects even though their
5 capacity, their size is smaller, they would
6 provide even more benefit according to your
7 own analysis?

8 A. Depending upon which scenario we're talking
9 about. Under the low gas scenario, not as
10 much. But under some of the other
11 scenarios, they were -- we're talking about
12 four hundred megawatts. I don't have them
13 committed to memory. I know the five that
14 we looked at, you know, I think they're
15 economic projects. There are fuel savings
16 associated with those. But, again, we're
17 obligating ourselves to a fixed stream of
18 dollars for the next -- you know, during
19 whatever the terms of the PPA's are. So you
20 are basically looking at various futures and
21 what you're avoiding. It wouldn't be -- the
22 numbers would not be as large because it's
23 four hundred megawatts compared to, you

1 know, eight hundred megawatts or so of the
2 combined cycle plants.

3 Q. Eighteen hundred?

4 A. Oh, the total eighteen hundred megawatts.
5 Actually, the Hog Bayou, it's what?
6 Whatever that number is. Eighteen hundred.
7 That's it.

8 Q. And for the record, the analysis that you're
9 referencing is Mr. Looney's Exhibit 1?

10 A. It's -- it can be -- it can be found in
11 Mr. Looney's analyses.

12 Q. Including Exhibit 1 as the sort of summary,
13 result summary?

14 A. I think that's the correct -- you know, I
15 don't remember. Yeah. The result summary.

16 Q. I just want to make sure. And so besides
17 Mr. Looney's projected savings based on his
18 analysis which we'll get into later with
19 him, do you have any other basis for your
20 opinion that there are these energy savings
21 and energy -- excuse me. Savings and
22 benefits associated with the proposed gas
23 generation?

1 A. I'm going to go back to my experience. And
2 I happen to know that the -- and I can't
3 divulge the heat rate because it's
4 confidential and proprietary, but I can tell
5 you it's really good. And I know that where
6 this would fit if it's approved and if it's
7 constructed where it would fit in our stack
8 would be very low in the stack. Looking at
9 natural gas prices where they are today, you
10 know, they're well under two dollars in
11 MMBtu. And I just know there are
12 significant fuel savings out there available
13 for our customers with these projects. It's
14 kind of like buying a more fuel efficient
15 car. You spend a little bit of -- you spend
16 some money to get more fuel efficiency.
17 And, you know, it's not just the cost of the
18 care. It's the savings in fuel that you're
19 putting in it. So these things are highly
20 efficient machines, all of them.

21 Q. But the purpose of this case is to actually
22 optimize as opposed to pick -- cherry pick
23 results. So --

1 A. Not cherry picking. We took what the market
2 provided to us and we compared it to what
3 the market provided to us from two other
4 different RFP's and found the best for our
5 customers.

6 Q. Okay. And when you say you went to the
7 market and the market is dictating, the
8 market is responding to procurements with
9 the constraints that you've imposed,
10 correct?

11 A. We did have -- can you elaborate?

12 Q. I'm simply asking because you used this term
13 within the abstract, but I just wanted to go
14 back and pin it down to the documents that
15 we have and that will be verified --
16 reviewed by this Commission.

17 A. Yes.

18 Q. You're referring to those RFP's that we've
19 gone over?

20 A. Right.

21 Q. There's no other?

22 A. That's right. I mentioned the three -- the
23 three main RFP's that I was talking about.

1 Q. Right. And that additional demand-side
2 analysis?

3 A. Right. Ongoing demand-side.

4 Q. Ongoing.

5 A. And distributed energy resources.

6 Q. And do you know, when did that demand-side
7 analysis begin?

8 A. It began when -- you know, when the -- when
9 we were -- when we started -- when the
10 winter reliability issue was identified and
11 actionable which meant we started planning
12 in the fall of 2018 and said we are now
13 planning -- we're going to develop plans
14 with this, you know, twenty-six percent or
15 twenty-five two five for Alabama Power.
16 That started the analysis of demand-side
17 options.

18 Q. And you directed -- you direct that analysis
19 of demand-side options?

20 A. I am -- I oversee that analysis. It's done
21 in another area, but we have a -- we
22 collaborate.

23 Q. Was that -- it's Alabama Power?

1 A. It is Alabama Power. Yes.

2 Q. And when do you expect those analysts to
3 come to you with the complete results on
4 demand-side?

5 A. So we're kind of at a catch-22 situation
6 here because we've asked for this Commission
7 to allow us to plan for the winter
8 reliability in setting the reserve targets
9 with the winter reliability. Once that's
10 confirmed, we'll be able to move in earnest
11 with those programs. But in the meantime,
12 we're doing some pilots. We're piloting
13 several demand-side programs to gauge their
14 effect on reducing winter load.

15 Q. So why the double standard? Why have you
16 executed contracts for the gas units but
17 you're merely piloting for demand-side
18 options?

19 A. Well, again, we've executed contracts, but
20 we're not looking to -- you know, we're
21 waiting for the approval to spend the amount
22 of money that would be required to continue
23 those projects. But the demand-side we feel

1 like we can do pilot programs to see -- to
2 validate some of our assumptions on load
3 response and customer participation, you
4 know, cost effectively.

5 Q. Okay. And, again, the expected -- if all
6 goes your way, the expected date for
7 completion of demand-side analysis is when?

8 A. We would want to go through -- well, we just
9 went through this winter and we did some --
10 did some testing of some of the -- some of
11 the programs. We want to go through at
12 least two seasons. So I'd look sometime a
13 year from now for us to be able to say what
14 we would feel comfortable moving forward
15 with new programs. In the meantime, we're
16 looking to expand our existing programs as
17 well.

18 Q. So spring of 2021 is when you'll finish the
19 analysis. And how long before you actually
20 integrate those resources into your system?

21 A. I mean, we're -- we will -- well, we have
22 the two hundred megawatts there already. So
23 we're counting on two hundred megawatts by

1 the year 2024. That's why I say it's kind
2 of a catch-22. We're kind of in this gray
3 area of we're expecting things to happen,
4 whether it be growing our existing program,
5 growing our interruptible, growing our
6 standby generation, et cetera, and looking
7 for these new programs.

8 Q. Including energy efficiency?

9 A. Yes. Well, energy efficiency to the extent
10 that it's economic. And we do have one
11 program that we are pursuing in that area.

12 Q. Do you put any particular emphasis on
13 developing low income programs?

14 A. I'm not aware of a particular emphasis on
15 low income programs.

16 Q. Okay. And do you have any documents that
17 show that you've exhausted with those two
18 hundred megawatts the available cost
19 effective demand-side options for customers?

20 A. Yeah. I think that was included as part of
21 our discovery process, all of our analyses
22 in that regard.

23 Q. So anything that you pre-filed and presented

1 to the Commission?

2 A. Yes.

3 Q. And what's that?

4 A. The economic analysis of the programs, the
5 potential for additional capacity from
6 demand-side programs and a description of
7 the programs.

8 Q. I think we're speaking past one another,
9 sir. I'm asking if beyond the two hundred
10 megawatts identified and proposed if you
11 have something that says here's the universe
12 of potentially cost effective demand-side
13 options and we've projected this many for
14 whatever reason.

15 A. I'll refer to the Nexant -- Nexant study
16 that was included as part of discovery that
17 went through a comprehensive technical
18 potential of demand-side options. I think
19 it identified up to four hundred megawatts
20 under certain conditions that was under
21 economic tests known as the total resource
22 cost tests and then a hundred megawatts
23 under the rate impact measure test.

1 Q. And that Nexant study dates back to?

2 A. 2014.

3 Q. And there's no effort underway to update
4 that study beyond the year 2020?

5 A. I'm not familiar, but there would be an
6 effort underway to update that study. I
7 mean, I -- those discussions, we need --
8 one, again, it's the catch-22 I described.
9 Once we get an approval to move forward with
10 winter planning for twenty-five, twenty-six
11 percent, that would start a number of
12 processes in place.

13 Q. But like stand alone solar, demand-side
14 options have energy savings associated with
15 them regardless of their capacity benefits,
16 do they not?

17 A. They could. Yes. They could have --

18 Q. And in --

19 A. -- energy savings.

20 Q. Sorry for cutting you off. In terms of an
21 analysis on the available -- universal
22 available energy savings from demand-side
23 options, you don't have a document

1 attempting to identify that, do you?

2 A. I think that's all included in our discovery
3 responses.

4 Q. So, again, the Nexant 2014 study?

5 A. That's one, plus our own analysis that was
6 included as a part of that as well.

7 Q. Okay. Nothing beyond that?

8 A. Nothing beyond that.

9 Q. Nothing that you're putting in front of the
10 Commission today to reassure them that
11 you've captured all of those savings?

12 A. Nothing I'm putting in front of the
13 Commission today.

14 Q. And so you can't guarantee this Commission
15 what gas prices will be in five to ten or
16 forty years, can you?

17 A. You're talking about commodity prices or are
18 you talking about fixed transportation?

19 Q. Either.

20 A. Well, actually, you know, so when I think
21 about gas prices, I think of them in two
22 components. The FTE which is, you know,
23 fixed transportation which confirms the

1 ability for it to be delivered even in the
2 winter when it's cold and then the commodity
3 price of natural gas. Those FTE contracts
4 have -- you know, we have rollover rights
5 they're called once we engage in them, once
6 we have those which means we have access to
7 those perpetually. There are -- those are
8 FERC regulated tariffs. Sometimes we can
9 negotiate something or they're -- you know,
10 they have other ways of getting better
11 prices. I feel very confident about the
12 availability of FTE even though I'm not a
13 natural gas expert. I feel confident about
14 those. Commodity prices of natural gas,
15 I'll just observe, you know, what's happened
16 here in the United States in the past
17 several years with, you know, the horizontal
18 drilling and hydraulic fracturing. We're
19 now the largest producer of natural gas in
20 the world which is incredible to me from
21 where we were ten years ago. There's a lot
22 of natural gas out there. So I cannot
23 guarantee you, to answer your question, what

1 the price will be in forty years of the
2 commodity, but I feel confident in the
3 supply.

4 Q. And you're familiar -- and I think in the
5 coming days we'll get more into the Rocky
6 Mountain Institute from the last year that
7 several witnesses referred to, intervenor
8 witnesses in their pre-filed testimony.

9 A. Yes. I'm familiar that Rocky Mountain
10 Institute has a study.

11 Q. And you reviewed that study?

12 A. I -- I didn't review it as closely as
13 Mr. Bush. There he is.

14 Q. All right. But you are familiar with the
15 fact that that report identified a
16 substantial amount of planned gas generation
17 in this country?

18 A. Yes. I'm familiar there's substantial
19 natural gas planned.

20 Q. And do you have analysis on whether the
21 pursuit and build-out of that planned gas
22 generation will have an impact on the fuel
23 supply adequacy for the proposed gas units

1 in this petition?

2 A. Right. So supply and demand. So there's
3 more -- there is more demand, but there's a
4 lot more supply. That's why natural gas
5 prices continue to decline.

6 Q. Okay. And so, again, you don't have any
7 documents. You just have your speculation
8 about --

9 A. Not speculation. It's an informed judgment.

10 Q. Okay.

11 A. Yeah.

12 Q. But no documents?

13 A. Right.

14 Q. Okay. And you're not a gas expert?

15 A. I am not.

16 Q. And you're familiar and, in fact, introduced
17 the company witnesses in this case. Would
18 you identify any of them as a gas expert,
19 fuel?

20 A. No.

21 Q. No. And you were talking -- I believe the
22 word you used was perpetual access to these
23 FTE firm transportation contracts. And

1 while there may be an option to continue
2 them, as I understand your testimony, that
3 isn't a guarantee that the pricing available
4 to you today will be the pricing in the
5 future?

6 A. That's right. Could be less.

7 Q. Or it could be more?

8 A. That's correct.

9 Q. But you chose not to run a high gas price
10 sensitivity analysis or at your direction
11 Mr. Looney did not perform such analysis?

12 A. That's right.

13 Q. Okay. You also referenced the Barry 8 as
14 the longest lived gas unit being proposed by
15 the company. Forty years is the expected
16 life of Barry 8. And do you expect for all
17 forty years Barry 8 to be burning gas, or
18 various sources of gas?

19 A. I expect Barry 8 to use what is most
20 economical fuel available at that time. It
21 could be natural gas. But there are other
22 options if we have to use other options.

23 Q. Do you have documents analyzing the

1 economics of those other options?

2 A. No, I don't. And the reason, the
3 expectation is that it will be burning
4 natural gas.

5 Q. And, again, that expectation is based on
6 your informed, quote, unquote, opinion about
7 gas prices?

8 A. Well, yes. That's correct.

9 Q. Do you --

10 A. And the efficient -- I'm sorry for
11 interrupting. And the efficiency of Barry
12 8. As I've talked about, it's an efficient
13 machine.

14 Q. And the efficiency is relevant because the
15 lower the heat rate, the less fuel that's
16 burned and therefore the less fuel cost
17 incurred, correct?

18 A. That's correct.

19 Q. But, for example, a solar plant has zero
20 fuel costs because sunshine is free? Yes?

21 A. The solar plant has zero fuel costs, but it
22 does have those ongoing obligations that,
23 you know, through the -- and these purchase

1 power agreements -- power purchase
2 agreements, the PPA's, we're committing to
3 those streams of dollars for the duration of
4 the contract.

5 Q. So we haven't talked yet much about
6 emissions. But in addition to being zero
7 fuel costs, isn't solar also zero emissions?

8 A. There are no air emissions with solar that
9 I'm aware of.

10 Q. By contrast, the gas units have significant
11 emissions associated with them, do they not?

12 A. I don't -- significant is a relative term.
13 I know there are emissions.

14 Q. You don't have analysis to present to this
15 Commission on the costs, whether those are
16 kind of damages or environmental compliance
17 retrofits, that sort of thing? You don't
18 have cost estimates for relying on these gas
19 units for decades?

20 A. So what we did as we discussed is we have
21 some scenarios where if there was carbon
22 legislation in the future and it was twenty
23 dollars per ton, we have captured the costs

1 of that to see how our portfolio would
2 respond. And that informed our portfolio
3 including the combined cycle. The natural
4 gas combined cycles actually performed very
5 well economically there. That's in
6 Mr. Looney's testimony as well.

7 Q. Is that the limit, the analysis that you
8 just referenced? Again, I believe the
9 summary results of which are identified and
10 presented in his Exhibit 1. Is that the
11 extent of the emission slash environmental
12 cost estimates that you're putting before
13 the Commission?

14 A. Yes.

15 Q. So, for example, you're familiar with
16 Mr. Bush's testimony concerning the
17 possibility of retrofitting, for example,
18 Barry 8 with carbon capture and
19 sequestration in the future?

20 A. Yes. So picking up on that --

21 Q. You are familiar --

22 A. Yes. I'm familiar with it. Yes.

23 Q. And in terms of, if you know, that testimony

1 by Mr. Bush, same question. You don't know
2 of any documents that the company has that
3 it's not pre-filed and chosen not to present
4 to the Commission about the cost association
5 with those types of retrofits?

6 A. I don't.

7 Q. Okay. But like you said before, you can do
8 almost any kind of imagined -- analysis
9 imaginable. So you could do that analysis.
10 You just chose not to do it?

11 A. We didn't. It's not a question of choosing
12 not to do it. It's a question of what is a
13 -- if the type of thing you're describing
14 would come into context -- and we had this
15 line of questioning at the deposition about
16 the low to no carbon by 2050. So we're
17 talking thirty years into the future. And
18 I'll just observe that thirty years in the
19 future, things, the costs that are incurred
20 thirty years in the future, when I look at
21 those on a present value, they will be --
22 they will be less. And we talked about ways
23 to address that. Carbon sequestration.

