

**BEFORE THE PUBLIC SERVICE COMMISSION**

**STATE OF GEORGIA**

**In Re:**

**Docket No. 55378**

**GEORGIA POWER COMPANY'S  
2023 INTEGRATED RESOURCE PLAN  
UPDATE**

**DIRECT TESTIMONY OF RONALD L. LEHR  
ON BEHALF OF CLEAN ENERGY BUYERS ASSOCIATION**

**February 15, 2024**

**I. Introduction and Summary of Recommendations.**

**Q: Please state your name, position, and business address.**

A: My name is Ronald L. Lehr. I am a consultant and the Board Chair for New Energy Economics. My business address is 4950 Sanford Circle West, Englewood, Colorado 80113.

**Q: On whose behalf are you testifying in this proceeding?**

A: As Board Chair for New Energy Economics, I am testifying on behalf of the Clean Energy Buyer's Association (CEBA).

**Q: Please summarize your qualifications and work experience.**

A: I advise clients regarding energy regulation and business matters. Current assignments include work for Western Grid Group on western grid-level system, operations integration, and transmission planning and work for a consortium of foundations interested in application of new financial approaches to address stranded utility assets resulting from retiring uneconomic generation plants. I have worked for the largest privately owned Swiss utility, private firms, trade and business associations, non-profit advocacy groups, national energy laboratories, and foundations on energy acquisitions, renewable energy policies, and commercialization strategies. I represented the wind industry in the Western U.S. on regional transmission and related issues for over a decade and have appeared as an expert witness, sponsoring testimony in administrative venues on utility planning and mergers, and in antitrust, employment, and government claim litigation. I am currently board chair of New Energy Economics, which supports competitive acquisition of new utility generation and demand resource portfolios to manage risks, based on rapidly changing

1 economic fundamentals. I served for seven years, from 1984 to 1991, as Chairman and  
2 Commissioner of the Colorado Public Utilities Commission. I served on corporate and  
3 foundation boards of directors and boards of advisors. I also completed terms as an  
4 appointed member of panels charged to make recommendations on electric industry  
5 restructuring, renewable energy resources, and transmission needs to the Colorado General  
6 Assembly, and as President and Commissioner of the Denver Board of Water  
7 Commissioners, the water utility for Denver and surrounding suburban areas. More details  
8 about my background are provided in Attachment RL-1.

9 **Q: Have you previously provided testimony before the Georgia Public Service**  
10 **Commission?**

11 A: Yes. I previously submitted testimony in Georgia Power Company's 2022 Rate Case,  
12 Docket No. 44280.

13 **Q: What is the purpose of your testimony?**

14 A: The purpose of my testimony is to provide analysis and recommendations regarding  
15 Georgia Power Company's (Georgia Power or the Company) proposals in its 2023  
16 Integrated Resource Plan (IRP) Update. CEBA's other witness in this proceeding, Ms.  
17 Priya Barua, testifies that large energy customers demand clean energy and lists four high-  
18 level outcomes of this docket that CEBA and its members support. Along with Ms. Barua,  
19 I provide specific recommendations for how the Commission should resolve this docket to  
20 achieve these outcomes for the benefit of Georgia Power's customers and the State. I  
21 provide recommendations to address shorter-term issues that affect resource sufficiency in

1 the near-term as well as longer-term recommendations to improving Georgia Power's  
2 planning and procurement processes.

3 **Q: What are the high-level outcomes that CEBA supports in this docket?**

4 A: CEBA supports the following outcomes for Georgia Power's 2023 IRP Update:

5 A. Georgia Power's forecasted future load should be met with least-cost, competitive  
6 clean energy resources.

7 B. All new capacity additions should be as clean and cost-effective as possible, without  
8 preference given to utility-owned gas generation resources or affiliate transactions.

9 C. Customers interested in voluntary clean energy purchases should be empowered to  
10 contribute to Georgia Power serving its forecasted load.

11 D. Georgia Power should make progress on transmission expansion plans and increasing  
12 the availability of market mechanisms to improve reliability and meet forecasted load  
13 growth.

14 **Q: Please summarize your specific recommendations to the Commission.**

15 A: I recommend that the Commission:

16 1. Reject Georgia Power's requests for CPCNs for PPAs with Mississippi Power and  
17 Santa Rosa Energy Center LLC.

18 2. Reject Georgia Power's request to develop up to 1,400 MW of simple cycle combustion  
19 turbine (CT) resources at Plant Yates.

20 a. In the alternative, allow Georgia Power to develop only one simple cycle CT at  
21 Plant Yates to account for the limited transmission capacity at that location.

- 1       3. Based on the capacity need the Commission finds is supported by the record of this  
2       proceeding, direct Georgia Power to procure the needed capacity through expedited  
3       RFPs that were approved in the 2022 IRP. Specifically, the Commission should direct  
4       Georgia Power to:
  - 5           a. No later than 60 days after the Commission's decision in this docket, issue the  
6           planned All-Source RFP for capacity resources for resources starting in 2026  
7           rather than the winter of 2028/2029.
  - 8           b. Expand and accelerate the planned RFP for 500 MW of ESS.
  - 9           c. Evaluate bids from the CARES 2023 Utility Scale RFP for Renewable  
10          Generation to meet capacity needs.
- 11      4. Approve, with modification, Georgia Power's proposal to develop, own, and operate  
12      BESS resources at various sites. Specifically, the Commission should authorize  
13      Georgia Power to develop up to 2,000 MW of solar-paired BESS. The Commission  
14      should approve the specific projects Georgia Power identified in its 2023 IRP Update  
15      (178 MW of BESS at existing Company-owned solar facilities at Robins and Moody  
16      Air Force Bases and 200 MW of BESS located with 200 MW of new solar) but require  
17      Georgia Power to competitively procure all additional BESS capacity.
- 18      5. Revisit and lower the minimum percentage of supply-side resources that must be  
19      owned by Georgia Power pursuant to Commission Rule 515-3-4-.04(3)(f)(7). The  
20      amount of supply-side resources Georgia Power owns should be the result of the  
21      planning and procurement process that provides the best outcomes for customers.

1           6. Direct Georgia Power to study and report to the Commission the extent to which  
2           additional transmission development and upgrades, enhanced transmission connections  
3           with neighboring balancing authorities, and improved market mechanisms will  
4           facilitate Georgia Power's ability to meet customer load and improve reliability. These  
5           studies should be submitted in the 2025 IRP Initial Filing by the Company and be  
6           available to intervenors in the proceeding.

7           7. Direct Georgia Power to improve its planning processes for the 2025 IRP consistent  
8           with my recommended process improvements to reduce Georgia Power's and its  
9           customers' long-term planning risks and provide least-cost options that benefit all  
10          ratepayers.

