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December 4, 2019

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*Via electronic delivery*

Walter L. Thomas, Jr., Secretary  
Alabama Public Service Commission  
RSA Union Building  
100 North Union Street, Suite 850  
Montgomery, AL 36104

**Re: Petition for a Certificate of Convenience and Necessity  
Docket 32953**

Dear Secretary Thomas,

On behalf of Sierra Club, we are submitting for filing the enclosed testimony along with supporting exhibits. As the supporting materials include information that is confidential and proprietary to Alabama Power Company and to third parties, we are providing both a public version and a non-public, confidential version to be retained under seal by the Commission.

Please contact me with any questions.

Sincerely,

  
Joel E. Dillard

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*Counsel for Sierra Club*

## CERTIFICATE OF SERVICE

I certify that copies of the foregoing have been served on the following this 4<sup>th</sup> day of December, 2019.

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*/s/ Joel E. Dillard*

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*Counsel for Sierra Club*

IN RE: Petition for a Certificate of Convenience and Necessity by Alabama Power Company )  
 )  
 ) Docket 32953

1    **Q.    STATE YOUR NAME AND BUSINESS ADDRESS.**

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

9 Q. DESCRIBE SIERRA CLUB AND ITS MISSION.

15 **Q. DESCRIBE SIERRA CLUB'S BEYOND COAL CAMPAIGN.**

1

1 energy economy, wherein we phase out power plants that burn fossil fuels like coal and  
2 gas, and secure the wide-ranging benefits of clean energy – including reduced and stable  
3 electricity rates – for all communities. By clean energy, I mean renewable energy like  
4 power plants fueled by solar and wind energy, energy storage, and energy efficiency. The  
5 Campaign advocates a just transition to clean energy locally, in the Mobile Bay Area, and  
6 all across Alabama and the rest of the country by: intervening, submitting comments,  
7 providing testimony, and presenting experts in energy-related proceedings; participating  
8 in public hearings and workshops; speaking to students, civic organizations, and other  
9 stakeholders; and holding trainings and symposia – all to advance a just transition to a  
10 clean energy economy.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. I show that Sierra Club is an association that meets the Commission’s requirements to  
13 participate as a party in this case. Specifically, I show that: (a) Sierra Club’s members  
14 would otherwise have standing to participate in their own right, because many members  
15 are Alabama Power customers whose substantial interests may be injured by the outcome  
16 of this case; (b) the interests Sierra Club seeks to protect are germane to its purpose; and  
17 (c) neither the claim asserted nor the relief requested requires the participation of  
18 individual members in this case.

19 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY’S PLANNED**  
20 **ENERGY RESOURCE ADDITIONS?**

21 A. I read the Company’s petition for certification. It identifies the resource additions as (1)  
22 building a large (more than 700 megawatt (MW)) gas plant at the Company’s Barry site,  
23 called Barry 8; (2) acquiring an even larger (around 900 MW) gas plant, in Autauga

1 County, called the Central Alabama Generating Station; (3) purchasing over 200 MW of  
2 energy from yet another gas plant in the Africatown Historic District, called the Hog  
3 Bayou Energy Center. The total capacity for these gas resources is approximately 1,800  
4 MW. By contrast, the Company plans to add much smaller amounts of clean energy  
5 resources, approximately 340 MW of solar paired with storage, and 200 MW of demand  
6 side management and distributed energy resource programs.

7 **Q. HOW MANY SIERRA CLUB MEMBERS LIVE IN ALABAMA?**

8 A. More than 3,900 as of October 2019, including more than 200 members in Mobile  
9 County, and likewise more than 200 members in Baldwin County, Alabama.

10 **Q. HOW MANY MEMBERS LIVE IN ALABAMA POWER'S SERVICE AREA?**

11 A. Approximately 2,500 members live in Alabama Power's service area, which means they  
12 either receive service directly from the Company or from another entity that relies on the  
13 Company's service.

14 **Q. WHERE DID YOU GET THESE NUMBERS?**

15 A. The membership numbers are from Sierra Club's membership database, which includes  
16 each member's current address.

17 **Q. WHAT ARE THE INTERESTS OF SIERRA CLUB AND ITS MEMBERS IN**  
18 **THIS CASE?**

19 A. As discussed in Sierra Club's motion to intervene, because the Commission will decide  
20 whether to deny, approve, or approve with conditions the Company's planned energy  
21 resource additions, this case will affect a range of interests of Sierra Club and its  
22 members. These interests include the direct financial interest of the many Sierra Club  
23 members who are the Company's customers and therefore will bear the rate impacts of

Commission's decision. Likewise, Sierra Club and its members have substantial interests in securing the wide-ranging benefits of clean energy, such as the solar paired with storage, demand-side management, and distributed energy programs under review. These benefits include but are not limited to reducing the cost of their electric service because clean energy resources have *no* fuel costs, and also serve as a hedge against the fuel price and supply risks associated with the rest of the Company's resources that rely on fossil fuels like gas and coal. Similarly, Sierra Club and its members have a substantial interest in avoiding the wide-ranging costs and risks of dirty energy, such as the gas-burning power plants under review. The costs and risks include but are not limited to those associated with the pollution and environmental degradation arising from extracting, piping, and burning gas, including in the areas where the members live, work, and recreate, as well as the environmental compliance activities to abate the resulting pollution. Relatedly, Sierra Club and its members have a substantial interest in stemming the catastrophic climate damages caused by burning fossil fuels – damages that members have already experienced and are particularly vulnerable to experiencing more in the coming years.

**Q. ARE THERE ANY OTHER INTERESTS OF SIERRA CLUB AND ITS MEMBERS YOU WOULD LIKE TO HIGHLIGHT?**

A. Yes. Sierra Club and its members have a vital interest in stemming damage from the climate crisis. People in coastal areas like the Mobile Bay area are especially vulnerable to this damage and so it is not surprising that local members, including those who took the time and courage to provide their testimony in this case, are gravely concerned that the Company's plan would exacerbate this crisis – by adding mostly gas-burning power plants to its system, while also indefinitely running its old fossil fuel-burning plants. .

1 This is why Sierra Club and its members' advocacy for a just transition to clean energy  
2 stresses that this transition will also help address the climate crisis.

3 **Q. DOES CLIMATE CHANGE IMPACT SIERRA CLUB MEMBERS AND IF SO,**  
4 **HOW?**

5 A. Yes, definitely. Impacts include damage to property from increasingly severe weather,  
6 like more dangerous hurricanes and flooding, as well as more intense heat. There are also  
7 climate change induced impacts on our environment – that Sierra Club members enjoy  
8 when engaging in outdoor activities, like gardening, hiking, boating, or going to the  
9 beach – but is now suffering from climate change impacts. For example, extreme drought  
10 conditions caused by climate change is drying up streams and creeks and lowering river  
11 levels. Climate change spreads diseases and causes algae blooms in Alabama's Gulf  
12 Coast waters, killing aquatic life. All of these impact Sierra Club members who partake  
13 in activities like hiking, boating, or enjoying the beach.

14 **Q. WHAT IS THE POSITION OF SIERRA CLUB ON CONTINUED RELIANCE ON**  
15 **FOSSIL FUELS AS AN ENERGY SOURCE?**

16 A. Sierra Club members oppose fossil-fired electric generation and support clean and  
17 renewable sources of electricity like solar and wind energy, along with storage and  
18 energy efficiency programs.

19 **Q. WHAT TYPE OF RELIEF DOES SIERRA CLUB SEEK IN THIS CASE?**

20 A. I need to start with the caveat that discovery is still ongoing in this case and so Sierra  
21 Club reserves its right to specify the relief that it seeks. That said, Sierra Club will seek  
22 outcomes that are consistent with it and its members' substantial interests, and will not  
23 seek money damages. Therefore, participation by its members is not required.



BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

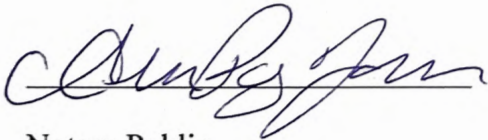
DIRECT TESTIMONY OF STEPHEN STETSON ON BEHALF OF SIERRA CLUB

Stephen Stetson, being first duly sworn, deposes and says he has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of his knowledge, information, and belief.



Stephen Stetson

Signed and sworn to before me on  
this 4<sup>TH</sup> day of DECEMBER 2019.



Notary Public



IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

1     **Q.     STATE YOUR NAME AND ADDRESS FOR THE RECORD.**

3    **Q.    HOW LONG HAVE YOU LIVED AT THAT ADDRESS?**

5 Q. ARE YOU AWARE THAT ALABAMA POWER COMPANY PLANS TO ADD A  
6 LARGE PORTFOLIO OF ENERGY RESOURCES TO ITS SYSTEM, AND  
7 THAT, TO DO SO, IT SEEKS A CERTIFICATE OF CONVENIENCE AND  
8 NECESSITY FROM THE ALABAMA PUBLIC SERVICE COMMISSION?

10     **Q.     ARE YOU AWARE THAT THE COMMISSION IS CURRENTLY REVIEWING**  
11           **WHETHER SUCH A CERTIFICATE SHOULD BE ISSUED, AND THAT IT HAS**  
12           **ALLOWED SIERRA CLUB TO PARTICIPATE AS A PARTY IN THE CASE**  
13           **DEDICATED TO THIS REVIEW?**

15     **Q.   HOW DID YOU LEARN ABOUT THE COMPANY’S PLAN AND THE**  
16     **COMMISSION’S CERTIFICATION CASE?**

1

1   **Q.    WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2    A.    As a Sierra Club member, I want to express my support for its intervention in this case,  
3           and to explain the reasons for my support.

4   **Q.    WHAT ELECTRIC UTILITY SERVES YOU?**

5    A.    I am a customer of Alabama Power Company and have been one since 2005.

6   **Q.    WHEN DID YOU JOIN SIERRA CLUB?**

7    A.    I initially joined in 1970. When I moved back to Alabama in 2005 from California to  
8           care for my mother, I began to work with the Alabama chapter of Sierra Club. My  
9           membership with the chapter started around 2007.

10   **Q.    WHAT PROMPTED YOU TO JOIN SIERRA CLUB AND WHAT IS YOUR**  
11       **CURRENT ROLE?**

12   A.    I originally joined in 1970 when attending a Sierra Club sponsored Earth Day event, in  
13       Boulder, CO, where I learned more about the importance of environmental protection.  
14       Currently, I serve as Secretary of the Alabama Chapter, and am a member of the  
15       Chapter's Executive Committee. I also serve as Vice Chair for the Mobile Bay Group.  
16       Across these roles, I liaise between Sierra Club and many other organizations on the Gulf  
17       Coast to coordinate our shared interests and work. We are adding to our environmental  
18       justice (EJ) coalition all the time; we've been working on EJ issues for the last few  
19       decades here on the coast and in northern Alabama. Specifically, our work centers on  
20       communities that are already overburdened by pollution. We look out for ways to clean  
21       up pollution in these communities, and to protect them from further pollution. We help  
22       share relevant information with the communities, the media, and the general public. We  
23       also advocate for more resources to help solve EJ issues.

1 **Q. ARE YOU INVOLVED IN OTHER ENVIRONMENTAL ORGANIZATIONS?**

2 A. Yes. Locally, I am a member of Mobile Baykeeper, Livable Communities, Citizens  
3 Resource Committee of the Mobile Bay Estuary Program, MEJAC (Mobile  
4 Environmental Justice Action Coalition), League of Women Voters, Green Coast and  
5 The Sustainability Summit, Healthy Gulf (Formerly Gulf Restoration Network), Alabama  
6 Rivers Alliance, GASP, Gulf Coast Center for Law & Policy, and Alabama Coastal  
7 Foundation, as well as many other national environmental organizations.

8 **Q. WHAT PROMPTED YOUR EFFORTS TO SUPPORT ENVIRONMENTAL**  
9 **PROTECTION?**

10 A. My parents have always been conservationists; my father was a leader on conservation  
11 issues when I was growing up, including being president of conservation organizations in  
12 Alabama and Mobile County. At that time, the Methodist church, which my family  
13 attended, had a stewardship program; stewardship, in those days, meant protection of  
14 God's creation (the Earth). All of this contributed to my work to protect the environment.

15 **Q. WHAT HAVE YOU HEARD FROM ALABAMA POWER ABOUT THE**  
16 **ENERGY RESOURCES THAT ARE DESCRIBED IN THEIR CERTIFICATION**  
17 **PETITION?**

18 A. I have not received any communication directly from them. This information has not  
19 been included in our monthly invoice.

20 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PLANNED**  
21 **ENERGY RESOURCE ADDITIONS?**

22 A. Their plan includes relatively little clean energy resources like solar. Instead, their plan  
23 would continue their heavy reliance on fossil fuels for decades to come, with massive

1 addition of new gas – not only building a large new gas plant, but purchasing an existing  
2 even bigger one and buying fossil fuel energy from the Hog Bayou plant.

3 **Q. WHAT INPUT DID YOU HAVE IN THE RESOURCES THAT THE COMPANY**  
4 **SELECTED?**

5 A. None.

6 **Q. DO YOU KNOW HOW LONG THE COMPANY PLANS TO OPERATE THE**  
7 **PROPOSED GAS PLANT AT BARRY?**

8 A. They say in their certification that that plant would have a “useful life” of 40 years, but,  
9 according to my research, the average age of retired gas power plants is 48 years, and one  
10 that retired in 2011 was built in 1912.

11 **Q. WHAT IS YOUR REACTION TO THE COMPANY’S PLAN TO BURN GAS**  
12 **FOR DECADES?**

13 A. I am very concerned. I am a strong advocate for clean energy. Reliance on solar energy  
14 has been a lifelong goal for me. In the 1970s, I built a passive solar house. I have long  
15 been interested in renewable energy on the Alabama Gulf Coast. This was reinforced by  
16 experiencing the Deepwater Horizon BP oil spill disaster in the Gulf of Mexico on April  
17 20, 2010, and understanding the immediate and long-term impacts on human, marine, and  
18 plant life and local economies. It is evident to me that whenever we have oil and gas  
19 development, despite the best engineering, we’re going to have disasters and continuous  
20 pollution.

21 Right now, the state’s high production of energy from fossil fuels impedes what we need,  
22 which is a transition to renewable energy. The existing glut of fossil fuel generation  
23 stations and state policies making demand-side adoption prohibitively expensive are

1 blocking the development of clean energy. Solar is particularly important, but is taxed so  
2 high. Alabama Power has suppressed the development of solar energy in the state and its  
3 proposed new set of gas burning resources shows its intent to continue doing so. I feel  
4 strongly that we need to encourage a different type of positive economic growth:  
5 renewable energy, which will have a bigger, better impact on the economy. Relying on  
6 fossil fuels is paralyzing the state economy.