1 Capture sequestration is one of them, and
2 burning an alternative fuel is another. But
3 no. I don't have any of the costs.

4 Q. Okay. And since you volunteered it, this
5 low to no carbon commitment, that's --
6 you're referencing Southern's commitment to
7 the low to no carbon by 2050?

8 A. Fifty percent reduction in carbon dioxide
9 emissions by 2030 when compared to 2007, low
10 to no carbon by 2050.

11 Q. And in terms of reassuring this Commission
12 that these carbon emission gas units will be
13 able to operate economically consistent with
14 that commitment, what kind of documents do
15 you have?

16 A. We have the -- we have the --

17 Q. Time for a break.

18 A. I think the battery just died.

19 MS. CSANK: Your Honor, can we take a
20 ten-minute break?

21 ALJ GARNER: See if one of the other
22 ones is working still.

23 MS. CSANK: Your Honor, if I may, I

1 would like to ask the witness to answer the
2 pending question. But if I may just ask for
3 a restroom break, a very short one.

4 ALJ GARNER: How much longer are you
5 going to be?

6 MS. CSANK: If I'm allowed to take a
7 break, I could streamline my questions and
8 be that much faster, sir.

9 ALJ GARNER: What's the other
10 alternative? Let's take a short break.
11 Five minutes.

12 MS. CSANK: But, sir, may I just have
13 him for the benefit of the record answer the
14 pending question?

15 ALJ GARNER: Yes.

16 Q. If you know it. Otherwise, we can --

17 A. I will just observe what I was going to say.
18 I'll observe that these units are some of
19 the more efficient units on our system.
20 These would not be the ones that we'd be
21 concerned about. I believe your question
22 was guaranteeing something. Why don't you
23 read the question.

1 (Whereupon, the court reporter
2 read the requested portion of
3 the record.)

4 A. These will be -- these will continue to be
5 -- since they are already going to be some
6 of the most economic resources on our
7 system, they will be competing with a lot of
8 older 1950's, 1960's vintage units that
9 would be more impacted by things such as
10 what you're describing. These are going to
11 be economic resource additions for years to
12 come.

13 Q. Sir, that wasn't -- that was not my
14 question. I was asking --

15 A. You asked me if I had any documentation.

16 Q. Yes.

17 A. It was -- again, I'm going to go back to --
18 no. I don't have a report that says this is
19 it other than -- I don't have any
20 documentation. It goes back to the
21 experience of knowing how these fit in our
22 -- in our stack compared to the resources
23 that they're going to be off -- the

1 generating plants that they're going to be
 2 offsetting and reducing carbon from those
 3 resources. You say they make carbon.
 4 They're actually going to be reducing carbon
 5 emissions for the older -- older units.
 6 Older gas units.

7 Q. So I'm going to break my promise to everyone
 8 and have a few follow-up questions for you.
 9 So are you familiar with the quip you can
 10 manage what you measure?

11 A. I'm sorry? Am I familiar with what?

12 ALJ GARNER: Quip.

13 Q. The expression. Quip.

14 A. I'm sorry. Manage what you measure?

15 Q. Yes.

16 A. Oh, no, I'm not.

17 Q. So in terms of your referencing, again, your
 18 opinions, but -- and not documents in saying
 19 that you know in the abstract these units
 20 you're proposing will be more efficient
 21 compared to existing systems, they're the
 22 right choice, in terms of -- well, number
 23 one --

1 A. That's well said, by the way.

2 Q. The higher the heat rate, the more fuel
3 that's burned and more emissions, correct?

4 A. That's correct.

5 Q. And every hour that a gas plant is
6 operating, it's burning fuel and it's
7 emitting carbon, correct?

8 A. And offsetting something else that would
9 have emitted more carbon.

10 Q. Unless the base line is a zero carbon
11 emitting resource in which case it's not an
12 environmental benefit or cost benefit, it's
13 actually a detriment, correct?

14 A. We're not starting with that baseline.
15 We're starting with a system that's got
16 1950's and 1960's power plants with much
17 higher heat rates. And so when we introduce
18 these new gas plants into the system, they
19 will reduce the output of those units and
20 reduce carbon.

21 Q. Right. But your own goal is to transition
22 to a zero or low carbon system. And so if
23 you can skip past a long-term high cost high

1 risk commitment to carbon emission
2 resources, you could reach your goal faster
3 and save money, right?

4 A. Well, no. The evidence didn't support that.
5 That's why we did the solicitation and
6 that's why we have this portfolio. I take
7 issue with the term high cost and high risk.
8 I don't think they're high cost and high
9 risk. I think they're the most affordable
10 resources that the market could provide to
11 meet our reliability needs that are upon us
12 right now.

13 Q. Okay. And in your opinion, is that gas --
14 the gas plants that cost approximately one
15 point one billion dollars to bring online,
16 let alone to operate, that's not high cost
17 to you?

18 A. No, because the fuel savings -- I mentioned
19 in one of them, the fuel savings more than
20 pay for that plant. So --

21 Q. Under scenarios that you made. You didn't
22 run a high gas price scenario, right?

23 A. I did not run a high gas scenario.

1 Q. Did you compare it to portfolios that had
2 more stand alone solar, more solar paired
3 with batteries?

4 A. Stand alone solar would not have met our
5 capacity needs. Right. I mean, we could
6 put in five thousand megawatts of solar and
7 it wouldn't affect our reliability needs in
8 the winter one bit.

9 Q. Sir, you're familiar with the fact that your
10 sister company, Georgia Power, is procuring
11 gigawatts of solar regardless of the
12 capacity benefits citing specifically the
13 downward pressure on customer's costs?

14 A. Yeah. I'm familiar with Georgia Power and
15 what they're doing.

16 Q. And you agree with how I characterized it?
17 They are procuring stand alone solar
18 regardless of whether there's a capacity
19 deficit on that system, Georgia Power's?

20 A. They are adding solar on their system, but
21 I'm not here to defend what Georgia Power is
22 doing or why they're doing it.

23 Q. But you are here making representations to

1 the Commission about the economics of your
2 proposal, and your responsibilities include
3 ensuring that you're getting the best
4 economics for your customers. So if there's
5 market signals like your own sister company
6 identifying savings associated with large
7 increases of solar on its system, wouldn't
8 you want to investigate and verify that
9 opportunity for your customers?

10 A. Yeah. We can investigate energy savings and
11 opportunities for our customers. But,
12 again, it won't affect the twenty-four
13 hundred megawatts need that we have for our
14 winter reliability problem.

15 Q. How do you know? Where are the documents?

16 A. Okay. Actually, we do have a document on
17 this one.

18 Q. Please.

19 A. All right. I produced a load shape in my
20 very first data response that showed solar
21 doesn't run when it's dark. It has zero
22 output. And our problems with reliability
23 in the winter -- cold winter mornings are

1 when it's dark outside. So there's no solar
2 when it's dark. So it doesn't produce any
3 power. That's why we paired them with
4 batteries. I'm not trying to -- not trying
5 to diminish anything. I'm just stating a
6 fact. So we paired them with batteries to
7 get some capacity value out of the solar.

8 Q. Sir, but your testimony is that the benefit
9 and the economics -- that your economic case
10 for the gas units relies heavily on energy
11 savings, right?

12 A. And the capacity savings. But it does --
13 but they do have -- the same thing with the
14 solar battery. They are relying on the
15 energy and capacity savings. But the
16 combined cycle energy and capacity savings.
17 But they provide capacity. The combined
18 cycle provides capacity. The eighteen
19 hundred megawatts that you referenced
20 earlier.

21 Q. Right. But besides that load shape that you
22 just referenced that you provided in
23 discovery, you do not have documents that

1 say that additional solar on the system
2 would not yield greater energy savings and
3 therefore cost savings to customers?

4 A. I said reliability benefits. I don't want
5 to -- what I said was if our Commission told
6 us to add two thousand megawatts of solar
7 only like Georgia's Commission did, we would
8 still have a need of twenty-four hundred
9 megawatts of capacity for the winter. It
10 wouldn't affect our winter capacity need.

11 Q. But it could change the economics of that
12 twenty-four hundred megawatt capacity
13 proposal, could it not? Because now your
14 new baseline would be a system that had two
15 thousand gigawatts solar in the mix. And so
16 the energy savings and the displacement of
17 existing inefficient units, all of that
18 would be different. You just don't have an
19 analysis to present?

20 A. Well, that was -- I think solar of that
21 magnitude already was included in the
22 benchmark case, Georgia Power adding that
23 type of capacity. So what I told you

1 earlier is that would not affect the
2 economics of our portfolio.

3 Q. But your benchmark case didn't include you
4 adding that?

5 A. No. But Georgia did, and we dispatch as one
6 system. So the same system is represented.
7 We economically dispatch the entire pool.

8 Q. I understand, sir. But it's not your
9 testimony that Georgia adding a lot of cost
10 savings solar for its customer precludes you
11 from adding even more solar on your system
12 to save your customers money?

13 A. It's my testimony that us adding solar only
14 doesn't resolve our capacity needs.

15 Q. And you don't have documentation to
16 substantiate your opinion that adding money
17 saving solar would change -- would not
18 change the economics of the twenty-four
19 hundred megawatt proposal in your petition,
20 right?

21 A. You're right. I don't have a document that
22 says that.

23 Q. Okay. And, sir, I think at this point I

1 would --

2 ALJ GARNER: Let's go ahead. It's
3 been asked and answered many times. Let's
4 get to some conclusion.

5 MS. CSANK: Yes, sir. If we can take
6 a short break, and I'll streamline the
7 remainder of my questions.

8 ALJ GARNER: Well, I think you should
9 be streamlining right now because you went
10 on for a little while since you indicated
11 you needed a break.

12 MS. CSANK: Judge Garner, may I
13 propose this? I'm going to attempt to get
14 through the non-confidential questions and
15 then may we take a break when I pivot to the
16 confidential? Does that make sense?

17 ALJ GARNER: How much longer are you
18 going to be?

19 MS. CSANK: I'm bad at estimating,
20 sir. It depends on how cooperative the
21 witness is. But I'd estimate a half an
22 hour. And I would appreciate a restroom
23 break at some point soon.

1 ALJ GARNER: Let's go ahead and take a
2 break. Let's take a five-minute break.

3 MS. CSANK: Thank you, Your Honor.

4 (Brief recess)

5 ALJ GARNER: All right. Let's resume
6 the cross-examination of Mr. Kelley.

7 MS. CSANK: Thank you, Your Honor.

8 Q. Mr. Kelley, a couple of quick clean-up
9 questions. Earlier we were talking about
10 the time line for adding demand-side
11 options, and I think you were saying that
12 the analysis would take a year and that
13 bringing the resources online could take a
14 couple of additional years, right?

15 A. That's correct.

16 Q. And so those resources, two hundred
17 megawatts of demand-side resources can be
18 brought online pretty quickly? Once there's
19 a decision made that they're identified, you
20 can proceed to actually --

21 A. We're actively pursuing adding -- growing
22 our existing programs even now, our
23 interruptible programs. We're looking to

1 get more customers on those projects, on
2 those programs.

3 Q. Okay. And that analysis that you were
4 saying that's coming in to you in about a
5 year's time, again, the purpose of that is
6 to select resources under this two hundred
7 megawatt placeholder, right?

8 A. That's correct.

9 Q. And the similar questions for the solar RGC.
10 Do you have an expectation around the time
11 line beyond that initiation of the
12 procurement in the fall of this year?

13 A. It would be -- we would be marketing the
14 best projects from that -- from that -- our
15 RFP if it's better than the one we already
16 have. We'd be marketing that to customers
17 about a year from now.

18 Q. And your plan is to impose the same
19 constraints that you did in previous
20 renewable RFP's?

21 A. That's right. Our plan is to still comply
22 with the order.

23 Q. But there's evidence, is there not, that

1 larger scale projects may be even more
2 economic than eighty megawatts?

3 A. It's possible.

4 Q. Okay. And so if it -- if -- well, how would
5 you verify?

6 A. I know that there are larger projects and
7 megawatts. I assume they're larger because
8 there was some economic reasons for them to
9 be larger. So that's why I said that. But
10 I'm still -- we're still following the order
11 from the Commission from 2015.

12 Q. Okay. And so consistent with our earlier
13 agreement that I'm not looking for legal
14 conclusions, let's assume that you have the
15 ability to come to the Commission and ask
16 for a change to that 2015 RGC and go to the
17 market for larger projects --

18 A. Yeah.

19 Q. -- that exceeds eighty megawatts. Would you
20 verify if they were cost effective projects?

21 A. If the Commission asked us to do that, we
22 would do that. Yes.

23 Q. Okay. Wouldn't you proactively seek to do

1 that regardless of whether the Commission
2 orders you to?

3 A. Well, that's not my area, asking for things
4 of that nature.

5 Q. But it is your area to ensure the customers
6 are getting the least cost resources, is it
7 not?

8 A. Yeah. I'm just saying it's not -- I'm not
9 the regular regulatory interfacing.
10 Certainly work within our company to -- if
11 that were something that needed to be done.
12 Yes.

13 Q. Thank you, sir. So in terms of, again, just
14 the time line, you initiate the RFP in the
15 fall. When do you think you would have
16 identified projects to submit to the
17 Commission for review?

18 A. Oh, for review. Well, again, those -- the
19 way the RGC is structured is it contemplates
20 having a customer and is partnered with one
21 of our retail customers. So we would be --
22 as we're doing now, were actively marketing
23 renewable contracts with our customer

1 similar to how we did with Walmart a few
2 years ago. So when that is all done, then
3 we would bring it to the Commission. I said
4 a year. Maybe a little bit longer.

5 Q. Okay. And then would it take roughly a
6 year, maybe more depending on the
7 circumstances of a particular project and
8 then if approved, build the project or bring
9 it online?

10 A. That all depends on the status of the
11 transmission. I will observe again there
12 are solar battery projects that we're asking
13 for approval. Three of them are in 2024.
14 So it's all a function of how much pre-work
15 some of these projects have done to get
16 their necessary permits and their
17 transmission service and the transmission
18 construction.

19 Q. But as we sit here today, you don't dispute
20 that once approved, a solar project could be
21 built in approximately a year? Let's say an
22 eighty megawatt solar project could be built
23 in a year?

1 A. Yeah. Once all the approvals are done and
2 once -- if the transmission -- if the
3 transmission is available. I think we've
4 established at deposition that the
5 transmission could be a limiting factor.

6 Q. Okay. And similar question for gas units.
7 Combined cycle units take approximately,
8 what, four years to build after approval?

9 A. Well, this one is targeted to be completed
10 about November of '23. So a little less
11 than four years.

12 Q. Okay. And similar question for combustion
13 turbines. It's roughly three to four years?

14 A. Similar. Maybe a little less than a
15 combined cycle.

16 Q. Okay. And generally, solar comes in all
17 sorts of increments, right? You can have
18 very small projects, and they can --

19 A. Yes.

20 Q. -- be very large?

21 A. Uh-huh.

22 Q. Gas units also come in a range of sizes, but
23 they tend to be procured at larger scales,

1 right?