11          **II.    The Critical Importance of Competitive Bidding.**

12       **Q:    What will you address in this section of your testimony?**

13       A:    In this section of my testimony, I will explain why it is critical that the Commission rely  
14           on the competitive bidding processes required by the Commission's rules for meeting  
15           Georgia Power's capacity needs. Georgia Power has not justified its request to rely on the  
16           exceptions to competitive bidding allowed in certain narrow circumstances by the  
17           Commission's rules. Accordingly, the Commission should reject Georgia Power's  
18           proposed PPAs with Mississippi Power and the Santa Rosa Energy Center  
19           (Recommendation No. 1) and Georgia Power's proposed utility-owned CTs at Plant Yates  
20           (Recommendation No. 2). Instead, the Commission should work with Georgia Power to  
21           accelerate and expand several existing and planned RFP processes and direct Georgia

1 Power to expand its proposed BESS acquisition proposal and acquire most of the needed  
2 BESS capacity through competitive bidding.

3 **Q: Before you address competitive bidding, is there a framing that you recommend for**  
4 **this docket?**

5 A: Yes, I recommend that the Commission separate shorter-term issues that affect resource  
6 sufficiency in the near-term from decisions that will have long-term implications. Longer-  
7 term issues that can be handled in the next IRP should be resolved using the Commission's  
8 standard planning and procurement approaches. Using standard approaches to address  
9 longer-term needs will help avoid further encouraging the Company to bring emergency  
10 issues to the Commission and will reinforce the need for adequate load forecasting and use  
11 of the Commission's approved planning and procurement processes.

12 The Commission should focus on what needs to be done immediately while  
13 allowing more time and consideration for actions and investments that are less urgent and  
14 can wait until the 2025 IRP. This approach also provides time for more consideration of  
15 the load forecasts at issue in this proceeding. If currently anticipated load growth does not  
16 appear, or appears at levels lower than anticipated, or later than anticipated, the  
17 Commission can avoid costs to consumers that might not be needed. This approach has the  
18 benefits of reducing customer costs and matching resource inventory more closely to actual  
19 loads.

1           A. Georgia Power's requested exceptions to the competitive bidding requirement.

2   **Q:   Do the Commission's rules generally require that Georgia Power procure generation**  
3   **resources through competitive bidding?**

4   A:   Yes. Commission Rule 515-3-4-.04(f) requires Georgia Power to procure new supply-side  
5   capacity through competitive bidding unless certain narrow exceptions apply. Georgia  
6   Power argues that three of these narrow exceptions apply to its proposals to its proposed  
7   PPAs with Mississippi Power and the Santa Rosa Energy Center and its proposed CTs at  
8   Plant Yates. First, Georgia Power argues that these resources are "supply-side capacity  
9   resources of extraordinary advantage that require immediate action."<sup>1</sup> Second, Georgia  
10   Power argues that the Commission has authority to exclude any new supply-side resources  
11   from the competitive bidding requirements during an IRP proceeding pursuant to  
12   subparagraph 6.<sup>2</sup> Third, Georgia Power argues that the minimum percentage of utility-  
13   owned resources established in 2001 allows the Commission to exempt utility-owned  
14   resources from the competitive bidding requirements to ensure the percentage of supply-  
15   side resources owned by Georgia Power does not fall below 70 percent.<sup>3</sup> At hearing,  
16   Georgia Power's witness panel confirmed that Georgia Power views the current  
17   circumstances it is facing as extraordinary and that these extraordinary circumstances  
18   warrant relying on these exceptions to the competitive bidding requirements.<sup>4</sup>

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<sup>1</sup> 2023 IRP Update at 24, citing Commission Rule 515-3-4-.04(3)(f)(3).

<sup>2</sup> 2023 IRP Update at 24, citing Commission Rule 515-3-4-.04(3)(f)(6).

<sup>3</sup> 2023 IRP Update at 24, citing Commission Rule 515-3-4-.04(3)(f)(7).

<sup>4</sup> Hearing Transcript at 287-288 (January 16, 2024).



1   **Q:   Has Georgia Power demonstrated that the circumstances it is facing justify exempting**  
2       **the PPAs with Mississippi Power and Santa Rosa Energy Center and the proposed**  
3       **CTs at Plant Yates from the Commission’s competitive bidding requirements?**

4   A:   No. As I discuss more below, there are several ways Georgia Power can use competitive  
5       bidding processes to meet its capacity needs. Accordingly, there is no need to rely on the  
6       rules’ narrow exceptions to the competitive bidding requirements. Moreover, these  
7       emission-intensive resources would undermine Georgia Power’s past efforts to  
8       decarbonize its electricity supply and the clean energy requirements of many of its large  
9       customers. The Commission should be very reluctant to approve three resources that would  
10      increase the emission-intensity of Georgia Power’s resource mix outside the competitive  
11      bidding process and traditional IRP process.

12      Using standard approaches to address capacity needs will help avoid further encouraging  
13      the Company to bring emergency issues to the Commission and will reinforce the need for  
14      adequate load forecasting and use of the Commission’s approved planning and  
15      procurement processes.

16   **Q:   Do the PPAs with Mississippi Power and Santa Rosa Energy Center and the proposed**  
17       **CTs at Plant Yates represent “capacity resources of extraordinary advantage”?**

18   A:   No. The mere availability of the PPAs does not mean that they provide some sort of  
19       “extraordinary advantage” to Georgia Power’s customers that competitively bid resources  
20       cannot provide. Similarly, Georgia Power’s promised ability to deploy CTs relatively  
21       quickly on property it owns at Plant Yates is not by itself an “extraordinary advantage” for  
22       customers. If anything, these resources provide extraordinary advantages to Georgia Power

1 and Southern Company, not to Georgia Power's customers. Specifically, the PPA with  
2 Mississippi Power would provide an advantage to Georgia Power's parent company,  
3 Southern Company, because this PPA would allow Mississippi Power to continue running  
4 fossil fuel steam resources that the Mississippi Public Service Commission had ordered  
5 Mississippi Power to retire.<sup>5</sup> Similarly, the proposed utility-owned CTs at Plant Yates  
6 would add to Georgia Power's rate base and increase its profit opportunity. However, these  
7 benefits to Southern Company and Georgia Power would come at the expense of Georgia  
8 Power's customers that expect Georgia Power to continue decarbonizing its electricity  
9 supply and expect Georgia Power to pursue the most cost-effective resources through  
10 competitive bidding.

11 **Q: Has Georgia Power demonstrated that these resources meet the other rule exemptions**  
12 **to the competitive bidding requirement?**

13 A: No. CEBA will address Commission Rule 515-3-4-.04(3)(f)(6) in briefing, but it is my  
14 understanding that this provision simply requires the Commission to make an explicit  
15 determination whether or not to exempt any supply-resource from the competitive bidding  
16 requirements based on the exceptions specified in the rule. In other words, Commission  
17 Rule 515-3-4-.04(3)(f)(6) does not indicate that the Commission will approve exceptions  
18 to the competitive bidding requirement for reasons that are not specified in the rules. I will  
19 address the exemption at Commission Rule 515-3-4-.04(3)(f)(7) in more detail below.

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<sup>5</sup> 2023 IRP Update at 17.