7 **Q. ARE THERE ANY OTHER ASPECTS OF THE COMPANY'S PLAN THAT YOU**  
8 **WOULD LIKE TO ADDRESS?**

9 A. Yes, the reason I care so much about renewable energy is because of the climate crisis.  
10 Our reaction to climate change is a defining moment. The Alabama Gulf Coast is very  
11 vulnerable to sea level rise, tropical storms, hurricanes, etc. Everything we do needs to  
12 keep our vulnerability in mind. Climate change will have an impact on every sector of  
13 society. I have been working hard to raise awareness of the dangers of climate change to  
14 the Mobile Bay area, including an event called Rise for Climate Mobile Bay held in  
15 September of this year. Yet, the Company's plan, doubling down on gas burning for  
16 decades to come ignores and will exacerbate climate change. Our power generation  
17 future requires accelerating a transformation of our energy system from fossil energy to  
18 clean energy that will bring greater economic prosperity and health to all of us, and  
19 Alabama Power should get busy building it.

20 **Q. HAVE YOU PERSONALLY EXPERIENCED ANY IMPACTS OF CLIMATE**  
21 **CHANGE?**

22 A. Yes. I previously had a house on a barrier island – Dauphin Island – that I had to sell  
23 because it became impossible to maintain due in part to rising seas and worsening,

1 extreme weather due to climate change. I personally experienced how sea level rise  
2 impacts area residents' ability to travel on flooded roads and enjoy their property. Also, I  
3 enjoy gardening, and plant a range of different types of annual edible crops. I grew up in  
4 this area, and have noticed that due to weather changes I have observed – including  
5 extreme drought, extreme flooding, and extreme heat, soil fertility is decreasing and  
6 plants that previously grew well in my garden are no longer surviving. This means I can  
7 no longer grow the same species of the plants that my family grew and depended on in  
8 my youth, such as tomatoes, pecans, peaches, and citrus.

9 **Q. ARE THERE ANY OTHER ASPECTS OF THE COMPANY'S PLANS THAT**  
10 **YOU WOULD LIKE TO ADDRESS?**

11 A. Yes, I am retired and my income is unpredictable year to year. I already have some  
12 difficulties paying my power bills, and I worry that building a new gas plant will increase  
13 my rates and create unpredictable future rates. Gas price fluctuations are a function of  
14 market supply and demand. Any change in the supply or demand for gas, even over short  
15 periods, can result in significant price changes. This is another major reason alternative  
16 clean energy plans should begin now.

17 **Q. ARE THERE ANY OTHER ASPECTS OF THE COMPANY'S PLAN THAT YOU**  
18 **WOULD LIKE TO ADDRESS?**

19 A. Yes, I worry about the extreme vulnerability of the location where Alabama Power  
20 Company wants to build the new gas plant at the Barry site. We have continuing sea level  
21 rise projected and even more severe weather patterns expected. The location is already  
22 vulnerable to storms and related storm surge, and it will only get worse over the 40+  
23 years this plant is expected to exist. The USDOT Climate Change Vulnerability

1 Assessment released in June 2014, focuses on Mobile and examines the vulnerability of  
2 its infrastructure to climate change. The analysis and information concludes that the  
3 location of the Mobile Delta, which is where Plant Barry is located, is highly vulnerable  
4 to current storms and storm surge that could conceivably happen today, and of course  
5 highly vulnerable to more intense storms, coupled with sea level rise of the future.

6 Relatedly, I am concerned about adding new gas plant infrastructure to the Barry plant  
7 site because that area is already in extreme danger of a spill from the existing unlined  
8 coal ash ponds.

9 I can't imagine the catastrophe that would occur should there be an explosion associated  
10 with a new gas burning plant at that site. Coal ash poses so many health and  
11 environmental hazards, a spill would be disastrous. Barry's coal ash is near such a big  
12 waterway, it could contaminate considerable amounts of the downstream coastal area,  
13 including in and around Mobile Bay, which would inflict devastation from which I fear  
14 the area would never fully recover.

15 **Q. ARE YOU AWARE THAT THE COMMISSION ISSUED AN ORDER**  
16 **APPROVING THE COSTS THAT ALABAMA POWER IS INCURRING FOR**  
17 **THE PROPOSED GAS PLANT AT BARRY, AND THAT THE ORDER**  
18 **GUARANTEES PAYMENT BY CUSTOMERS EVEN IF THE PLANT NEVER**  
19 **GETS A CERTIFICATE OF CONVENIENCE AND NECESSITY?**

20 A. Yes, I am.

21 **Q. HOW DID YOU LEARN OF THIS?**

22 A. I read the legal brief Sierra Club filed opposing this.

23 **Q. DOES THIS CONCERN YOU?**



1 A. Yes, it does. I don't think it is right to charge customers like me now before the Public  
2 Service Commission even has a chance to review whether or not Alabama Power should  
3 be given permission to build the plant.

4 **Q. IS THE INFORMATION CONTAINED IN YOUR TESTIMONY, THIS**  
5 **DOCUMENT, TRUE AND CORRECT AND WITHIN YOUR PERSONAL**  
6 **KNOWLEDGE?**

7 A. Yes.

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of                     )  
Convenience and Necessity by                     )  
Alabama Power Company                     )                     Docket 32953

DIRECT TESTIMONY OF CAROL ADAMS-DAVIS ON BEHALF OF SIERRA CLUB

Carol Adams-Davis, being first duly sworn, deposes and says she has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of her knowledge, information, and belief.

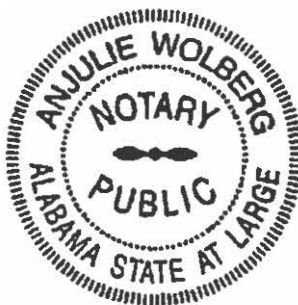
*Carol Adams-Davis*

Carol Adams-Davis

Signed and sworn to before me on  
this 4<sup>th</sup> day of December, 2019.

*Anjulie Wolberg*

Notary Public



**ANJULIE WOLBERG**  
Notary Public  
Alabama State at Large  
My Commission Expires 8/03/2022

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of                     )  
Convenience and Necessity by                     )                     Docket 32953  
Alabama Power Company                     )

DIRECT TESTIMONY OF JOE NEAL WOMACK ON BEHALF OF SIERRA CLUB

1    **Q.     STATE YOUR NAME AND ADDRESS FOR THE RECORD.**

2    A.     My name is Joe Neal Womack, Jr. I live at 812 Center Street, Mobile, Alabama 36610.

3    **Q.     HOW LONG HAVE YOU LIVED AT THAT ADDRESS?**

4    A.     For about ten years. I grew up right across the street, and I've been coming and going  
5           from Mobile for most of my life, but I settled down here more permanently ten years ago.

6    **Q.     ARE YOU AWARE THAT ALABAMA POWER COMPANY PLANS TO ADD A**  
7           **LARGE PORTFOLIO OF ENERGY RESOURCES TO ITS SYSTEM, AND**  
8           **THAT, TO DO SO, IT SEEKS A CERTIFICATE OF CONVENIENCE AND**  
9           **NECESSITY FROM THE ALABAMA PUBLIC SERVICE COMMISSION?**

10   A.     Yes. I know about that.

11   **Q.     ARE YOU AWARE THAT THE COMMISSION IS CURRENTLY REVIEWING**  
12           **WHETHER SUCH A CERTIFICATE SHOULD ISSUE, AND THAT IT HAS**  
13           **ALLOWED SIERRA CLUB TO PARTICIPATE AS A PARTY IN THE CASE**  
14           **DEDICATED TO THIS REVIEW?**

15   A.     Yes, I support the Sierra Club's intervention.

16   **Q.     HOW DID YOU LEARN ABOUT THE COMPANY'S PLAN AND THE**  
17           **COMMISSION'S CERTIFICATION CASE?**

1 A. I was informed about it by Carol Adams-Davis at a meeting of a group I help run called  
2 Mobile Environmental Justice Action Coalition, or MEJAC for short. I believe that was  
3 in late October, 2019.

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. I want to explain how the dirty energy in Alabama Power's plan would harm my  
6 community, Africatown. Africatown is heavily polluted by industry – which I believe has  
7 been caused by decades of environmental racism. Alabama Power's plan would add to  
8 that pollution when we should be cleaning it up. I want to explain why we do not want  
9 any expansion or extension of dirty energy in our community. In addition, I want to  
10 highlight the negative consequences to our community of rate increases from Alabama  
11 Power's dirty energy. Finally, I would like to express my concern with the climate  
12 consequences for our community and the Mobile area in general from the Company's  
13 plan to use dirty energy for decades.

14 **Q. WHAT ELECTRIC UTILITY SERVES YOU?**

15 A. Alabama Power.

16 **Q. HOW LONG HAVE YOU BEEN AN ALABAMA POWER CUSTOMER?**

17 A. I've consistently been a customer since I moved into my current home ten years ago. And  
18 I've been a customer of theirs off and on for pretty much my whole life.

19 **Q. ARE YOU A SIERRA CLUB MEMBER?**

20 A. Yes, I am.

21 **Q. WHEN DID YOU JOIN?**

22 A. In June of 2018.

23 **Q. WHAT DO YOU DO AS A SIERRA CLUB MEMBER?**

1 A. I am on the board of the Mobile Bay group of the Sierra Club's Alabama chapter; I joined  
2 several years before becoming a dues-paying member. I don't have a named position on  
3 the board, but I attend board meetings and help the Mobile Bay group make decisions  
4 about strategic goals and tactics. I also attend events in the Mobile area that the chapter  
5 either organized or participated in.

6 **Q. ARE THERE OTHER ENVIRONMENTAL ORGANIZATIONS OR ACTIVITIES**  
7 **YOU HAVE BEEN INVOLVED IN?**

8 A. Yes. I am the Vice President of MEJAC and the President of a group called Africatown –  
9 CHESS, which stands for Clean, Healthy, Educated, Safe, and Sustainable Communities.  
10 Both of these groups advocate for environmental justice in the Mobile area, and in  
11 Africatown in particular. We do this by organizing the community to advocate for a clean  
12 and healthy environment, meeting with government officials and others with power to  
13 support the community's goals, and engaging in education campaigns to make the  
14 community and the world aware of Africatown's history and the importance of  
15 preserving it. Sierra Club has helped get both organizations started, actually; and several  
16 Sierra Club members like me attend our weekly MEJAC meetings. So, I work closely  
17 with the Sierra Club in my different environmental roles.

18 **Q. WHAT HAS PROMPTED YOU TO BECOME INVOLVED IN EFFORTS TO**  
19 **PROTECT THE ENVIRONMENT?**

20 A. For me it all started with protecting Africatown, the community I live in. Africatown is  
21 where the last slave ship to ever come to the U.S. landed—that was in 1860. After those  
22 slaves were freed, they returned to the Africatown area and created their own self-  
23 governed community. Africatown is now a primarily black community that is home to

1 many descendants of those people who landed as slaves. Unfortunately, over the past  
2 several decades, the city of Mobile has set zoning laws in such a way that caused industry  
3 to move to Africatown and heavily pollute the area. The International Paper Co. mill,  
4 located in an area known as Hog Bayou, historically was the biggest polluter. It was so  
5 bad in the 1960s that pollution used to fall from the sky and coat surfaces in ash. With  
6 stronger environmental laws and enforcement in the 1990s, though, International Paper  
7 decided to leave without cleaning up. Now the area where their mill was located is a toxic  
8 mess. In my opinion, this was environmental racism: I believe they targeted us because  
9 we were a minority community that they thought had little political power. This is not an  
10 issue that has been solved: Africatown is still surrounded by heavy industry and more  
11 industry is still trying to come in. When I retired in the early 2010s, I decided I would do  
12 what I could to stop polluting industry from taking actions that would further endanger  
13 the community.

14 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PLANNED**  
15 **ENERGY RESOURCE ADDITIONS?**

16 A. I know they are trying to build a new gas plant at the Barry site, want to buy power from  
17 the Hog Bayou gas plant, and want to buy another large gas plant in Central Alabama.  
18 They also have plans for some small investments in solar power and energy efficiency.

19 **Q. WHAT HAVE YOU HEARD FROM ALABAMA POWER ABOUT THE**  
20 **ENERGY RESOURCES THAT ARE DESCRIBED IN THEIR CERTIFICATION?**

21 A. They have not contacted me at all about this project.

22 **Q. WHAT INPUT DID YOU HAVE IN THE RESOURCES THAT THE COMPANY**  
23 **SELECTED?**

1 A. None.

2 **Q. ARE YOU FAMILIAR WITH ANY OF THE SITES WHERE THE ENERGY**  
3 **RESOURCES THAT ARE INCLUDED IN ALABAMA POWER'S**  
4 **CERTIFICATION WOULD BE LOCATED?**

5 A. Yes. I live right next to the Hog Bayou gas plant that Alabama Power is seeking to buy  
6 electricity from. It is less than a five minute drive from my house and easily within  
7 walking distance.

8 **Q. WHAT IS YOUR REACTION TO ALABAMA POWER'S PLAN TO BUY**  
9 **ENERGY FROM THE HOG BAYOU GAS PLANT?**

10 A. I am worried that it will lead to the expansion and extension of this plant's operations  
11 with a corresponding increase in the pollution from the plant. We are against polluting  
12 industry in Africatown. We wish the plant would shut down, and we definitely do not  
13 want them to grow. The Hog Bayou area is so polluted already, and needs to be cleaned  
14 up. I am worried that this action by Alabama Power will make the area even more  
15 polluted, thereby further endangering the health and safety of our community.

16 **Q. DO YOU HAVE ANY OTHER REACTIONS TO ALABAMA POWER'S PLAN?**

17 A. I am also worried about the impact this plan will have on my electric rates. I currently  
18 have difficulty paying my electricity bills. This proposal, if approved, could increase my  
19 electricity rates even more, as Alabama Power recovers the cost of building and operating  
20 the dirty power plants in its plan from its customers like me. That would cause me real  
21 financial hardship. I am also worried, with the proposed heavy reliance on gas, about rate  
22 impacts should the price of gas increase. I further worry about the impact that a rate  
23 increase will have on my neighbors in the community. Many of them are elderly with no

1 guaranteed income source, and many are on low incomes, so any sort of increase in  
2 electric rates would be harmful to the broader Africatown community.

3 **Q. DO YOU HAVE ANY OTHER REACTION TO THE COMPANY'S PLANS**  
4 **THAT YOU WANT TO ADDRESS?**

5 A. Yes, I am worried about the climate impact of building the new gas plant at Barry. We  
6 need to move off of burning dirty fossil fuels and onto clean energy. Using fossil fuels is  
7 damaging to the Earth, and now is the time to make the switch to renewable energy.  
8 Instead, Alabama Power is trying to build a new gas plant that will emit climate change-  
9 causing greenhouse gases for another forty years. We can't keep abusing our Earth like  
10 this or there will be even worse consequences than the environmental disasters that we  
11 are already seeing

12 **Q. HOW DOES CLIMATE CHANGE IMPACT YOU?**

13 A. It's been getting warmer over the past several years, which means my neighbors and I  
14 have had to run the air conditioning more, increasing the cost of our electricity bills. The  
15 higher temperatures have also forced me to pay someone to take care of my yard in the  
16 summer – it's too hot to do myself now. In addition, I am worried about the future  
17 consequences of climate change. We are right in the middle of Hurricane Row in the Gulf  
18 Coast. We have had several big storms that have barely missed us over the past decade.  
19 These storms are getting stronger and stronger due to climate change, and it is just a  
20 matter of time before one hits us straight on. I fear the damage such a storm would cause  
21 to me and my community, and that burning more fossil fuels will make this worse.