2 A. It's all a function of the economies of
3 scale. But then there's a transmission
4 problem again. I mean, I think the most
5 economic combined cycle units, two thousand
6 megawatts. But then you have to add
7 hundreds of millions of dollars in
8 transmission. So it's not economic anymore.
9 So total cost. That's why we settled on
10 these seven hundred megawatt sizes.

11 Q. Okay. And as you sit here today, do you
12 have any reason to dispute that combined
13 cycle technology will continue to improve in
14 the future?

15 A. I don't have any reason to dispute that.

16 Q. So heat rates could improve in the future?

17 A. That's correct.

18 Q. And so whatever energy savings, fuel savings
19 might be associated with a purchase of a new
20 combined cycle unit could be even better in
21 the future, could it not?

22 A. It could be.

23 Q. Okay. And so if you'd turn now, sir,

1 please, to your rebuttal testimony. You
2 make a statement about your opinion that the
3 pricing, the favorable price -- it's on page
4 thirteen, line sixteen and seventeen. The
5 favorable pricing requested in this
6 portfolio that you're proposing is, quote,
7 unquote, unlikely to be replicated anytime
8 soon. Let me know when you're there.

9 A. I'm there.

10 Q. Okay. And we've talked about this before,
11 sir.

12 A. Yes.

13 Q. What are the bases or what is the basis for
14 this opinion?

15 A. Being in the business for as long as I've
16 been, I know there's value in getting the
17 word out there of being first. The fact is
18 we've alerted the market that we have a --
19 we have a capacity deficit. We're asking
20 for twenty-four hundred megawatts. We're
21 one of the first in the southeast to
22 identify that this -- we have a capacity
23 need of this type. I feel like we've got

1 the low hanging fruit through the
2 solicitation with the Hog Bayou and the
3 Central Alabama acquisition as well as maybe
4 even the solar battery with the two powering
5 combos. There's why there's a value in
6 getting out there first. Now that the
7 market is aware, I believe the prices will
8 go up. No. I don't have any documentation
9 on that.

10 Q. Thank you. All right. So then let's turn
11 to the benchmark plan. Actually, before we
12 go there, I have another line and I think we
13 might need to take that confidentiality
14 break and then proceed. So as we went over
15 earlier, you believe that the price of gas
16 is for whatever reason unlikely to rise?

17 A. No. I think we've got scenarios of low gas
18 and needing gas scenario. And we had a high
19 gas scenario as well. I will observe, you
20 know, that I -- yes. I know you said that
21 they'd be unlikely to rise. I don't know if
22 I ever said that.

23 Q. Okay.

1 A. We look at a variety of potential outcomes.

2 Q. Okay. But you -- you stand behind the gas
3 units that you're proposing regardless of
4 whatever gas prices may be?

5 A. That's right.

6 Q. Okay. And you're familiar, are you not,
7 with the last time the company came in to
8 build combined cycle units at Barry, right?

9 A. Yes.

10 Q. That was in the '90's?

11 A. It was.

12 Q. That was Unit 6 and 7?

13 A. Yes.

14 Q. And at the time there was some legislation
15 being proposed, et cetera. But the company
16 as part of that certification case proposed
17 that its shareholders would take on the
18 stranded asset risk associated with Unit 6
19 and 7, did it not?

20 A. I read that. Yes.

21 Q. All right. And when you say you read that,
22 you're referring to Ms. Wilson's testimony,
23 Sierra Club witness testimony?

1 A. Yes. I was referring to that, Ms. Wilson's
2 testimony.

3 Q. Okay. And she identified that precedent and
4 was recommending to the Commission that it
5 consider a similar condition if it were to
6 decide to grant the certificate you're
7 requesting for Barry 8, correct?

8 A. I remember reading that.

9 Q. All right. And do you know if the company
10 has a position on that condition?

11 A. I wouldn't recommend that condition.

12 Q. Why not?

13 A. The situation is different than it was
14 twenty odd years ago. That was right on the
15 heels of a retail restructuring, retail --
16 retail restructuring was the topic at the
17 time in the late '90's. And as part of
18 that, it was a stranded cost bill or
19 stranded cost legislation in the State of
20 Alabama. And they were specifically talking
21 about that stranded cost legislation. In
22 this combined cycle, we don't have that
23 pending before us today.

1 Q. So you think it is more reasonable to leave
2 the stranded asset risk on customers at this
3 time?

4 A. I -- like I told you, I don't believe there
5 will be stranded asset risks because this is
6 better than most of the plants that we -- if
7 approved, these plants would be better than
8 a lot of the older plants that we have.

9 Q. But until Sierra Club raised the issue, you
10 had no documents on stranded asset risk
11 analysis, did you?

12 A. Again, just showing how economic they were
13 in the stack. I'm going to keep going back
14 to that. I don't believe that these were
15 subject to stranded asset risks. These are
16 better than the units that they are being --
17 dispatching with. There are other units
18 that we would take off the system before we
19 would be look at the -- which would make
20 these plants run even more.

21 Q. But stranded asset risk is mainly a
22 prospective issue as opposed to a
23 retrospective issue, is it not? It depends

1 on what market conditions will be in the
2 future over these long lives of the proposed
3 units, correct?

4 A. I feel comfortable about how these units
5 will perform in these futures.

6 Q. Okay. But the specific type of analysis
7 that I've asked you about in this line, you
8 don't have it, right?

9 A. I don't know what specific analysis you're
10 referring to. I don't have it. I don't
11 have the analysis because I'm not sure what
12 it even is.

13 Q. You don't have an analysis that identifies
14 or quantifies the stranded asset risks
15 associated with these units, do you?

16 A. I don't know what analysis -- what type of
17 analysis you would be referring to.

18 Q. Well, surely the company performed some kind
19 of analysis before proposing to take on the
20 stranded asset risk in the case of Barry 6
21 and 7, did it not?

22 A. I don't know.

23 Q. Okay. So wouldn't you have at least checked

1 given that precedent before coming forward
2 with the Barry 8 proposal?

3 A. I'll just go back to my observation that the
4 fuel savings and the other scenario was
5 greater than the costs that we're talking
6 about incurring to build the plant. So
7 negative costs.

8 MS. CSANK: Okay. And I'm going to
9 pass out an exhibit to Your Honor.

10 ALJ GARNER: Is it confidential
11 information?

12 MS. CSANK: No, Your Honor. It's a
13 news article with which the witness is
14 familiar. May I approach?

15 ALJ GARNER: Yes. Do you want this
16 marked as Sierra Club 2?

17 MS. CSANK: Yes, sir.

18 Q. I'll give you a moment to review it.

19 A. Okay.

20 Q. Can you verify that it's a true and correct
21 copy? You've seen this document?

22 A. I have.

23 Q. Okay.

1 A. I'm familiar with it.

2 Q. And so for the record, this is a Wall Street
3 Journal article. The date that it was last
4 accessed was a few weeks ago. But the
5 article itself is dated June 8, 2012. Do
6 you see that --

7 A. Yes.

8 Q. -- on the first page? Okay. And the
9 article is titled The Weekend Interview with
10 Tom Fanning, The Natural Gas Skeptic. Do
11 you see that?

12 A. Yes.

13 Q. And Mr. Fanning is the CEO of Southern
14 Company, correct?

15 A. Yes.

16 Q. And as we discussed at your deposition,
17 throughout this interview Mr. Fanning
18 described his opinions of gas generation and
19 the volatility around gas pricing, correct?

20 A. That's one of the things he discusses.

21 Q. Is there anything else notable that you
22 believe --

23 A. Yes. I mean, you notice he talks about all

1 of the above strategy which speaks to me
2 about something we still favor, and that's
3 fuel diversity. You know, we're talking
4 about adding some natural gas here to our
5 system. But if it's approved, we'd have --
6 we'll still have the majority of our system
7 coal fired. We'd still have a
8 significant -- we would have more gas but
9 not more than thirty percent of our
10 capacity. We'd have ten percent nuclear.
11 We'd have thirty percent from demand-side
12 and other including some renewables and
13 hydroelectric in that category as well. So
14 it's important to have fuel diversity.
15 That's what he talks about all of the above
16 strategy. He does also talk about
17 skepticism of natural gas.

18 Q. Let me turn your attention to page four.

19 A. Okay. Okay.

20 Q. And do you see the sentence that begins even
21 with many more wells and increased
22 production?

23 A. Yes. I see it.

- 1 Q. And the sentence continues, Mr. Fanning
2 thinks gas prices will return to their
3 historic oscillations and eventually spike.
4 Open quote, Gas has traditionally been way
5 more volatile certainly than coal and
6 nuclear, quote, end quote. He says, open
7 quote, So you're buying a more volatile
8 product. You're creating a higher Beta
9 energy policy, end quote. So that's just
10 one example of Mr. Fanning's opinions
11 concerning gas price volatility and the
12 risks associated with extended reliance on
13 gas burning power plants?
- 14 A. Eight years ago that was his opinion. So
15 eight years ago we didn't have a full
16 appreciation of the major supply discoveries
17 of natural gas in this country which is --
18 the prices are lower than they were even at
19 this time. So I think -- I haven't talked
20 with him. I haven't asked for his blessing.
21 Even he would agree that he didn't foresee
22 what has actually happened with natural gas.
- 23 Q. But you're speculating. You haven't talked

1 to him?

2 A. I have not.

3 Q. Okay. And nor do you dispute his opinions
4 as expressed here in this article?

5 A. I think I dispute -- well, I wouldn't
6 dispute it on June 8th, 2012. But I think
7 here in 2020, I think there's a little more
8 information. Dispute is a strong word. I
9 think there's more information.

10 Q. Okay. And dispute or not, you don't have
11 documents about where --

12 A. I know the United States is the largest
13 producer of natural gas in the world today.

14 Q. Right. But as we said before, in terms of
15 the impact of, for example, a proposed gas
16 generation in this country being built out
17 and what that might do to gas prices in,
18 say, another decade, you don't have any
19 documents on that, do you?

20 A. That goes back to the -- you know, we
21 employed Charles River and Associates to do
22 those forecasts for us, and they give us a
23 low gas scenario, medium and a high gas

1 scenario. And those continue to show
2 favorable gas pricing for the foreseeable
3 future.

4 Q. Okay. Thank you, sir.

5 MS. CSANK: And then I think now might
6 be a good time, Your Honor, to clear the
7 room for a short confidential.

8 ALJ GARNER: We're down a good bit.
9 Who hasn't executed confidentiality
10 agreements in the room? Okay. All right.
11 Well, let's clear the room of all of those
12 who haven't executed a confidentiality
13 agreement.

14 (Whereupon, all those not
15 executing confidentiality
16 agreements left the hearing
17 room.)

18 MR. GROVER: Your Honor, for my
19 planning purposes, may I ask what your
20 intention is about how long we're going to
21 go on tonight, when we start tomorrow and
22 all of that?

23 ALJ GARNER: I'd like to get finished

1 with Mr. Kelley. So we're probably going to
2 be a while.

3 MR. GROVER: Okay. Thank you, Your
4 Honor.

5 MS. CSANK: Your Honor, if I'm not
6 mistaken, there's some recording that seems
7 to be broadcast into the foyer.

8 ALJ GARNER: Yes. I'll make sure
9 that's off. Everyone who is in the room
10 either has executed a proprietary agreement
11 or doesn't need to. I'm going to rely on
12 the lawyers to confirm that with me because
13 I have a list of who's executed them, but I
14 -- I know. I'm going to turn it off before
15 we get to the testimony. All right. So
16 we're good?

17 MR. GROVER: We're good, Your Honor.

18 ALJ GARNER: All right. Let's proceed
19 with cross. And this questioning for cross
20 will be under seal, Court Reporter.

21 MS. CSANK: Thank you, Your Honor.

22 (Whereupon, the following
23 testimony is confidential and is

1 under seal.)

2 Q. Mr. Kelley, I'd like to go back to the
3 claimed needs that are under pending
4 proposed resource additions. And those
5 needs as we said before start now in the
6 year 2019 -- 2020, correct?

7 A. Correct. Yes.

8 ALJ GARNER: Just talk loud.

9 A. I'll just talk loud. Correct.

10 Q. And those needs grow at least in this decade
11 to -- until the 2023/2024 winter?

12 A. Yes.

13 Q. And I believe I see you turning pages.

14 A. I'm trying to find the actual schedule.

15 Q. Your direct testimony at page eleven --

16 A. I just found it.

17 Q. -- and also in your Exhibit 1 which is the
18 2019 IRP which has the more expanded version
19 I think of the same table that is at the top
20 of the directive.

21 A. Right. I'm familiar.

22 Q. All right. And so what's being presented in
23 this table on your page eleven is business

1 as usual without the proposed resource
2 additions, correct?

3 A. That's correct.

4 Q. This does not take into account the
5 availability of surpluses in the pool?

6 A. That's right.

7 Q. Okay. And more specifically, does the -- so
8 this is a winter projected capacity deficit?

9 A. Yes.

10 Q. And, again, that's a projection?

11 A. That's correct.

12 Q. In future times?

13 A. Uh-huh.

14 Q. And specifically, that column on the
15 right-hand side, APC needs, what that's
16 showing us in red are capacity values.
17 Those are, again, protected capacity
18 deficits based on projections of winter peak
19 load?

20 A. That's correct.

21 Q. Which is the period of highest demand for
22 electricity on your system?

23 A. Yes.

1 Q. The projection of that. And more
2 specifically, that's six to eight a.m. on
3 weekdays in January?

4 A. Generally. It could be in December and
5 February.

6 Q. And there are various ways to shave or shift
7 peak load, right?

8 A. There are.

9 Q. Can you name some of those ways for us?

10 A. Yes. Interruptible load is one way. That
11 definitely shaves it. We have contracts
12 with customers to call on them to curtail
13 their operations in exchange for an
14 incentive.

15 Q. Any other ways?

16 A. We have a standby generator -- standby
17 generation program where we can dispatch
18 emergency generation in certain locations to
19 disconnect them from our system. And there
20 are --

21 Q. Please continue.

22 A. Oh, keep going. Oh, yeah. Of course, we
23 have some pricing options that we can send

1 out higher prices and customers can respond
2 to those prices. We're investigating some
3 residential type interruptible programs as
4 well. We're also investigating some
5 thermostats, a smart thermostat program and
6 some other more exotic programs that use
7 customers' thermostats, customers allowing
8 us to schedule their heating, their heating
9 needs. Also looking at water heating, some
10 things with water heating to -- you know, to
11 turn off water heaters, cycle water heaters
12 and electric water heaters.

13 Q. Okay. Besides reciting these options from
14 memory, is there -- this gets back to our
15 earlier conversation of the demand-side
16 analysis that's still underway that's going
17 to be presented to you in about a year's
18 time.

19 A. Yes.

20 Q. In terms of just another concrete example of
21 an option that may be available to your
22 customers, are you familiar with the U.S.
23 Department of Energy's low income

1 weatherization grant program? Funding that
2 is provided to low income weatherization
3 programs?

4 A. I'm not familiar.

5 Q. Okay. And, again, it's part of your job
6 responsibilities to seek out -- well, I
7 think we said before that you attempt to
8 identify the least cost means to customers?

9 A. Yes.

10 Q. Including low income customers?

11 A. Well, that would include all customers.

12 Q. So if there were, you know, grants or
13 funding from the federal government, you'd
14 attempt to secure that for customers, would
15 you not?

16 A. I would like to know more about that.

17 Q. Okay. But you haven't for the purposes of
18 preparing for today done so?

19 A. No.

20 Q. Okay. Sir, there's nothing specifically in
21 the documents that you're presenting to the
22 Commission that says that combined cycle
23 units are what are needed to meet your

1 projected needs?