1   **Q:   What do you recommend with respect to Georgia Power’s requests for CPCNs for**  
2       **the PPA with Mississippi Power, the PPA with Santa Rosa Energy Center, and the**  
3       **utility-owned CTs at Plant Yates?**

4   A:   I recommend that the Commission reject each of these requests. Georgia Power has not  
5       justified its request to rely on the narrow, limited exceptions to the Commission’s  
6       competitive bidding requirements for these resources. Given the emission-intensity of  
7       these resources, the clear benefits of these resources to Georgia Power and Southern  
8       Company, and the lack of clear benefits to Georgia Power’s customers, the Commission  
9       should be especially reluctant to allow Georgia Power to procure these resources outside  
10      the normal competitive bidding processes and the full analysis that a regular IRP requires.

11   **Q:   If the Commission is inclined to approve one of these three resources, do you have an**  
12      **opinion as to which it should be?**

13   A:   Again, Georgia Power has not justified its requests for any of these resources. However, if  
14      the Commission were to approve one of these three resources, I suggest that the  
15      Commission allow Georgia Power to build a single CT at Plant Yates. I view a single CT  
16      as the “least bad” option of these three fossil fuel resources because CTs are used to meet  
17      peak needs and typically do not run very often and so will likely produce fewer emissions  
18      than the two PPAs. I recommend that the Commission only allow Georgia Power to build  
19      a single CT because, according to Georgia Power, transmission constraints at Plant Yates  
20      would limit the capacity contribution of the proposed CTs to 600 MW until 2028.<sup>6</sup> There

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<sup>6</sup> Georgia Power Direct Testimony at 38.

1 is simply no reason to allow Georgia Power to build 1,400 MW of CT capacity at Plant  
2 Yates as it has requested outside the normal IRP process given these transmission  
3 constraints. In addition, it would be more appropriate for Georgia Power to evaluate CTs  
4 in its 2025 IRP using the standard IRP process, which includes developing an  
5 environmental compliance strategy, attention to consumer cost impacts, and transmission  
6 and market studies.

7 **Q: Do you have any other recommendations if the Commission approves one or more**  
8 **CTs at Plant Yates?**

9 A: Yes. If the Commission authorizes any new CTs, it should require Georgia Power to  
10 provide an updated reserve margin study in the 2025 IRP and to evaluate the ability to use  
11 additional demand response resources and reserve sharing capabilities and report the results  
12 in the 2025 IRP. These reasonable analysis and reporting requirements will provide some  
13 assurance that Georgia Power will not face emergency capacity needs in the future or seek  
14 to address such needs with new utility-owned CTs.

15 B. Meeting the load forecast with competitive bidding.

16 **Q: Why is it critical that the Commission require resources to be procured through**  
17 **competitive bidding in this docket?**

18 A: In addition to being the default requirement under the Commission's rules, use of  
19 competitive bidding, adequately supervised by the Commission, is the most reliable and  
20 effective method for finding out what resources the market can supply, when, where, and  
21 at what cost. The only way for the Commission to ensure that the generation resources  
22 procured in an IRP are the best resources available for customers is for Georgia Power to

1 conduct a Request for Proposals (RFP) process to see what resources are actually available.  
2 Simply put, without an RFP there is a very high likelihood that customers will overpay for  
3 generation resources, especially when the utility has other reasons for procuring those  
4 resources such as increasing its rate base or providing a sales opportunity to an affiliate.

5 **Q: How specifically can the Commission require Georgia Power to use competitive**  
6 **bidding processes to meet its capacity needs in this docket?**

7 A: The Commission and Georgia Power have plenty of history and experience conducting  
8 RFPs for generation resources. Despite Georgia Power's protestations that there is not  
9 sufficient time to conduct an RFP to meet its forecasted load, Georgia Power can rely on  
10 three existing or planned RFPs that were approved in the 2022 IRP for its forecasted  
11 capacity needs. Specifically, I recommend that the Commission direct Georgia Power to:

- 12 a. No later than 60 days after the Commission's decision in this docket, issue the  
13 planned All-Source RFP for capacity resources for resources starting in 2026  
14 rather than the winter of 2028/2029.
- 15 b. Expand and accelerate the planned RFP for 500 MW of ESS.
- 16 c. Evaluate bids from the CARES 2023 Utility Scale RFP for Renewable  
17 Generation to meet capacity needs.

18 These RFPs are already in process at various stages, which provides the Commission and  
19 Georgia Power with the opportunity to use them to meet the load forecast the Commission  
20 approves for planning purposes in this docket.

1   **Q:    Given the planned scopes and timing of these RFPs, is it appropriate for the**  
2       **Commission to expand or accelerate them?**

3    A:    Yes. To the extent the Commission agrees with Georgia Power that the circumstances it is  
4       facing with respect to a rapidly increasing load forecast are extraordinary, it is appropriate  
5       for the Commission to take steps that it might not otherwise take in business-as-usual  
6       circumstances. The benefits of competitive bidding for customers are such that the  
7       Commission should prefer to make the process modifications needed to expand or  
8       accelerate these RFPs to ensure that resources can come online more quickly, rather than  
9       approve Georgia Power's PPA and CT requests. With the help of Staff, I am confident the  
10      Commission can make any process modifications necessary while protecting the integrity  
11      of the competitive bidding process and instilling confidence in bidders. Potential process  
12      modifications include compressing the time for RFP development (in the case of the All-  
13      Source RFP and the ESS RFP), compressing the time for bid evaluation and selection,  
14      establishing deadlines for PPA negotiations, and establishing firm deadlines with penalties  
15      for winning bidders to construct their projects.

16   **Q:    The CARES RFP is designed to procure resources for Georgia Power's voluntary**  
17       **Clean and Renewable Energy Supply (CARES) program, not to procure resources to**  
18       **serve system load. Is it appropriate to use this RFP to procure system resources?**

19   A:    Yes. Even though this RFP is currently open, it would be both reasonable and fair for  
20       Georgia Power to notify bidders that it plans to evaluate bids based on their ability to meet  
21       the capacity needs the Commission approves in this docket, in addition to their ability to  
22       meet the needs of the CARES program. Bidders should have the option to opt-out of such

1 evaluation, but I expect most bidders would welcome additional opportunities to have their  
2 projects selected as winning bids.

3 **Q: Why are you confident that Georgia Power would be able to procure sufficient**  
4 **resources to meet its load forecast through accelerated RFPs?**

5 A: The Request for Information (RFI) that Georgia Power conducted in preparation for this  
6 2023 IRP Update indicates that there are a substantial number of resources that could be  
7 available in the next few years. Specifically, the RFI found that a total of 1,110 MW of  
8 resources could be available in 2026, a total of 1,495 MW of resources could be available  
9 in 2027, and a total of 1,072 MW of resources could be available in 2028.<sup>7</sup> Georgia Power  
10 asserts that there is not actually enough time for these resources to come online in this  
11 timeframe,<sup>8</sup> but this assertion assumes that the RFP and certification processes will take  
12 the amount of time they usually take in ordinary circumstances. Given the extraordinary  
13 circumstances Georgia Power says it is facing, I am confident that these timelines can be  
14 compressed in a way that is fair to all bidders and that brings the needed capacity online in  
15 the timeframe it is needed.

16 Moreover, it is very likely that there are substantially more resources available by  
17 2026 and 2027 than the response to the RFI indicates. As Georgia Power's witness panel  
18 acknowledged at hearing, the RFI did not offer respondents the opportunity to enter into a  
19 contract with Georgia Power.<sup>9</sup> There are likely many developers that did not respond to the

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<sup>7</sup> 2023 Request for Information for Capacity Resources – Summary of Results, Section 2.3 (December 4, 2023).