1    **Q.    IS THE INFORMATION CONTAINED IN YOUR DIRECT TESTIMONY, THIS**  
2           **DOCUMENT, TRUE AND CORRECT AND WITHIN YOUR PERSONAL**  
3           **KNOWLEDGE?**

4    **A.    Yes.**

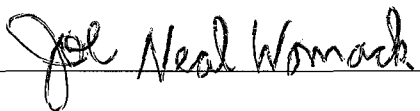
BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by )  
Alabama Power Company )

Docket 32953

DIRECT TESTIMONY OF JOE NEAL WOMACK ON BEHALF OF SIERRA CLUB

Joe Neal Womack, being first duly sworn, deposes and says he has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of his knowledge, information, and belief.

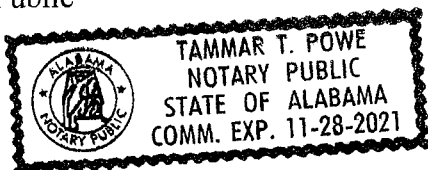


Joe Neal Womack

Signed and sworn to before me on  
this 2nd day of December, 2019.



Notary Public



IN RE: Petition for a Certificate of Convenience and Necessity by Alabama Power Company )  
 )  
 ) Docket 32953

1 Q. STATE YOUR NAME AND ADDRESS FOR THE RECORD.

3 Q. HOW LONG HAVE YOU LIVED AT THAT ADDRESS?

6 Q. ARE YOU AWARE THAT ALABAMA POWER COMPANY PLANS TO ADD A  
7 LARGE PORTFOLIO OF ENERGY RESOURCES TO ITS SYSTEM, AND  
8 THAT, TO DO SO, IT SEEKS A CERTIFICATE OF CONVENIENCE AND  
9 NECESSITY FROM THE ALABAMA PUBLIC SERVICE COMMISSION?

11     **Q.     ARE YOU AWARE THAT THE COMMISSION IS CURRENTLY REVIEWING**  
12           **WHETHER SUCH A CERTIFICATE SHOULD ISSUE, AND THAT IT HAS**  
13           **ALLOWED SIERRA CLUB TO PARTICIPATE AS A PARTY IN THE CASE**  
14           **DEDICATED TO THIS REVIEW?**

16     **Q.     HOW DID YOU LEARN ABOUT THE COMPANY’S PLAN AND THE**  
17     **COMMISSION’S CERTIFICATION CASE?**

1 A. Carol Adams-Davis informed me; she is a leader in the Mobile Bay group of the  
2 Alabama Sierra Club chapter. I work with her a lot and she let me know that Alabama  
3 Power had filed this petition for certification.

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. I want to express my opposition to the proposed construction and purchase of dirty gas  
6 power plants by Alabama Power, and explain my reasoning.

7 **Q WHAT ELECTRIC UTILITY SERVES YOU?**

8 A. I pay my electricity bill through a company called Arcadia Power, but I am a customer of  
9 Alabama Power. To my knowledge, what Arcadia Power does is pay my Alabama Power  
10 utility bill for me, and then I reimburse Arcadia Power for that amount. My  
11 understanding is that I also pay an additional amount to Arcadia Power to reimburse them  
12 for purchasing renewable energy on my behalf.

13 **Q. FOR HOW LONG HAVE YOU BEEN AN ALABAMA POWER CUSTOMER?**

14 A. I joined Arcadia Power about three years ago. Prior to that I had paid Alabama Power  
15 directly for my power since 1985. So I have been a customer of Alabama Power for about  
16 thirty-five years.

17 **Q. WHAT HAVE YOU HEARD FROM ALABAMA POWER ABOUT THE**  
18 **ENERGY RESOURCES THAT ARE DESCRIBED IN THEIR CERTIFICATION**  
19 **PETITION?**

20 A. Alabama Power has not communicated with me personally about those resources at all.

21 **Q. WHAT INPUT DID YOU HAVE IN THE RESOURCES THAT THE COMPANY**  
22 **SELECTED?**

23 A. They did not consult me at all about the new resources they are proposing.

1    **Q.     ARE YOU A SIERRA CLUB MEMBER?**

2    A.     Yes, I am.

3    **Q.     WHEN DID YOU JOIN?**

4    A.     In 2012, and I have consistently been a member since then.

5    **Q.     WHAT DO YOU DO AS A SIERRA CLUB MEMBER?**

6    A.     I attend meetings of the Mobile Bay group of the Alabama chapter—I go to about eight  
7           meetings a year. I also respond to Club mobilization requests by calling my  
8           representatives. Last year I attended the Alabama chapter’s annual retreat in Mobile.  
9           Over the past two years, I have also worked with Sierra Club and Mobile Environmental  
10          Justice Action Coalition (MEJAC) to organize two “Rise for Climate Jobs and Justice”  
11          events, the second of which coincided with the United Nations Climate Action Summit  
12          and all the activism that was occurring around that.

13   **Q.     DESCRIBE YOUR OTHER EFFORTS TO PROTECT THE ENVIRONMENT.**

14   A.     I am what I would call a “mega-volunteer” for environmental issues. Beyond the  
15          activities that I just described with Sierra Club, I am an active member of MEJAC. With  
16          MEJAC, I help organize threatened communities in Mobile to advocate for their rights to  
17          clean air, clean water, and a generally clean environment. I am also trained to give talks  
18          on the reality of climate change. And I am working with others to create a new inter-faith  
19          group to spread the word about our moral responsibility to fight climate change. We  
20          believe that our respective religions require us to take care of God’s creation and hold the  
21          planet in trust for future generations. Finally, from September 2016 to May 2017, I  
22          participated in a nine-month course at the EPA Region 4 Environmental Justice  
23          Academy, where I was trained on environmental justice issues.

1 **Q. WHAT HAS PROMPTED YOUR EFFORTS TO SUPPORT ENVIRONMENTAL**  
2 **PROTECTION?**

3 A. As a parent, I am deeply worried about how climate change will affect future generations.  
4 I believe strongly that we need to stop burning the dirty fossil fuels that cause climate  
5 change, and I want to do everything I can to make this happen. I don't want my children  
6 to look back and wonder why their mom did not do more to stop the runaway climate  
7 change they are dealing with, when she could have done *something* to make a difference.  
8 We owe it to everyone who comes after us to confront this climate crisis—this is a moral  
9 issue for me.

10 **Q. WHAT IS YOUR UNDERSTANDING OF ALABAMA POWER'S PLANNED**  
11 **ENERGY RESOURCE ADDITIONS?**

12 A. My understanding is that Alabama Power is seeking a petition of convenience and  
13 necessity to construct a new power plant that burns gas at the Barry site in Mobile  
14 County, to purchase another gas plant in Central Alabama, to buy energy from the Hog  
15 Bayou gas plant in Africatown, and to build a small amount of solar energy capacity and  
16 engage in energy efficiency projects. I also understand that the new gas plant at Barry is  
17 supposed to operate for about forty years, and that concerns me greatly.

18 **Q. WHAT WAS YOUR REACTION TO THE COMPANY'S PLAN TO BURN GAS**  
19 **FOR DECADES?**

20 A. I was very worried about the effect this plant will have in exacerbating climate change.  
21 This plant will lock in decades of carbon emissions. If we continue building dirty fuel  
22 plants that are going to last for forty years, we will not switch to renewables and reduce  
23 carbon emissions in the timeframe that the science tells us is necessary to maintain a

1 livable planet. The consequences of this plan to build this gas plant, and to commit to  
2 other gas plants, are dire. Climate change will cause more extreme temperatures, more  
3 severe storms, extreme flooding, and so much more harm. Further, I believe that within  
4 the next several years, the people will see the need to switch rapidly to clean energy and  
5 force our utilities to do so. When that happens, this gas plant will be forced to idle, and I  
6 am worried that customers like me will have to pay for this bad gamble by the company.

7 **Q. HOW DOES CLIMATE CHANGE IMPACT YOU?**

8 A. I am very worried about the impact of more extreme storms and higher sea levels in the  
9 Mobile Bay area. While the house I currently live in is not in obvious risk of flooding,  
10 Mobile County in general is a coastal community on the banks of the Mobile Bay, the  
11 Mobile River, and the Tensaw River. The area is likely to be seriously inundated by the  
12 bigger and bigger storms and higher sea levels that climate change causes. I am  
13 concerned that my children, and future generations in general, will not be able to live in  
14 Mobile anymore because of extreme temperatures and the flooding caused by more  
15 intense storms, more frequent storms, and higher sea levels.

16 **Q. ARE THERE ANY OTHER CONCERNS ARISING FROM THE COMPANY'S**  
17 **PLANS THAT YOU WANT TO ADDRESS?**

18 A. Yes. I think it will raise my electricity rates. My understanding is that when a utility  
19 builds a new power plant, it generally raises its customers' rates to pay for the  
20 construction and operation of the plant. I anticipate the same thing happening here. While  
21 I am able to pay my utility bill without too much difficulty, any additional money I have  
22 to pay for electricity is money I cannot spend on other things that I would rather invest in.

1 **Q. ARE YOU AWARE THAT THE PUBLIC SERVICE COMMISSION ISSUED AN**  
2 **ORDER APPROVING THE COSTS THAT ALABAMA POWER IS INCURRING**  
3 **FOR THE PROPOSED GAS PLANT AT BARRY, AND THAT THE ORDER**  
4 **GUARANTEES PAYMENT BY CUSTOMERS EVEN IF THE PLANT NEVER**  
5 **GETS A CERTIFICATE OF CONVENIENCE AND NECESSITY?**

6 A. Yes, I am.

7 **Q. HOW DID YOU LEARN OF THIS?**

8 A. I read the Sierra Club's petition for reconsideration of this order by the Commission.

9 **Q. WHAT IS YOUR REACTION TO THE ORDER?**

10 A. I am worried that this approval by the Commission ties their hands and makes it very  
11 difficult for them to make any fair decision about whether the plant should actually get  
12 approved. I am worried Alabama Power will now say that because they have spent so  
13 much on this project they can't scrap it anymore. The more spending they can get  
14 approved ahead of time, the harder it will be for the Commission to prevent them from  
15 going forward with the project. Further, I think the Commission's order approving  
16 recovery from customers of pre-construction work even if the plant is never built is  
17 unfair. It's not right for customers to be stuck with the cost of a plant that is never built. If  
18 the plant is not approved, Alabama Power should not be spending the money. Period.

19 **Q. DO YOU HAVE ANYTHING ELSE YOU WOULD LIKE TO ADD?**

20 A. According to the Intergovernmental Panel on Climate Change, by next year (2020) our  
21 greenhouse gas (GHG) emissions must have peaked, with a decline to zero GHG  
22 emissions from fossil fuels by 2050. Therefore, it is utterly irresponsible for Alabama  
23 Power to propose building, and the Commission to consider approving, additional



1        electrical capacity generated from fossil fuels. Writer and environmental activist Terry  
2        Tempest Williams, at the 2014 climate rally in New York City, told us that the eyes of  
3        the future are looking back at us and praying that we will do what is right. Building the  
4        proposed gas plant at Barry is not right.

5        **Q.    IS THE INFORMATION CONTAINED IN YOUR TESTIMONY, THIS**  
6        **DOCUMENT, TRUE AND CORRECT AND WITHIN YOUR PERSONAL**  
7        **KNOWLEDGE?**

8        A.    Yes.

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

DIRECT TESTIMONY OF LELLA LOWE ON BEHALF OF SIERRA CLUB

Lella Lowe, being first duly sworn, deposes and says she has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of her knowledge, information, and belief.

Lella Lowe

Lella Lowe

Signed and sworn to before me on

this 27<sup>th</sup> day of November 2019.



Cheryl Rester

Notary Public

My Commission Expires : February 25, 2023

IN RE: Petition for a Certificate of Convenience and Necessity by Alabama Power Company )  
 )  
 ) Docket 32953

1

1 A. Either Carol Adams-Davis mentioned them to me, or I may have learned about them at a  
2 Sierra Club meeting. I have also reviewed portions of the Company's petition for  
3 certification and Sierra Club's petition to intervene in the case.

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. The purpose of my testimony is to convey that, as a member of Sierra Club, I support its  
6 intervention in this case and to explain my reasons for doing so. As a resident of Mobile  
7 and the state of Alabama, I am not happy with what Alabama Power is asking the Public  
8 Service Commission to approve, and I want to speak up.

9 **Q. WHAT ELECTRIC UTILITY SERVES YOU?**

10 A. It has been Alabama Power as long as I can recall.

11 **Q. WHEN DID YOU JOIN SIERRA CLUB?**

12 A. I don't recall exactly when I joined as a dues-paying member, but it was fairly recent.  
13 Before joining, I was already an active participant in Sierra Club's Mobile Bay chapter  
14 and attended several meetings.

15 **Q. DID YOU JOIN SIERRA CLUB BEFORE OR AFTER YOU LEARNED ABOUT**  
16 **THE COMPANY'S CERTIFICATION PETITION?**

17 A. I joined before learning about this case.

18 **Q. WHAT PROMPTED YOU TO JOIN SIERRA CLUB?**

19 A. I have been active in working to address environmental problems in coastal Alabama for  
20 over 40 years. I was the President of the Mobile Bay chapter of the Audubon Society  
21 from the 1970s until 2000. I recently joined Sierra Club because Audubon was not doing  
22 enough environmental work. Sierra Club is the best option for working on the  
23 environmental issues that I care about, which includes protecting people from the

1 dangerous, unhealthy air pollution loads that comes from relying on fossil fuel-based  
2 energy.

3 **Q. WHAT PROMPTED YOUR EFFORTS TO SUPPORT ENVIRONMENTAL**  
4 **PROTECTION?**

5 A. I have lived near the Mobile Delta all my life. That delta is part of coastal Alabama life,  
6 and a beautiful and treasured region. I became involved in environmental protection  
7 decades ago after reading an article about potential oil drilling in the Mobile Bay. At that  
8 time I became a leader in opposing a permit for Mobil Oil to drill in Mobile Bay, in the  
9 1970s and we stopped them for ten years. All of this is documented in *Chronicle of an*  
10 *Eco-warrior: Relating South Alabama's Environmental Issues*.

11 Recently, I published another book called *Hanging by a Thread: The Plight of the*  
12 *Alabama Beach Mouse* which lives in Baldwin County. It discusses how people's  
13 involvement saved this special creature from extinction. Laws were passed to protect the  
14 dune systems which are their invaluable coastal habitat, which are also invaluable to us  
15 humans.

16 **Q. HAVE YOU RECEIVED ANY AWARDS FOR ENVIRONMENTAL**  
17 **PROTECTION?**

18 A. Yes, when I was President of the Mobile Bay chapter of the Audubon Society, I received  
19 the Sol Feinstone Environmental Award that included an award of \$1000.

20 **Q. WHAT IS YOUR VOCATION?**

21 A. I am a registered nurse and presently retired. I have spent decades working to protect the  
22 environment, filling my walls and closets with boxes of pamphlets, books, and  
23 documents. These, as well as Mobile Bay Audubon Society's records, newsletters, and

meeting notes, are presently preserved in University of South Alabama's archives so that others may hopefully become activists.

