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December 4, 2023

Ms. Sallie Tanner
Executive Secretary
Georgia Public Service Commission
244 Washington Street, S.W.
Atlanta, Georgia 30334

**Re: Georgia Power Company's 2023 Integrated Resource Plan Update
Docket No. 55378**

Dear Ms. Tanner:

Enclosed for filing on behalf of Georgia Power Company is the Direct Testimony of the Panel of Jeffrey R. Grubb, Francisco Valle, Lee Evans, and Michael A. Bush.

Please call me at (404) 885-3779 if you have any questions regarding this filing.

Sincerely,


Allison W. Pryor

Enclosure

STATE OF GEORGIA

**BEFORE THE
GEORGIA PUBLIC SERVICE COMMISSION**

In Re:

Georgia Power Company's)
2023 Integrated Resource Plan Update)

Docket No. 55378

DIRECT TESTIMONY OF

JEFFREY R. GRUBB, FRANCISCO VALLE, LEE EVANS,

AND MICHAEL A. BUSH

DECEMBER 4, 2023

**DIRECT TESTIMONY OF
JEFFREY R. GRUBB, FRANCISCO VALLE, LEE EVANS,
AND MICHAEL A. BUSH**

**IN SUPPORT OF GEORGIA POWER COMPANY'S
2023 INTEGRATED RESOURCE PLAN UPDATE
DOCKET NO. 55378**

I. INTRODUCTION

1

2 **Q. PLEASE STATE YOUR NAMES, TITLES, AND BUSINESS ADDRESSES.**

3 A. My name is Jeffrey R. Grubb. I am the Director of Resource Policy and Planning
4 for Georgia Power Company ("Georgia Power" or the "Company"). My business
5 address is 241 Ralph McGill Boulevard, N.E., Atlanta, Georgia 30308.

6 A. My name is Francisco Valle. I am the Director of Forecasting and Analytics for
7 Southern Company Services ("SCS"). My business address is 241 Ralph McGill
8 Boulevard, N.E., Atlanta, Georgia 30308.

9 A. My name is Lee Evans. I am the Director of Economics and Load Flexibility for
10 SCS. My business address is 241 Ralph McGill Boulevard, N.E., Atlanta, Georgia
11 30308.

12 A. My name is Michael A. Bush. I am the Generation Development Director for SCS.
13 My business address is 600 North 18th Street, Birmingham, Alabama 35203.

14 **Q. MR. GRUBB, PLEASE SUMMARIZE YOUR EDUCATION AND**
15 **PROFESSIONAL EXPERIENCE.**

16 A. I began my career with Georgia Power in 1992 as a cooperative education student
17 in Commercial and Industrial Marketing. I graduated from the Georgia Institute of
18 Technology in 1996 with a Bachelor of Science degree in Mechanical Engineering.

1 After joining the Company as a full-time employee in 1997, I worked in various
2 roles within Marketing until 2001, at which time I participated in a Company
3 developmental program where I gained experience in a wide range of functional
4 areas. During this period, I earned a Master of Business Administration degree from
5 Auburn University in 2000.

6 In 2003, I joined the Resource Policy and Planning organization at Georgia Power
7 where I served as a Project Manager through 2006. From 2007 through 2016, I
8 worked for SCS in various planning roles, including SCS Forecasting Team Leader
9 (2007), SCS Fuels Planning Manager (2007-2011), and SCS Resource Planning
10 Project Manager (2011-2016), where I managed the team that supports the
11 development of the Southern Company System (“System”) Integrated Resource
12 Plan (“IRP”). In this role, I supported Georgia Power’s 2013 IRP (Docket No.
13 36498) and 2016 IRP (Docket No. 40161). In 2016, I returned to Georgia Power as
14 Project Manager in Resource Policy and Planning, where I worked on the
15 development of the 2019 IRP. Beginning in March 2018, I assumed my current
16 position as Director of Resource Policy and Planning for Georgia Power.

17 **Q. MR. GRUBB, HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE**
18 **GEORGIA PUBLIC SERVICE COMMISSION?**

19 A. Yes. I testified in Docket No. 44160, Georgia Power’s 2022 IRP; Docket Nos.
20 4822, 16573, and 19279, the Georgia Public Service Commission’s
21 (“Commission”) Review of Georgia Power’s PURPA Avoided Cost Methodology;
22 Docket No. 42310, Georgia Power’s 2019 IRP; Docket No. 42625, Georgia
23 Power’s Application for the Certification of the 2020/2021 Renewable Energy
24 Development Initiative (“REDI”) Utility Scale Power Purchase Agreements
25 (“PPAs”); Docket No. 41596, Georgia Power’s Application for the Certification of
26 the 2018/2019 REDI Utility Scale PPAs; Docket No. 41734, Georgia Power’s
27 Application for the Certification of the 2018/2019 REDI Utility Scale PPAs for the
28 Commercial and Industrial (“C&I”) Program.

1 **Q. MR. VALLE, PLEASE SUMMARIZE YOUR EDUCATION AND**
2 **PROFESSIONAL EXPERIENCE.**

3 A. I graduated from the Universidad Técnica Federico Santa María in Valparaíso,
4 Chile in 1997 with a degree in Electrical Civil Engineering. I also hold a Master of
5 Business Administration from Emory University's Goizueta Business School.

6 I joined Southern Company in 1997 as a planning analyst at Edelnor S.A., a
7 subsidiary of Southern Energy Inc., in Santiago, Chile. In 2001, I moved to Atlanta
8 to join Mirant Corporation, where I held multiple roles of increasing responsibility
9 in system planning and market development and gained extensive experience
10 modeling power pools in the United States and valuing generation technologies and
11 demand response. Since then, I have worked at SouthStar Energy Services, a
12 subsidiary of Southern Company Gas, and served as the Manager of Risk Analysis
13 Services, a group within the SCS Finance organization. In this role, I was
14 responsible for supporting the selection of optimal financing strategies for the
15 company's debt and equity portfolios and for providing business units with
16 quantitative analysis and risk mitigation strategies. I also supported Georgia Power
17 Market Planning by providing revenue, load forecasting, and risk analysis;
18 performing weather revenue variance analysis; reviewing features of load
19 forecasting models; and more.

20 In September of 2021, I joined Georgia Power as Director of Market Planning. In
21 this role, I led Georgia Power's Forecast and Profitability & Economic Analysis
22 teams, which produced, among other things, the annual peak demand, energy, and
23 revenue forecasts, as well as profitability evaluations of demand side management
24 ("DSM") programs. In March of 2023, I assumed my current position as Director
25 of Forecasting and Analytics for SCS. I lead the forecasting team that provides load
26 forecasting services to SCS, Georgia Power, and Mississippi Power Company
27 ("Mississippi Power") as well as the quantitative team that supports capital market
28 operations and provides operational analytics.