<sup>8</sup> *Id.*

<sup>9</sup> Hearing Transcript at 296 (January 16, 2024).

1 RFI simply because they were too busy to respond to an RFI but that would respond to an  
2 RFP that offers real opportunities for contracts. I expect the Commission and Georgia  
3 Power will see just how many potential projects are available in the responses to the  
4 CARES RFP .

5 **Q: Please summarize your recommendation with respect to the current RFP processes.**

6 A: As stated above, the Commission should direct Georgia Power to meet the capacity need  
7 it had proposed to meet with the two PPAs and the proposed CTs starting in winter  
8 2025/2026 by expanding and accelerating existing RFP processes. Specifically, the  
9 Commission should direct Georgia Power to:

10 a. No later than 60 days after the Commission's decision in this docket, issue the  
11 planned All-Source RFP for capacity resources for resources starting in 2026 rather  
12 than the winter of 2028/2029.

13 b. Expand and accelerate the planned RFP for 500 MW of ESS.

14 c. Evaluate bids from the CARES 2023 Utility Scale RFP for Renewable Generation  
15 to meet capacity needs.

16 C. Expanding and improving Georgia Power's BESS proposal.

17 **Q: Should the Commission require Georgia Power to competitively procure the BESS**  
18 **resources it has proposed in the 2023 IRP Update?**

19 A: In large part, yes. Georgia Power has identified and proposed three specific BESS projects:  
20 two BESS additions to existing Company-owned solar facilities at Robins Air Force Base  
21 and Moody Air Force Base for a combined total of 178 MW and one 200 MW BESS project



1 co-located with 200 MW of new solar.<sup>10</sup> Though I expect customers would be better served  
2 if these projects had been competitively procured, to the extent the Commission agrees that  
3 Georgia Power must take immediate action to meet its near-term load forecast, CEBA  
4 would prefer to see these projects move forward simply because they are clean energy  
5 resources that would not result in new emissions. However, Georgia Power has failed to  
6 support its request to build an additional 622 MW of Company-owned BESS resources up  
7 to a total of 1,000 MW of new BESS capacity outside the normal competitive bidding  
8 processes.

9 **Q: Please explain.**

10 A: As discussed above, the Commission's rules require new generation resources to be  
11 procured through competitive bidding unless they meet one of the specified, narrow  
12 exceptions.<sup>11</sup> The only one of these exceptions Georgia Power cites in its request to acquire  
13 these proposed BESS resources without competitive bidding is the need own at least 70  
14 percent of its supply-side capacity.<sup>12</sup> The Commission should find that this is not a  
15 compelling reason to deny customers the benefits of competitive bidding.

16 **Q: What do you recommend?**

17 A: I recommend that the Commission approve the specific Company-owned BESS projects  
18 that Georgia Power identifies in the 2023 IRP Update – specifically, the 178 MW of BESS  
19 capacity at Robins and Moody Air Force Bases and the 200 MW of BESS paired with new

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<sup>10</sup> 2023 IRP Update at 20.

<sup>11</sup> Commission Rule 515-3-4-.04(3)(f).

<sup>12</sup> 2023 IRP Update at 20.

1 solar. I further recommend that the Commission direct Georgia Power to procure the  
2 remainder of the BESS capacity through a targeted RFP. Given the dispatchability value  
3 of BESS, the Commission should also authorize Georgia Power to procure up to 2,000 MW  
4 of total BESS capacity provided it does so through an RFP.

5 **III. No preference for utility-owned generation.**

6 **Q: What will you address in this section of your testimony?**

7 A: In this section of my testimony, I will address the Commission's policy that Georgia Power  
8 maintain a minimum percentage of its supply-side capacity as utility-owned generation  
9 resources. This policy is established by Commission Rule 515-3-4-.04(3)(f)(7) and the  
10 minimum percentage has been set at 70 percent since 2001.<sup>13</sup> This policy can also be  
11 thought of as a cap on non-utility-owned resources. In other words, under this policy, no  
12 more than 30 percent of Georgia Power's capacity needs can be supplied by PPA resources.

13 **Q: Recognizing that the Commission established the policy that Georgia Power should**  
14 **own at least 70 percent of its supply-side resource capacity, what does Georgia Power**  
15 **say in support of this policy?**

16 A: Georgia Power's witness panel argues that the purpose of this policy is "to ensure system  
17 reliability and sufficient Commission oversight of the resources serving customers."<sup>14</sup> The  
18 witness panel further argues that if Georgia Power were to contract for all the capacity it

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<sup>13</sup> 2023 IRP Update at 18, FN 28.

<sup>14</sup> Georgia Power Direct at 29.

1 expects to need through the winter of 2030/2031 it would “present system reliability  
2 risks.”<sup>15</sup>

3 **Q: Has Georgia Power presented any evidence to support its assertion that reliability**  
4 **would be negatively impacted if its ownership percentage fell below 70 percent?**

5 A: No.

6 **Q: Is there any reason to think that Georgia Power’s reliability would be negatively**  
7 **impacted if its ownership percentage fell below 70 percent?**

8 A: No.

9 **Q: Do any other states require their utilities to own a certain percentage of their supply-**  
10 **side capacity?**

11 A: While I have not conducted a 50-state survey, I am not aware of any other states that require  
12 investor-owned utilities to own at least 70 percent of their supply-side capacity or that have  
13 established any minimum utility ownership requirements. In many states, utilities do not  
14 own any generation assets. It has been over two decades since the 2001 California energy  
15 crisis and in that time, PPAs and other contractual arrangements and market mechanisms  
16 have proven to be effective at both keeping the lights on and providing cost-effective  
17 energy for customers.

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<sup>15</sup> *Id.*

1   **Q:    Are there any benefits to requiring Georgia Power to own at least 70 percent of its**  
2       **supply-side capacity?**

3   A:    The only clear benefit of this policy incurs to Georgia Power's shareholders in the form of  
4       a rate base that is higher than necessary and the resulting profit opportunities. Customers  
5       derive few, if any, benefits from this policy.

6   **Q:    Why is the Commission's minimum ownership policy a concern?**

7   A:    As I have discussed, part of Georgia Power's purported justification for constructing  
8       Company-owned CTs and Company-owned BESS without the benefit of competitive  
9       bidding is that its ownership percentage will fall below 70 percent without these utility-  
10      owned resources. In this way, the minimum ownership policy serves as a constraint on  
11      resource procurement decisions that has nothing to do with what the optimal resource  
12      option is or what is in the best interest of customers.

13   **Q:    How should the Commission establish a minimum ownership percentage for Georgia**  
14       **Power?**

15   A:    For the reasons discussed, it is entirely unnecessary to establish a minimum ownership  
16       percentage for Georgia Power. However, recognizing that this policy is enshrined in the  
17       Commission's rule, I recommend that the Commission revisit the current 70 percent  
18       ownership policy and greatly reduce that percentage, if not do away with the minimum  
19       threshold altogether. The amount of supply-side resources Georgia Power owns should be  
20       the result of the planning and procurement process that provides the best outcomes for  
21       customers and not be predetermined.