**Q. WHAT HAVE YOU HEARD FROM ALABAMA POWER ABOUT THE ENERGY RESOURCES THAT ARE DESCRIBED IN THEIR CERTIFICATION PETITION?**

A. I have not received any communication directly from them.

**Q. WHAT INPUT DID YOU HAVE IN THE RESOURCES THAT THE COMPANY SELECTED?**

A. They did not ask, so I never had an opportunity to give them input before they filed their petition.

**Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PLANNED ENERGY RESOURCE ADDITIONS?**

A. I understand that Alabama Power Company started work on a large new gas plant at Barry that almost no one knows about, and now expects the Commission to accept it and pass on the costs to the ratepayer, and that means me. They also intend on purchasing a larger plant in central Alabama that burns fossil fuel, and purchasing energy from Hog Bayou. Both are dirty energy sources. Alabama Power Company plans to purchase small, disappointing amounts of solar and other clean energy resources.

**Q. DO YOU KNOW HOW LONG THE COMPANY PLANS TO OPERATE THE PROPOSED GAS PLANT AT BARRY?**

A. I skimmed the Company's petition, which says that its "useful," polluting, life," will be 40 years.

1   **Q.     WHAT WAS YOUR REACTION TO THE COMPANY’S PLAN TO BURN GAS**  
2       **FOR DECADES?**

3   A.     Alabama Power’s history of burning fossil fuels caused coastal Alabamians to have all  
4       kinds of serious health problems. Cancer rates have always been high. We deserve  
5       energy supplies that do not add to our serious pollution problems and are safe for human  
6       health. Clean energy, like solar, provides this need.

7       The Mobile Bay area already suffers from air pollution from so many industries as well  
8       as transportation. People deserve energy that does not add to this pollution problem, and  
9       that is safe for human health. Clean energy resources like solar can accomplish this. I  
10      know Alabama Power plans to add some solar, but I think the amount is far too little,  
11      especially compared to their plans to rely on gas.

12      I also know about the environmental ruin that burning coal at Barry has already caused,  
13      including toxic air pollution and water pollution. I am also worried about the seep of the  
14      unlined coal ash ponds into groundwater, and effects on birds, animals, and marine and  
15      human life. Hurricanes increase the threat of this contamination. Relatedly, I am  
16      concerned that we know about the release of these toxic chemicals, yet there is  
17      insufficient monitoring to tell me exactly how serious the area’s air and water pollution  
18      is. This lack of monitoring in effect limits the public disclosure of the harmful impacts of  
19      the pollution from power plants that burn fossil fuels. As a passionate environmentalist,  
20      my belief is that it is time to address these wide and varied harms and turn to clean  
21      energy.

22      Also, based on my prior experience with Alabama Power, I do not trust them to have  
23      their customers’ interests or those of the people of Mobile Bay at heart in developing

1        their plans. That is because they are and have been such a huge source of pollution in the  
2        past that has threatened people's health. While the Company's plants have released many  
3        toxic chemicals into the air and water, they don't seem to be concerned about the effects  
4        of these chemicals on the people and natural areas in the Mobile Bay area. For example, I  
5        love to fish, but for many years the U.S. Fish and Wildlife Service would post signs along  
6        the Causeway and Fish River in Baldwin County and along Fowl River in Mobile County  
7        telling us not to catch the fish because they were full of mercury and hazardous to our  
8        health. Today, I think that the Company's heavily gas dependent plans are short sighted,  
9        greedy and irresponsible.

10    **Q.    ARE THERE ANY OTHER CONCERNS ARISING FROM THE COMPANY'S**  
11    **PLANS THAT YOU WANT TO ADDRESS?**

12    A.    Yes, I am almost 90 years old and on a fixed income. I am very concerned that, if they  
13        are allowed to proceed with their plans to rely on fossil fuels for decades, rate hikes will  
14        follow that will take a big bite out of my income. I am especially worried about all of the  
15        additional gas in their plan because even though gas prices are low now, I know that they  
16        can rise in the future, and that would impact my electric bills too. By contrast, clean  
17        energy from renewable resources like solar comes with no fuel cost, so it is a safer  
18        investment.

19    **Q.    ARE THERE ANY OTHER ASPECTS OF THE COMPANY'S PLAN THAT YOU**  
20    **WOULD LIKE TO ADDRESS?**

21    A.    Coal and gas plants release tons of hydrocarbons that contribute to climate change.  
22        Climate change is here and our tropical storms and hurricanes are becoming worse and  
23        costing more, plus nowadays there are the additional threatening tornados. Weather



1 should be a concern, but Alabama Power Company is apparently ignoring the issues by  
2 planning to invest heavily in gas, should the Commission allow them to do so.

3 **Q. HAVE YOU PERSONALLY EXPERIENCED ANY IMPACTS OF CLIMATE**  
4 **CHANGE?**

5 A. Yes. I live in the Mobile Bay area, and experience climate changes with the more intense  
6 high winds, rains, and floods during hurricanes, and also the tornado warnings, which are  
7 rather new to us.

8 **Q. IS THERE ANYTHING ELSE THAT YOU WOULD LIKE TO ADD?**

9 A. This case is an important opportunity for people to stand up for themselves, and for  
10 communities to become involved to challenge Alabama Power and the Commission to do  
11 better in protecting our lives, property, and pocketbooks.

12 **Q. ARE YOU AWARE THAT THE COMMISSION ISSUED AN ORDER**  
13 **APPROVING THE COSTS THAT ALABAMA POWER IS INCURRING FOR**  
14 **THE PROPOSED GAS PLANT AT BARRY, AND THAT THE ORDER**  
15 **GUARANTEES PAYMENT BY CUSTOMERS EVEN IF THE PLANT NEVER**  
16 **GETS A CERTIFICATE OF CONVENIENCE AND NECESSITY?**

17 A. Yes, I am.

18 **Q. HOW DID YOU LEARN OF THIS?**

19 A. I skimmed Sierra Club's petition for reconsideration of the order.

20 **Q. DOES THIS CONCERN YOU?**

21 A. Yes, it does. The Commission needs to be encouraged to remove their support and refuse  
22 Alabama Power Company's questionable charges. The people have not had a voice in  
23 these plans, and that should be the reason for the Commission to rethink their support.

1   **Q.   HOW WOULD YOU BENEFIT FROM SIERRA CLUB’S PARTICIPATION IN**  
2       **THIS CASE?**

3   A.   We must make as much of a difference now as possible, as we did back in the  
4       environmental movements of the 60s, 70s, and 80s. If people had not have been involved,  
5       we would not have areas today, like the Bon Secour National Wildlife Refuge in Baldwin  
6       County, that we could go out and enjoy in coastal Alabama in perpetuity. If Sierra Club  
7       is successful, then the environmental and financial harms that I described above would be  
8       minimized. This harm minimization, in turn, would help ensure that we are protecting our  
9       environment and that Alabama Power is using our money responsibly.

10   **Q.   IS THE INFORMATION CONTAINED IN YOUR TESTIMONY, THIS**  
11       **DOCUMENT, TRUE AND CORRECT AND WITHIN YOUR PERSONAL**  
12       **KNOWLEDGE?**

13   A.   Yes.

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

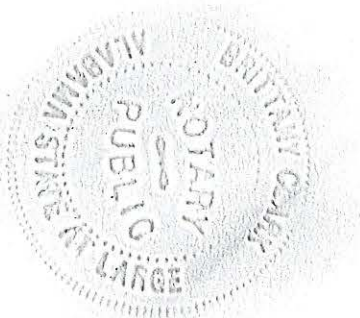
DIRECT TESTIMONY OF MYRTLE JONES ON BEHALF OF SIERRA CLUB

Myrtle Jones, being first duly sworn, deposes and says she has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of her knowledge, information, and belief.

  
\_\_\_\_\_  
Myrtle Jones

Signed and sworn to before me on  
this 2 day of December, 2019.

  
\_\_\_\_\_  
Notary Public comm exp: 09/26/2023



IN RE: Petition for a Certificate of Convenience and Necessity by Alabama Power Company )  
 )  
 ) Docket 32953

1 Q. PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.

2 A. Riva Fralick. My address is 20810 West Boulevard, Silverhill, Alabama 36576.

3 Q. HOW LONG HAVE YOU LIVED AT THAT ADDRESS?

4 A. I have lived there for about six and a half years.

5 Q. ARE YOU AWARE THAT ALABAMA POWER COMPANY PLANS TO ADD A

6 LARGE PORTFOLIO OF ENERGY RESOURCES TO ITS SYSTEM, AND

7 THAT, TO DO SO, IT SEEKS A CERTIFICATE OF CONVENIENCE AND

8 NECESSITY FROM THE ALABAMA PUBLIC SERVICE COMMISSION?

9 A. Yes. I am aware of that.

10 Q. ARE YOU AWARE THAT THE COMMISSION IS CURRENTLY REVIEWING

11 WHETHER SUCH A CERTIFICATE SHOULD ISSUE, AND THAT IT HAS

12 ALLOWED SIERRA CLUB TO PARTICIPATE AS A PARTY IN THE CASE

13 DEDICATED TO THIS REVIEW?

14 A. Yes, and I support the Sierra Club's intervention.

15 Q. HOW DID YOU LEARN ABOUT THE COMPANY'S PLANS AND THE

16 COMMISSION'S CERTIFICATION CASE?

17 A. I first heard about the plans and the case from Carol Adams-Davis. I also reviewed the

18 Company's petition for the certificate and Sierra Club's petition to intervene.

1   **Q.    WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2    A.    The purpose of my testimony is to express that, as a Sierra Club member, I support its  
3           intervention in this case, and to explain my reasons for doing so. I want to speak up to  
4           encourage both our state officials and the Company to do the right thing, which is to  
5           move now to clean energy.

6   **Q.    WHAT ELECTRIC UTILITY SERVES YOU?**

7    A.    My power company is Riviera Utilities. It has supplied my power since I moved here  
8           about six and a half years ago.

9   **Q.    WHEN DID YOU JOIN SIERRA CLUB?**

10   A.    I joined in 1986.

11   **Q.    WHAT PROMPTED YOU TO JOIN THE SIERRA CLUB?**

12   A.    I joined because I want to help protect the environment. Also, my mother has lived in the  
13           Mobile Bay area for 43 years, and visiting her, I have long been struck by the fragility  
14           and rich biodiversity of the Mobile-Tensaw Delta. I want to see this special place  
15           protected for future generations.

16   **Q.    PLEASE DESCRIBE WHAT YOU DO AS A MEMBER OF THE SIERRA CLUB.**

17   A.    Initially when I joined, I supported Sierra Club's activities mostly by paying my member  
18           dues. Since I moved from Florida to Alabama, and have retired, I have been more active  
19           with the Club's Mobile Bay chapter, including participating in programs to commemorate  
20           Earth Day. I also have attended town halls and various environmental hearings, written  
21           letters, and made phone calls concerning environmental protection..

22   **Q.    HAVE YOU BEEN OR ARE YOU NOW INVOLVED IN OTHER**  
23   **ENVIRONMENTAL ORGANIZATIONS OR ACTIVITIES?**

1 A. I am active in Citizens Climate Lobby, and began its chapter in Baldwin County .

2 **Q. WHAT IS YOUR VOCATION?**

3 A. Right now I am retired. Prior to retiring in 2009, I worked as an air traffic controller at Ft.  
4 Lauderdale-Hollywood International Airport in Florida.

5 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PLANNED**  
6 **ENERGY RESOURCE ADDITIONS?**

7 A. They plan to add large power plants that burn gas, including the new gas plant at Barry,  
8 an even bigger gas plant in Central Alabama, and still more energy from the gas plant in  
9 Hog Bayou. I know that the Company also plans to add a much smaller amount of solar  
10 and other, yet to be named clean energy resources that could include rooftop solar and  
11 energy efficiency for homes like mine.

12 **Q. ARE YOU AWARE OF HOW LONG THE COMPANY PLANS TO OPERATE**  
13 **THE NEW GAS PLANT AT BARRY?**

14 A. Yes, their petition says the plant would have a "useful life" of 40 years.

15 **Q. WHAT WAS YOUR REACTION TO THE COMPANY'S PLANS TO BURN GAS**  
16 **FOR DECADES?**

17 A. I was deeply concerned, disappointed, and angry. Now is the time to get serious about  
18 cleaning our energy system to avoid the worst impacts of climate change – not to sink  
19 money into dirty fossil fuels like gas that make climate change worse. Clean energy from  
20 renewable resources like the sun is used more and more everywhere else. But why not  
21 here in Alabama? I have read scientific research that burning gas is just as bad as burning  
22 coal for the environment. Not just the burning, but the extraction and transportation all  
23 contribute to the release of greenhouse gases, especially methane, causing climate

1 change. Burning, transporting, and extracting gas – including fracking and pipeline  
2 construction – will worsen climate change. Since learning about Alabama Power’s plan, I  
3 have felt strongly that people like me need to speak up because our leaders are not paying  
4 attention to what science tells us about the harm and threats of climate change. While  
5 climate change is a global issue, I need to do what I can locally to challenge both our  
6 leaders in government and industry to transition to clean energy and stop burning  
7 climate-damaging fossil fuels. In short, I believe that a livable future does not include  
8 plans like the Company’s for burning more fossil fuels.

9 **Q. BESIDES CLIMATE CHANGE, ARE THERE ANY OTHER ASPECTS OF THE**  
10 **COMPANY’S PLAN THAT YOU WANT TO ADDRESS?**

11 A. Yes, as far as the three gas plants, I object to pollution that they cause to the air, water  
12 and soil. Again, this includes not just the pollution from burning the gas at the plant but  
13 all from fracking and transporting gas to the plants. I am also concerned about the health  
14 impacts of this pollution, especially as the science already shows serious impacts and  
15 there is a lot of ongoing research so we may not yet know all of the harms to human  
16 health. This is especially an issue for the Mobile Bay area; it is well known that the  
17 Eastern Shore of Mobile Bay has a “cancer cluster,” and I am afraid that more fossil fuel  
18 burning will make that worse.

19 **Q. ARE THERE ANY ADDITIONAL ASPECTS OF THEIR PLAN THAT YOU**  
20 **WANT TO ADDRESS?**

21 A. Yes, I worry about price swings should the cost of gas rise. Because I am retired, I live on  
22 a fixed income. Although I may be able to handle some rate hikes, I am very concerned  
23 about impacts to others in my community who live on a low or fixed income.

1 **Q. IS THERE ANYTHING ELSE THAT YOU WANT TO ADD?**

2 A. A related point is our need to meet carbon reduction goals to address the threat of climate  
3 change – that is a 50% reduction by 2030, and being carbon neutral by 2050. Switching  
4 to clean, sustainable, renewable energy, not building more fossil fuel-burning plants, is  
5 the only way to meet these goals.

6 **Q. HAVE YOU PERSONALLY EXPERIENCED ANY IMPACTS OF CLIMATE**  
7 **CHANGE?**

8 A. Yes. The weather I have experienced in Alabama has become more extreme, causing  
9 among other things, my energy bills to increase. Alabama has had record flooding, record  
10 heat, and record droughts. In the months of May to July now, it is often too hot for me to  
11 pick the blueberries that grow on my property. In the summer it is too hot for me to walk  
12 my dog – who would get heat stroke or burn his paws. I have also had to endure  
13 hurricanes, and worry that Mobile could be hit by a devastating hurricane like Hurricane  
14 Michael which hit the Florida panhandle, not far away. I also worry about sea level rise in  
15 both the Gulf and Mobile Bay. Sea level rise is a major threat to the tourism-based  
16 economy of this area.