1 **Q. MR. VALLE, HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE**
2 **COMMISSION?**

3 A. Yes. I testified in Docket No. 44160, Georgia Power's 2022 IRP.

4 **Q. MR. EVANS, PLEASE SUMMARIZE YOUR EDUCATION AND**
5 **PROFESSIONAL EXPERIENCE.**

6 A. I received a Bachelor of Science degree in Financial Management from Clemson
7 University in 2006 and a Master of Science degree in Finance from Georgia State
8 University in 2013. I have also served as an Adjunct Instructor of Finance for the
9 University of West Florida. I am a licensed Certified Public Accountant and a
10 member of the American Institute of Certified Public Accountants. Additionally, I
11 am a member of the Southeastern Electric Exchange's Rates and Regulations and
12 Demand-side Management committees, the Edison Electric Institute Rates and
13 Regulatory Affairs committee, and a board member of the Peak Load Management
14 Alliance.

15 I began my career as an intern with SCS in 2006 and worked in various roles within
16 the Accounting and Corporate Finance organizations. In 2011, I joined Gulf Power
17 Company ("Gulf Power") in Revenue Accounting and later Regulatory and Cost
18 Recovery. In 2015, I became the Pricing, Costing & Load Research Supervisor,
19 where I oversaw the planning, implementation, and evaluation of retail electric
20 prices, the planning and production of cost studies, and the load research function.
21 Then, in 2018, I worked as a Project Manager in Georgia Power's Pricing & Rates
22 organization leading various costing and pricing initiatives.

23 Beginning in 2019, I assumed roles of increasing responsibility at SCS, each of
24 which oversaw developing and supporting system marginal costing tools, regulated
25 cost-of-service studies and economic analysis. My current responsibilities, in
26 addition to the costing function, include developing strategies and overseeing

1 analyses that influence end-use customer demand, designing load flexibility
2 programs, and the integration of these programs into the planning process.

3 **Q. MR. EVANS, HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE**
4 **COMMISSION?**

5 A. Yes, I testified before this Commission in Docket No. 44160, Georgia Power's
6 2022 IRP, and in Docket No. 44280, Georgia Power's 2022 Rate Case.

7 **Q. MR. BUSH, PLEASE SUMMARIZE YOUR EDUCATION AND**
8 **PROFESSIONAL EXPERIENCE.**

9 A. I began my career with Mississippi Power Company ("Mississippi Power") in 1983
10 as a cooperative education student. I graduated from Auburn University with a
11 degree in Electrical Engineering. After working outside the Southern Company for
12 a few years, I returned to work for Mississippi Power in 1990. From 1990 until
13 1995, I held various staff positions before transferring to SCS in Birmingham,
14 Alabama to work in the wholesale marketing organization.

15 I became a Term Trader in 1996 and I was appointed Manager of Energy Trading
16 in 1999. In 2003, I took the position of Director of Portfolio Management. After a
17 re-organization of the wholesale organization occurred in 2005 combining Portfolio
18 Management and Energy Trading, I took a leadership position in that new
19 organization. In 2009, I moved to my current role as Director of Generation
20 Planning and Development. My current responsibilities include providing
21 generation planning and development services to Southern Company's retail
22 operating companies, including Georgia Power.

23 **Q. MR. BUSH, HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE**
24 **COMMISSION?**

25 A. Yes. I was a rebuttal witness in Docket No. 40161, Georgia Power's 2016 IRP, and
26 a direct witness in Docket No. 42310, Georgia Power's 2019 IRP.

1 **Q. WHY IS GEORGIA POWER FILING THIS 2023 IRP UPDATE?**

2 A. The Company files this update in response to significant changes that have occurred
3 since the 2022 IRP was approved by the Commission. Most importantly, Georgia
4 has experienced rapid economic growth in the intervening months following the
5 2022 IRP. This extraordinary growth requires that Georgia Power develop new
6 supply- and demand-side capacity resources to meet substantial increases in
7 customer demand and the energy needs of our state. To address the pressing need
8 for capacity being driven by the extraordinary economic growth taking place in
9 Georgia, the Company filed the 2023 IRP Update. In the Update, the Company (i)
10 identifies the significant changes in the Company's Load and Energy Forecast since
11 the 2022 IRP resulting from economic growth, (ii) explains the impact of this
12 growth on the timing and magnitude of the Company's capacity needs, and (iii)
13 presents a comprehensive and flexible resource plan to meet the rapidly growing
14 energy needs of its customers. The 2023 IRP Update is consistent with Commission
15 Rules 515-3-4-.06(5) and 515-3-4-.06(6), which require that the Company amend
16 its IRP if it anticipates submitting an application for a certificate to construct or
17 purchase a supply-side capacity resource or demand-side resource that was not
18 previously approved as part of the IRP, or finds that other conditions warrant an
19 amendment, such as an increase in the projected load forecast.

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

21 A. The purpose of our testimony is to present, explain, support, and seek approval of
22 Georgia Power's 2023 IRP Update. As such, our testimony provides additional
23 support for the Load and Energy Forecast underlying the Company's request, the
24 Company's increased and accelerated capacity needs, and the resource plan
25 developed to address these needs. More specifically, our testimony supports the
26 following specific requests:

- 27 1. Authorization to procure the resources described in items 2-6 and 9 below in
28 accordance with Commission Rules through the exceptions to the

Commission’s Request for Proposals (“RFP”) process set forth in Commission Rules 515-3-4-.04(3)(f)(3), 515-3-4-.04(3)(f)(6), and 515-3-4-.04(3)(f)(7).

2. A certificate of public convenience and necessity for the PPA between Georgia Power and Mississippi Power as described in Attachment A and the Technical Appendix.

a. Regulatory asset treatment to defer the capacity and non-fuel energy payments made under the PPA, including additional sum, net of the wholesale capacity and non-fuel revenues from any remarketed capacity sales from January 1, 2024, through December 31, 2025, including an executed system sale to a regional electrical service provider during that time, for recovery in the next base rate case.

3. A certificate of public convenience and necessity for the PPA between Georgia Power and Santa Rosa Energy Center LLC as described in Attachment B and the Technical Appendix.

a. Regulatory asset treatment to defer the capacity and non-fuel energy payments made under the PPA, including additional sum, net of any wholesale capacity and non-fuel revenues from any remarketed capacity sales from January 1, 2024, through December 31, 2025, for recovery in the next base rate case.