1       **IV. Additional recommendations to address short-term needs before the 2025 IRP.**

2       **Q: What are the roles of planning reserve margins and power pool agreements in**  
3       **meeting short term emergency needs?**

4       A: Both reserve margins and pool agreements should be analyzed to define roles they might  
5       play in meeting resource requirements in the next few years. If Georgia Power is  
6       maintaining a 26% winter target planning reserve margin for the stated purpose of  
7       contributing to reliability, a portion of that reserve might meet short term needs. Consumers  
8       have been paying extra to have those reserves in place, which is like paying the premium  
9       for an insurance policy. Now that Georgia Power's load forecast has dangerously  
10      increased, consumers should get some relief by calling on the insurance they bought. When  
11      the planning reserve margin falls closer to the industry-wide rule of thumb of 15%, and all  
12      short-term options outlined above have been exhausted, then the Company can return to  
13      the Commission if it needs additional authority for more resources. Reducing the winter  
14      reserve margin from 26% to a range closer to the standard 15% would free up capacity to  
15      serve new loads through winter 2026/2027 of the load forecast emergency, giving more  
16      time for RFPs to be completed to address capacity needs.

17             Likewise, Georgia Power has power pooling agreements with other neighboring  
18      utilities. These are, like planning reserve margins, available to contribute in defined,  
19      extraordinary circumstances. The Commission should require the Company to investigate  
20      and report on these agreements to determine whether and how much they might contribute  
21      to resolving the resource needs proposed in this docket. Like reducing the excessive  
22      planning reserve margin, calling on power pool resources to the extent allowed by these

1 agreements could be part of the mix of solutions to exigent circumstances the Company  
2 claims in this docket. In summary, the high level of reserve margin preferred by the  
3 Company suggests that the system assumptions and agreements around reserve margin  
4 requirements and sharing are ripe for review by this Commission to identify inefficiencies  
5 in the system and solutions to support a least-cost plan in this IRP update.

6 **V. The need to study transmission development and market mechanisms.**

7 **Q: What will you discuss in this section of your testimony?**

8 A: In this section of my testimony, I will provide recommendations for studies and analyses  
9 Georgia Power should undertake before the 2025 IRP to ensure the Commission has a more  
10 complete picture of the tools and strategies available to Georgia Power for meeting its load  
11 forecast. These recommendations are long-term planning improvements for the  
12 Commission's consideration.

13 **Q: What can be done to achieve diverse resource options by developing market options?**

14 A: The Commission should direct Georgia Power to evaluate and report on consumer benefits  
15 of an energy imbalance market. Georgia Power participates in the Southeast Energy  
16 Exchange Market (SEEM),<sup>16</sup> but no widely available information has been located that  
17 details how much economic benefit SEEM has produced, or what impacts it has had on  
18 market options that allow Georgia Power to benefit from additional resource diversity. No  
19 consistent source of SEEM benefits seems to be available.

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<sup>16</sup> <https://southeastenergymarket.com/>.

1 Contrast that lack of transparency with the CAISO Western Energy Imbalance  
2 Market (WEIM), which has produced about \$5 billion in savings since it launched in  
3 2014.<sup>17</sup> Contrast these two regional markets: the Western EIM has substantial savings  
4 detailed on its web page; SEEM does not. Since WEIM operates on the CAISO full market  
5 model, all participants share the same information about resources that are available and  
6 use the EIM dispatch to rationalize access to regional resources that participate voluntarily.  
7 Aside from reliability benefits that flow from EIM adding “real time grid awareness”  
8 through operators’ access to its grid model, it is widely known that EIM dispatch has  
9 largely replaced the prior system of short-term bilateral utility power trading that preceded  
10 it. EIM trading is automated and efficient; the bilateral trading it replaces much less so.  
11 Note that CAISO EIM calculated and reported dollar benefits measure not only consumer  
12 savings but also the inefficiency, limitations, and waste that was previously maintained by  
13 the utility bilateral market system. I note that SPP’s Western Energy Imbalance Service  
14 (WEIS) produced an estimated \$31.7 million in benefits in 2022.<sup>18</sup>

15 **Q: Are there opportunities for broader market coordination in expanding power pools**  
16 **and regional resource adequacy planning?**

17 A: Yes. Again, the West, akin to the Southeast in lacking access to Regional Transmission  
18 Organizations (RTO) and Independent System Operators (ISO), has developed incremental  
19 progress in shared, voluntary, regional resource adequacy planning. Led by the Western

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<sup>17</sup> <https://www.westerneim.com/pages/default.aspx>.

<sup>18</sup> Benefit of the Market – SPP Energy Imbalance Service (available at:  
<https://spp.org/documents/69127/2022%20weis%20benefit%20of%20market%20report.pdf>).

1 Power Pool,<sup>19</sup> a voluntary group of utilities have developed the Western Resource  
2 Adequacy Program (WRAP) which has established standards for planning and sharing  
3 information about resource adequacy. By planning together, and sharing information about  
4 available and planned resources, WRAP participants hope to increase system reliability  
5 and reduce costs for backup power.<sup>20</sup>

6 Like the WEIM, WRAP is voluntary, and is much less than a fully developed  
7 regional transmission organization on the FERC model. But it does provide progress  
8 toward a more regional approach to reliability planning. It is expected to reveal  
9 opportunities for utilities to make more optimal use of their existing resources, add  
10 resources that serve both their loads and help to meet regional resource needs, and to avoid  
11 unneeded and uneconomic investments in resources that, given regional planning and  
12 information sharing, would be surplus to requirements, uneconomic, and potentially  
13 stranded assets.

14 Georgia Power could be helping to plan and execute a regional reliability and  
15 resource assessment program like WRAP. Georgia Power's next set of resource portfolios  
16 should be planned to include resources from these market and regional resource adequacy  
17 planning options.

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<sup>19</sup> <https://www.nwcouncil.org/reports/columbia-river-history/northwestpowerpool/>.

<sup>20</sup> <https://www.westernpowerpool.org/about/programs/western-resource-adequacy-program>.



1   **Q:    Are there best practices you can recommend that the Commission might direct**  
2       **Georgia Power to undertake to improve transmission planning?**

3    A:    Yes. In my experience, transmission planning as typically practiced engages with less than  
4       full attention to all transmission benefits. Economic and operational reliability are  
5       commonly addressed and important values that allow utilities planning transmission to  
6       justify (or avoid) investments. Economic benefits are typically calculated in production  
7       cost models. Reliability benefits obtained in load flow and similar studies can be measured  
8       by reduced loss of load probability and potential savings from reduced planning reserve  
9       margins. More comprehensive assessments of all transmission benefits would give more  
10      complete information for both utility decision makers on whether, when, and where to  
11      invest in transmission, and give decision makers more information to inform their decisions  
12      about whether to approve transmission proposals. A report from Brattle in 2013 contains  
13      the most exhaustive examination of transmission benefits and how to address them of  
14      which I am aware. It describes planning approaches for comprehensive treatment of  
15      benefits, and advice to planners on how to address each benefit.<sup>21</sup>

16   **Q:    Should transmission planning be proactive, or reactive to demonstrated current**  
17       **needs?**

18   A:    In my view, transmission planning, including all the benefits found in the Brattle report,  
19       should anticipate transmission needs proactively rather than reacting to transmission  
20       shortages that constrain resource options and consumer benefits, as Georgia Power has

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<sup>21</sup> Chang, J., Pfeifenberger, J., and Hagerty, J., “The Benefits of Electric Transmission: Identifying and Analyzing the Value of Investments,” A WIRES Report, Brattle, 2013. 193 pages.