17 **Q. HOW WOULD YOU BENEFIT FROM SIERRA CLUB’S PARTICIPATION IN**  
18 **THIS CASE?**

19 A. If the evidence shows that Company should not proceed with its plans to add the three  
20 gas plants, and the Commission rejects them, then I stand to benefit in important ways. I  
21 can avoid the financial hit of these plants, and I can avoid the environmental harm of  
22 these plants. While some would say that the three gas plants “would be a drop in the  
23 bucket,” relative to the global problem of climate change, I firmly believe that we have to



1 do our part. Right now, Alabama's leaders are the last to admit that climate change is  
2 happening; the government and companies are denying the science supporting climate  
3 change. Successful opposition to continued reliance on fossil fuels would be real  
4 recognition of the climate change problem and action to address it. This is an existential  
5 crisis that will have global impacts, and also impact the next generation of my own  
6 family, especially the children. Also, Sierra Club's participation would prove that "little  
7 people" have a say in something that will affect them, their families, and their  
8 communities further down the road. This would help assure that our descendants have a  
9 livable planet.

10 **Q. DO YOU HAVE ANYTHING ELSE YOU WOULD LIKE TO ADD?**

11 A. I am trying to do my own part to address climate change and have my voice heard here.  
12 This is not an adversarial attack; rather it is motivated by my concern and love for our  
13 planet. We all need to be good stewards and wean ourselves off of fossil fuel energy,  
14 starting now.

15 **Q. IS THE INFORMATION CONTAINED IN YOUR TESTIMONY, THIS**  
16 **DOCUMENT, TRUE AND CORRECT AND WITHIN YOUR PERSONAL**  
17 **KNOWLEDGE?**

18 A. Yes.

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

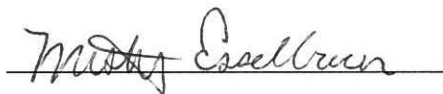
DIRECT TESTIMONY OF RIVA FRALICK ON BEHALF OF SIERRA CLUB

Riva Fralick, being first duly sworn, deposes and says she has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of her knowledge, information, and belief.



Riva Fralick

Signed and sworn to before me on  
this 27<sup>th</sup> day of November, 2019.



Notary Public

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

**PUBLIC VERSION**

Direct Testimony of  
Rachel S. Wilson

On behalf of  
Sierra Club

December 4, 2019

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## Table of Exhibits

RW-1	Rachel Wilson Resume
RW-2	Sierra DR-1 I-14.
RW-3	Hoffman, et al. 2018. The Cost of Saving Electricity Through Energy Efficiency Programs Funded by Utility Customers: 2009-2015. Lawrence Berkeley National Laboratory.
RW-4	Wilson, R. and B. Biewald. 2013. Best Practices in Electric Utility Integrated Resource Planning. Prepared for the Regulatory Assistance Project.
RW-5	Binz, R. et al. 2014. Practicing Risk-Aware Electricity Regulation: 2014 Update. Prepared for Ceres.
RW-6	Georgia Public Service Commission. Order Adopting Stipulation as Amended. Docket No. 42310. July 29, 2019.
RW-7	Union of Concerned Scientists. 2015. Rating the States on their Risk of Natural Gas Overreliance.
RW-8	U.S. Energy Information Administration. 2014. Northeast and Mid-Atlantic power prices react to winter freeze and natural gas constraints.
RW-9	CONFIDENTIAL Sierra Club DR-1 I-01 Attachment O APSC Staff Q&A.
RW-10	Rocky Mountain Institute. 2019. The Growing Market for Clean Energy Portfolios.
RW-11	Parnell, John. 2019. FPL to replace aging gas power plants with the world's largest battery. Forbes.
RW-12	Utility Dive. March 15, 2018. Arizona regulators move to place gas plant moratorium on utilities.
RW-13	Utility Dive. February 11, 2019. Arizona extends gas plant moratorium, punts on PURPA reforms.
RW-14	Utility Dive. April 25, 2019. Indiana regulators reject Vectren gas plant over stranded asset concerns.
RW-15	Utility Dive. October 1, 2019. Minnesota rejects Xcel's 720 MW Mankato gas plant purchase over stranded asset concerns.
RW-16	Direct Testimony of John A. Putnam before the Alabama Public Service

	Commission. Docket No. 26115.
RW-17	CONFIDENTIAL Sierra DR-1 I-05 Attachment Y – APC 2023 RFP Final Ranking MG0.
RW-18	Conservation Law Foundation. 2014. Conservation Law Foundation Announces Settlement with Footprint Power Plant on Salem Natural Gas Facility.
RW-19	Agreement between Connecticut Fund for the Environment, Inc. and NTE Connecticut, LLC. August 27, 2019.
RW-20	Interagency Working Group (August 2016), “Technical Support Document – Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866.”

1    **I.    INTRODUCTION AND QUALIFICATIONS**

2    **Q.    STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.**

3    A.    My name is Rachel Wilson and I am a Principal Associate with Synapse Energy  
4        Economics, Incorporated (“Synapse”). My business address is 485 Massachusetts  
5        Avenue, Suite 2, Cambridge, Massachusetts 02139.

6    **Q.    DESCRIBE SYNAPSE ENERGY ECONOMICS.**

7    A.    Synapse Energy Economics is a research and consulting firm specializing in  
8        electricity industry regulation, planning, and analysis. Synapse’s clients include state  
9        consumer advocates, public utilities commission staff, attorneys general,  
10       environmental organizations, federal government agencies, and utilities.

11   **Q.    SUMMARIZE YOUR WORK EXPERIENCE AND EDUCATIONAL**  
12   **BACKGROUND.**

13   A.    At Synapse, I conduct analysis and write testimony and publications that focus on a  
14        variety of issues relating to electric utilities, including integrated resource planning,  
15        resource adequacy, electric system dispatch, environmental regulations and  
16        compliance strategies, and power plant economics.

17        I also perform modeling analyses of electric power systems. I am proficient in the  
18        use of spreadsheet analysis tools, as well as optimization and electricity dispatch  
19        models to conduct analyses of utility service territories and regional energy markets.

20        I have direct experience running the Strategist, PROMOD IV, PROSYM/Market  
21        Analytics, PLEXOS, EnCompass, and PCI Gentrader models, and I have reviewed  
22        input and output data for several other industry models.

23        Prior to joining Synapse in 2008, I worked for the Analysis Group, Inc., an economic  
24        and business consulting firm, where I provided litigation support in the form of

1 research and quantitative analyses on a variety of issues relating to the electric  
2 industry.

3 I hold a Master of Environmental Management from Yale University and a Bachelor  
4 of Arts in Environment, Economics, and Politics from Claremont McKenna College  
5 in Claremont, California.

6 A copy of my current resume is attached as Exhibit RW-1.

7 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?**

8 A. I am testifying on behalf of the Sierra Club.

9 **Q. HAVE YOU TESTIFIED BEFORE THE ALABAMA PUBLIC SERVICE**  
10 **COMMISSION?**

11 A. No.

12 **Q. HAVE YOU TESTIFIED BEFORE OTHER STATE REGULATORS**  
13 **CONCERNING THE SOUTHERN COMPANY ELECTRIC SYSTEM?**

14 A. Yes. I submitted testimony in Georgia in the 2019 Integrated Resource Plan docket,  
15 No. 43210, and in the 2019 Rate Case docket, No. 42516. I also submitted testimony  
16 in Mississippi in Docket No. 2019-UA-116.

17 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

18 A. The purpose of my testimony is to present my analysis of Alabama Power  
19 Company's petition for a certificate of convenience and necessity for proposed  
20 resource additions totaling 2,436 megawatts (MW). My evaluation focuses on the  
21 relevant factors used by this Commission, and state regulators across the country, to  
22 decide whether to issue such a certificate, and if so, with what conditions. These  
23 relevant factors include: (1) whether there is a capacity and/or energy need, and if so,  
24 the magnitude and nature of that need; and (2) whether a utility's proposed resource



1 additions are the least-cost way to meet that need as compared to other options  
2 available to that utility. Other options would include targeted, incremental  
3 investments to reduce or defer the identified need.

4 **Q. IDENTIFY THE DOCUMENTS ON WHICH YOU BASE YOUR ANALYSIS.**

5 A. My analysis focuses on the Company’s petition and its pre-filed direct testimony and  
6 discovery responses. I use the Clean Energy Portfolio tool developed by the Rocky  
7 Mountain Institute to compare the costs of Barry Unit 8 to a replacement portfolio of  
8 energy efficiency and renewable resources. I also refer to other documents such as  
9 filings and orders in utility dockets and industry publications.

10 **II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS**

11 **Q. SUMMARIZE YOUR PRIMARY CONCLUSIONS.**

12 A. In its petition, Alabama Power points to a projected winter peak load—the hour of  
13 maximum electrical power demand—as the driver for a corresponding projected  
14 winter capacity deficit, in which the Company’s current generating capacity (in MW)  
15 is not sufficient to meet projected peak load plus a reserve margin.<sup>1</sup> To resolve this  
16 capacity deficit, Alabama Power proposes to add 2,236 MW of supply-side resources  
17 to its system, of which 1,896 MW are new or existing gas units.

18 The proposed gas units are a mismatch for Alabama Power’s projected need. The  
19 winter peak identified in 2023-2024 is driving the proposed resource additions;  
20 however, peak declines after that year and drops by [REDACTED]

21 [REDACTED]

---

<sup>1</sup> A reserve margin is (capacity minus demand) divided by demand, where capacity is the expected maximum available supply and demand is expected peak demand. Utilities have supply resources in excess of expected demand to ensure system reliability.

1 [REDACTED] Alabama Power has provided no evidence that it cannot  
2 rely on excess capacity from the other Southern Company operating companies to  
3 meet at least a portion of the projected winter peak need prior to [REDACTED]  
4 Alabama Power has not demonstrated that its proposed resource portfolio is least-  
5 cost to customers. Rocky Mountain Institute's Clean Energy Portfolio tool shows that  
6 a replacement resource portfolio made up of 50 percent demand-side management  
7 (DSM) measures and 50 percent renewable resources has a lower levelized cost of  
8 energy (LCOE) at \$39.34/MWh than building and operating Barry Unit 8 at an  
9 LCOE of \$45.54.

10 There are wide-ranging risks associated with gas units. Reliance on gas as a fuel  
11 subjects a generator to risk of fuel price volatility and fuel supply disruption,  
12 particularly in the winter. Alabama Power's projected need is, in part, a result of the  
13 Company's current reliance on gas, and to meet that need with more gas is illogical.  
14 In addition, downward pressure on the prices of renewable technologies leads to  
15 substantial stranded asset risk for gas generators, particularly new units with longer  
16 expected service lives. These units also face the risk of carbon dioxide regulation,  
17 which would result in increased operating costs that are passed on to customers.

18 The social cost of carbon is a value used to measure climate damages associated with  
19 emissions of CO<sub>2</sub>. Using a mid-range value developed by the United States  
20 Interagency Working Group on the Social Cost of Greenhouse Gases, I calculate that  
21 the climate damages associated with the proposed gas units total \$3.9 billion in net  
22 present value terms over their anticipated service lives.

1 **Q. PLEASE SUMMARIZE YOUR PRIMARY RECOMMENDATIONS.**

2 A. I make several recommendations. First, I recommend approval of the proposed solar-  
3 and-storage projects because, as Mr. M. Brandon Looney demonstrates in his Direct  
4 Testimony, there is a clear cost benefit to customers.<sup>2</sup>

5 Instead of the proposed gas units, Alabama Power should seek to obtain capacity  
6 from the other Southern Company operating companies, to the extent it can, [REDACTED]

7 [REDACTED]  
8 [REDACTED] Further, the Company should  
9 be required to conduct a new DSM potential study and undertake all cost-effective  
10 DSM to reduce any remaining capacity deficit. The Company should also be required  
11 to procure additional renewable resources consistent with the recommendations of  
12 Sierra Club witness Mark Detsky, which are described in his Direct Testimony. The  
13 proposed gas units should be rejected or at least deferred until the results of the DSM  
14 potential study and the renewable resource procurement are known.

15 However, if the Commission does grant the certificate to the proposed gas units  
16 rather than deferring that decision, it should impose three conditions on that approval  
17 to protect customers from the significant risks associated with those units: (1)  
18 Alabama Power's shareholders, rather than its customers, should bear the costs of the  
19 proposed gas units becoming stranded assets; (2) The proposed gas units should be  
20 required to operate under enforceable annual declining greenhouse gas emissions  
21 limits; and (3) Alabama Power should submit a retirement-replacement study for the  
22 vulnerable fossil steam units on its own system.

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<sup>2</sup> CONFIDENTIAL Exhibit MBL-1.

1 **III. ALABAMA POWER’S PROPOSED GAS UNITS OVERBUILD RELATIVE**  
2 **TO ITS FUTURE CAPACITY NEED**

3 **Q. DESCRIBE ALABAMA POWER’S PROPOSED RESOURCE ADDITIONS.**

4 A. In his Direct Testimony, Mr. John B. Kelley describes Alabama Power’s proposal to  
5 add 2,236 MW of supply-side resources and 200 MW of demand-side resources.<sup>3</sup>

6 The proposed supply-side resources are: (1) power purchase agreements (PPAs) for  
7 the five proposed solar-and-storage projects with a cumulative capacity of 340 MW;  
8 (2) the new 743 MW combined-cycle Barry Unit 8; (3) the 238 MW PPA with the  
9 combined-cycle Hog Bayou Energy Center; and (4) acquisition of the 915 MW  
10 combined-cycle Central Alabama Generating Station.<sup>4</sup> The proposed demand-side  
11 resources are 200 MW of demand-side management (DSM) and distributed energy  
12 resources.<sup>5</sup>

13 **Q. WHAT NEED ARE THE PROPOSED RESOURCE ADDITIONS SUPPOSED**  
14 **TO MEET?**

15 A. In short, a projected capacity need. The Company’s 2019 IRP projected growing  
16 winter peak loads and corresponding winter capacity deficits over the next 10 years.<sup>6</sup>

17 In his Direct Testimony, Mr. Kelley explains that the Company needs approximately

---

<sup>3</sup> Demand-side resources are those that change customer demand, saving energy in a given hour or range of hours. Supply-side resources are electric generators that produce energy to meet customer demand.

<sup>4</sup> Direct Testimony of John B. Kelley. Page 19, lines 15-24. Note that Alabama Power’s petition includes a request for blanket authorization to build supporting transmission infrastructure and facilities for the transport, handling, treatment, processing, and delivery of fuel.

<sup>5</sup> Direct Testimony of John B. Kelley. Page 20, lines 1-3.

<sup>6</sup> Direct Testimony of John B. Kelley. Page 10, lines 20-22.