4. Authority to develop, own, and operate up to 1,000 MW of Battery Energy Storage Systems (“BESS”) at various sites as described in this IRP Update and the Technical Appendix.

a. Approval that any development costs not useful or transferable to other projects be deferred to a regulatory asset for recovery in the next base rate case in the event this request is denied.

5. Authority to develop, own, and operate up to 1,400 MW from three simple cycle combustion turbine (“CT”) resources at Plant Yates as described in this IRP Update and the Technical Appendix.

- 1 a. Approval that any development costs not useful or transferable to other
- 2 projects be deferred to a regulatory asset for recovery in the next base rate
- 3 case in the event this request is denied.
- 4 6. Approval of two new customer-sited distributed energy resource (“DER”)
- 5 programs as described in this IRP Update.
- 6 7. Approval of one new tariff-based demand response program as described in this
- 7 IRP Update.
- 8 8. Approval of an amended certificate for one existing demand response DSM
- 9 program as described in this IRP Update and Attachment C.
- 10 9. Approval of the Flex Capacity framework as described in Section VII of this
- 11 testimony.
- 12 a. Regulatory asset treatment to defer any developmental costs for such
- 13 activities that would otherwise be expensed for recovery in the next base
- 14 rate case.
- 15 10. Transmission system improvements to accommodate the above-requested
- 16 resources needed in support of the Company’s Load and Energy Forecast as
- 17 described in the Technical Appendix.

18 We adopt the 2023 IRP Update filed on October 27, 2023 as part of our testimony.

19 **Q. PLEASE SUMMARIZE THE TESTIMONY OF THE PANEL.**

20 A. Georgia continues to be one of the fastest growing states in the country and is

21 experiencing extraordinary economic development. The tremendous growth that

22 has occurred since the 2022 IRP is projected to significantly increase customers’

23 energy needs. Numerous businesses are choosing to locate or expand in Georgia,

24 and many of these businesses require a substantial amount of energy to support

25 their operations. To put this in context, based on economic data available at the

26 time of the 2022 IRP, the Company anticipated less than 400 MW of growth

27 between the winter of 2023/2024 and the winter of 2030/2031. In contrast, based

28 on data since the 2022 IRP, the Company’s current projections reflect load growth

1 of approximately 6,600 MW through the winter of 2030/2031. Therefore, the
2 Company must acquire additional capacity resources to help ensure it is able to
3 continue supporting the energy needs of our customers and the state during this
4 period of extraordinary economic growth.

5 Georgia Power's 2023 IRP Update Load and Energy Forecast projects
6 extraordinary customer load growth stemming from the rapid economic
7 development taking place in Georgia, which far exceeds the demand projected in
8 the 2022 IRP. The Company's 2023 IRP Update Load Forecast reflects the increase
9 in demand from the numerous new large load projects Georgia Power has been
10 selected to serve as well as a considerable pipeline of future projects. These large
11 load projects, which include manufacturers, the electric transportation industry, and
12 data centers, are unprecedented in project size, volume, and pace of integration.
13 Without a historical precedent for this extraordinary growth, these loads are not
14 captured in the Company's standard forecasting process. Therefore, the Company
15 developed a forecasting model to better capture the uncertainties related to new
16 large loads, including state selection, electric service provider selection, project
17 delays, and the materialization of load. With this additional information, the
18 Company made certain external adjustments to the load forecast each year over the
19 twenty-year planning horizon to account for the recent growth in projected load and
20 incorporate the ramp rates for such large load additions by month and year.

21 The dramatic increase in projected load identified by the Company's load forecast
22 has not only increased but accelerated the Company's capacity need. The load
23 levels presented in the 2023 IRP Update reflect a projected capacity need in the
24 winter of 2025/2026, which is a full three years earlier than what was anticipated
25 in the 2022 IRP. Further, the magnitude of the projected capacity need in the winter
26 of 2030/2031 has increased by 4,800 MW since the 2022 IRP.

27 So that it can meet the needs of a growing Georgia and continue to reliably serve
28 customers, the Company plans to meet its winter capacity needs through a

1 combination of (i) resources that will be selected through the All-Source and
2 Energy Storage System RFPs approved in the 2022 IRP, which will address the
3 capacity needs beginning in the winter of 2028/2029; and (ii) the portfolio of
4 resources presented in the 2023 IRP Update, which will address Georgia Power's
5 capacity needs starting in the winter of 2025/2026. The 2023 IRP Update proposes
6 a balanced portfolio of resources including power purchases and new build
7 opportunities. These resources address the Company's short-term capacity needs
8 and provide a foundation for the Company's long-term capacity needs and the
9 continued transition of its generation fleet to cleaner resources.

10 Given the significance of the Company's increased projected loads and
11 corresponding capacity needs, Georgia Power cannot wait to conduct the All-
12 Source RFP or wait until the 2025 IRP to address these needs. The Company must
13 act quickly to secure the critical resources necessary to meet the state's near-term
14 energy needs. Georgia Power has adjusted and will continue to adjust as needed its
15 pricing for new customer projects, consistent with existing tariff authority, to reflect
16 the increased cost to serve those customers. All else being equal, we expect that the
17 projected revenues associated with incremental load from these new customer
18 projects will offset the costs of the resources requested in this filing and put
19 downward pressure on our overall retail rates as we continue to provide clean, safe,
20 reliable, and affordable power for all of Georgia Power's customers in the coming
21 years.

22 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

23 A. The remainder of our testimony is organized as follows:

- 24 • Section II discusses Georgia Power Company's updated load and energy
25 forecast.
- 26 • Section III discusses the Company's updated capacity needs.

- 1 • Section IV addresses the Company’s proposed resource solutions, including
2 the requests for certification of the PPAs between Georgia Power and
3 Mississippi Power and between Georgia Power and Santa Rosa Energy
4 Center LLC; approval to construct up to 1,000 MW of BESS; and approval
5 to construct three CT resources at Plant Yates.
- 6 • Section V covers the Company’s DER and demand response solutions,
7 including the certification of two new customer-sited DER programs;
8 certification of one new tariff-based demand response program; and
9 certification for the expansion of one existing DSM demand response
10 program.
- 11 • Section VI covers the customer impacts of the 2023 IRP Update.
- 12 • Section VII explains the Company’s proposed Flex Capacity framework.
- 13 • Section VIII addresses the Transmission impacts of the 2023 IRP Update.