2 A. Well --

3 Q. There's no technical --

4 A. The portfolio is presented in Mr. Looney's
5 testimony and identifies the lowest cost
6 options. And the fact that three of them
7 were combined cycle units, that's what we're
8 looking for is the most cost effective
9 technology.

10 Q. But there's nothing special about combined
11 cycle units from a reliability perspective,
12 that they alone are a viable solution to
13 your identified projected reliability need,
14 correct?

15 A. The fact that the lowest cost is what's
16 special, that's not the only thing that
17 makes it special.

18 Q. But from a technical perspective -- what was
19 I looking for? There's no technical
20 attributes combined cycle that is --

21 A. I mean, I could think of operational
22 flexibility and things like that, but I
23 can't think of a -- a technical reason why

1 it has to be combined cycle. But it is.

2 Q. That's your analysis?

3 A. Yes. The market provided that they were
4 lower costs than combustion turbines or
5 batteries, eight hour batteries or things of
6 that nature.

7 Q. But as we sit here today, you do not dispute
8 that the existing resources that you're
9 using to meet your existing winter needs are
10 cost effective?

11 A. What existing resources are you referring
12 to?

13 Q. Whatever you're using that met the winter
14 needs of the company?

15 A. Oh, we -- I'm not -- okay. Now I understand
16 your questions.

17 Q. Thanks.

18 A. Ask it again.

19 MS. CSANK: Oh, Madam Reporter, would
20 you --

21 Q. Well, let me just try it again. You do not
22 dispute the cost efficacy of the existing
23 resources that you used to get through this

1 past winter?

2 A. I do not dispute that which means I am in
3 favor of that. It's a double negative.
4 That's all. I mean, yeah. I don't dispute
5 the cost efficacy or whatever you said of
6 those resources.

7 Q. Okay. Maybe that was -- okay. I'm not sure
8 where the double negative was, but okay.

9 A. I do not dispute. That was the double
10 negative.

11 Q. I see. Okay. There are -- thank you, sir.
12 There are other supply-side options
13 short-term and long-term that may meet from
14 a technical standpoint your identified
15 reliability needs?

16 A. Could be. That's why we did an IRP to find
17 out what was out there.

18 Q. But in terms of short-term options
19 specifically?

20 A. (Witness nodding head in the affirmative.)

21 Q. Do you know?

22 A. We asked for short-term options in the RFP.
23 We did not receive any short-term options.

1 Q. But then you did identify some through
2 prodding and these --

3 A. Yes. Why aren't you giving us short-term
4 options? We asked for short-term options.
5 And they said, Well, we don't want to give
6 you short-term options. We like long-term
7 options. And we said, Give us some
8 short-term options. And they did, and they
9 weren't very attractive.

10 Q. Okay. But you're not presenting documents
11 on those short-term options, are you?

12 A. I don't know if we're presenting documents
13 on those or not. They weren't very
14 attractive options. You know, they couldn't
15 get natural gas. That was one of the
16 issues. So we couldn't validate the
17 firmness. There was some transmission
18 concerns.

19 Q. Didn't you pursue short-term options with
20 the existing gas units in the petition?

21 A. We did.

22 Q. Okay. And in terms of your analysis that
23 led to the projection of those short-term

1 options, where are the documents
2 substantiating those projections?

3 A. I don't know. I don't know if those are
4 provided or not, the things that we
5 rejected. It was kind of outside of our
6 formal -- to the extent it was formal, that
7 was outside of our formal solicitation when
8 we went back and said can you give us a
9 short-term proposal.

10 Q. So how does this Commission know? How can
11 anyone verify whether you have properly
12 identified and evaluated those short-term
13 options?

14 A. Well --

15 Q. Trust you?

16 A. Yes.

17 Q. Okay.

18 A. We also went into the market to those that
19 didn't respond to our RFP and asked for
20 short-term options and we said -- and we got
21 indications that we would be receiving some
22 proposals, and we did not. Did not submit
23 that either. That's what happened.

1 Q. Nor did you reach out to renewable energy
2 project developers in advance to solicit
3 input on pricing or other terms for options
4 that they could provide?

5 A. We did. We actually did reach out to
6 renewable energy developers. That's how we
7 ended up with four hundred megawatts solar
8 battery combination project.

9 Q. Before the 2018 renewable --

10 A. No. During the -- during that solicitation.

11 Q. Okay. And as we said before, there are
12 certain constraints imposed on that 2018
13 RFP?

14 A. Uh-huh.

15 Q. So you didn't attempt to -- to consult with
16 market participants to see if those were
17 viable constraints or if those customers
18 could do better if you perhaps altered some
19 of those constraints?

20 A. No. We used the constraints under the RGC.

21 MS. CSANK: Okay. Sir, thank you so
22 much for your time. That's all my questions
23 for now.

1 THE WITNESS: Great. Thank you.

2 ALJ GARNER: Let's move on. Now that
3 the room is cleared, do you have any?

4 MR. JOHNSTON: I don't believe so.

5 ALJ GARNER: We can bring the rest of
6 the folks back in. All right. For
7 those of you who are so anxiously waiting to
8 get back in, come on back in.

9 (Whereupon, the hearing room was
10 re-opened to the public and the
11 confidential sealed testimony
12 was concluded.)

13 ALJ GARNER: Ms. Csank, do you move
14 for the admission of Sierra Club Exhibit 1
15 and 2?

16 MS. CSANK: Yes, Your Honor.

17 ALJ GARNER: Any objections?

18 MR. McCRARY: Which one, Your Honor?

19 ALJ GARNER: Sierra Club 1 and 2.

20 MR. McCRARY: Yes, sir. I object to
21 Sierra 1. The witness wasn't familiar with
22 it. I mean, I don't think it has any
23 probative value under the circumstances.

1 ALJ GARNER: It was introduced for
2 purposes of cross. I'm going to go ahead
3 and allow it.

4 MS. CSANK: Thank you, Your Honor.

5 ALJ GARNER: Sierra Club Exhibits 1
6 and 2 are admitted.

7 MR. EBERSBACH: May I proceed, Your
8 Honor?

9 ALJ GARNER: Yes, you may.

10 CROSS-EXAMINATION

11 BY MR. EBERSBACH:

12 Q. Mr. Kelley, good evening. My name is Kurt
13 Ebersbach. I work with the Southern
14 Environmental Law Center representing Energy
15 Alabama and GASP in this matter.

16 A. Yes.

17 Q. So the reason we are here and the reason the
18 company is proposing this new capacity as
19 we've established is to address a winter
20 reliability need, correct?

21 A. Correct.

22 Q. And on a weather normal basis, the company's
23 winter peak has exceeded its summer peak

1 since 2010?

2 A. Yes.

3 Q. And the company's most recent load forecast
4 projects it will remain winter peaking?

5 A. That's correct.

6 Q. The company has identified several drivers
7 of this trend towards winter peaking,
8 correct?

9 A. Yes.

10 Q. One of which is rates of forced generation
11 unit outages at low temperatures?

12 A. That's one of the reasons. Yes.

13 Q. And on occasion -- and I believe this is
14 under reserve margin study. On occasion
15 over the past decade, more than ten percent
16 of the system's capacity has been in a
17 forced outage rate concurrently?

18 A. I wouldn't doubt that.

19 Q. Those generally are fossil generation
20 resources, correct?

21 A. I think so.

22 Q. Another driver that the system has cited is
23 natural gas pipeline constraints in winter,

1 correct?

2 A. As a driver for winter reliability, I
3 don't -- I don't remember that one. It's
4 not ringing a bell. Recite that in
5 testimony.

6 Q. But do you consider that one of the drivers
7 of winter reliability concerns?

8 A. I just know that's why we procure firm --
9 FT, firm transportation of natural gas.

10 Q. Okay. Now, you say the company's proposed
11 portfolio would further diversify the
12 company's resource mix, correct?

13 A. Yes. Yes.

14 Q. And by 2024, the company's resource mix
15 would be roughly thirty-one percent gas and
16 twenty-nine percent coal on a capacity
17 basis. And as shown in your 2019 IRP, the
18 company was at twenty-nine percent gas and
19 thirty-two percent coal then; is that right?
20 That would be page six of the IRP document.

21 A. Twenty-two percent coal and twenty-eight
22 percent gas in 2019.

23 Q. Okay. So in 2024, about sixty percent of

1 the company's capacity will -- capacity mix
2 will consist of fossil resources which is
3 roughly the same as today?

4 A. Coal and natural gas.

5 Q. And those resources are current with forced
6 outages?

7 A. Yes.

8 Q. Now, your testimony is that the need to add
9 capacity didn't become actionable until the
10 company adopted seasonal planning in the
11 2019 IRP?

12 A. Correct.

13 Q. But you're not saying the company couldn't
14 have taken steps over the last decade to
15 address emerging winter reliability
16 concerns, are you?

17 A. No. And we did take steps.

18 Q. Right. And you detail some of those in your
19 testimony, correct?

20 A. Right.

21 Q. Am I correct that those steps you listed are
22 generally what could be considered
23 supply-side measures?

1 A. Those would be lower cost supply-side
2 measures.

3 Q. For example, when you took steps at lowering
4 forced outage rates?

5 A. We took some winterization initiatives and
6 put in the plant manager's goals candidly.

7 Q. You brought some Barry units back into
8 service?

9 A. That's something else we did. Yes.

10 Q. You upgraded others?

11 A. Yes.

12 Q. Over the last decade did the company seek to
13 alter or eliminate any of its declining
14 block rate structures?

15 A. I don't know that, but I don't -- I know who
16 can answer that.

17 Q. Who is that?

18 A. That would be Ms. Baker.

19 Q. Okay. Now, declining block rates afford
20 lower prices at higher levels of
21 consumption, right?

22 A. That's my understanding, but I'm not a rate
23 expert.

1 Q. Well, the company isn't proposing here to
2 eliminate its declining block rates, is it?

3 A. You need to talk to Ms. Baker.

4 Q. Okay. Did the company do anything to limit
5 or suspend its programs that incentivize
6 customers to switch to electric heating?

7 A. I don't know if we eliminated or
8 incentivized because, again, we're in that
9 catch-22 as I described earlier where we're
10 seeking approval for winter reliability to
11 move forward in everything that we do. And
12 I think that's probably why, you know, there
13 haven't been adjustments for rates. But I'm
14 going to leave that to Ms. Baker to talk
15 about. You talked about electric heating.
16 There is -- I think it did devalue the
17 benefit of electric heating, but I don't
18 think it eliminated the value.

19 Q. Would you agree that to the extent the
20 company has incentivizing the adoption of
21 winter heating, it's in some sense creating
22 the problems it's now attempting to solve?

23 A. It's all -- it's not creating the problem.

1 It's -- it -- I will say that the electric
2 heating is worth less than it was -- than we
3 foresaw it would be twenty years ago. It's
4 not worth zero. It's not worth a negative
5 number. It's worth less. There's still
6 value in adding electricity sales. And the
7 revenue that that provides to the extent
8 that it's greater than the cost that we
9 incur could put -- exert downward pressure
10 on a raise.

11 Q. But you're adding to winter load, correct?

12 A. It would be.

13 Q. And you're not seeking to eliminate those
14 incentive programs as part of this filing?

15 A. I think we're seeking to optimize the
16 economics of those programs which might be
17 eliminating. But I can't -- that's not --
18 really that's not my area either.

19 Q. Okay. So you're responsible for the
20 company's IRP?

21 A. Yes.

22 Q. IRP is -- the 2019 IRP is what determined
23 the need for the capacity resources for

1 which you're seeking approval here?

2 A. That's correct.

3 Q. Now, you say in your testimony the IRP is
4 not a document but a process?

5 A. Yes.

6 Q. Nevertheless, the company provides a summary
7 plan which is attached to your testimony.
8 We just looked at it.

9 A. That's right. Every three years we produce
10 a document.

11 Q. And you say -- that's a thirty-four page
12 document, and you say it provides
13 considerable detail?

14 A. Yes.

15 Q. Have you reviewed the Tennessee Valley
16 Authority's most recent IRP document?

17 A. No.

18 Q. Even though you sometimes buy capacity from
19 TVA?

20 A. We don't buy capacity from TVA. Maybe on a
21 short-term basis there might be some energy
22 exchanges, but I'm not familiar with any
23 capacity purchases from TVA.

1 Q. Okay. So you would have no concept of the
2 detail provided in their IRP?

3 A. I don't follow TVA.

4 Q. How about Georgia Power's 2019 IRP filing?

5 A. I'm aware of it.

6 Q. Have you reviewed it?

7 A. I have not.

8 Q. Even though you operate on a coordinated
9 basis, a coordinated planning basis with the
10 other retail operating companies, you've not
11 reviewed that document?

12 A. That's correct.

13 Q. Now, your IRP process provides no
14 opportunity for public participation or
15 stakeholder engagement; is that correct?

16 A. I think that's probably correct other than
17 what I mentioned through the Office of the
18 Attorney General.

19 Q. Right.

20 A. Yeah.

21 Q. Now, are you aware that Georgia Power filed
22 a six-month proceeding in which various
23 parties can intervene and comment on the

1 plan which is then not final until the
2 Commission approves it at the proceeding's
3 conclusion?

4 A. I'm aware.

5 Q. Are you aware that TVA similarly provides
6 for public participation and feedback?

7 A. I don't know what TVA does.

8 Q. But here you -- you present your plan in
9 summary form as more or less a done deal,
10 correct?

11 A. It is a -- it's an information -- it
12 provides information for our customers.

13 Q. Now, as part of the IRP, you do a load
14 forecast and a reserve margin study to
15 determine what your needs are, correct?

16 A. Yes.

17 Q. Then you determine an optimal mix to meet
18 those identified needs?

19 A. Yes.

20 Q. Is that a modeling exercise?

21 A. Yes.

22 Q. Are solar and wind resources something the
23 model can collect?

1 A. For the initial benchmark plan for this IRP,
2 it was not.

3 Q. Are demand-side resources something the
4 model can select?

5 A. For this IRP, it was not.

6 Q. So the model, as I understand it, can only
7 select a supply-side option and really only
8 one of two types, either a generic
9 combustion turbine or a generic combined
10 cycle?

11 A. It can select a number of options, but those
12 are the two candidate technologies that were
13 used to develop the benchmark plan. Then we
14 try to find options that could do better
15 than that benchmark plan.

16 Q. So are you saying those are the only two
17 options that you allow the model to select?

18 A. To establish the benchmark plan --

19 Q. Okay.

20 A. -- which is not the final answer.

21 Q. Right. So the benchmark plan as the name
22 suggests is a benchmark against which you
23 evaluate whether options would be better for

1 customers?

2 A. That's right.

3 Q. Including demand-side options?

4 A. That's correct.

5 Q. Now, in this proceeding as we've discussed,
6 the company seeks approval to pursue
7 twenty-four hundred megawatts of new
8 capacity and almost all of it supply-side,
9 correct?

10 A. Yes.

11 Q. And the proposed demand-side component is
12 just two hundred megawatts?

13 A. Two hundred megawatts was demand-side and
14 distributed energy resources.

15 Q. Okay. And it's being proposed to address a
16 shortfall between the company's indicated
17 need and the sum total of the proposed
18 supply-side additions?

19 A. Twenty-four hundred megawatts includes --
20 I'm sorry. I don't follow your line. It's
21 part of the portfolio, two hundred
22 megawatts.

23 Q. Well, you need twenty-four hundred

1 megawatts?