1 2,400 MW of additional resources on its system by 2023–2024 because of those  
2 projected winter peak loads and capacity deficits.<sup>7</sup>

3 **Q. DO YOU AGREE THAT THE COMPANY NEEDS 2,400 MW OF**  
4 **ADDITIONAL RESOURCES ON ITS SYSTEM BY 2023–2024?**

5 A. No, I disagree. In its integrated resource planning process and, specifically, in its  
6 2018 Reserve Margin Study, the Company developed a new methodology for  
7 projecting winter peak load. This methodology appears to be the main driver of its  
8 projected winter capacity deficits. However, my analysis does not delve into the  
9 details of this new methodology and accepts, without affirming, the Company's  
10 calculations.

11 My analysis instead critiques the Company's leap from its projection of a winter  
12 capacity deficit to the conclusion that the solution is to add 1,896 MW of gas  
13 capacity to its system all at once. Even if the Commission accepts the Company's  
14 projected winter capacity deficits, it should draw different conclusions about the size  
15 and timing of needed resource additions.

16 **Q. WHAT CONCLUSIONS ABOUT NEED SHOULD THE COMMISSION**  
17 **DRAW INSTEAD?**

18 A. The Company's projected winter peak and corresponding capacity deficit [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]

---

<sup>7</sup> Direct Testimony of John B. Kelley. Page 14, lines 17-18.

1 [REDACTED] However, the projected capacity deficit in 2023–2024 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]<sup>8</sup> [REDACTED]  
5 [REDACTED] Reliance on the  
6 Southern Company system to meet demand in that year would affect the size and  
7 timing of the necessary resource additions.  
8 Alabama Power and the other Southern Company subsidiaries “operate their systems  
9 on a coordinated basis to achieve economies of scale and other available  
10 efficiencies.”<sup>9</sup> If one looks at the coordinated Southern Company system, the  
11 capacity additions needed for Alabama Power to meet the winter reserve margin are  
12 lower than what the Company is proposing in this docket.<sup>10</sup> Alabama Power asserts  
13 that it cannot rely on the capacity of the other operating companies in the 2023–2024  
14 timeframe because much of what is available comes from older fossil steam units  
15 that cannot be counted on to meet future resource need.<sup>11</sup> However, there is no  
16 legally enforceable obligation to retire any of those units.<sup>12</sup> Alabama Power is thus  
17 building and acquiring new resources to make up for the capacity on the Southern  
18 Company system that has not yet committed to retire.

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<sup>8</sup> CONFIDENTIAL Exhibit JBK-1. Alabama Power 2019 Integrated Resource Plan. Page 21.

<sup>9</sup> Direct Testimony of John B. Kelley. Page 4, lines 17-19.

<sup>10</sup> Direct Testimony of John B. Kelley. Page 12, lines 1-4.

<sup>11</sup> Direct Testimony of John B. Kelley. Page 13, lines 10-14.

<sup>12</sup> Exhibit RW-2. Sierra DR-1 I-14.

1 **Q. SHOULD ALABAMA POWER CONSIDER THE SOUTHERN COMPANY**  
2 **SYSTEM RESOURCES TO MEET ITS PROJECTED NEED?**

3 A. Yes. Alabama Power should consider relying on resources in the Southern Company  
4 system to meet at least a portion of its projected need, [REDACTED]  
5 [REDACTED]<sup>13</sup> Georgia Power is the largest of the Southern  
6 Company subsidiaries. The 2019 IRP Summary Report states that Georgia Power  
7 still experiences a summer peak, and that, coupled with its size relative to the other  
8 Southern Company operating companies, “is the reason the winter need shown for  
9 the collective system is considerably less, as Georgia Power currently has capacity  
10 on its system that can be used to help support the winter requirements of Alabama  
11 Power’s customers.”<sup>14</sup> While the Company states in its 2019 IRP that “[REDACTED]  
12 [REDACTED]  
13 [REDACTED]”<sup>15</sup> it has not presented any evidence that it could not rely on excess Southern  
14 Company capacity [REDACTED]

15 **Q. WHY WOULD ALABAMA POWER HAVE TO RELY ON THE SOUTHERN**  
16 **COMPANY SYSTEM RESOURCES ONLY THROUGH WINTER OF [REDACTED]?**

17 A. The 2,400 MW of projected need in 2023 is the [REDACTED]  
18 [REDACTED]. From [REDACTED], the forecasted winter peak [REDACTED]  
19 [REDACTED].<sup>16</sup> The capacity need in [REDACTED]

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<sup>13</sup> CONFIDENTIAL Exhibit JBK-1. Alabama Power 2019 Integrated Resource Plan. Page 3.

<sup>14</sup> Direct Testimony of John B. Kelley. Page 12, lines 10-14.

<sup>15</sup> Exhibit JBK-1. Alabama Power 2019 Integrated Resource Plan. Page 3.

<sup>16</sup> Exhibit JBK-1. Alabama Power 2019 Integrated Resource Plan. Page 21.

1 [REDACTED] which is almost [REDACTED] than the identified need in 2023. [REDACTED]  
2 [REDACTED]  
3 [REDACTED], as shown in  
4 Confidential Table 1.

**Confidential Table 1. Alabama Power projected peak demand, capacity, and capacity deficit**

Year	Peak	Total	Capacity
	Demand	Capacity	Required to
	(MW)	(MW)	Meet APC
	(A)		Target (MW)
2019	[REDACTED]		
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			

Source: CONFIDENTIAL Sierra DR-1 I-14 Attachment A.

5 If Alabama Power moves forward with its proposed resource acquisition, it will have [REDACTED]  
6 [REDACTED]



1 [REDACTED]  
2 [REDACTED] Total future capacity under Alabama Power's current proposal is shown in  
3 Confidential Table 2.

**Confidential Table 2. Alabama Power winter capacity with proposed resources and capacity deficit/surplus**

	Target	Capacity	Capacity
	Winter	w/ Proposed	(Deficit)
	Reserves	Projects	Surplus
Year	(MW)	(MW)	(MW)
2019	[REDACTED]		
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			

Source: CONFIDENTIAL Sierra DR-1 I-14 Attachment A.

1 **Q. WHAT ARE THE IMPLICATIONS OF A CAPACITY** [REDACTED]

2 [REDACTED]?

3 A. In short, wasted money. That [REDACTED] reflects a mismatch between the  
4 Company's projected need and its proposed resource additions. The large, lumpy gas  
5 units are problematic because for years after their in-service date they are not  
6 projected to be fully used and useful. Rather than building a gas new unit or  
7 acquiring one or more existing gas units, Alabama Power could instead rely on the  
8 Southern Company system, as described above, and acquire additional DSM and  
9 renewable resources in smaller increments to meet its projected capacity deficit in the  
10 winter of 2023–2024. The Company could cancel or delay the build of Barry 8  
11 and/or the acquisition of Central Alabama Generating Station and the PPA with Hog  
12 Bayou, depending on the outcome of the upcoming 2020 renewable resource  
13 procurement. Recommendations for effectively conducting that procurement are  
14 described in the Direct Testimony of Sierra Club witness Mark Detsky.

15 **Q. WHAT ABOUT THE STATEMENT OF ALABAMA POWER WITNESS MR.**  
16 **JOHN B. KELLEY IN HIS DIRECT TESTIMONY THAT IT CANNOT RELY**  
17 **ON THE CAPACITY OF THE OTHER OPERATING COMPANIES FOR**  
18 **WINTER RELIABILITY?**

19 A. I do not believe that Mr. Kelley or any other Company witnesses have demonstrated  
20 that Alabama Power cannot rely on the other Southern operating companies for  
21 capacity, at least in the year of greatest need. Mr. Kelley's reasoning behind Alabama  
22 Power's inability to rely on the Southern Company system resources is that "much of  
23 the capacity that gives rise to the higher reserve levels at the other retail affiliates

1 comprises older fossil steam resources.”<sup>17</sup> He notes certain economic challenges  
2 associated with these units and he mentions Bowen Units 1 and 2 specifically.  
3 However, Georgia Power has not publicly announced an intent to retire these units at  
4 any point in the future, and in fact, [REDACTED]  
5 [REDACTED].<sup>18</sup>

6 **Q. DO YOU DISAGREE WITH MR. KELLEY’S ASSERTION THAT OLDER**  
7 **STEAM UNITS FACE ECONOMIC CHALLENGES?**

8 A. No, and I have testified on that issue in several other jurisdictions. However, I note  
9 that certain of these older steam units that can operate uneconomically during certain  
10 parts of the year are beginning to switch to seasonal operation, in which they are only  
11 available during months of peak demand. That would be an option available to the  
12 Southern operating companies.

13 **Q. ARE THE ECONOMICS OF THESE OLDER STEAM UNITS AFFECTING**  
14 **ALABAMA POWER’S PROJECTED NEED IN ANY OTHER WAY?**

15 A. Yes. Alabama Power provides a load and resource table in “CONFIDENTIAL Sierra  
16 DR-1 I-14 Attachment A.” This attachment shows [REDACTED]  
17 [REDACTED],  
18 indicating it has not yet committed to it, and yet it is contributing to the Company’s  
19 projected capacity need deficit. [REDACTED]

20 [REDACTED]  
21 [REDACTED]

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<sup>17</sup> Direct Testimony of John B. Kelley. Page 13, lines 10-11.

<sup>18</sup> Direct Testimony of John B. Kelley. Page 13, lines 21-22.

1 **IV. ALABAMA POWER HAS NOT DEMONSTRATED THAT ITS PROPOSED**  
2 **GAS UNITS ARE NEEDED, OR THAT THEY ARE LEAST-COST**

3 **Q. IN ADDITION TO RELYING IN PART ON THE SOUTHERN POOL, WHAT**  
4 **OTHER RESOURCES SHOULD ALABAMA POWER PROCURE TO MEET**  
5 **ITS CALCULATED CAPACITY DEFICIT IN WINTER 2023–2024?**

6 A. A combination of demand-side resources, such as energy efficiency and distributed  
7 energy, and supply-side renewable resources, in that order. These resources can be  
8 procured in smaller increments over time, helping to meet Alabama Power’s  
9 calculated capacity deficit in winter 2023–2024 without overbuilding.

10 A. *Alternative least-cost resource options*

11 **Q. WHY DO YOU RECOMMEND THOSE RESOURCES IN THAT ORDER?**

12 A. Alabama Power should first expand its DSM programs, such as those that make  
13 homes and businesses more energy efficient, to reduce peak load and annual energy  
14 usage. Energy efficiency measures are commonly referred to as the “first fuel,”  
15 meaning that these measures should be considered first when adding new resources  
16 to a portfolio because they generally are the least-cost option. A recent report by  
17 Lawrence Berkeley National Laboratory found that the average cost of kWh saved by  
18 energy efficiency programs in the United States is 2.5 cents.<sup>19</sup>  
19 Alabama Power does the opposite in its petition, however, filling in the remaining  
20 capacity need with DSM and distributed energy resource (DER) measures only after

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<sup>19</sup> Exhibit RW-3. Hoffman, et al. 2018. *The Cost of Saving Electricity Through Energy Efficiency Programs Funded by Utility Customers: 2009-2015*. Lawrence Berkeley National Laboratory. Available at: [http://eta-publications.lbl.gov/sites/default/files/cose\\_final\\_report\\_20180619\\_1.pdf](http://eta-publications.lbl.gov/sites/default/files/cose_final_report_20180619_1.pdf).

1 seeking to procure 2,236 MW of supply-side resources.<sup>20</sup> As described in a widely-  
2 cited report that I authored for the Regulatory Assistance Project, attached as Exhibit  
3 RW-4, best practices in resource planning dictate that utilities use analytical tools to  
4 fairly evaluate the costs and benefits of both demand- and supply-side resources as  
5 part of a future resource portfolio because of the documented cost savings associated  
6 with demand-side resources.<sup>21</sup>

7 **Q. WHAT SUPPLY-SIDE RESOURCES SHOULD ALABAMA POWER**  
8 **PROCURE, AFTER CONSIDERING COST-EFFECTIVE DSM MEASURES?**

9 A. Alabama Power's supply-side resource procurement should include additional PPAs  
10 for solar and battery storage resources, either on a standalone or paired basis, as well  
11 as PPAs for wind resources with neighbors operating in the Southwest Power Pool  
12 and as part of the Midcontinent Independent System Operator. This type of  
13 procurement serves two purposes. First, it allows Alabama Power to make  
14 incremental resource investments<sup>22</sup> to meet any remaining need. Second, it allows  
15 Alabama Power to capture cost savings associated with renewables regardless of  
16 whether there is a capacity need.

17 This approach is supported, for instance, by a 2014 report from the Ceres Investor  
18 Network, attached as Exhibit RW-5, which finds that large base load fossil fuel

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<sup>20</sup> Direct Testimony of John B. Kelley. Page 10, lines 1-3.

<sup>21</sup> Exhibit RW-4. Wilson, R. and B. Biewald. 2013. *Best Practices in Electric Utility Integrated Resource Planning*. Prepared for the Regulatory Assistance Project.

<sup>22</sup> By "incremental investments," I mean procurement of a smaller number of MW of resources on a more frequent basis, rather than the lumpier addition of large gas plants in a single year that can result in oversupply situations in subsequent years.

1 generators are the riskiest resource additions for utilities.<sup>23</sup> By contrast, the report  
2 identifies renewables resources as the least-cost and least-risk supply-side resource  
3 additions.<sup>24</sup>

4 **B. Barry 8 is high risk compared to DSM and renewables**

5 **Q. IS THERE OTHER SUPPORT FOR YOUR RECOMMENDED APPROACH?**

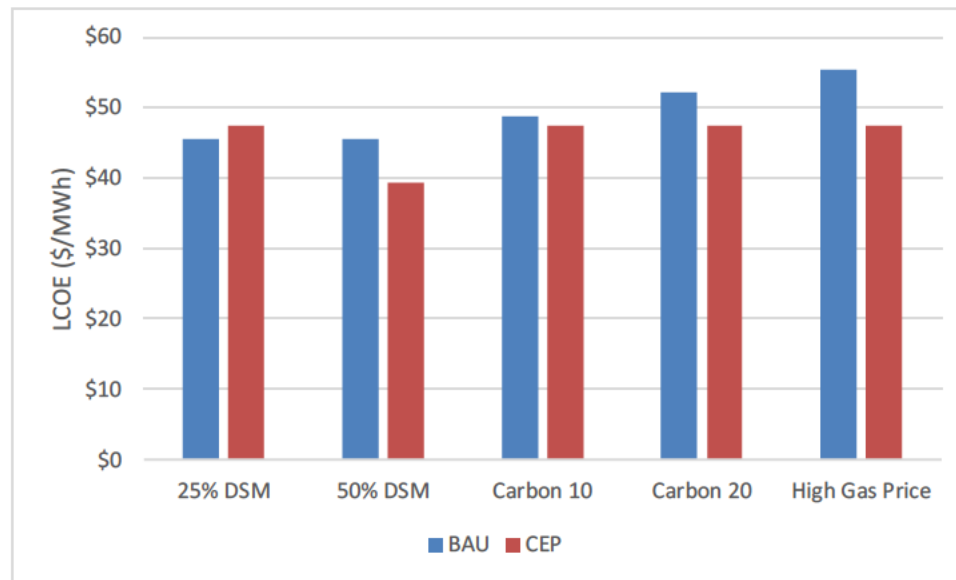
6 A. Yes. My own analysis illustrates that customers can save money if the Company  
7 procures demand-side resources and supply-side renewables instead of its proposed  
8 gas units. The Rocky Mountain Institute developed a Clean Energy Portfolio tool that  
9 compares the costs of a new combined-cycle unit with a replacement resource  
10 portfolio that meets peak demand in the top 50 hours in the year, monthly total  
11 energy requirements, and ramp requirements of a combined-cycle unit. I used this  
12 tool to compare Barry 8 with a portfolio of DSM and renewables under five different  
13 scenarios. The results are shown in Figure 1.