1 experienced in this docket. Instead of providing transmission after resource needs and  
2 locations are identified, as appears to be the present approach by the Company based on its  
3 testimony, the Company should be anticipating transmission needs, making needed  
4 investments in advance of need. In order accomplish this, the Commission should direct  
5 the Company to engage in proactive transmission planning process that allows for customer  
6 and impacted stakeholder feedback – which would enable the Company to proactively  
7 address customer and resource needs in support of more cost-effective planning.

8 In part, proactive transmission planning is required because transmission projects  
9 can exhibit longer lead times than resource development projects, particularly those that  
10 are adaptable to many locations (like solar and batteries) and modular (like solar, batteries  
11 and wind). Proactive planning would allow Georgia Power to identify the best areas for  
12 resource development and system integration, using locational diversity to manage output  
13 variability, steering development in advance for best overall system outcomes.

14 **Q: Over what proactive term and geographies should transmission planning proceed?**

15 A: I recommend a 20 year “vision” plan, accompanied by 5 and 10 year action plans. The  
16 CAISO has embarked on planning with these longer terms, which promises to help  
17 rationalize resource development locations and timing. MISO, SPP, and ERCOT all  
18 provide examples of longer-term planning and nearer-term investments, with abundant  
19 consumer benefits resulting. Expanded geographies for transmission planning should  
20 replace planning that only looks at transmission needs within the utility service area  
21 boundary. The ability to reach diverse resources is important both for risk management and  
22 for reliability. For example, transmission systems need to be broader than the area impacted

1 by extreme weather. It should appropriately reach the best, most diverse resource locations,  
2 both to access location-dependent resources like wind, and to spread resources across  
3 geography to minimize output variability. If clouds are cutting into solar production in one  
4 area, adequately planned transmission can access other solar resource areas likely be cloud-  
5 free. If a hurricane strikes, it is important to have transmission access to other areas than  
6 can continue to produce needed energy.

7 **Q: What should be the role of non-wires transmission alternatives?**

8 A: Grid Enhancing Technologies (GETS), including rewiring with modern wires  
9 technologies, sensors that allow real time and improved operations, and flow based  
10 operations that replace deterministic line ratings<sup>22</sup> (and many other innovations) are all  
11 being widely demonstrated and used right now. These approaches help to speed up  
12 transmission provision and improve transmission efficiency. The Commission's planning  
13 rules should specifically reference and encourage Georgia Power to plan transmission that  
14 incorporates new technologies and approaches, and to report its progress as inputs into its  
15 resource planning, because resources and transmission need to proceed together. The  
16 current docket shows how delayed transmission provision, rather than proactive planning,  
17 reduces access to resource options, drives up costs, and results in inefficient resource  
18 provision. Furthermore, a consistent cost-benefit methodology should be applied by the

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<sup>22</sup> APS data system: <https://www.tdworld.com/grid-innovations/distribution/article/20971578/arizona-public-service-leverages-data-for-advanced-distribution-management> . FERC tariff approval <https://www.rtoinsider.com/31320-aps-can-adopt-flowgate-methodology-ferc-rules/>.

1 Company to facilitate evaluation of transmission solutions and alternatives that support  
2 least-cost planning.

3 **Q: Isn't transmission hard to route and site?**

4 A: Yes, it is. Rewiring or rebuilding on existing rights of way, using land adjacent to rights of  
5 way (including those devoted to rail and road transportation and gas and oil pipelines) can  
6 provide options that might be easier to access than new rights of way on virgin ground.  
7 "Smart from the start" transmission planning that has been heavily developed in the West  
8 emphasizes avoiding siting barriers like wildlife and other recognized national, state, and  
9 local preserves. Engaging early with groups who devote themselves to protecting such  
10 places is another way to avoid siting and routing controversies. Cultural resources for  
11 indigenous people are another category of challenges that can be avoided by "smart from  
12 the start" transmission planning.<sup>23</sup>

13 **Q: Based on this discussion, what do you recommend?**

14 A: I recommend that the Commission direct Georgia Power to study and report to the  
15 Commission the extent to which additional transmission development (including grid  
16 enhancing technologies, non-wires alternatives, and flow-based transmission operations),  
17 enhanced transmission connections with neighboring balancing authorities, and improved  
18 market mechanisms will facilitate Georgia Power's ability to meet customer load and  
19 improve reliability. These studies should be submitted in the 2025 IRP.

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<sup>23</sup> <https://cleanenergygrid.org/wp-content/uploads/2013/01/Pam-Eaton.pdf>.

1       **VI. Reducing long-term planning risks.**

2       **Q: What will you address in this section of your testimony?**

3       A: In this section of my testimony, I will provide a number of recommendations for how the  
4       Commission and Georgia Power can conduct more effective resource planning. My goal  
5       in this section of my testimony is to provide advice for how Georgia Power and the  
6       Commission can avoid facing another interim IRP in the future in which Georgia Power  
7       cites exigent circumstances as justification for procuring expensive, emission-intensive  
8       resources on short notice and outside the required competitive bidding processes.

9       **Q: Do you have recommendations for how the Georgia Power planning and procurement**  
10       **process might be improved?**

11      A: Yes. The most important longer-term task for the Commission is to give Georgia Power  
12      guidance on how to improve resource planning and procurement. The goal here is to rely  
13      on competitive procurement to reveal economic values of all alternatives that should be  
14      considered for inclusion in resource portfolios going forward. The Commission should take  
15      responsibility for improving the partnership between utility and regulators, since both have  
16      important roles in improving outcomes. Georgia Power must diversify its suppliers and  
17      resources to manage risks. Regulators must drive toward low costs, consistent with risk  
18      management through diverse resource portfolios. They must be aware of utility monopsony  
19      and regulate its incentives. The improved process must encourage suppliers, while  
20      providing utility approvals and shareholder returns commensurate with both well managed  
21      risks and the public interest.

1 **Q: How can planning and procurement processes be improved to manage risks more**  
2 **effectively?**

3 A: Financial economics provides a starting place for considering how to understand and  
4 manage risks in obtaining the best utility resources to meet loads and reasonable cost. The  
5 most common and effective way investors manage investment risks is by investing in  
6 diversity in their investment portfolios.<sup>24</sup> Utilities, with Commission encouragement,  
7 should likewise endeavor to manage their risks by investing in diverse resource portfolios.  
8 Risks here are simply costs that a given investment faces that could give rise to higher than  
9 anticipated costs. By diversifying as many aspects of a utility's resource pool as possible,  
10 the utility can mitigate the risk that any single investment will impose significant costs on  
11 the utility and its ratepayers.