14 **II. UPDATED LOAD AND ENERGY FORECAST**

15 **Q. PLEASE EXPLAIN THE SCALE AND PACE OF THE ECONOMIC** 16 **GROWTH IN GEORGIA SINCE THE 2022 IRP.**

17 A. Since the approval of the Company’s 2022 IRP in July of 2022, Georgia’s
18 successful economic development efforts have added more than \$24 billion in
19 capital investment and more than 38,000 jobs to what was already a healthy pipeline
20 of activity. Today, Georgia’s economic development pipeline is more robust than
21 ever, with record growth as companies are looking to locate or expand within the
22 state. As explained in the 2023 IRP Update, this economic growth trend has been
23 driven, in large part, by Georgia’s recognition as one of the best places in the
24 country in which to do business, and the state is attracting strong customer growth
25 across residential, commercial, and industrial classes. This rapid economic
26 expansion resulted in historic increases in the demand for energy at a scale and pace
27 not previously experienced. New and expanding economic development projects
28 can be seen in the investment and job creation in emerging industries like electric

1 transportation (“ET”) manufacturing and its supplier base, as well as in more
2 traditional industries, including the automotive, agricultural, information
3 technology, and aerospace industries.

4 **Q. HOW HAS THIS GROWTH CONTRIBUTED TO THE CHANGE IN**
5 **GEORGIA POWER’S LOAD FORECAST?**

6 A. Georgia Power’s 2023 IRP Update Load Forecast, completed in September 2023,
7 projects extraordinary load growth stemming from rapid economic development
8 taking place in Georgia. The load growth identified in the 2023 IRP Update Load
9 Forecast far exceeds that identified by the load forecast produced in August 2021
10 for the 2022 IRP. Through 2031, Georgia Power’s projected winter peak demand
11 is currently more than 5,900 MW greater than the winter peak demand projected in
12 the 2022 IRP load forecast. For context, this increased demand is equivalent to
13 almost 40% of the Company’s winter peak demand for 2024 and is projected to
14 materialize in less than a decade.

15 The Company initially identified a load increase when it created its Budget 2023
16 load forecast in August 2022 through its annual planning process. This forecast
17 identified an increase of 1,100 MW through 2031 compared to the 2022 IRP filing.
18 Although a sizable increase in load, this initial indication of increasing loads did
19 not alter the 2029 capacity need year identified in the 2022 IRP. Because the
20 increase in capacity was forecasted to occur in the existing capacity need year and
21 would be addressed by the 2029-2031 All Source RFP, no action was necessary
22 based on the Budget 2023 load forecast.

23 In January 2023, the Company began producing load forecast sensitivities with
24 greater frequency than the annual load forecast to help better understand these
25 changes in projected load and to further inform the Company’s resource planning
26 decisions. The load forecast sensitivity the Company developed in June of 2023
27 identified considerable increases in projected load. These increases first advanced
28 the Company’s capacity need to the end of 2026 or the winter of 2027. The

1 magnitude and accelerated timing of the Company's capacity needs identified
2 following the summer 2023 load forecast sensitivities are the catalysts for the 2023
3 IRP Update, which is based on the updated load forecast produced in September
4 2023 ("2023 IRP Update Load Forecast"). The 2023 IRP Update Load Forecast
5 projects a capacity need at the end of 2025, or the winter of 2026.

6 **Q. WHY DID THE COMPANY BEGIN PRODUCING LOAD FORECAST**
7 **SENSITIVITIES WITH GREATER FREQUENCY THAN THE ANNUAL**
8 **LOAD FORECAST?**

9 A. Georgia Power began producing load forecast sensitivities with greater frequency
10 than the annual load forecast due to the significant increase in economic
11 development projects in Georgia. The Company found it appropriate and necessary
12 to evaluate projected load and capacity needs on a more frequent basis to plan and
13 prepare for the rapid economic growth in Georgia and corresponding increased
14 demand for energy. These load forecast sensitivities then allowed the Company to
15 better understand the corresponding accelerated capacity needs as the revised load
16 projections became available. This proactive approach helped Georgia Power plan
17 for and address the growing energy needs of its customers and the state more
18 effectively.

19 **Q. PLEASE EXPLAIN HOW THE COMPANY DEVELOPED LOAD**
20 **FORECAST SENSITIVITIES AND HOW THE COMPANY USED THAT**
21 **INFORMATION PRIOR TO FILING THE 2023 IRP UPDATE.**

22 A. The Company developed its load forecast sensitivities to assess the range and
23 likelihood of future load growth from new large load customers. In developing the
24 sensitivities, the Company used a probabilistic approach to develop external
25 adjustments to its baseline commercial and industrial load and energy forecasts
26 further described in this Section. These external adjustments are necessary to
27 account for the unprecedented magnitude and speed of the economic development

1 now taking place in Georgia, which is not captured in baseline forecasts that rely
2 on historical trends.

3 In developing the forecast model for large load projects, Georgia Power considers
4 specific project details and acknowledges various uncertainties that are inherent in
5 the forecasting process. The Company's model incorporates information for each
6 large load project, including the projected commercial operation date ("COD"), the
7 detailed year-by-year load trajectory (i.e., ramp-up), and the announced load or
8 design capacity for the project, which aids in facility sizing and equipment
9 procurement. The Company also classifies projects as Industrial or Commercial and
10 segments projects based on specific business categories such as warehouse, battery
11 manufacturing, cryptocurrency, data center, chemical processing, and solar panel
12 manufacturing, thus further refining the data used to inform its forecast.

13 The Company's probabilistic model addresses several dimensions of the
14 uncertainty that is inherent in large load projects, and several uncertainties are
15 included in the model. For example, these uncertainty dimensions include:

- 16 • Location Decision Uncertainty, which recognizes that potential customers
17 may choose to locate projects in a different state despite showing initial
18 interest in Georgia;
- 19 • Provider Selection Uncertainty, which exists due to the competitive
20 selection process for large load customers among multiple electric service
21 providers;
- 22 • Execution Risk Uncertainty, which exists even after a customer selects
23 Georgia Power as its electric service provider, because unforeseen
24 circumstances, such as financial or economic conditions, may lead to
25 project abandonment;
- 26 • Load Materialization Uncertainty, which acknowledges that the load
27 announced by a customer is only an estimate of the customer's projected
28 load, which may materialize at a lower level than initially anticipated; and

- COD Delay Uncertainty, which recognizes that the projected commercial operation date of a project may be delayed, thus resulting in the project's load materializing later than initially expected.

Prior to filing the 2023 IRP Update, external adjustments to the baseline load forecast have been standard practice and were used to account for energy and peak demand resulting from new or ongoing uses that are not fully embedded in historical data or explicitly captured by our models. The Company assesses the need for external load adjustments when large customers are announced, typically introducing them when these customers bring a new line of business to the state or when the implied growth from our models is insufficient to represent the addition of the new load.