2 A. Yes.

3 Q. The supply-side additions represent --

4 A. Twenty-two hundred. Yes. I understand.

5 Q. And as I understand it, this shortfall
6 arises only because building Barry Unit 8
7 would require a costly transmission upgrade
8 which to avoid you need to limit the output
9 of Greene County 1 and 2; is that right?

10 A. That was an option. It was the most
11 inexpensive option. We could have built the
12 transmission and it would have been more
13 expensive.

14 Q. Okay. But my point is you're only getting
15 to the two hundred megawatt need because of
16 the decision to pursue Barry Unit 8?

17 A. I don't know if I've thought of it that way.
18 I think that was coincidental that those are
19 two hundred megawatts -- approximately two
20 hundred megawatts each. But that was not
21 the intention.

22 Q. Okay.

23 A. It was identified as twenty-four hundred

1 megawatts.

2 Q. Okay. Do you agree that demand-side
3 management is a resource?

4 A. Yes.

5 Q. So once you have a demonstrated need, you
6 can meet it by building or buying new
7 supply-side capacity which you are largely
8 proposing to do or by implementing
9 demand-side measures or some combination of
10 both?

11 A. Right. We have two thousand megawatts of
12 those already in our -- in our resource mix.

13 Q. And what you're trying to do, as I
14 understand it, is to get to the least cost
15 means of reliably addressing the company's
16 capacity deficit on both a short-term and
17 long-term basis?

18 A. Yes.

19 Q. Does the company consider -- I'm going to
20 call it DSM for short, demand-side measures.

21 A. Sure.

22 Q. Does the company consider DSM a priority
23 resource?

1 A. A priority resource? I think yes, it's an
2 important resource.

3 Q. But is it a priority resource?

4 A. I don't know what that means.

5 Q. Well, do you recall filing in the mid 2000's
6 where the company had to respond to the
7 Energy Independent Security Act and one of
8 the determinations that had to be made at
9 that time was whether the company considered
10 energy efficiency a priority resource?

11 A. No. I don't recall that.

12 Q. You weren't involved in that process at all?

13 A. No.

14 Q. Okay. Would you take my word for it subject
15 to check that the company submitted a filing
16 where it did say it considers energy
17 efficiency a priority resource?

18 A. I have no reason to not dispute that.

19 Q. Okay. And you just said it -- you do
20 consider it priority. So tell me what you
21 mean by that.

22 A. You tell me, because I really -- I don't
23 know what that means. I don't know.

1 Q. But the company made a filing where it said
2 that?

3 A. I know you said the company made a filing.

4 Q. Okay.

5 A. And I don't know what it was involving.

6 Q. Well, priority could mean right to take
7 precedence over other options.

8 A. Okay. Could be.

9 Q. Is that your understanding of what it means
10 when you say energy efficiency is a priority
11 resource?

12 A. I honestly don't know what was meant by the
13 priority resource in 2005 in a filing. I
14 just don't know.

15 Q. Okay. Well, let's forget the filing. You
16 said a moment ago that the -- you consider
17 energy efficiency or DSM a priority
18 resource?

19 A. I said I consider it to be an important
20 resource that provides capacity.

21 Q. But -- okay. So in your treatment as you
22 develop IRP's, you're not looking first to
23 DSM or energy efficiency to see how much you

1 can get before you turn to supply-side
2 considerations?

3 A. We're looking for the most economic things
4 we can find. And if that's demand-side,
5 that would be first. If it's not, then it
6 would not be first.

7 Q. Now, I believe it's in the IRP. This is at
8 page fifteen. You talk about evaluating DSM
9 on a consistent basis with supply-side
10 resources?

11 A. Yes.

12 Q. Does that mean letting both DSM and
13 supply-side options have at least an equal
14 shot -- at least an equal shot at meeting
15 the demonstrated need?

16 A. Yes.

17 Q. And the IRP process, that's the process
18 through which that evaluation is made?

19 A. Yes.

20 Q. So let's look at how that played out here.
21 The company identified this twenty-four
22 hundred megawatt need and issued a capacity
23 RFP, right?

1 A. That's correct.

2 Q. Did that capacity RFP solicit demand-side
3 resources?

4 A. It did not.

5 Q. Did the company put together and consider
6 any DSM portfolios that could have met some
7 or all of the identified capacity needs?

8 A. Two hundred megawatts is what we put
9 together. From my experience, we would not
10 be able to find twenty-four hundred
11 megawatts of demand-side. Recognizing we
12 already had two thousand megawatts just as a
13 point of reference.

14 Q. All right. But as we discussed, you came to
15 two hundred megawatts at the end of the
16 process after you had already decided what
17 supply-side options to pursue, correct?

18 A. We reserved two hundred megawatts for the
19 ability to find cost effective programs. I
20 mentioned this. We were in this area where
21 we're trying to see are we in winter
22 reliability planning or not.

23 Q. But that was after you had identified the

1 shortfall between your identified need and
2 the supply-side resources you had already
3 decided to pursue?

4 A. Well, that's -- I mean, you said that. I --
5 you said that with the Greene County,
6 whatever, and I told you that wasn't the
7 intent.

8 Q. Well, but it's in your -- I mean, it's in
9 your testimony.

10 A. Two hundred megawatts -- we reserved two
11 hundred megawatts to identify cost effective
12 programs and identify distributed energy
13 resources. In my experience, it's going to
14 be very difficult to find that. It's going
15 to be more cost effective than what we've
16 already produced in this portfolio.

17 Q. Let me ask it this way. You didn't -- you
18 didn't come up to two hundred megawatts of
19 distributed and demand-side resources prior
20 to deciding to pursue Barry Unit 8 and the
21 other supply-side measures, did you?

22 A. No.

23 Q. Now, you referenced before the 2014

1 potential study by Nexant?

2 A. Correct. Technical potential study.

3 Q. Now, that sort of document identifies a
4 whole universe of potential demand-side
5 measures, right?

6 A. That's right.

7 Q. And then looks at them in terms of the
8 different cost effectiveness?

9 A. Right.

10 Q. So you did have a place you could have gone
11 to assemble a proposed DSM portfolio, right?

12 A. Right.

13 Q. But you did not do that?

14 A. Yeah, we did. We actually went there. The
15 Nexant study from 2014 used the vintage of
16 2014 projections of avoided costs which are
17 more higher than they are now. So that
18 study, we're replicating a much lower
19 potential. So we feel like we're stepping
20 out to even identify two hundred megawatts.

21 Q. Okay. But you did tell me before that you
22 didn't assemble a DSM portfolio and compare
23 it against the supply-side options, didn't

1 you?

2 A. We don't -- we have indications. Part of
3 the problem with the demand-side is we have
4 to pay out almost all of the benefits to
5 participants to participate which renders
6 them not as cost effective as a lot of these
7 supply-side resources. Nevertheless, we are
8 attempting to find two hundred megawatts of
9 cost effective programs.

10 Q. Well, when you say not as cost effective,
11 wouldn't you need to have assembled the
12 portfolio and run it through the test?

13 A. We did. And we did. We did the economic
14 analysis. That was included in our
15 discovery. We found two programs. We found
16 two programs, two -- excuse me. Two new
17 programs. In addition to our existing
18 programs, we identified two new programs.
19 And, actually, I think we're piloting two
20 additional new programs to see if they could
21 work as well. So four new programs.

22 Q. And what are those programs?

23 A. Those programs are a -- called the smart

1 thermostat program where we're encouraging
2 customers to purchase smart thermostats. We
3 have indications that would -- can reduce
4 the peak energy use and manage their energy
5 bill. We have a -- it's called Smart
6 Advantage. I think I refer to it as
7 orchestrated energy in my testimony. That's
8 where we have a third -- we have -- we allow
9 a company to program people's heating needs
10 during certain critical times reducing their
11 usage. We have what we call a power pause
12 program which is a residential interruptible
13 program, believe it or not. And we have
14 another water heating program to control
15 water heaters, residential water heaters to
16 cycle them or -- so that they can reduce
17 load during the winter mornings. Those are
18 the four that I'm -- the four new ones.

19 Q. That are pilots, correct?

20 A. Those are pilots, and we have -- you know,
21 there's some pricing options that we might
22 be pursuing in the future. But Ms. Baker
23 can talk about those.

1 Q. And am I correct that the power pause
2 program is limited to current employees of
3 the company?

4 A. That's correct. The pilot program.

5 Q. Are you aware that Georgia Power recently
6 received approval for a residential smart
7 thermostat load control program?

8 A. No, I'm not.

9 Q. Even though you do coordinate it?

10 A. That's right. That's right.

11 Q. And they cited that as helpful toward
12 addressing winter reliability concerns even
13 though Georgia Power is projected to remain
14 summer peaking?

15 A. Okay.

16 Q. Now, regarding the thermostat -- smart
17 thermostat program, isn't that a passive
18 energy efficiency measure that the company
19 has had for some time?

20 A. I believe it used to be tied in with the
21 purchase of a heat pump, but I think we
22 removed that constraint this latest
23 go-around.

1 Q. And why did you remove that constraint?

2 A. To get more participation and also probably
3 in recognition of the issue of the heat
4 pump, it may not be as valuable as it once
5 was.

6 Q. And might contribute it to winter
7 reliability concerns?

8 A. Yeah.

9 Q. And just one other question about the
10 company's passive DSM programs, because
11 there are some that incentivize electric
12 heating. Would you agree with that?

13 A. You'd have to be -- you'd have to ask -- I
14 know there's a move towards incentivizing
15 more efficient electric heating. Once the
16 customer is sold on electric heating, then
17 the idea is to sell them a more efficient,
18 higher efficiency electric heating which
19 could reduce the -- reduce the demand.

20 Q. The company's passive energy efficiency
21 programs are listed in the appendix to the
22 IRP, correct?

23 A. Correct.

1 Q. So, for example, you have a heat pump water
2 i=heater program?

3 A. That's right. And the idea there being if
4 the customer is installing heat pump water
5 heaters instead of electric water heaters,
6 there would be less demand on our system.

7 Q. Can a customer who currently heats their
8 home through gas avail themselves of this?
9 In other words, can they avail themselves of
10 this program and adopt electric heating?

11 A. I'm sorry. I was looking at this. Can a
12 customer do what, now, on the heat pump?

13 Q. Suppose a customer currently has natural gas
14 for heating purposes. Could they avail
15 themselves to this program? Could they
16 switch to an electric water heater?

17 A. Water heater?

18 Q. Yeah.

19 A. I know those are programs that are under
20 development, trying to adjust the issues
21 that we're talking about here today. So I
22 don't know.

23 Q. Aren't these existing programs?

1 A. Those are existing programs. But their
2 legacy from -- you know, they're from when
3 we were summer peaking. So they're -- you
4 know, so we're making the transition. I'll
5 go back to that discussion of where we're
6 kind of waiting to see if we get approval to
7 continue with the winter planning.

8 Q. Okay. So your testimony is that you're not
9 sure whether a customer on gas for heating
10 purposes could take advantage of these
11 incentives?

12 A. Well, I don't know the details specifically
13 about that. If I said, I would be
14 speculating right now.

15 Q. Okay. But this is your IRP program?

16 A. Yes, it is.

17 Q. Okay. Let me ask about number five, the
18 residential plug-in electric vehicle rate
19 rider. How is that an energy efficiency
20 measure?

21 A. I believe it's probably looking -- if I
22 had -- taking the view of total energy, BTU
23 instead of just kilowatt hours. BTU's are

1 reduced because of electricity versus
2 gasoline.

3 Q. But would you agree that to the extent the
4 customer is offered this, this is growing
5 load rather than reducing it?

6 A. Well, it's -- the incentive is from
7 nine a.m. to -- nine p.m. to five a.m. By
8 five a.m., it's no longer incenting the
9 charging. So that would be not incenting
10 them to charge it at that time. Incenting
11 them to charge during the night when we
12 don't typically have problems. But you get
13 closer to the early morning, you know, this
14 is when it starts becoming an issue.

15 Q. So it's kind of a load shifting measure?

16 A. Yes.

17 Q. Okay. Let's talk about the rate payer
18 impact measure test or the RIM test for
19 short. You've testified that that's -- you
20 considered that the proper means of gaging
21 cost effectiveness?

22 A. That's correct.

23 Q. Now, you recognize the RIM is only one of

1 five cost effectiveness tests, right?

2 A. I don't know what the other four are. I
3 know what the -- a couple of others are, but
4 I know about the RIM test and the TRC test.

5 Q. Well, have you read the Nexant report that
6 we discussed earlier?

7 A. I have.

8 Q. And it has all five, doesn't it?

9 A. I don't know what all five it has. It might
10 have the societal cost test. It might have
11 utility cost, participant test maybe.

12 Q. Right.

13 A. Those are the five. I just remembered.

14 Q. Okay.

15 A. You're talking really fast.

16 Q. Sorry. I'm just trying to --

17 A. It's late.

18 Q. I appreciate that --

19 A. Okay.

20 Q. -- for sure. I'll slow down. Don't all the
21 tests provide useful information?

22 A. They provide information. I don't know how
23 useful all of the tests are.

1 Q. Well, doesn't looking to all of them provide
2 a more comprehensive picture than focusing
3 on just one?

4 A. It can provide information, but ultimately
5 we're looking at not subsidizing. We're
6 looking at programs that don't require
7 subsidization. That's what the RIM test
8 does.

9 Q. Well, when you evaluate your supply-side
10 proposals under different future natural gas
11 and carbon price scenarios, isn't that to
12 give the Commission a comprehensive picture
13 of --

14 A. Yes.

15 Q. So --

16 A. We look at the demand-side under different
17 natural gas as well and carbon.

18 Q. You did?

19 A. Yes.

20 Q. Okay. Did you subject your supply-side
21 proposals to the RIM test?

22 A. Yes. They all passed the RIM test.

23 Q. But they will raise rates, correct?

1 A. Yeah. But that's not the RIM test.

2 Q. The RIM test -- doesn't the RIM test answer
3 whether rates will rise?

4 A. No.

5 Q. It doesn't?

6 A. No.

7 Q. Okay. Now, you mentioned a moment ago the
8 utility cost test now called the program
9 administrator cost test. Would you agree
10 the question answered by that test is
11 whether utility bills will increase?

12 A. No. I really -- I am familiar with it. I'm
13 familiar with the name, but I'm not really
14 familiar with its application because I
15 don't see it as very informative.

16 Q. So you can't say whether the scores that are
17 yielded from that cost effectiveness test
18 show whether all customers would benefit?

19 A. As with the RIM test. The RIM test is the
20 ultimate measure of whether all customers
21 can benefit.

22 Q. Based on rate increases?

23 A. Based on no cross subsidization from other

1 -- from customers. It doesn't -- if a
2 program passes as a RIM test, it does imply
3 placing downward pressure on rates. It
4 doesn't mean no rate increases. It means
5 downward pressure on rates when compared to
6 the alternative.

7 Q. But couldn't you have a situation where a
8 RIM score is negative? In other words,
9 fails a RIM test but average bills would
10 still decrease as evaluated by the program
11 administrator cost program?

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

14 Q. So if I heard you correctly a moment ago,
15 all of the measures the company considered
16 were subjected to the RIM test?

17 A. Yes.

18 Q. Over what time frame was that analysis
19 conducted?

20 A. It all depended on which -- which one --
21 which project we're talking about or what --
22 over the relevant time frame. I'll answer
23 it that way.