12 Certainly Georgia Power and the Commission have enough experience with project  
13 completion risks to know fully how important these can be to both shareholders and  
14 consumers. There are other important risks to focus on in the context of this filing. Here is  
15 a representative but not exhaustive set of risks that I recommend to the Company and the  
16 Commission focus more attention on in upcoming planning and procurement work:

- 17 1. Fuel risks.
- 18 2. Load forecast risks.
- 19 3. Resource adequacy and reliability planning risks.
- 20 4. Economic, technology, and policy risks.

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<sup>24</sup> <https://www.investopedia.com/terms/m/modernportfoliotheory.asp>.

*Fuel Risks*

**Q: What approaches do you recommend to help manage gas price and availability risks?**

A: First, the Commission and Georgia Power should reduce or eliminate any new natural gas capacity additions, consistent with my recommendations above to reject the Santa Rosa Energy Center PPA and the proposed CTs. Georgia Power's resource portfolio is already top-heavy with gas generation, accounting for the largest share of any generation resource, about 48% of its total.<sup>25</sup> Throughout the resolution of this docket and the next planning cycle, the Commission should encourage more diversity in resources and shy away from adding more gas. Key steps here include assigning gas generation resources more complete assessment of risks inherent in more reliance on gas, consistent with "risk aware" planning.<sup>26</sup>

In modeling costs of service for potential portfolios that include more gas resources, gas price spike risks require higher assumed future gas costs in planning. The only thing that can be said with certainty about gas prices forecasts, particularly in longer time frames, is that they are highly likely to be wrong. From a risk management perspective, it is altogether better for gas price forecasts to be wrong and too high than wrong and too low.

I recommend that the Company and Commission choose from among reasonable, but

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<sup>25</sup> Georgia Power 2023 Facts and Figures, [https://www.georgiapower.com/content/dam/georgiapower/pdfs/company-pdfs/facts\\_figures\\_2023.pdf](https://www.georgiapower.com/content/dam/georgiapower/pdfs/company-pdfs/facts_figures_2023.pdf) See also: <https://utilitytransitionhub.rmi.org/map/>.

<sup>26</sup> Binz, R., Sedano, R., Furey, D., Mullen, D., "PRACTICING RISK-AWARE ELECTRICITY REGULATION: What Every State Regulator Needs to Know, How State Regulatory Policies Can Recognize and Address the Risk in Electric Utility Resource Selection," A Ceres Report April 2012. <http://www.rbinz.com/Binz%20Sedano%20Ceres%20Risk%20Aware%20Regulation.pdf>

1 higher forecasted gas price projections, since risks to consumers from gas prices spikes are  
2 entirely asymmetrical; that is, consumers face heavy economic burdens when gas prices  
3 are forecasted too low, but benefit if the forecasts are too high.

4 **Q: What about how gas costs are recovered in rates?**

5 A: This Commission and other Georgia policy makers are well aware of consumer discontent  
6 following gas cost increases that resulted very high bills from the last big gas price spike.  
7 Since 100 percent of gas costs are recoverable through energy or fuel cost riders on  
8 consumers' bills, there is a severe "moral hazard" problem for utilities planning whether  
9 to include additional gas resources in future portfolios and procurements. Moral hazard  
10 arises because utilities' gas resource acquisitions have minimal or no economic impacts on  
11 the utility and its shareholders, since consumers pay the gas bill, not utilities. Reforms are  
12 being discussed now among Georgia policy makers, including this Commission<sup>27</sup> and  
13 legislators, about how to share gas cost recovery responsibility between consumers and  
14 shareholders to moderate this moral hazard problem. In its resource planning and  
15 procurement, the Commission should remain aware of this problem and vigilant to protect  
16 consumers against the convenient, morally hazardous utility preference for gas resources.

17 All of these issues with more gas in the Georgia Power system – sudden, extreme  
18 price spikes, current overreliance, impossibility of forecasting prices accurately, moral  
19 hazard due to cost recovery from customers, risks from increasingly harmful weather  
20 extremes, lack of availability due to gas supply chain failures – present risks that can be

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<sup>27</sup> In re: Georgia Power Company's 2023 Fuel Cost Recovery (FCR) Application, Docket No. 44902.



1 well managed by increasing attention to customers' side of the power equation. Instead of  
2 adding more gas related risks, the Commission should favor clean energy resources paired  
3 with storage, customer-driven resources, and clean distributed energy resources, consistent  
4 with CEBA's recommendations.<sup>28</sup>

5 *Load Forecast Risks*

6 **Q: Should the Commission order better load forecasting going forward?**

7 A: Yes. A good first step would be to order the Company to present more adequate explanation  
8 for why Georgia Power's load forecast in the 2022 IRP did not capture the very high load  
9 growth Georgia Power forecasts in this IRP Update. Next, the Commission should require  
10 more robust reforms, including a focus on end use data collection. Both of these actions  
11 are currently required by the Commission's IRP rules, but specific regulatory attention to  
12 why the previous load forecast was so far off the mark and improved end use data collection  
13 could help to achieve more accurate load forecasting going forward.

14 **Q: What load forecasting improvements is the Company proposing?**

15 A: Georgia Power states that it has:

16 ... developed a forecasting model to better capture the uncertainties related to  
17 new large loads, including state selection, electric service provider selection,  
18 project delays, and the materialization of load. With this additional information,  
19 the Company made certain external adjustments to the load forecast each year over  
20 the twenty-year planning horizon to account for the recent growth in projected load  
21 and incorporate the ramp rates for such large load additions by month and year.<sup>29</sup>  
22

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<sup>28</sup> See CEBA's specific recommendations, above pages 4-5.

<sup>29</sup> Georgia Power Direct at 9.

1 While these improvements appear to provide more information about new loads that might  
2 be useful, it is not clear from Company testimony how useful the new information gathered  
3 will be. For example, what new sources of information have been developed? Who  
4 provided the new information and in what time frame? Do the new sources have a long and  
5 distinguished track record of accuracy, or not? What methodology did the Company use to  
6 make its “external adjustments” to its forecasting model and is it using the appropriate  
7 methodology? Why did the Company choose to use P95 for its projected load rather than  
8 a lower, more likely scenario? How did Georgia Power determine the “ramp rates” that are  
9 included in the adjustments? What will Georgia Power do if actual load growth is lower  
10 than its projections?

11 *Resource Adequacy and Reliability Planning Risks*

12 **Q: Why are resource adequacy and reliability included in your assessment of important**  
13 **planning risks?**

14 A: Planning reserve margins, added to assumptions about resource amounts and ability to meet  
15 load requirements, determine the total amount of new capacity a utility needs to meet its  
16 future forecasted load. The key to planning is the “loads and resources table” where totals  
17 of loads and needed resources are shown, with added amounts to represent planning reserve  
18 margins, which are assumed to contribute to system reliability. These amounts are typically  
19 shown in capacity or MW terms.

20 Having adequate capacity is a good outcome that is necessary, but no longer  
21 sufficient to define either resource adequacy or reliability. Portfolios of future resources  
22 should both provide sufficient energy at the time needed across all hours of the year, (from

1 diverse resource portfolios constructed out of competitive bids) to avoid, or manage, the  
2 major risks discussed here. Having enough capacity to meet peak day requirements, adding  
3 a planning reserve margin, and equating the outcome with reliability is one way to plan for  
4 reliability, but now seems out of date given best thinking by innovative utility system  
5 engineers.