Q. WHAT FACTORS ARE CONTRIBUTING TO THE RAPID ECONOMIC DEVELOPMENT TAKING PLACE IN GEORGIA?

A. There are several factors contributing to this rapid economic development. For example:

- **Government Policies:** State and local government policies promoting economic development, including incentives for businesses to relocate or expand in Georgia, have contributed to the state's economic development.
- **Attractive Business Climate:** Georgia is a top state in which to do business, with competitive tax structures, a skilled workforce, and strong infrastructure. These factors have attracted a wide range of industries to the state, including technology, manufacturing, logistics, and healthcare.
- **Investment in Infrastructure:** Significant investments in infrastructure, including transportation, utilities, and digital connectivity, make Georgia an attractive location for businesses.
- **Population Growth:** Georgia's population is growing, leading to an increased demand for goods and services and driving economic development.

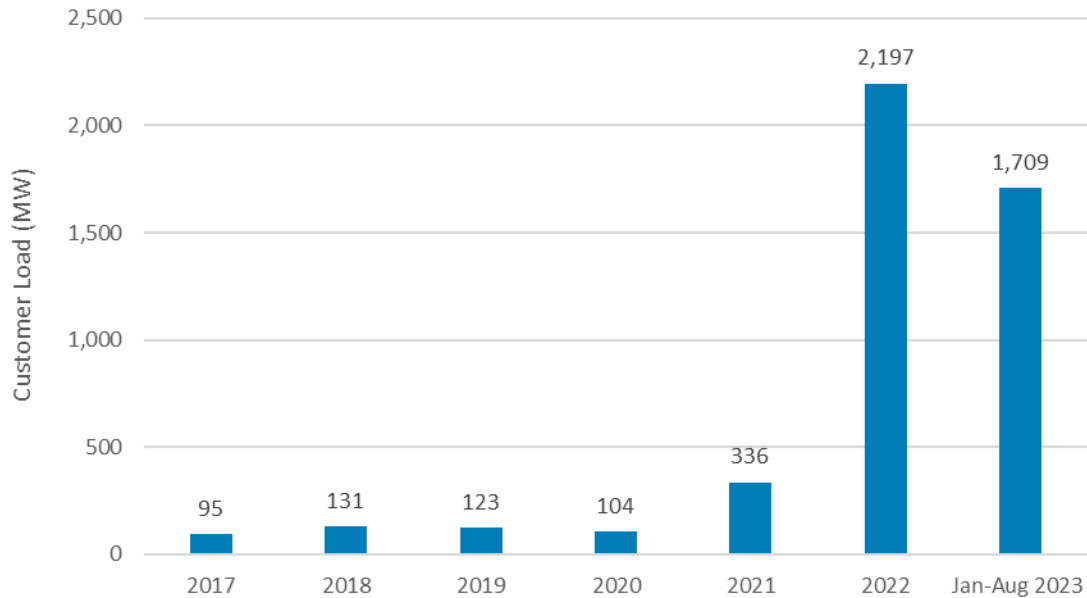
- **Emerging Industries:** The growth of emerging industries, such as renewable energy, electric vehicles, and data centers, has contributed to economic development.

Government policies creating an attractive business climate and promoting infrastructure investment are the foundation that attracts emerging industries, jobs, and population growth. The resulting economic growth has significantly increased the demand for energy, thereby driving the 2023 IRP Update.

Q. HOW DOES THE MAGNITUDE OF NEW ECONOMIC DEVELOPMENT PROJECTS THAT GEORGIA POWER IS BEING ASKED TO SERVE COMPARE TO HISTORICAL NORMS?

A. There has been a dramatic increase in the size of economic development projects Georgia is attracting to the state. Prior to 2021, on average, the Company was selected to serve approximately 100 MW of large load economic development projects per year. Then, in 2021, the Company was selected to serve 336 MW, or three times this historical average. This number increased substantially in 2022, during which the Company was selected to serve 2,197 MW, or twenty-two times its historical average. Through August of 2023, the Company had already been selected to serve more than 1,700 MW of large economic development projects. Figure 1 below illustrates the increase in economic development projects requesting electric service from Georgia Power.

Figure 1: New Large Load Customers Selecting Georgia Power by Year



These large load economic development projects correspond to the robust economic growth and influx of new businesses in Georgia, including manufacturers, the EV industry, data centers, and other businesses. Significantly, many of these new customers are bringing load to Georgia Power's system that falls well outside of historical norms. Some of these customer loads surpass 1,000 MW each. Moreover, the energy profiles for many of these new customers have high load factors and require a substantial amount of generation and consistent energy delivery around the clock.

Q. WHY DIDN'T THE LOAD AND ENERGY FORECAST USED IN THE 2022 IRP CAPTURE THE BOOM IN ECONOMIC GROWTH THAT PROMPTED THE 2023 IRP UPDATE?

A. Consistent with the forecasting methodologies used in prior IRPs, the Company's 2022 IRP Load Forecast was appropriately informed by projections based on historical trends and foreseeable economic growth. The forecast could not project load additions for industries without historical data, nor could it have captured the

1 extraordinary economic growth and increased load that has taken place since the
2 2022 IRP. Nothing in the Company's or state's history would have predicted load
3 growth of this magnitude or that such growth would occur so rapidly.

4 **Q. HOW DOES THE COMPANY ACCOUNT FOR THE LARGE INFLUX OF**
5 **ANTICIPATED LOADS IN ITS FORECAST?**

6 A. The Company accounts for the addition of large loads by making external
7 adjustments to its Load and Energy Forecast. This process is necessary because the
8 economic development growth associated with these large loads would not
9 otherwise be captured in the historical trends that underlie the Company's base
10 forecast. While the use of an external adjustment for large load additions is not new,
11 the Company recently had to revise its methodology for calculating and applying
12 the adjustments because of the extraordinary size of the large loads projected on the
13 electric system.

14 **Q. PLEASE DESCRIBE THE COMPANY'S METHODOLOGY FOR**
15 **ADJUSTING THE LOAD AND ENERGY FORECAST IN THIS CASE.**

16 A. As described in the Load and Energy Forecast Technical Appendix, the external
17 adjustment process involves several steps:

- 18 1. **Known Project Inputs:** For each large load customer choice project the
19 Company evaluated and included in the forecast update, the customer requiring
20 electric service provided the following information: COD; ramp-up; announced
21 load; class; and segment.
- 22 2. **Modeling Project Uncertainty:** As described previously, each customer
23 choice project contains multiple dimensions of uncertainty, which must be
24 considered in developing a forecast. These uncertainties include the customer's
25 state selection, electric provider selection, project delays, and load
26 materialization. Based upon its knowledge and experience, the Company
27 develops a probability analysis for each point of uncertainty. To account for

these uncertainties, the Company then uses a probabilistic approach to determine the success or failure of an individual customer project.