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<sup>23</sup> Exhibit RW-5. Binz, R. et al. 2014. *Practicing Risk-Aware Electricity Regulation: 2014 Update*. Page 3. Prepared for Ceres.

<sup>24</sup> Exhibit RW-5. Binz, R. et al. 2014. *Practicing Risk-Aware Electricity Regulation: 2014 Update*. Page 4. Prepared for Ceres.

**Figure 1. Levelized cost of energy (LCOE)**



In the “50% DSM” scenario, demand-side measures can make up 50 percent of the replacement resource portfolio (just over 370 MW) with the other 50 percent being renewables. A clean energy portfolio consisting of half DSM and half renewables at an LCOE of \$39.34/MWh is a cost-effective replacement portfolio for Barry Unit 8 (at an LCOE of \$45.54) and would save customers money.

Under the “25% DSM” scenario, demand-side measures can make up only one-quarter of the replacement resource portfolio. This is the only scenario that I examined in which Barry Unit 8 was less expensive than the replacement portfolio. However, the “Carbon 10,” “Carbon 20,” and “High Gas Price” are sensitivities on the “25% DSM” scenario, in which I increase the price of carbon dioxide (CO<sub>2</sub>) emissions and gas. In each of these sensitivity cases, which provide a measure of the emissions and fuel price risks, the clean energy replacement portfolio is less expensive than Barry Unit 8.

1    **Q.     WHY IS YOUR ANALYSIS FOCUSED ON BARRY UNIT 8?**

2    A.     It is a new unit that has not been built yet, and it would have the longest service life  
3           of the three gas units that the Company proposes to add to its system. Barry Unit 8  
4           therefore presents the greatest risk to customers, as discussed in Section V, below.

5           *C.     Commission actions to protect Alabama customers*

6    **Q.     WHAT WOULD YOU RECOMMEND THE ALABAMA PUBLIC SERVICE**  
7           **COMMISSION DO WITH RESPECT TO THE COMPANY'S PROPOSED**  
8           **RESOURCE ADDITIONS?**

9    A.     Alabama Power has not demonstrated that its proposed gas units are needed or that  
10          they are the least-cost to customers. My analysis using the Clean Energy Portfolio  
11          tool illustrates that there are likely other combinations of DSM and renewable  
12          resources that are lower cost than one or more of those gas units. Therefore, the  
13          proposed gas units should be rejected or at least deferred until the Company has fully  
14          and fairly evaluated additional DSM and renewable resources.

15          I recommend approval of 200 MW of DSM and distributed energy resources now.  
16          Further, the Company should be required update its energy efficiency potential study  
17          and undertake all cost-effective DSM in order to reduce its projected capacity deficit.  
18          Similarly, I recommend that the Commission approve the proposed solar-and-storage  
19          projects because there is a clear cost benefit to customers. Alabama Power will  
20          perform another resource procurement for renewable energy resources in 2020 and  
21          should adjust its procurement process in the ways described in the Direct Testimony  
22          of Sierra Club witness Mark Detsky. The Commission should deny, or at least defer,  
23          the petition for the proposed gas units until the results from this new procurement are  
24          known.



1   **Q.    CAN YOU PROVIDE AN EXAMPLE WHERE A STATE UTILITY**  
2       **COMMISSION REQUIRED A UTILITY TO INCREASE ITS**  
3       **PROCUREMENT OF RENEWABLES OR DEMAND-SIDE**  
4       **MANAGEMENT?**

5    A.    Yes. In the recent 2019 Georgia Power IRP, Docket No. 42310, the Georgia Public  
6       Service Commission ordered Georgia Power to increase its utility-scale solar  
7       procurement to 2,000 MW from the 950 MW initially proposed by the Company.  
8       The Commission also ordered the Company to increase its procurement of  
9       distributed generation<sup>25</sup> to 210 MW from the initial 50 MW. Further, the  
10      Commission ordered Georgia Power to increase the energy savings targets for its  
11      residential and commercial energy efficiency programs by 15 percent above the  
12      Company's proposed amounts.<sup>26</sup>

13   **V.   PROPOSED GAS UNITS WOULD EXPOSE CUSTOMERS TO**  
14       **UNNECESSARY RISK**

15   **Q.    HOW WOULD YOU CHARACTERIZE THE LEVEL OF RISK TO**  
16       **CUSTOMERS ASSOCIATED WITH ALABAMA POWER'S PROPOSED**  
17       **GAS UNIT ADDITIONS?**

18    A.    A 2015 report from the Union of Concerned Scientists, attached as Exhibit RW-7,  
19       examined states' risks of overreliance on gas in five categories, rating each on a scale

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<sup>25</sup> Distributed generation is another term for distributed energy resources.

<sup>26</sup> Exhibit RW-6. Georgia Public Service Commission. Order Adopting Stipulation as Amended. Docket No. 42310. July 29, 2019. Pages 18-19.

1 of low/moderate/high.<sup>27</sup> According to this report, Alabama is already over-reliant on  
2 gas units and is subjecting its customers to all the risks described in this section,  
3 below, as the state ranks high in four out of five risk categories, and moderate in the  
4 remaining category.<sup>28</sup>

5 ***A. Winter fuel supply risks***

6 **Q. ARE LARGE GAS UNITS THE BEST OPTION FOR ALABAMA POWER**  
7 **TO MEET PROJECTED WINTER PEAK?**

8 A. No. There are several reasons that large gas units are ill-suited to meet Alabama  
9 Power's projected winter peak. First, there are risks associated with gas supply in the  
10 winter months. Cold weather leads to increased demand for gas for electric power  
11 and heating, and gas supply is dependent on pipeline capacity. If winter demand  
12 exceeds pipeline capacity, there is a scarcity of supply. This occurred at the  
13 Massachusetts Hub in mid-December 2013 when day-ahead, on-peak power prices  
14 rose above \$200/MWh during a cold spell.<sup>29</sup> In early January 2014, Northeast

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<sup>27</sup> Those categories include: (1) gas generation as a share of in-state electricity production (2014); (2) increase in percent of in-state electricity generation fueled by gas (2008-2014); (3) gas capacity as a share of power plants being built (2014-2017); (4) total projected gas capacity in 2017; and (5) power sector carbon dioxide emissions (2013).

<sup>28</sup> Exhibit RW-7. Union of Concerned Scientists. 2015. *Rating the States on their Risk of Natural Gas Overreliance*. Available at: <https://www.ucsusa.org/sites/default/files/attach/2015/12/natural-gas-overreliance-analysis-document.pdf>.

<sup>29</sup> Exhibit RW-8. U.S. Energy Information Administration. 2014. *Northeast and Mid-Atlantic power prices react to winter freeze and natural gas constraints*. Available at: <https://www.eia.gov/todayinenergy/detail.php?id=14671>.

1 generators again struggled to procure gas supplies during a freeze, driving prices  
2 even higher.<sup>30</sup>

3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]<sup>31</sup>

7 **B. Stranded asset risk**

8 **Q. YOU NOTED THAT THERE ARE RISKS ASSOCIATED WITH THE LONG**  
9 **SERVICE LIVES OF THE PROPOSED GAS UNITS. HOW LONG ARE THE**  
10 **EXPECTED SERVICE LIVES OF THE COMPANY'S PROPOSED GAS**  
11 **UNITS?**

12 A. The new unit, Barry 8, has the longest expected service life: 40 years.<sup>32</sup> The two  
13 existing gas units have shorter service lives—23 years for the Central Alabama  
14 Generating Station<sup>33</sup> and 19 years for Hog Bayou.<sup>34</sup>

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<sup>30</sup> Exhibit RW-8. U.S. Energy Information Administration. 2014. *Northeast and Mid-Atlantic power prices react to winter freeze and natural gas constraints*. Available at: <https://www.eia.gov/todayinenergy/detail.php?id=14671>.

<sup>31</sup> Exhibit RW-9. CONFIDENTIAL Sierra Club DR-1 I-01 Attachment O APSC Staff Q&A.

<sup>32</sup> Direct Testimony of M. Brandon Looney. Page 4, line 3.

<sup>33</sup> This is the remaining useful life if Alabama Power acquires Central Alabama in 2023 as it proposes to do. Direct Testimony of John B. Kelly. Page 22, line 23.

<sup>34</sup> This is the term of the proposed PPA for Hog Bayou, which starts in 2020. Direct Testimony of John B. Kelley. Page 22, line 2.

1 **Q. WHAT ARE THE RISKS ASSOCIATED WITH SERVICE LIVES THAT**  
2 **LONG?**

3 A. As I noted, there are wide-ranging risks, including the risk that these gas units  
4 become stranded assets. The costs of the three proposed gas units are tied directly to  
5 both the capital cost to build them as well as their fuel cost, that is gas needed to  
6 operate them. Generation from renewable energy has zero fuel cost, and the capital  
7 costs have been declining over time and are expected to continue to do so. Recent  
8 trends show that it can be cheaper today to build new renewable-plus-storage units  
9 than to build *new* gas units. Forecasts suggest that in the future, it will be cheaper to  
10 build new renewable-plus-storage units than to continue operating *existing* gas  
11 units.<sup>35</sup> This means that new and existing gas units are likely to become stranded  
12 assets.

13 **Q. WHAT IS A STRANDED ASSET?**

14 A. A stranded asset is one that no longer has value or produces income. It is important  
15 to consider stranded asset risk for large gas units, like those Alabama Power  
16 proposed to add to its system, because the costs to construct them are usually  
17 recovered by utilities from their customers over many decades—in this case 40 years  
18 for Barry Unit 8. If conditions in the electric sector cause Barry 8 to no longer be  
19 “used and useful,” either the Company’s customers or its shareholders will be  
20 burdened with the costs of a non-performing unit for the remainder of its depreciable  
21 life.

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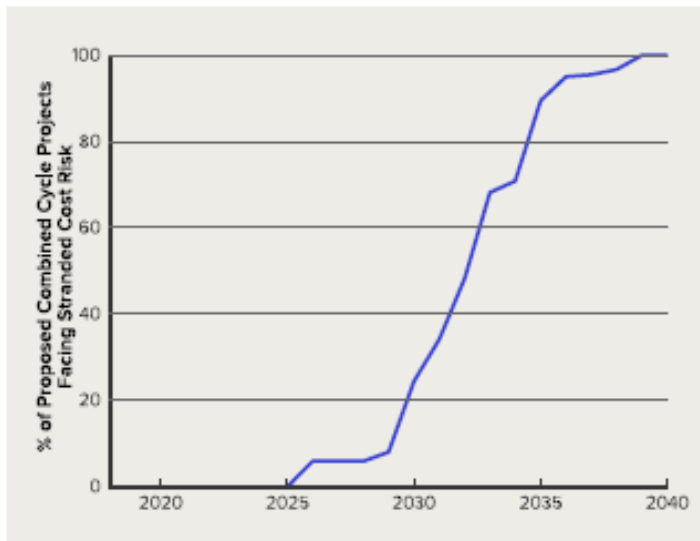
<sup>35</sup> Exhibit RW-10. Rocky Mountain Institute. 2019. *The Growing Market for Clean Energy Portfolios*.

**Q. WHAT IS THE LIKELIHOOD THAT NEW GAS PLANTS WILL BECOME STRANDED ASSETS?**

A. According to an extensive, nationwide analysis that the Rocky Mountain Institute completed this fall, attached as Exhibit RW-10, the likelihood is increasing over time and will jump dramatically starting in 2029. As shown in Figure 2, by 2035, nearly all currently proposed gas capacity will have operating costs higher than new renewable and storage resources due to expected price declines in these technologies.

“The clear implication is that utilities or investors that move ahead with proposed plants face significant financial risk; consumer savings and/or market competition will dictate that the plants be shut down while book life remains. In short, combined-cycle investors face significant stranded asset risk.”<sup>36</sup>

**Figure 2. Percent of proposed combined-cycle units facing stranded asset risk, 2020-2040**



Source: Rocky Mountain Institute. 2019. *The Growing Market for Clean Energy Portfolios*. Page 35.

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<sup>36</sup> Exhibit RW-10. Rocky Mountain Institute. 2019. *The Growing Market for Clean Energy Portfolios*. Page 35.

1 By 2040, RMI's analysis shows that all the gas units currently proposed will become  
2 stranded assets. If constructed, Barry Unit 8 will have been operating for only 17  
3 years in 2040. Given its 40-year expected useful life, there is significant risk that  
4 either customers or shareholders will be saddled with the costs of this unused plant  
5 for an additional 23 years, at least.

6 **Q. IS THERE EVIDENCE THAT UTILITIES ARE CHOOSING OTHER**  
7 **RESOURCE ADDITIONS OVER GAS UNITS?**

8 A. Yes. As just one example, Florida Power & Light is building the Manatee Energy  
9 Storage Center, which is a 409 MW storage system (the world's largest) that will  
10 replace two existing gas units. An existing solar plant will charge the battery, and the  
11 resulting savings to customers are expected to total \$100 million.<sup>37</sup>

12 **Q. IS THERE EVIDENCE THAT OTHER STATE REGULATORS ARE**  
13 **MAKING DECISIONS ABOUT NEW GAS UNITS BASED ON THE RISK**  
14 **THAT THEY WILL BECOME STRANDED ASSETS?**

15 A. Yes, especially in recent cases, state regulators are regularly citing stranded asset risk  
16 as one of the main reasons why they have rejected proposed gas units:

17 • In March 2018 the Arizona Corporation Commission rejected the integrated resource  
18 plans of the state's utilities due to their reliance on gas units and the associated risk  
19 of stranded assets. The Commission placed a nine-month moratorium on new gas  
20 units larger than 150 MW while the utilities modeled scenarios with high

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<sup>37</sup> Exhibit RW-11. Parnell, John. 2019. *FPL to replace aging gas power plants with the world's largest battery*. Forbes. Available at: <https://www.forbes.com/sites/johnparnell/2019/03/31/fpl-to-replace-aging-gas-power-plants-with-the-worlds-largest-battery/#640ab4812ebb>

1 penetrations of renewables and storage.<sup>38</sup> That moratorium was then extended for an  
2 additional six months.<sup>39</sup>

3 • In April 2019 the Indiana Utility Regulatory Commission (IURC) rejected an 850  
4 MW gas plant proposed by Vectren, citing concerns that the plant could become a  
5 stranded asset as cost of renewables declines and customer demand changes. The  
6 IURC directed Vectren to evaluate alternatives to a large, centralized generating  
7 station.<sup>40</sup>

8 • In October 2019 the Minnesota Public Utilities Commission rejected a proposal from  
9 Xcel Energy to purchase the 720 MW Mankato combined-cycle gas plant due to  
10 stranded asset concerns if the plant were to close early due to the decline in  
11 renewable and storage costs.<sup>41</sup>

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<sup>38</sup> Exhibit RW-12. Utility Dive. March 15, 2018. *Arizona regulators move to place gas plant moratorium on utilities*. Available at: <https://www.utilitydive.com/news/arizona-regulators-move-to-place-gas-plant-moratorium-on-utilities/519176/>.