1 Q. So the DSM proposals that you considered,
2 what time frame did you --

3 A. Generally it's tied to the equipment life
4 associated with, for example, the thermostat
5 equipment life. How long does a thermostat
6 -- pardon me -- normally last? I'm guessing
7 -- I don't recall the specifics on that one.

8 Q. And --

9 A. Ten years maybe. I'm guessing. I shouldn't
10 have said that.

11 Q. And the avoided costs that you compared it
12 to, did it include capacity cost?

13 A. Avoided capacity. Demand-side options we
14 look at. That's when we talk about
15 evaluating them on a consistent basis to
16 whether or not they can provide capacity or
17 not.

18 Q. Okay. Just a few more questions, sir. This
19 past winter was warm I think you said
20 before. It was a mild winter?

21 A. It was.

22 Q. And there weren't any reliability concerns
23 this winter, correct?

1 A. That's correct.

2 Q. So what if that's the trend? What if
3 winters keep getting milder?

4 A. I just think that's -- now you're
5 speculating.

6 Q. I am. But you've acknowledged in your
7 testimony that we are facing a climate
8 crisis, correct?

9 A. No, I didn't acknowledge.

10 Q. In your deposition?

11 A. I said I don't know.

12 Q. You don't know?

13 A. I don't know.

14 Q. Now, when the company -- no one can predict
15 the weather as you said before. But when
16 the company tries to do a projection about
17 what they think things are going to be like,
18 they use a historical test and they
19 normalize weather, right?

20 A. That's right. We look at history as a guide
21 to what weather could be.

22 Q. Okay. But if you spin it forward and if
23 winter is getting warmer, then you wouldn't

1 need as much -- if winters are getting
2 warmer, you wouldn't need as much capacity
3 as you're claiming here, right?

4 A. If it was -- if there was a discernable
5 measurable increase in winter weather, is
6 that what you're asking about? Higher
7 temperatures.

8 Q. Let's suppose in the next ten years you
9 don't have any winters where the temperature
10 falls below your design value that you use
11 in your analysis.

12 A. I would be surprised.

13 Q. But in that case, the capacity would be
14 excessive or would be unnecessary, right?

15 A. In that case, yes. But I also notice it was
16 forty degrees below zero in Chicago last
17 winter. I mean, who would have thought
18 that?

19 Q. Well, this is Alabama, not Chicago.

20 A. Well, okay. Vortices come and vortices go.
21 It's hard to predict what the winter is
22 going to be. That's part of our issue with
23 the winter.

1 Q. Okay.

2 A. Variations are large.

3 Q. So you don't see much risk that you'll be
4 wrong in your projections?.

5 A. We don't forecast -- we don't forecast the
6 weather.

7 Q. But you're saying you need -- you need this
8 new capacity for reliability concerns going
9 forward?

10 A. That's correct.

11 Q. So if you're wrong, why should all the risk
12 be on your customers?

13 A. Well, what if we're right?

14 Q. Well --

15 A. I mean, that's why it's a -- it's a
16 probability game.

17 Q. Right.

18 A. So we are looking at reasonable information
19 here, history to guide us to what we have
20 seen observable weather here for the past
21 decades. Based on that, going through that
22 analysis to identify what our target reserve
23 margin should be. I mean, but back in 2014,

1 the last polar vortex we had that made its
2 way to Alabama, we ended that winter with
3 well over forty percent reserves and we
4 nearly had to shed load. So now we're
5 talking about twenty-five percent. I mean,
6 that tells me that we'll still have load
7 shedding events. There's a good chance that
8 that could happen. We don't want it to
9 happen. But I'm just saying weather is kind
10 of a fickle thing.

11 Q. Okay. So if you're confident that you're
12 not wrong and that consumers aren't going to
13 be faced with the stranded asset risk --

14 A. I'm confident.

15 Q. -- then why didn't the company put its
16 shareholders into the game like it did in
17 the '90's?

18 A. Because it's a different situation.

19 Q. How is it different?

20 A. I explained that already. I explained that
21 that was on the heels of stranded cost
22 legislation. That was putting assets --
23 identifying what should be subjected to the

1 stranded cost calculations at that time.
2 We're not -- we're not in that situation
3 today.

4 Q. So if the Legislature were proposing a bill
5 that created the prospect that that might
6 happen, then the company might --

7 A. We would revisit that at that time.

8 Q. Okay. But not in order to protect your
9 customers?

10 A. Well, you know, I think I mentioned that
11 this asset is one of the better performing
12 assets that we would have on our system, if
13 not the best. We're talking about Barry 8,
14 I guess?

15 Q. Sure.

16 A. Or are we talking about all of them? I
17 don't know. Highly efficient machines. And
18 these aren't the ones that I would be
19 concerned about in that situation that you
20 described.

21 Q. Okay. So why not put your shareholder money
22 where your mouth is?

23 A. I just -- what I just said is there are

1 other options besides that asset that we
2 would be looking. As described, if natural
3 gas -- I'm not trying to envision this
4 future that you're creating with the
5 stranded asset or whatever word you used.
6 There are other assets that we would be
7 looking at to remove from our system under
8 that scenario thereby making these even more
9 cost effective.

10 Q. Okay. I remembered just one last question.
11 I want to go back to your discussion with
12 Ms. Csank about displacement of less
13 efficient resources.

14 A. Okay.

15 Q. So you've said that Barry Unit 8, for
16 example, would displace less efficient gas
17 or coal resources and thereby save customers
18 money?

19 A. That's correct.

20 Q. But aren't you saying in this case that you
21 need this additional capacity on top of what
22 you already have?

23 A. I'm saying that we need capacity,

1 twenty-four hundred megawatts of reliable
2 cost effective capacity. So yes. We're
3 adding capacity here. And the combined
4 cycle provides capacity and it provides
5 energy benefits. So does the solar battery,
6 by the way. It provides capacity and energy
7 benefits.

8 Q. I agree.

9 A. That's why we selected them.

10 Q. But you're saying you need this capacity on
11 top of the capacity you already have?

12 A. That's right.

13 Q. Why would there be displacement?

14 A. Because when we had the capacity -- because
15 it will dispatch in front of the other units
16 that I'm talking about. It will offload
17 them. They will not run as much once these
18 other units -- if they are approved, once
19 they're put in our system, they will offload
20 the other more less efficient units.

21 MR. EBERSBACH: Okay. Thank you very
22 much. That's all I have, sir.

23 ALJ GARNER: Anything from the Coal

1 Association?

2 MR. CAGLE: No, Your Honor.

3 ALJ GARNER: American Senior Alliance?

4 MR. HOOPER: Your Honor, we have no
5 questions for Mr. Kelley.

6 ALJ GARNER: Energy Fairness.

7 MR. GRIFFIN: (Shaking head in the
8 negative.)

9 ALJ GARNER: I see a no.

10 MR. GRIFFIN: No.

11 ALJ GARNER: Alabama Solar Industry
12 Association.

13 MS. HOWARD: Yes, Your Honor.

14 CROSS-EXAMINATION

15 BY MS. HOWARD:

16 Q. Good evening, Mr. Kelley.

17 A. Evening.

18 Q. I'm Jennifer Howard. I represent the
19 Alabama Solar Industry Association. We met
20 during your deposition in this matter.
21 There's been a lot of talk in this hearing
22 about an anticipated winter reliability
23 deficit. But isn't it --

1 ALJ GARNER: Can you pull the
2 microphone close to you? Thank you.

3 MS. HOWARD: Beg your pardon. Shall I
4 repeat the question?

5 ALJ GARNER: Why don't you do that.

6 Q. There's been a lot of talk in this hearing
7 about an anticipated winter reliability
8 deficit. But isn't it also true that
9 Alabama Power anticipates there being a
10 summer reliability deficit?

11 A. There is a summer reliability deficit, but
12 it's farther out in time. So yes.

13 Q. What do you mean when you say it's farther
14 out in time?

15 A. I mean it's -- I was looking for it actually
16 in the IRP document. If you'll bear with me
17 just one moment. What I mean is that we --
18 it's farther out in time, like 2027 or 2028
19 before we hit the summer reliability
20 deficit. So if you solve the winter
21 problem, you're solving the summer problem.

22 Q. When your deposition was taken last month,
23 you did not have an estimate at that time as

1 to the size of the --

2 A. It's twenty-eight. I'm sorry to interrupt
3 you. I just found it. Twenty-eight pages.
4 But I did find it. Farther out in time.
5 20 -- it was the year 2027 that we have a
6 deficit. And that grows on out. So we're
7 talking about seven years later.

8 Q. To be clear, a summer reliability deficit
9 could result in expected unserved energy
10 which is another way of saying blackouts for
11 customers, correct?

12 A. Anytime we have a deficit, it increases the
13 prospect for blackouts, yes. But, again, if
14 we meet the winter problem, we will solve
15 the summer problem. The summer problem is
16 forty-five megawatts in the year 2027. So
17 if we add twenty-four hundred megawatts for
18 the winter, we'll have more than solved the
19 summer problem.

20 Q. Adding solar energy to the grid can result
21 in certain avoided costs to the system,
22 correct?

23 A. Yes. Yes.

1 Q. Is it fair to say avoided costs means all
2 the costs that the company would otherwise
3 incur to produce energy from some other
4 unit?

5 A. Yes.

6 Q. Isn't it true that solar results in greater
7 avoided costs during the day in the
8 summertime than wintertime?

9 A. Yes.

10 Q. There are incidences where a generating
11 resource can provide cost benefits that
12 would justify adding that resource to the
13 grid even if there's not a specific capacity
14 need, correct?

15 A. I suppose there could be such as
16 transmission or something of that nature.

17 Q. You're familiar with the fact that the
18 Georgia Public Service Commission has
19 approved a framework for determining the
20 costs and benefits of renewable resources?

21 A. I've heard of it.

22 Q. But Alabama Power has not done and this
23 Commission has not approved a similar type

1 of framework that would document in general
2 how Alabama Power measures the various value
3 strains of solar, correct?

4 A. Everything -- well, yes. A lot of things
5 there. Everything that's included in that
6 document is things that we value, benefits
7 and costs. They may have added some unique
8 things for Georgia. But in general, avoided
9 capacity, avoided energy, any ancillary
10 services that solar or any renewable can
11 provide, any transmission or distribution
12 losses. All of those things are -- to the
13 extent that they are relevant, we include
14 them. Whether you call it a renewable cost
15 benefit framework or not is really -- you
16 know, it's just words.

17 Q. I understand it's your position that you
18 include them. But you don't have a separate
19 document that sets out how you measure those
20 values that's like the framework in Georgia,
21 do you?

22 A. It's the same thing. I don't know if we
23 have a separate document or not, but it's

1 the same thing. We do the same process
2 unless there's something unique to Georgia.
3 Sometimes they put some things in there that
4 is unique.

5 Q. You don't know if you assigned the exact
6 same dollar value to the exact same dollar
7 stream as the Georgia framework, do you?

8 A. It's the same concept. Whether they're --
9 whether they are on the exact same numbers
10 or not, I don't know because each project is
11 unique. It has different transmission
12 implications. It has different ancillary
13 services implications. It has different
14 capacity implications based on its load
15 shape.

16 Q. You don't have a document that sets forth
17 how you measure those dollar values, do you?

18 A. No. I -- no. It has nothing to do with not
19 having a document.

20 Q. I'm sorry. I may have --

21 A. It has nothing to do with not having a
22 document. We evaluate each project's costs
23 and benefits unique to that project.

1 Q. I understand you're saying that you value --
2 that you assign values on a project to
3 project basis?

4 A. Uh-huh.

5 Q. And all I'm talking about is something
6 different which is you don't have a study, a
7 document, a framework like the one in
8 Georgia that sets out in writing how you
9 measure each of those values in every
10 project?

11 A. It's inherent in our process. Everything we
12 do is documented in our process for all of
13 those values. It's not different from
14 Georgia unless, as I said again, Georgia had
15 something unique to Georgia, which I don't
16 know if they do.

17 Q. And you don't know how your values compare
18 to theirs?

19 A. No, because I don't know if they've added
20 things that aren't relevant.

21 Q. And this Commission has not approved the
22 measurements that you're assigning, has it?

23 A. We would -- we go over -- if we were to do a

1 project, this Commission would approve
2 everything that we do. They would look at
3 the benefits and the costs. We would
4 demonstrate them, and they would make a
5 judgment.

6 Q. Not in terms of an overall measurement
7 that's going to be applied in all cases,
8 correct?

9 A. Each project is unique. Look at the
10 benefits and the costs. I don't think you
11 can over -- I'm not trying to be evasive.
12 You just can't simply identify and say this
13 is a number that you put in for each
14 project. I don't think that's what they do
15 in Georgia either. I think the framework is
16 the key -- is the key description there.

17 Q. And do you have a single report that would
18 characterize in general or document in
19 general how Alabama Power values the various
20 value streams of solar?

21 A. I don't know if we have a single document
22 that does that.

23 Q. Alabama Power customers have expressed a lot

1 of interest in solar, correct?

2 A. I'm aware that there are customers that have
3 interest in solar.

4 Q. In fact, you told me in your deposition that
5 Alabama Power has been working with a number
6 of major companies to locate solar on their
7 premises or get them access to solar energy,
8 correct?

9 A. Yes. That's correct.

10 Q. It's fair to say that some of these
11 companies are interested in obtaining more
12 of their energy from solar, correct?

13 A. Yes.

14 Q. Some of these companies also have
15 sustainability goals to lower their carbon
16 footprint, correct?

17 A. Correct.

18 Q. And we've spoken some today about the 2015
19 RGC proceeding?

20 A. Yes.

21 Q. And Ms. Noel Cain testified on behalf of
22 Alabama Power in that proceeding, correct?

23 A. Yes.

1 Q. And she testified that the 2015 RGC
2 proceeding was primarily driven by customer
3 interest both from the military bases at
4 Fort Rucker, the Anniston Army Depot and
5 Maxwell Air Force Base as well as the
6 private sector, correct?

7 A. Yes.

8 Q. And do you agree that -- are you aware that
9 nearly half of the nation's Fortune 500
10 companies have renewable mandates or goals
11 of some kind, some of which have a goal of
12 using a hundred percent renewable energy?

13 A. I'm not aware of the exact number, but I
14 wouldn't be surprised.

15 MS. HOWARD: Your Honor, may I
16 approach the witness?

17 ALJ GARNER: You may?

18 Q. This was a deposition exhibit, Exhibit 10 to
19 your deposition. And I apologize. Those
20 are all the copies that I have.

21 ALJ GARNER: It appears to be the
22 transcript from Docket 32382

23 MS. HOWARD: Yes, sir. Do you want to

1 see it?

2 MR. McCRARY: I thought we covered
3 this with our pre-hearing conference about
4 requisite copies and such. That was --

5 MS. HOWARD: I apologize if I
6 misunderstood something. My understanding
7 was that we actually only needed one copy of
8 deposition exhibits.

9 ALJ GARNER: There may have been some
10 confusion. We'll work with it.

11 Q. I'll direct you, sir, to Ms. Cain's
12 testimony at page twenty-five. And in that
13 proceeding she testified that nearly half of
14 the nation's Fortune 500 companies have
15 renewable mandates or goals of some kind,
16 some of which have a goal of using a hundred
17 percent renewable energy, correct?

18 A. Yes. I see that.

19 Q. Some of your prospective customers have
20 indicated that they may base their decision
21 as to where to locate their businesses in
22 part on whether they have access to
23 renewable energy. Isn't that true?