3. **Incorporating the Model:** The Company incorporates three probability distributions (project delay, actual/announced load percentage, and project success/failure) into the expected ramp-up schedule for a project. This involves shifting the COD by a COD delay random variable, scaling the shifted year-by-year load trajectory by the actual/announced load percentage random variable, and multiplying the shifted and scaled year-by-year load trajectory by the Bernoulli 0/1 random variable that represents state selection, electric provider selection and completion rate.
4. **Modeling the Portfolio:** The Company uses a tiered approach to define the coefficients that describe the interaction among projects in the customer choice portfolio. This approach is driven by the class and segment of the projects instead of being defined one by one.
5. **Model Implementation:** The probabilistic approach is implemented in Excel with a third-party add-in called @Risk, which allows for Monte Carlo simulation and analysis.

This approach allows the Company to adjust the load forecast to account for the large influx of anticipated load in a way that is both realistic and mathematically rigorous, allowing the Company to plan for a probable amount of customer choice load and avoid overestimating load additions that could add unnecessary capacity to the electric system.

Q. PLEASE EXPLAIN HOW THE EXTERNAL ADJUSTMENTS ARE DETERMINED AND APPLIED TO THE BASELINE FORECAST.

- A. The external adjustment involves several key steps to refine the baseline load forecast. First, the Monte Carlo model generates a distribution of megawatt (MW) outcomes for the Company's load portfolio by quarter. Employing a probabilistic approach, this distribution reflects the range and likelihood of future load growth

1 from new large load customers. Next, the total portfolio MW is allocated to each
2 individual project, to capture the contribution of each project to the overall load
3 portfolio outcome. This step ensures that the unique characteristics and scale of
4 each project are considered in the adjustment.

5 To translate individual project contributions into a form that is compatible with the
6 Company's baseline energy forecast, the contributions are converted to an energy
7 metric by applying load factor assumptions specific to each project. The resulting
8 energy figures represent the external adjustment (i.e., the additional load
9 attributable to new projects). The calculated external adjustment is then added to
10 the baseline forecast to determine the total load the Company must serve.

11 **Q. DOES THE COMPANY EXPECT ITS LOAD PROJECTIONS TO**
12 **CHANGE?**

13 A. The Company's load projections will change as economic conditions change.
14 Current economic conditions suggest that Georgia continues to be attractive to new
15 firms. By incorporating the new data and methodologies in this filing, the Company
16 will be able to more closely follow the changing conditions of large loads and
17 incorporate their impacts more effectively.

18 **III. UPDATED CAPACITY NEEDS**

19 **Q. PLEASE IDENTIFY THE PRIMARY DRIVERS IMPACTING THE**
20 **COMPANY'S UPDATED CAPACITY NEEDS AND CORRESPONDING**
21 **REQUESTS IN THIS CASE.**

22 A. Georgia Power's requests are primarily driven by three factors: (1) an increased and
23 accelerated demand for electricity; (2) a decrease in the availability of electricity
24 supply from existing generation resources in the wholesale market; and (3) the time
25 required to build or buy energy from new resources to meet capacity needs arising
26 as early as 2026. The Company must carefully manage these driving forces in a
27 rapidly evolving climate.

1 The increased and accelerated demand for electricity is the primary driver behind
2 the need for capacity and the Company's request for additional resources in the
3 2023 IRP Update.

4 The second driver, the decreased supply of electricity, is related to the limited
5 amount of electric generation capacity available in the wholesale market. Several
6 other utilities in the Southeast recently concluded or are actively conducting RFPs
7 seeking additional capacity from wholesale assets in the region. Should these
8 utilities identify any available capacity and procure it, this will further reduce
9 Georgia Power's opportunity to procure wholesale capacity to meet the needs of its
10 customers. Notably, the Company was one of the first utilities to solicit market
11 when it procured and certified over 2,300 MW of wholesale market capacity in the
12 2022 IRP, well in advance of tightening market conditions.

13 The third driver is the limited time available to procure or construct the resources
14 needed to meet customers' capacity needs. Georgia Power's RFP process typically
15 takes two to two-and-a-half years to identify, evaluate, and select capacity
16 resources. Even if an RFP was issued immediately and concluded within that
17 timeframe (i.e., as early as November 2025), only PPAs for existing wholesale
18 generation assets could meet capacity needs in 2026. And that assumes such
19 capacity resources remained available for the entirety of the lengthy RFP process.
20 Any new-build resources selected through such an RFP would need to be
21 constructed within one year to meet capacity needs, which is not a feasible timeline
22 for construction.

23 **Q. CAN GEORGIA POWER'S RESERVE MARGIN PROVIDE SUFFICIENT**
24 **CAPACITY TO MEET THE INCREASE IN CUSTOMERS' NEEDS?**

25 A. No. The Company's reserve margin accounts for various operational uncertainties,
26 including weather, load forecast, unit performance, and market availability. The
27 load forecast component in the 2021 Reserve Margin Study, filed in support of the
28 Company's 2022 IRP, appropriately reflected a normal level of uncertainty in the

1 demand of both existing and new customers. This uncertainty was considered in
2 determining the target reserve margin. However, the load forecast uncertainty
3 component of the 2021 Reserve Margin Study was never intended to reflect the
4 significant increase in demand being driven by the extraordinary economic growth
5 addressed by the 2023 IRP Update. Therefore, the target reserve margin established
6 in the 2022 IRP does not provide sufficient reserves to address the substantial load
7 growth projections presented in the 2023 IRP Update.

8 **Q. DID GEORGIA POWER CONSIDER WHETHER ITS INCREASED**
9 **CAPACITY NEED COULD BE MET WITH MARKET RESOURCES?**

10 A. Yes. The Company actively participates in the wholesale energy market, conducts
11 numerous RFPs, and just completed a Request for Information (“RFI”) targeting
12 the wholesale market. The Company’s last Capacity RFP resulted in contracts with
13 six existing facilities that were approved in the 2022 IRP. These contracted
14 resources will continue to support the energy needs of Georgia Power’s customers
15 during this period of economic growth.