<sup>39</sup> Exhibit RW-13. Utility Dive. February 11, 2019. *Arizona extends gas plant moratorium, punts on PURPA reforms*. Available at: <https://www.utilitydive.com/news/arizona-extends-gas-plant-moratorium-punts-on-purpa-reforms/548072/>.

<sup>40</sup> Exhibit RW-14. Utility Dive. April 25, 2019. *Indiana regulators reject Vectren gas plant over stranded asset concerns*. Available at: <https://www.utilitydive.com/news/indiana-regulators-reject-vectren-gas-plant-over-stranded-asset-concerns/553456/>.

<sup>41</sup> Exhibit RW-15. Utility Dive. October 1, 2019. *Minnesota rejects Xcel's 720 MW Mankato gas plant purchase over stranded asset concerns*. Available at: <https://www.utilitydive.com/news/minnesota-rejects-xcels-720-mw-mankato-gas-plant-purchase-over-stranded-as/564029/>.

1 **Q. IS THERE ANYTHING THIS COMMISSION COULD DO TO REDUCE THE**  
2 **STRANDED ASSET RISK TO CUSTOMERS IF THE PROPOSED GAS**  
3 **UNITS WERE APPROVED?**

4 A. Yes. It could condition the approval of any of the gas with the provision that, in the  
5 event the units become stranded assets, Alabama Power's shareholders will bear the  
6 costs rather than customers.

7 **Q. IS THERE A PRECEDENT FOR SUCH AN ACTION?**

8 A. Yes. Alabama Power requested a similar certificate of convenience and necessity for  
9 combined-cycle units Barry 7 and 8 in docket 26115. In response to concerns about  
10 stranded asset risk, Mr. John A. Putnam submitted Direct Testimony stating that the  
11 Company was willing to commit that any stranded costs resulting from these units  
12 would be borne by Alabama Power's shareholders rather than its customers.<sup>42</sup> His  
13 testimony in that docket is attached as Exhibit RW-16.

14 **C. Carbon dioxide price risk**

15 **Q. WHAT ARE THE EXPECTED CARBON DIOXIDE EMISSIONS OVER THE**  
16 **EXPECTED USEFUL LIVES OF THE COMPANY'S PROPOSED GAS**  
17 **UNITS?**

18 A. Building and operating Barry 8 will result in a large volume of greenhouse gas  
19 emissions for decades. Based on the unit's heat rate, assumed capacity factor of [REDACTED]  
20 percent,<sup>43</sup> and its expected service life of 40 years, the lifetime emissions of Barry 8

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<sup>42</sup> Exhibit RW-16. Direct Testimony of John A. Putnam before the Alabama Public Service Commission. Docket No. 26115. Page 13, line 7.

<sup>43</sup> Exhibit RW-17. CONFIDENTIAL Sierra DR-1 I-05 Attachment Y – APC 2023 RFP Final Ranking MG0.



1 will be approximately 74 million tons of CO<sub>2</sub>. Hog Bayou will emit approximately 7  
2 million tons of CO<sub>2</sub>, assuming a capacity factor of [REDACTED] percent<sup>44</sup> and a remaining  
3 useful life of 19 years. Central Alabama will release 27 tons of CO<sub>2</sub>, assuming a  
4 capacity factor of [REDACTED] percent<sup>45</sup> and a remaining useful life of 23 years. These  
5 plants will be responsible for the emission of a total of 108 million tons of CO<sub>2</sub> over  
6 their remaining lifetimes. This is equivalent to 239,549,994,132 miles driven by an  
7 average passenger vehicle.<sup>46</sup>

8 **Q. IS THIS CONSISTENT WITH SOUTHERN COMPANY'S ANNOUNCED**  
9 **GREENHOUSE GAS REDUCTION GOAL?**

10 A. No. Southern Company has set an intermediate goal of a 50 percent reduction in CO<sub>2</sub>  
11 emissions from 2007 levels by 2030, and a long-term goal of low- to no-CO<sub>2</sub>  
12 emissions by 2050.<sup>47</sup>

13 **Q. DOES THE UNITED STATES CURRENTLY HAVE A PRICE ON**  
14 **EMISSIONS OF CARBON DIOXIDE FROM ELECTRIC POWER PLANTS?**

15 A. No. Even a modest price on carbon dioxide would impose additional costs on  
16 customers and exacerbate the stranded asset risk described in the section above.  
17 Alabama Power considered this risk and evaluated the proposed gas units under a  
18 CO<sub>2</sub> sensitivity. The Company's results show that with a CO<sub>2</sub> price, costs to

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<sup>44</sup> Exhibit RW-17. CONFIDENTIAL Sierra DR-1 I-05 Attachment Y – APC 2023 RFP Final Ranking MG0.

<sup>45</sup> Exhibit RW-17. CONFIDENTIAL Sierra DR-1 I-05 Attachment Y – APC 2023 RFP Final Ranking MG0.

<sup>46</sup> Exhibit RW-18. U.S. EPA. 2018. *Greenhouse Gas Equivalencies Calculator*. Available at: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

<sup>47</sup> Exhibit RW-19. Southern Company. *Climate*. Accessed November 26, 2019. Available at: <https://www.southerncompany.com/corporate-responsibility/environment/air-and-climate.html>.

1 customers of the proposed gas additions increase. Demand-side measures and  
2 incremental renewable resource additions pose no such risk to customers.

3 **Q. WHAT CAN THE COMMISSION DO TO REDUCE THE CO<sub>2</sub> EMISSIONS**  
4 **RISK TO CUSTOMERS IF THE PROPOSED GAS UNITS WERE**  
5 **APPROVED?**

6 A. The Commission could condition its approval on those units operating under  
7 enforceable annual declining emissions limits. In conjunction, the Commission could  
8 also set a retirement date at the units. The developers of the Footprint gas combined-  
9 cycle project in Massachusetts agreed to decreasing annual emissions limits and a  
10 retirement date of no later than January 1, 2050, to comply with state laws calling for  
11 reductions in greenhouse gases.<sup>48</sup> Similarly, when requesting a similar certificate of  
12 need in Connecticut, NTE Energy made a voluntary commitment to reduce  
13 greenhouse gas emissions at its proposed Killingly Energy Center (a new combined-  
14 cycle unit) at least 80 percent below initial operating levels by 2050, and retiring or  
15 operating the facility with zero net greenhouse gas emissions after that date.<sup>49</sup>

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<sup>48</sup> Exhibit RW-20. Conservation Law Foundation. 2014. *Conservation Law Foundation Announces Settlement with Footprint Power Plant on Salem Natural Gas Facility*. Available at: <https://www.clf.org/newsroom/conservation-law-foundation-announces-settlement-footprint-power-plant-salem-natural-gas-facility/>.

<sup>49</sup> Exhibit RW-21. Agreement between Connecticut Fund for the Environment, Inc. and NTE Connecticut, LLC. August 27, 2019.

1 **VI. THE PROPOSED GAS UNITS WOULD CAUSE COSTLY CLIMATE**  
2 **DAMAGES**

3 **Q. WHAT IS THE SOCIAL COST OF CARBON?**

4 A. The social cost of carbon is a value used to measure the climate damages—the  
5 monetized value of the net impacts—associated with CO<sub>2</sub> emissions. It values the  
6 incremental damages done by an additional ton of emitted CO<sub>2</sub> and discounts this  
7 number to the present value. Climate damages include property damage from floods  
8 and changes in agricultural productivity to extinction of endangered species and loss  
9 of unique environments.

10 **Q. DOES THE UNITED STATES HAVE A VALUE FOR THE SOCIAL COST**  
11 **OF CARBON?**

12 A. Yes. Between 2010 and 2016, the U.S. government's Interagency Working Group on  
13 the Social Cost of Greenhouse Gases developed estimates of the social cost of  
14 carbon. The estimates use three different discount rates and two different measures of  
15 climate sensitivity, which is defined as a measure of how fast the world is warming  
16 in response to rising concentrations of greenhouse gases. The final estimation of the  
17 social cost of carbon occurred in August 2016. The federal estimates ranged from  
18 \$15 to \$152/ton in 2020, rising to between \$32 and \$262 in 2050. Values are in  
19 \$2019 per metric ton.<sup>50</sup>

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<sup>50</sup> Exhibit RW-22. Interagency Working Group. 2016. Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866. Available at: [https://www.epa.gov/sites/production/files/2016-12/documents/sc\\_co2\\_tsd\\_august\\_2016.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf)

1 **Q. WHAT ARE THE TOTAL CLIMATE DAMAGES ASSOCIATED WITH THE**  
2 **PROPOSED GAS UNITS, APPLYING THE SOCIAL COST OF CARBON?**

3 A. Climate damages were calculated using the Interagency Working Group's mid-value  
4 for the social cost of carbon of \$52/ton in 2020 that rises to \$85/ton in 2050 at a  
5 discount rate of 3 percent. This results in climate damages of \$3.9 billion in net  
6 present value terms over the anticipated lives of the gas units.

7 **Q. DID ALABAMA POWER CONSIDER CLIMATE DAMAGES IN ITS**  
8 **EVALUATION OF THE PROPOSED GAS UNITS?**

9 A. No. I have not seen any such consideration or valuation of climate damages like the  
10 one I describe above. Nonetheless, they are relevant to the Commission's decision.  
11 The Company's failure to consider these damages reinforces my conclusion that it  
12 has not demonstrated that the proposed gas units are least-cost.

## 13 **VII. CONCLUSIONS AND RECOMMENDATIONS**

14 **Q. SUMMARIZE YOUR CONCLUSIONS.**

15 A. In its petition, Alabama Power points to a projected winter peak load—the hour of  
16 maximum electrical power demand—as the driver for a corresponding projected  
17 winter capacity deficit, in which the Company's current generating capacity (in MW)  
18 is not sufficient to meet projected peak load plus a reserve margin.<sup>51</sup> To resolve this  
19 capacity deficit, Alabama Power proposes to add 2,236 MW of supply-side resources  
20 to its system, of which 1,896 MW are new or existing gas units.

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<sup>51</sup> A reserve margin is (capacity minus demand) divided by demand, where capacity is the expected maximum available supply and demand is expected peak demand. Utilities have supply resources in excess of expected demand to ensure system reliability.

1 The proposed gas units are a mismatch for Alabama Power’s projected need. The  
2 winter peak identified in 2023-2024 is driving the proposed resource additions;  
3 however, [REDACTED]  
4 [REDACTED]  
5 [REDACTED] Alabama Power has provided no evidence that it cannot  
6 rely on excess capacity from the other Southern Company operating companies to  
7 meet at least a portion of the projected winter peak need prior to [REDACTED]  
8 Alabama Power has not demonstrated that its proposed resource portfolio is least-  
9 cost to customers. Rocky Mountain Institute’s Clean Energy Portfolio tool shows that  
10 a replacement resource portfolio made up of 50 percent DSM measures and 50  
11 percent renewable resources has a lower LCOE at \$39.34/MWh than building and  
12 operating Barry Unit 8 at an LCOE of \$45.54.

13 There are wide-ranging risks associated with gas units. Reliance on gas as a fuel  
14 subjects a generator to risk of fuel price volatility and fuel supply disruption,  
15 particularly in the winter. Alabama Power’s projected need is, in part, a result of the  
16 Company’s current reliance on gas, and to meet that need with more gas is illogical.  
17 In addition, downward pressure on the prices of renewable technologies leads to  
18 substantial stranded asset risk for gas generators, particularly new units with longer  
19 expected service lives. These units also face the risk of carbon dioxide regulation,  
20 which would result in increased operating costs that are passed on to customers.

21 The social cost of carbon is a value used to measure climate damages associated with  
22 emissions of CO<sub>2</sub>. Using a mid-range value developed by the United States  
23 Interagency Working Group on the Social Cost of Greenhouse Gases, I calculate that

1 the climate damages associated with the proposed gas units total \$3.9 billion in net  
2 present value terms over their anticipated service lives.

3 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

4 A. I make several recommendations. First, I recommend approval of the proposed solar-  
5 and-storage projects because, as Mr. M. Brandon Looney demonstrates in his Direct  
6 Testimony, there is a clear cost benefit to customers.<sup>52</sup>

7 Instead of the proposed gas units, Alabama Power should seek to obtain capacity  
8 from the other Southern Company operating companies, to the extent it can, [REDACTED]

9 [REDACTED]  
10 [REDACTED] Further, the Company should

11 be required to conduct a new DSM potential study and undertake all cost-effective  
12 DSM to reduce any remaining capacity deficit. The Company should also be required  
13 to procure additional renewable resources consistent with the recommendations of  
14 Sierra Club witness Mark Detsky, which are described in his Direct Testimony. The  
15 proposed gas units should be rejected or at least deferred until the results of the DSM  
16 potential study and the renewable resource procurement are known.

17 However, if the Commission does grant the certificate to the proposed gas units  
18 rather than deferring that decision, it should impose three conditions on that approval  
19 to protect customers from the significant risks associated with those units: (1)  
20 Alabama Power's shareholders, rather than its customers, should bear the costs of the  
21 proposed gas units becoming stranded assets; (2) The proposed gas units should be  
22 required to operate under enforceable annual declining greenhouse gas emissions

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<sup>52</sup> CONFIDENTIAL Exhibit MBL-1.

1 limits; and (3) Alabama Power should submit a retirement-replacement study for the  
2 vulnerable fossil steam units on its own system.

3 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

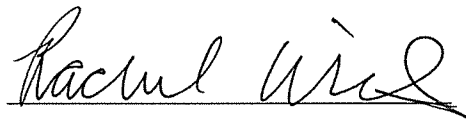
4 **A.** Yes, it does.

BEFORE THE  
ALABAMA PUBLIC SERVICE COMMISSION  
MONTGOMERY, ALABAMA

IN RE: Petition for a Certificate of )  
Convenience and Necessity by ) Docket 32953  
Alabama Power Company )

DIRECT TESTIMONY OF RACHEL WILSON ON BEHALF OF SIERRA CLUB

Rachel Wilson, being first duly sworn, deposes and says she has read the foregoing prepared testimony and states the matters and things set forth therein are true and correct to the best of her knowledge, information, and belief.

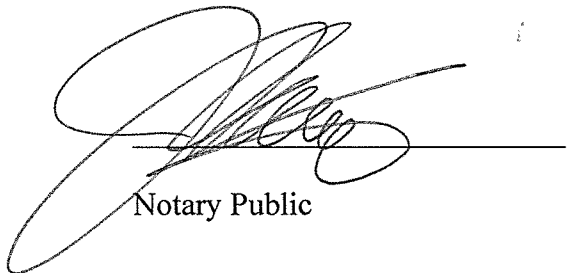


Rachel Wilson

Signed and sworn to before me on  
this 4 day of December, 2019.



**JANICE CONYERS**  
Notary Public  
Commonwealth of Massachusetts  
My Commission Expires  
July 11, 2025



Notary Public