1 A. That's true.

2 Q. And you are aware that some employers may be
3 attracted to locate in a particular state
4 based in part on whether they will have
5 access to renewable energy?

6 A. Yes.

7 Q. Do you believe that adding more power from
8 renewables can position the State of Alabama
9 to better compete with other states for new
10 business?

11 A. I believe that's true in certain cases.
12 Yes.

13 Q. In fact, Ms. Cain affirmatively testified to
14 that in the 2015 RGC proceeding, correct,
15 beginning on page ninety-four?

16 MR. McCRARY: Your Honor, if I could
17 object. It appears she's asking the witness
18 to read some sworn testimony from someone
19 else and ask if that's what it says. I
20 don't think this is very helpful at eight
21 fifteen or particularly relevant.

22 ALJ GARNER: Well, it's in reference
23 to a transcript.

1 A. Okay. I'm on page ninety-four. Which line
2 are we talking about?

3 Q. Beginning on line twenty-two.

4 A. Twenty-two. Okay.

5 Q. Talking about how adding more power from
6 renewable can position the state of Alabama
7 to better compete with other states for
8 business.

9 A. Yes. I see what she said, and I agree there
10 are certain customer like data centers that
11 value this renewable.

12 Q. And if adding solar to the grid attracts new
13 customers, that can lead to load growth that
14 can put downward pressure on customer rates,
15 correct?

16 A. That could happen.

17 Q. Similarly as having more solar on the grid
18 helps avoid the loss of existing customers
19 who are wanting access to renewable energy.
20 That would lead to load retention. That
21 would put downward pressure on customer
22 rates, correct?

23 A. That could happen.

1 Q. Do you agree that solar development can
2 support local economic development through
3 new jobs and increased tax revenues to
4 cities and counties?

5 A. Yes.

6 Q. Does Alabama Power have a role to play in
7 supporting the local economies of Alabama's
8 cities and counties?

9 A. Yes.

10 Q. And adding solar energy to the grid has the
11 additional benefit of helping Alabama Power
12 comply with environmental air emissions
13 laws, correct?

14 A. That's another benefit.

15 Q. Of all the projects proposed in this
16 petition, the five solar plus battery
17 projects are the most cost effective,
18 correct?

19 A. Over the range of scenarios, that's correct.
20 Over all event scenarios that we looked at,
21 five that we -- the five that we
22 recommended, yes. Not the seven, though,
23 that we rejected.

1 Q. And you have no cost comparison between the
2 cost of the latest solar plus battery
3 bidders -- strike that. You screened out
4 certain solar plus battery projects that
5 were bid for various reasons including cost,
6 correct?

7 A. Yes.

8 Q. And there were about six hundred megawatts
9 of solar plus battery projects that were
10 screened out, correct?

11 A. Five hundred and sixty megawatts.

12 Q. And you do not have a cost comparison that
13 would compare the cost of those six
14 hundred -- excuse me. How much did you say?
15 Five hundred?

16 A. Five sixty.

17 Q. Five hundred and sixty. You do not have a
18 comparison that would compare the cost of
19 the those five hundred sixty megawatts of
20 solar projects to a high gas cost scenario?

21 A. No.

22 Q. And your last RFP for solar was from 2018,
23 correct?

1 A. Yes.

2 Q. And you have no cost comparison between the
3 cost of those bids to a high gas cost
4 scenario, correct?

5 A. That's correct. Unnecessary. It would be
6 unnecessary to do that.

7 Q. And you have no analysis of what the pricing
8 would be for solar projects larger than
9 eighty megawatts, correct?

10 A. That's right.

11 Q. And isn't it true that you cannot name a
12 single time that a solar photovoltaic
13 facility in the Southern Company's fleet has
14 had a forced outage due to cold
15 temperatures?

16 A. I cannot name a single time unless you count
17 being dark when there's zero megawatts, and
18 then that would be a time.

19 Q. And Alabama Power has no studies or analysis
20 that would indicate solar generating assets
21 have any vulnerability to forced outage in
22 cold temperatures, correct?

23 A. Other than what I just said.

1 Q. Meaning being dark?

2 A. Yes. I mean, typically the cold
3 temperatures are when it's dark. I mean, I
4 guess it could be cold during the day, but
5 we don't -- the load isn't down.

6 Q. You agree that historically gas prices have
7 been more volatile than the prices of other
8 fuel?

9 A. Historically, yes. Going back in history
10 ten, twenty years, but not in recent times.

11 Q. Do you agree there's a risk that if there
12 were new carbon regulation in the future,
13 that would drive up the price of fuel such
14 as gas?

15 A. It could. It could. I don't know if it
16 would or not.

17 Q. Well, would you agree that those costs could
18 be significant?

19 A. I don't know what significant means.

20 MS. HOWARD: Your Honor, may I
21 approach?

22 ALJ GARNER: Yes. What have we got?

23 MR. HOWARD: Your Honor, deposition

1 Exhibit 18 from Mr. Kelley's deposition was
2 quite voluminous. I'm prepared to enter
3 only excerpts as an exhibit if that would be
4 acceptable.

5 ALJ GARNER: 18 is the large binder?

6 MS. HOWARD: Correct.

7 ALJ GARNER: And you've got the
8 excerpt script?

9 MS. HOWARD: Correct.

10 ALJ GARNER: Okay. You might want to
11 discuss that with Mr. McCrary.

12 MS. HOWARD: Okay.

13 MR. MCCRARY: And 18 is the whole --
14 what is 18?

15 MS. HOWARD: That's the whole thing
16 that was marked in the deposition

17 ALJ GARNER: And these are excerpts
18 from --

19 MS. HOWARD: These are excerpts from
20 the form 10-K that was marked as Exhibit 18
21 to Mr. Kelley's deposition. And for the
22 record, the first part of this is continuous
23 from the first page through page I-35 and

1 then -- excuse me -- I-36. Then it's skips
2 to the signature page which is near the end
3 of the document.

4 ALJ GARNER: All right. I've marked
5 the transcript that was previously
6 introduced as Alabama Solar Industry
7 Association Exhibit 1. This will be Alabama
8 Solar Industry Association Exhibit 2.

9 MS. HOWARD: Thank you, Your Honor.

10 Q. Mr. Kelley, I direct your attention to page
11 I-20.

12 A. Okay. I'm there.

13 Q. All right.

14 A. I-20.

15 Q. All right. And do you see the heading in
16 bold that says the Southern Company system
17 may be exposed to regulatory and financial
18 risks related to the impact of GHG
19 legislation, regulation and emission
20 reduction goals?

21 A. I see it.

22 Q. Skipping down to the second from last
23 paragraph on that same page, it says costs

1 associated with GHG legislation, regulation
2 and emission reduction goals could be
3 significant?

4 A. I see that.

5 Q. Did I read that correctly?

6 A. Yes.

7 Q. And going back to the first page, this is
8 the form 10-K that purports to have been
9 filed with the United States Securities and
10 Exchange Commission by Southern Company and
11 its affiliates, correct?

12 A. Yes.

13 Q. GHG in that statement would refer to
14 greenhouse gases, correct?

15 A. Correct.

16 Q. And the statement we just read about costs
17 that could be significant, such increased
18 costs could result in increased prices
19 charged to rate payers, correct?

20 A. Where was it again? I've already lost it.

21 Q. Page I-20.

22 A. Yes.

23 Q. Second from the last paragraph.

1 A. Uh-huh.

2 Q. Cost associated with the GHG --

3 A. Right. I'm just reading some other things
4 around it. For example, it talks about the
5 carbon reduction goal and to achieve these
6 goals, Southern Company expects to continue
7 growing renewable energy portfolio, increase
8 the use of natural gas for generation which
9 is exactly what we're doing here.

10 Q. My question is such increased costs that
11 this is talking about could result in
12 increased prices charged to rate payers,
13 correct?

14 A. It could. Yeah. With increased costs that
15 could happen. I'm just noticing there are a
16 lot of other things around that statement.

17 Q. Do you also agree that future governmental
18 limitations on fracking could increase the
19 prices of gas?

20 A. It could.

21 Q. And such limitations could have a material
22 impact on the supply and cost of gas. Do
23 you have any reason to dispute that?

1 A. If you restrict the supply, the prices will
2 go up.

3 Q. So no, you have no reason to dispute that?

4 A. No. I can't think of a reason.

5 Q. I'll direct your attention to page I-23 of
6 the exhibit. In bold near the bottom of
7 that page, in Alabama Power's filings to the
8 Securities and Exchange Commission it made
9 this statement on page I-23. Quote, The
10 Southern Company system may not be able to
11 obtain adequate natural gas, fuel supplies
12 and other resources required to operate the
13 traditional electric operating companies,
14 correct?

15 A. Yes. It says that, and then right under
16 that it says that's why we also purchased
17 other fuels including coal, uranium, fuel
18 oil, biomass. That's why we have a
19 diversity of fuel supply. One of the
20 risks -- I mean, the 10-K is just something
21 that identifies any risks anybody can think
22 of for the shareholders' benefit. That's
23 why we do things like have coal.

1 Q. Looking at the next page, I-24, on the
2 second paragraph -- second paragraph. Well,
3 I suppose it's the first full paragraph, the
4 second sentence.

5 A. Is this the one that was talking about
6 Southern Company Gas?

7 Q. That -- that paragraph, second sentence. It
8 says, quote, Natural gas supplies can be
9 subject to disruption in the event
10 production or distribution is curtailed such
11 as in the event of a hurricane or a pipeline
12 failure, unquote. And then skipping on to
13 the second to last sentence of that same
14 paragraph it says, quote, The availability
15 of shale gas and potential regulations
16 affecting its accessibility may have a
17 material impact on the supply and cost of
18 natural gas, unquote.

19 A. Yes. That's talking about Southern
20 Company --

21 Q. Excuse me. Did I read that correctly?

22 A. You did. But that's talking about Southern
23 Company Gas. That's not -- that's a gas

1 subsidiary that relies on gas supply.

2 Q. Do you have anything to guarantee to this
3 Commission that you can procure gas at the
4 proposed gas burning facilities at the low
5 to moderate prices that you have projected
6 over the lifetimes of those facilities?

7 A. Are you talking about commodity or
8 transportation?

9 Q. Commodity.

10 A. Commodity. No. I rely on the -- the
11 forecast of supply and demand from Charles
12 River and Associates. And they predict a
13 pretty stable supply of gas at reasonable --
14 or different scenarios, low, medium and
15 high.

16 Q. And we talked earlier about the fact that
17 Alabama Power has asked for authority to
18 pursue up to two hundred megawatts of
19 demand-side management, correct?

20 A. Yes. And distributed energy resources.

21 Q. Well, that was the -- my question, sir. You
22 would like for at least some of that
23 demand-side management to be comprised of

1 distributed energy resources --

2 A. That's correct.

3 Q. -- located on or near customers' property,
4 correct?

5 A. Yes.

6 Q. And for this purpose, you've been
7 considering renewable distributed energy
8 solar paired with battery projects, correct?

9 A. That's one of the distributed energy
10 resources that we're looking at. Yes.

11 Q. And we talked earlier about the fact before
12 you filed the petition in this matter, you
13 gave presentations to the Office of the
14 Attorney General and also to the AIEC and
15 Manufacture Alabama, correct?

16 A. I don't know if I gave the presentations,
17 but somebody at Alabama Power did.

18 Q. But Alabama Power did not give a
19 presentation to the Alabama Solar Industry
20 Association, did it?

21 A. Not that I'm aware of.

22 Q. Are you aware of any effort that Alabama
23 Power has made to reach out to Alabama Solar

1 Industry Association, our state's local
2 trade association for companies in the solar
3 industry to try to communicate with them
4 about this petition or how you might
5 identify other solar projects.

6 A. I don't know. But I know a person on my
7 staff who deals with renewable energy
8 exclusively, and for all I know, she may
9 have -- I'm not aware.

10 Q. Not to your knowledge?

11 A. Not to my knowledge.

12 MS. HOWARD: Your Honor, I have two or
13 three questions that get into confidential
14 material, and that will be the conclusion of
15 my questioning.

16 ALJ GARNER: All right. Let's clear
17 the room.

18 (Whereupon, all those not
19 executing confidentiality
20 agreements left the hearing
21 room.)

22 ALJ GARNER: And once again, we'll
23 rely on the attorneys to tell me if we're

1 clear.

2 MS. HOWARD: Do we need to turn the
3 mikes off again?

4 ALJ GARNER: Yes. I will when we
5 start.

6 MR. McCRARY: I think we're good.

7 ALJ GARNER: All right. And, Court
8 Reporter, this portion of the transcript
9 will be under seal. All right.

10 (Whereupon, the following
11 testimony is confidential and is
12 under seal.)

13 Q. And, Mr. Kelley, we talked earlier about the
14 fact that you've been working with a number
15 of major companies to locate solar on their
16 premises or give them access to solar
17 energy?

18 A. Yes.

19 Q. And some of those companies include
20 Wal-Mart, Target, Evonik, a steel company
21 called SSAB, universities including Auburn
22 and UAB, some of the Wal-Mart suppliers,
23 Mercedes, Honda, Wells Fargo, Walgreens,

1 Olen, and Regions Bank, correct?

2 A. Yes.

3 Q. And those were just some of the ones you
4 could remember in your deposition, correct?

5 A. Yes.

6 Q. There are others as well?

7 A. There are.

8 Q. Since then have you recalled any others?

9 A. I know that there is a discussion --
10 potential discussion with U.S. Steel.

11 Q. Any others?

12 A. City of Birmingham. The City of Birmingham.

13 Q. And any others?

14 A. I don't recall any others right now.

15 Q. But there may be others?

16 A. It could be.

17 MS. HOWARD: Thank you, sir. That's
18 all I have.

19 ALJ GARNER: All right. We can have
20 everyone come back in the room.

21 (Whereupon, the hearing room was
22 re-opened to the public and the
23 confidential sealed testimony

1 was concluded.)

2 ALJ GARNER: Attorney General's
3 office. And you move for the admission of
4 Alabama Solar Industry Exhibit 1 and 2?

5 MS. HOWARD: Yes, sir, I do.

6 ALJ GARNER: Any objection?

7 MR. McCRARY: No, Your Honor.

8 ALJ GARNER: They are admitted. All
9 right. Ms. Martin.

10 CROSS-EXAMINATION

11 BY MS. MARTIN:

12 Q. Mr. Kelley, I'm Olivia Martin. We've met
13 before. I have just a couple of quick
14 questions. So I hope you give me the right
15 answers so I won't have to ask any
16 follow-up.

17 A. So do I.

18 Q. We have -- the demand-side options that are
19 issued in this petition, you're not asking
20 the Commission to approve those particular
21 programs today, just the amounts of the
22 demand-side options?

23 A. I think we're looking at the amount and

1 there might be some discussion about how
2 those are administered in the future. But,
3 you know, nothing -- we don't have anything
4 specific today.

5 Q. But all of those programs we filed at the
6 Commission and we can talk about them at a
7 later date?

8 A. Yes.

9 Q. Good. That was really the answer I wanted
10 to hear.

11 A. Good.

12 Q. And in your testimony and also in your
13 pre-filed testimony and then also tonight
14 you mentioned that in your demand-side
15 options you want to incent customers to
16 shift load from higher to lower cost
17 periods. And you used the incent and you
18 also used the word payout. And does Alabama
19 Power pay customers today for demand-side
20 options? Do they pay out any --

21 A. Yes.

22 Q. So explain to me, then, how all the programs
23 I'm aware of are revenue neutral. So how do

1 you have a revenue neutral program?