16 The recently completed RFI, issued in September 2023, gathered market
17 information regarding the availability of existing capacity resources to help address
18 the Company’s accelerated capacity need for years 2026 through 2028, as well as
19 the expanded capacity needs for years 2029 through 2031, which are to be
20 addressed in the All-Source RFP approved in the 2022 IRP. In response to its RFI,
21 the Company received 44 unique submissions, 32 of which were mutually exclusive
22 opportunities that met resource qualifications sought by Georgia Power. Notably,
23 only two of the 44 submissions were existing facilities. Neither existing facility has
24 capacity available in the winter of 2025/2026 through the winter of 2027/2028. The
25 Company’s knowledge of the wholesale market, as confirmed by the RFI, indicates
26 that existing market resources are not sufficient to address the capacity need
27 identified in the 2023 IRP Update.

1 **Q. HOW DO THE RESULTS OF GEORGIA POWER'S RFI IMPACT ITS**
2 **REQUEST?**

3 A. As demonstrated by the Company's RFI Summary Report included in Georgia
4 Power's Supplemental Filing made December 4, 2023, there is no indication from
5 the market that there are additional existing resources that can meet the Company's
6 capacity needs in the winter 2025/2026 to winter 2027/2028 timeframe. The RFI
7 results support the Company's resource plan identified in the 2023 IRP Update.

8 **Q. CAN THE COMPANY LEVERAGE THE ALL-SOURCE RFP TO MEET**
9 **THE CAPACITY NEED IDENTIFIED IN THE 2023 IRP UPDATE?**

10 A. No. The All-Source RFP cannot acquire resources quickly enough to meet capacity
11 needs identified for the winter of 2025/2026. As noted previously, the RFP process
12 typically takes two to two-and-a-half years from selection of the independent
13 evaluator to the certification of resources. Even if an RFP could be issued
14 immediately and completed within two years (e.g., by November 2025), only PPAs
15 for existing wholesale generation assets would be able to meet capacity needs in
16 the winter of 2025/2026. Moreover, this assumes those resources would be both
17 existing and available, as well as economical and reliable. As demonstrated by the
18 results of the Company's recent RFI, there are not sufficient existing resources
19 available in the wholesale market to meet the Company's resource needs identified
20 in the 2023 IRP Update. If the Company relied solely on the RFP process to procure
21 resources, it would be unable to meet its capacity needs in the timeframe addressed
22 in this 2023 IRP Update and would be limited in its ability support the continued
23 economic development of the state. The All-Source RFP that was approved in the
24 2022 IRP will help the Company address its increased capacity needs in 2029-2031.
25 Notably, the Company plans to increase the number of MW it will seek to procure

1 in the upcoming All-Source RFP to address the increased capacity needs in the
2 2029-2031 timeframe.

3 **Q. IS THE COMPANY GENERALLY REQUIRED TO PROCURE NEW**
4 **SUPPLY SIDE RESOURCES THROUGH AN RFP?**

5 A. Yes. However, as described above, the standard RFP process will not procure the
6 capacity needed to meet the energy needs of our customers quickly enough. The
7 Commission's rules contemplate that such a scenario might occur. Accordingly,
8 and consistent with the Commission's rules, the resource requests included in this
9 2023 IRP Update rely on several of the Commission's approved exceptions to the
10 RFP process. These exceptions are more fully addressed later in our testimony.

11 **Q. PLEASE EXPLAIN WHY THE COMPANY MUST REQUEST**
12 **ADDITIONAL GENERATION RESOURCES NOW INSTEAD OF**
13 **WAITING UNTIL THE 2025 IRP.**

14 A. Time is of the essence — To meet the capacity need arising in the winter of
15 2025/2026, the Company must take reasonable and appropriate steps to procure
16 resources that can be available for use by the end of 2025. In the 2022 IRP, the
17 Company projected needing additional capacity at the end of 2028. The 2022 IRP
18 Order approved a plan – which authorized the Company to conduct several RFPs –
19 that would enable the Company to procure the needed generation resources in time
20 to meet the winter of 2028/2029 capacity need. The accelerated load growth that
21 has occurred since the 2022 IRP has resulted in the need to procure capacity for the
22 winter of 2025 /2026 (i.e., December 2025 through February 2026) – three years
23 earlier than the winter of 2028/2029, as projected in the 2022 IRP.

1 **Q. PLEASE ADDRESS POTENTIAL CHALLENGES OR RISKS**
2 **ASSOCIATED WITH MEETING THE INCREASED CAPACITY NEED.**

3 A. Potential challenges and risks associated with meeting the increased capacity need
4 identified in the 2023 IRP Update include the following:

- 5 • **Limited Resource Availability:** There is unlikely to be enough existing firm
6 generation available to meet the increased demand for energy by the winter of
7 2027/2028. While the Company's procurement of existing resources secures
8 some capacity, it does not fill or alter the need for new capacity needed to serve
9 customers.
- 10 • **Competition for Resources:** Other utilities are also navigating the need for
11 additional capacity based on potential load growth, seeking replacement
12 capacity for retiring coal units, and adding resources to meet their newly
13 established or increased winter target reserve margins. This competition limits
14 the availability of market resources to meet Georgia Power's needs.
- 15 • **Reliance on Third Parties:** The Company cannot rely solely on third-party
16 independent power producers, who do not have an obligation to serve, to meet
17 its customers' energy needs. Consistent with Commission policy, the Company
18 must maintain an appropriate balance between Company-owned resources and
19 purchased power to ensure the reliability of the electric system and meet the
20 energy needs of the customers it is obligated to serve.
- 21 • **Transmission Constraints:** Limitations on available transmission capacity
22 could also limit the timeframe in which the Company can leverage existing
23 resources or deploy new resources. Therefore, the Company must carefully plan
24 and coordinate the addition of new transmission improvements to mitigate these
25 constraints.
- 26 • **Regulatory and Policy Changes:** Changes in energy policies or regulations
27 could impact the Company's plans and operations. For example, changes in
28 environmental regulations could affect the operation of certain types of power
29 plants in the future.

- **Technological Challenges:** The integration of new technology, such as battery storage systems, can present technical challenges and require significant investment.
- **Load Forecast Uncertainty:** While the Company’s load forecasts are based on the best available information, they cannot predict the future with absolute certainty, and actual demand could be higher or lower than projected.

Q. WHAT IS THE COMPANY’S PLAN TO ADDRESS THE INCREASED AND ACCELERATED CAPACITY NEEDS, AND ASSOCIATED RISKS, IDENTIFIED IN THE 2023 IRP UPDATE?