6 **Q: Has CEBA recently made a contribution to explaining modern approaches to**  
7 **planning for resource adequacy and reliability?**

8 A: Yes. A good introduction to CEBA's priorities and outlooks is provided in a very recent  
9 report "Energy Customer Priorities for Meeting Resource Adequacy Needs."<sup>30</sup> While this  
10 report deals with reliability planning from a large customer perspective, it contains both  
11 introduction to CEBA's goals and a short but complete summary of the best current  
12 thinking about how reliability planning should be undertaken. These sensible reforms  
13 include:

- 14 • Regional planning to share resources across more diverse generation resources and  
15 geographies.
- 16 • Use of more than industry standard loss of load expectation (LOLE) on a one event in  
17 ten-year horizon to incorporate additional industry standards. These standards, like  
18 "Expected Unserved Energy" (EUE) measure other parameters of assuring service, like

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<sup>30</sup> Clean Energy Buyer's Alliance, "Energy Customer Priorities for Meeting Resource Adequacy Needs," JANUARY 2024 ([https://cebayers.org/wp-content/uploads/2024/01/CEBA\\_Energy-Customer-Priorities-for-Meeting-Resource-Adequacy-Needs\\_January-2024.pdf](https://cebayers.org/wp-content/uploads/2024/01/CEBA_Energy-Customer-Priorities-for-Meeting-Resource-Adequacy-Needs_January-2024.pdf)). There is a useful bibliography of recent work on reliability planning, including reference to the Energy Systems Integration Group's seminal report, "Energy Systems Integration Group. "Redefining Resource Adequacy for Modern Power Systems." 2021. <https://www.esig.energy/wp-content/uploads/2021/08/ESIG-Redefining-Resource-Adequacy-2021.pdf>. ESIG describes principles and details methods, including proposing that reliability be tested as an economic issue.

1 reliability events' durations and impacts. Simply put, they more fully explore different  
2 aspects of reliability. Use of consistent and up-to-date resource capacity accreditation  
3 methods like "Effective Load Carrying Capacity" (ELCC) that treat all resources  
4 consistently and fairly is another recommended approach that helps to improve  
5 reliability planning.

- 6 • Use of increased and more severe weather impacts in planning, employing consistent  
7 sources for weather data and modeling.
- 8 • Assessing transmission's role in providing access to more diverse resources to manage  
9 reliability risks.
- 10 • Increased attention to demand side resources' contributions to maintaining reliability  
11 against challenges to the bulk power system.

12 I recommend that the Commission and its Staff fully investigate and report how improved  
13 reliability planning could avoid power interruptions due to failure to plan adequately for  
14 reliability.

15 *Economic, Technology, and Policy Risks*

16 **Q: What perspectives do you have on planning risks from changes in the economy,**  
17 **technology developments, and policy changes?**

18 A: My sense is that Georgia Power has enough experience with these planning risks to address  
19 them competently, particularly with regard to economic and business cycle risks and policy  
20 changes. I testified in the recent Georgia Power rate case that the Company and  
21 Commission should take full advantage of benefits for consumers available from recent

1 federal legislation, most importantly the Inflation Reduction Act.<sup>31</sup> My testimony was  
2 included in the case record without challenge. I believe that there is more useful work to  
3 be done to bring all these federal benefits to Georgia Power customers.

4 But I would add that with rapid technology development, planning becomes more  
5 difficult, since there is less time to gather information about rapidly changing technologies  
6 and apply that information in planning. It would also be worthwhile looking deeper into  
7 technology adoption research that focuses on conditions in which some technologies  
8 penetrate markets very rapidly. Artificial intelligence is a good example. Cell phones  
9 rapidly became commonplace, but some reports suggest that AI will eclipse their adoption  
10 rates. Good to know in advance if you are an electric provider like Georgia Power, since  
11 AI is also electricity intensive. Was Georgia Power tracking AI adoption rates and  
12 anticipating accurately how those rates would impact its load forecast? Apparently not well  
13 enough to avoid big load forecasting surprises.

14 **I. Conclusion and Recommendations.**

15 **Q: Please summarize your recommendations to the Commission.**

16 **A:** I recommend that the Commission:

- 17 1. Reject Georgia Power's requests for CPCNs for PPAs with Mississippi Power and  
18 Santa Rosa Energy Center LLC.

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<sup>31</sup> Georgia Power Company's 2022 Rate Case, Docket No. 44280.

- 1           2. Reject Georgia Power’s request to develop up to 1,400 MW of simple cycle combustion  
2           turbine (CT) resources at Plant Yates.  
3                 a. In the alternative, allow Georgia Power to develop only one simple cycle CT at  
4                 Plant Yates to account for the limited transmission capacity at that location.  
5           3. Based on the capacity need the Commission finds is supported by the record of this  
6           proceeding, direct Georgia Power to procure the needed capacity through expedited  
7           RFPs that were approved in the 2022 IRP. Specifically, the Commission should direct  
8           Georgia Power to:  
9                 a. No later than 60 days after the Commission’s decision in this docket, issue the  
10                 planned All-Source RFP for capacity resources for resources starting in 2026  
11                 rather than the winter of 2028/2029.  
12                 b. Expand and accelerate the planned RFP for 500 MW of ESS.  
13                 c. Evaluate bids from the CARES 2023 Utility Scale RFP for Renewable  
14                 Generation to meet capacity needs.  
15           4. Approve, with modification, Georgia Power’s proposal to develop, own, and operate  
16           BESS resources at various sites. Specifically, the Commission should authorize  
17           Georgia Power to develop up to 2,000 MW of solar-paired BESS. The Commission  
18           should approve the specific projects Georgia Power identified in its 2023 IRP Update  
19           (178 MW of BESS at existing Company-owned solar facilities at Robins and Moody  
20           Air Force Bases and 200 MW of BESS located with 200 MW of new solar) but require  
21           Georgia Power to competitively procure all additional BESS capacity.

1           5. Revisit and lower the minimum percentage of supply-side resources that must be  
2           owned by Georgia Power pursuant to Commission Rule 515-3-4-.04(3)(f)(7). The  
3           amount of supply-side resources Georgia Power owns should be the result of the  
4           planning and procurement process that provides the best outcomes for customers.

5           6. Direct Georgia Power to study and report to the Commission the extent to which  
6           additional transmission development and upgrades, enhanced transmission connections  
7           with neighboring balancing authorities, and improved market mechanisms will  
8           facilitate Georgia Power's ability to meet customer load and improve reliability. These  
9           studies should be submitted in the 2025 IRP Initial Filing by the Company and be  
10          available to intervenors in the proceeding.

11          7. Direct Georgia Power to improve its planning processes for the 2025 IRP consistent  
12          with my recommended process improvements to reduce Georgia Power's and its  
13          customers' long-term planning risks and provide least-cost options that benefit all  
14          ratepayers.

15   **Q:    Does this conclude your testimony?**

16   **A:    Yes.**