2 A. Okay. I'm thinking of like they are
3 industrial interruptible programs.

4 Q. Okay. All right. So not for homeowners?

5 A. Oh, the sensible switch program, the air
6 conditioner cycling program, we pay
7 customers to participate in that.

8 Q. Okay. And then we're throwing around the
9 term one point one billion dollars. Is
10 there any limit on that? Is the Commission
11 today approving you spending one point one
12 billion and perhaps more if there are cost
13 overruns?

14 A. It's my understanding that we're asking for
15 approval of the petition that includes
16 capital expenditures of one point one
17 billion, but there's also the PPA's which
18 are not capital expenditures, the PPA's that
19 were mentioned earlier.

20 Q. But if there were cost overruns in any of
21 these projects, if it went above the one
22 point one billion, what happens then?

23 A. Well, the way we structured these

1 arrangements, you know, hopefully that type
2 of thing does not happen because it's a big
3 price acquisition of buying a plant at a
4 known price. So that should be -- that's
5 the price. And then the construction of the
6 Barry 8 combined cycle, Mr. Bush can talk
7 more about this tomorrow. But the -- it's a
8 turn key proposal which means we are putting
9 majority of that cost on the developer and
10 they've given us a fixed price.

11 Q. Okay. And you also mentioned several times
12 that this new capacity that we're doing
13 could displace or offload other units that
14 were not as efficient. And so is it
15 probable that rate payers will have to pay
16 stranding costs for the displaced units?

17 A. No, because the -- no. We're talking about
18 fuel. We're talking about fuel costs. I
19 mentioned the large fuel savings. So that's
20 a fuel cost.

21 Q. So you're not anticipating that any other
22 facilities would be closed?

23 A. Well, later in time. I mean, some of our

1 plants are aging, getting older and reach
2 the end of their useful or depreciable
3 lives. That's a possibility.

4 Q. But there would be no premature closures of
5 other facilities?

6 A. Well, I don't -- at this moment I don't see
7 that.

8 MS. MARTIN: Okay. Thank you. No
9 further questions.

10 ALJ GARNER: All right. Anything from
11 the staff?

12 MR. FREE: No questions, Your Honor.

13 ALJ GARNER: All right. Redirect.

14 REDIRECT EXAMINATION

15 BY MR. McCRARY:

16 Q. Mr. Kelley, since you're my witness and
17 you've been on the witness stand for about
18 six hours and it's twenty minutes until
19 nine, I'll try to keep it short. Okay?

20 A. Okay.

21 Q. Earlier in the day Ms. Csank asked you about
22 the showings to secure a certificate under
23 Section 37-4-28. Do you recall that?

1 A. Yes.

2 Q. And she mentioned there were two showings,
3 an indication of need and an indication that
4 the resources to meet that need are cost
5 effective?

6 A. Yes.

7 Q. Do you recall that? Are there any other
8 types of resources that this Commission has
9 certified under that -- under that statute
10 that you're aware of?

11 A. Yes. The Greene County CT. The Greene
12 County CT back in the '90's, Barry 6 and 7,
13 our co-generation projects, the Calhoun and
14 the Harris PPA's. Right.

15 Q. And those were all reliability based?

16 A. Right. The Calhoun PPA extension.

17 Q. Right. Are there non-reliability based
18 resources that the Commission has certified
19 under that section?

20 A. Yes.

21 Q. Can you give an example?

22 A. The wind PPA's and some of the biomass
23 projects that we entered into ten years ago.

1 Q. And what type of showing has this Commission
2 required in those types of certification
3 requests?

4 A. We have to demonstrate that it was lower
5 than -- the projects were lower than our
6 projected avoided costs.

7 Q. You were also asked about community outreach
8 with regard to the Hog Bayou and Central
9 Alabama facilities. You recall that?

10 A. Yes.

11 Q. And you indicated that those are both
12 existing facilities and had been in place
13 for a number of years?

14 A. Correct.

15 Q. So Alabama Power is not proposing to build
16 anything in those locations, is it?

17 A. That's correct.

18 MS. CSANK: Your Honor, if I may just
19 launch an objection. These appear to be
20 leading questions and inappropriate for
21 redirect.

22 ALJ GARNER: Yeah. Let's be a little
23 less leading. I know the hour is getting

1 late.

2 MR. McCRARY: It is. Yes, sir.

3 Q. Are there benefits that you can think of,
4 Mr. Kelley, that those types of facilities
5 might provide to the local -- local economy
6 in those areas?

7 A. Yes. I would think. Yes. There are
8 benefits.

9 Q. Can you tell me what they are?

10 A. I would think that those power plants
11 provide jobs to those communities. People
12 running the plants, suppliers serving the
13 plants, vendors in whatever shape, form or
14 fashion in North Mobile and then
15 Billingsley, Alabama. In addition, the tax
16 revenue. They pay property taxes, and
17 they're probably a very significant source
18 of tax revenue.

19 Q. Are you generally aware of the efficiencies
20 of those various facilities in terms of
21 their heat rates?

22 A. Yes.

23 Q. Does that give you any basis for having an

1 opinion as to longevity of those resources
2 going forward?

3 A. Yes. As I stated, they're one of the more
4 efficient plants on our system. They would
5 be if they were approved.

6 Q. And even if they're not approved, would that
7 give you any opinion as to their
8 suitability?

9 A. Oh, I still think they would be very
10 suitable power plants. Even if they're not
11 approved, they would still -- they're still
12 low cost power plants. They could probably
13 find a buyer.

14 Q. You were asked some questions by Ms. Csank
15 about the twenty-four hundred megawatt
16 expansion. Let me ask you this. Is that
17 need request impacted by any unit
18 retirements?

19 A. Well, yes. The Gorgas retirement that we
20 had last year, the eleven hundred megawatts
21 and Barry 3. We had to retire Barry 3
22 because of government imposed environmental
23 mandates. Barry 3 was due to the MATS Rule

1 and Gorgas 8 through 10 due to the coal
2 combustion residuals rule.

3 Q. All right. And does the need also reflect
4 any retired -- any expiration of power
5 purchase agreements?

6 A. Yes. We have a purchase power agreement
7 expiring at the end of 2022.

8 Q. So approximately how many megawatts would
9 the Gorgas --

10 A. Eleven hundred.

11 Q. Eleven hundred. And then the -- what was
12 the other one that you --

13 A. Barry 3. It was two hundred megawatt, two
14 fifty maybe. The Calhoun PPA is seven
15 hundred.

16 Q. And so that's roughly two thousand megawatts
17 if I've added correctly?

18 A. Yeah.

19 Q. You were also asked some questions about the
20 renewable RFP and eighty megawatt limit
21 that's reflected in that.

22 A. I'm sorry. I just remembered it was Gorgas
23 6 and 7 in 2015, the MATS rule, another

1 hundred megawatts or so. We have some
2 retirements from environmental rules that we
3 have less capacity than we used to.

4 Q. And is the twenty-four hundred megawatt need
5 here partially reflective of those
6 retirements?

7 A. Yes.

8 Q. You were asked some questions about the
9 renewable RFP and the eighty megawatt limit
10 reflected in that solicitation, correct?

11 A. Yes.

12 Q. And the genesis of that eighty megawatt
13 limit is what?

14 A. That was from the Commission.

15 Q. Is there any comparable limit with respect
16 to renewables in the capacity RFP?

17 A. In the capacity RFP, I think we suddenly
18 wanted projects up to twelve hundred
19 megawatts.

20 Q. All right.

21 A. So no.

22 Q. You were asked a number of questions about
23 the possibility of purchasing capacity from

1 affiliates. Do you recall those questions?

2 A. Yes.

3 Q. Assuming for the sake of my question that an
4 affiliate had capacity to sell. Would you
5 anticipate those resources to be the most
6 beneficial to its own customers or the least
7 beneficial to its own customers?

8 A. This would be the least beneficial, their
9 highest cost capacity.

10 Q. And based on your experience, what type of
11 resources would those likely be?

12 A. Super critical coal units.

13 Q. And would super critical coal units present
14 costs or operational prospects that would be
15 attractive for Alabama Power Company?

16 A. No. They would be highly costly in cost and
17 may be of operational benefit -- operational
18 challenges.

19 Q. You provided some testimony regarding net
20 fuel savings associated with I know the
21 Barry 8 unit and perhaps the other gas fired
22 resources. Do you recall that?

23 A. Yes.

1 Q. And you referred to net fuel savings?

2 A. That's correct.

3 Q. How is that net value derived? Net of what?

4 A. Well, compared to the benchmark plan. In
5 other words, it's -- these units are being
6 dispatched against the avoided energy costs
7 generated by that benchmark plan. That
8 billion dollars of fuel savings is what I
9 was talking where it was offloading more
10 inefficient units.

11 Q. So does that include the cost of the fuel
12 for the --

13 A. Oh, yes.

14 Q. -- for the natural gas resources?

15 A. Yes. The cost to burn the fuel. Then the
16 benefits of what it is offloading.

17 Q. So is it cost of fuel burned minus cost of
18 fuel not burned?

19 A. Correct.

20 Q. You were asked questions about the DSM
21 potential study that was done in 2014. Do
22 you recall that?

23 A. Yes.

1 Q. What has avoided costs on Alabama Power's
2 system done since 2014?

3 A. The projections have declined and actuality
4 has declined as well.

5 Q. And does that have any implications for the
6 cost effectiveness of DSM programs?

7 A. Yes. It makes them less cost effective
8 because they're not avoiding as high -- as
9 much cost. Less valuable.

10 Q. You were asked some questions about the
11 Southern Company's low to no goal. Do you
12 recall that?

13 A. Yes.

14 Q. Are -- is that goal of Southern Company
15 predicated on any assumptions?

16 A. Yes. It's predicated upon access to low
17 natural gas -- continued access to low
18 natural gas prices and it is predicated upon
19 technological advancements between now and
20 2050 such as carbon capture and perhaps
21 sequestration.

22 Q. Now, if I look at -- withdraw that. You
23 were also asked a number of questions about

1 Alabama Power's ability to rely on excess
2 reserves in the Southern pool. Do you
3 remember those questions?

4 A. Yes, sir.

5 Q. Now, in Appendix 1 of the IRP, what is set
6 forth on Appendix 1 of the IRP?

7 A. Appendix 1 of the IRP. That's a list of
8 Alabama Power's existing supply-side
9 resources

10 Q. All right. And these are owned and
11 controlled resources?

12 A. Yes.

13 Q. And does that mean those are resources over
14 which Alabama Power has operational control?

15 A. Yes.

16 Q. And associated with the capacity. Does
17 Alabama Power have energy entitlement?

18 A. Yes.

19 Q. Would excess reserves that happen to be in
20 the Southern pool qualify for inclusion on
21 this list?

22 A. No.

23 Q. Why not?

1 A. Because the IIC is not a planning document.
2 It is an operating document that just
3 allocates existing resources after the fact.
4 We have no capacity or energy entitlement to
5 those temporary surpluses.

6 Q. You were asked a number of questions about
7 the two hundred megawatts of DSM and
8 distributed energy resources that are
9 included in the portfolio. Do you remember
10 those questions?

11 A. Yes.

12 Q. Do you have any sense of where those
13 resources might rank relative to the rest of
14 the portfolio?

15 A. They would probably be at the bottom. They
16 would be least cost effective because we
17 have to pay out the benefits to get the
18 participation.

19 Q. Now, Ms. Howard asked you some questions
20 about companies in Alabama Power service
21 territory who were interested in having
22 access to renewable energy or who have
23 carbon related goals. Do you recall those

1 questions?

2 A. Yes.

3 Q. Is there a Commission approved mechanism in
4 place for working with customers like that?

5 A. Yes. That's the RGC.

6 Q. Describe how the RGC is designed to work in
7 that regard.

8 A. The RGC is designed to work where we would
9 go and find the market for renewable
10 resources. It's mostly been solar if not
11 exclusively solar projects. We find those
12 projects the best most economic projects and
13 then we market those to our -- to customers
14 who are interested. So they are purchasing
15 a majority of the renewable attributes from
16 that project, and that's how they get
17 approved. It contemplates having customer
18 participation in the renewable projects.

19 MR. McCRARY: Your Honor, could I get
20 Alabama Solar Exhibit 1? I don't have a
21 copy of it.

22 ALJ GARNER: Sure.

23 MR. McCRARY: Thank you.

1 Q. Mr. Kelley, this testimony that you were
2 asked about in Alabama Solar Energy
3 Association Exhibit 1, that was testimony
4 from Ms. Cane in that RGC docket, is it not?

5 A. Yeah. I believe it's the transcript.

6 Q. And let me direct your attention to page
7 forty-six of that transcript.

8 A. Okay.

9 Q. And in particular, line five. And let me
10 ask you is there testimony from Ms. Cane as
11 to whether that is a needs bases, a
12 reliability based petition or something
13 else?

14 A. It's something else. The authority that
15 Alabama Power is requesting is not based on
16 a need for additional capacity or some
17 reliability need but rather is driven by
18 customer requests, preferences of that
19 nature; is that correct? And she says,
20 that's correct.

21 MR. McCRARY: And, Your Honor, I'm
22 sorry. Could I get the Exhibit 2? I'll
23 swap you and give this one back.

1 Q. Mr. Kelley, I'm going to hand you this
2 exhibit and ask you to look at page I-9.

3 A. Okay.

4 Q. And I'll direct your attention to the
5 paragraph next to the bottom -- near the
6 bottom on I-9.

7 A. Yes.

8 Q. The paragraph that says SCS acting as
9 agent --

10 A. Right.

11 Q. -- on behalf of, et cetera. Is there any
12 language there that addresses the issue of
13 reliance on natural gas for purposes of
14 normal operation of the Southern Company
15 units?

16 A. Yes. The last sentence says, Management
17 believes that these contracts provide
18 sufficient natural gas supplies,
19 transportation and storage to ensure normal
20 operations of the Southern Company system's
21 natural gas generating units.

22 Q. All right.

23 MR. McCRARY: That's all that we have,

1 Your Honor. Thank you.

2 ALJ GARNER: I need to get that
3 exhibit back. Thank you, sir. All
4 right. Nothing further for Mr. Kelley?

5 MR. McCRARY: No, sir.

6 ALJ GARNER: Mr. Kelley, I'm about
7 to tell you the words you've been waiting
8 on for over four hours. You are excused

9 THE WITNESS: Thank you.

10 ALJ GARNER: I don't know how
11 you're going to fare at dinner, though.
12 You made a lot of deferrals to some of
13 your co-workers. All right.
14 Mr. Kelley's direct and rebuttal
15 pre-filed testimony are admitted as are
16 all of his exhibits. And that will be
17 Alabama Power Exhibits 20 through 30.
18 All right. With that we are concluded
19 for the day. We will resume at nine in
20 the morning. Have a good evening.

21 (Whereupon, the proceeding was
22 recessed at approximately
23 8:53 p.m.)

CERTIFICATE

STATE OF ALABAMA

ELMORE COUNTY

I hereby certify that the above and foregoing proceeding was taken down by me in stenotype and the questions and answers thereto were transcribed by means of computer-aided transcription, and that the foregoing represents a true and correct transcript of the testimony given by said witnesses upon said hearing.

I further certify that I am neither of counsel, nor of kin to the parties to the action, nor am I in anywise interested in the result of said cause.

Signed the 14th day of March, 2020.

Virginia Denise Barrett

ACCR #458, Expires 9/30/20

My Commission Expires 9/9/23

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