A. The Company developed a well-balanced, reasonable, and diversified plan that ensures it continues providing reliable and affordable power to its customers. The 2023 IRP Update proposes to leverage the Commission Rules’ RFP exemptions to acquire available capacity on the Southern Company system and from the constrained existing capacity and energy market, utilize existing transmission interconnections for newly proposed BESS resources, identify transmission solutions to enable resource deployment, and to construct new supply-side assets to ensure capacity is available by the years needed and to reduce reliance on third parties. The diverse portfolio includes both thermal and storage resources in light of potential technological and policy challenges, and the plan creates or modifies Distributed Energy Resource (“DER”) and demand-side programs that can mitigate quick load ramps associated with economic development load. The resources being proposed by the Company in the 2023 IRP Update are described more fully below.

IV. PROPOSED RESOURCES

Q. CAN THE COMPANY SUPPORT THE RAPID ECONOMIC DEVELOPMENT AND CUSTOMER DEMAND IN GEORGIA?

A. Yes. The Company is well positioned to continue providing the resources and infrastructure required to power Georgia’s robust economy, including the capacity

1 required to support continued economic development. With the support of this
2 Commission, the Company has a well-established record of meeting the energy
3 needs of its customers and providing them with clean, safe, reliable, and affordable
4 energy. Georgia's constructive regulatory framework, as overseen by the
5 Commission, provides the necessary foundation for the Company to meet the
6 energy needs of our state during this period of extraordinary economic growth.

7 The 2022 IRP established a strong base of 1500-1600 MW of capacity length to
8 meet all current and contracted customer demands in the near term. Further, the
9 BESS projects approved in the 2019 IRP (Mossy Branch) and in 2022 (McGraw
10 Ford) will provide valuable development and operational experience with this
11 burgeoning technology. Finally, the Company's extensive planning and operational
12 experience provide the knowledge and tools necessary to keep pace with growing
13 customer demand and Georgia's thriving economy.

14 **Q. PLEASE IDENTIFY THE RESOURCES PROPOSED IN THE 2023 IRP**
15 **UPDATE AND EXPLAIN HOW EACH RESOURCE WILL HELP MEET**
16 **THE CAPACITY NEEDS IDENTIFIED BY GEORGIA POWER'S**
17 **UPDATED LOAD FORECAST.**

18 A. Georgia Power is proposing the following resources to meet the capacity needs
19 associated with its revised load forecast:

- 20 • **Purchases of Capacity and Energy:** Georgia Power seeks to certify PPAs
21 with Mississippi Power and a market resource, Santa Rosa Energy Center.
22 These agreements will provide immediate additional capacity and energy to
23 meet the growing demand.
- 24 • **BESS:** Georgia Power proposes to develop, own, and operate up to 1,000
25 MW of BESS and/or BESS plus Solar at various sites, including two of
26 Georgia's military bases. These systems will provide additional capacity
27 and help to balance the grid.

- **Simple Cycle CT Resources:** The company proposes to develop, own, and operate up to 1,400 MW of simple cycle CT resources at Plant Yates. These resources will provide additional capacity and help to meet peak demand.

Together, these projects are designed to meet Georgia Power's updated load forecast and capacity needs, ensuring the Company can continue to provide reliable and affordable power to its customers.

Q. DOES THE COMPANY CONTINUE TO SUPPORT THE FLEET TRANSITION PROPOSED IN THE 2022 IRP?

A. Yes. The Company will continue to responsibly transition its generation fleet to cleaner resources while maintaining reliable and affordable electric service for customers. The 2023 IRP Update supports this transition by focusing on resources that meet the Company's near-term capacity need and enable the Company to provide reliable and affordable electric service.

The Company remains optimistic about the future of renewable resources, as well as the prospects of the Inflation Reduction Act ("IRA") and its potential to reduce the cost of new renewables for customers. As consistently demonstrated by the Company's expansion planning analysis, new solar generation remains economically attractive and will continue to be considered as a generation resource in future IRP cycles. This 2023 IRP Update is focused on meeting the capacity needs associated with Georgia's rapid economic growth, and these capacity needs require a level of reliability and resilience that cannot be met with solar resources alone. Therefore, the Company's 2023 IRP Update seeks firm capacity resources while reaffirming that renewables remain a crucial component of the Company's long-term plans.

Regarding the future of renewable energy, the renewable energy expansion plans developed for the 2023 IRP Update suggest the Company could economically add up to approximately 10,000 MW of new renewable resources by 2035, which is

1 significantly more than the 6,000 MW projected in the 2022 IRP. Notably, the
2 Company's continued expansion of BESS and DER resources, such as those
3 proposed in the 2023 IRP Update, are essential to ensuring that the grid remains
4 reliable and resilient while the Company continues adding renewable resources to
5 its generation mix.

6 **Q. WHY ARE COMPANY-OWNED RESOURCES A CRITICAL PART OF**
7 **RESPONDING TO THE NEEDS IDENTIFIED IN THE 2023 IRP UPDATE.**

8 A. Georgia Power cannot rely solely on existing market capacity to satisfy the
9 Company's growing capacity needs. As noted previously, there are not enough
10 market resources to meet the capacity needs nor is there enough time to conduct an
11 RFP. Thus, Company-owned resources are essential to the Company's ability to
12 meet its capacity needs and to continue providing customers with reliable electric
13 service. While the Company supports the selection of market resources through the
14 RFP process for the benefit of customers, market participants selected through that
15 process are not obligated to serve Georgia Power's customers and are not able to
16 address the Company's capacity needs on the accelerated timeline identified in the
17 2023 IRP Update. So that it can continue providing its customers with reliable
18 service and meet the timelines of customers' needs, Georgia Power must develop
19 new resources in accordance with the RFP exceptions in the Commission's Rules
20 in addition to procuring resources through the typical RFP process. Moreover, to
21 ensure a reliable and efficient transition of the generation fleet, it is critical that the
22 Company maintain a diverse resource portfolio that includes market resources,
23 Company-owned resources, and a balance of resource technologies.

24 **Q. HOW HAS THE COMMISSION HISTORICALLY ADDRESSED THE**
25 **NEED FOR COMPANY OWNERSHIP?**

26 A. Longstanding Commission policy requires Georgia Power to own at least 70% of
27 its supply-side resources to ensure system reliability and sufficient Commission
28 oversight of the resources serving customers. The resource plan set forth in the 2023

1 IRP Update is consistent with this Commission policy and continues to provide an
2 appropriate balance between Company-owned resources and contract PPAs from
3 the wholesale market. Even if Georgia Power was able to contract for all the
4 capacity needed to serve customers through the winter of 2030/2031 via PPAs, the
5 number of Company-owned resources serving customers would fall below 70% as
6 early as the winter of 2026/2027 and would decrease to approximately 56% by the
7 winter of 2030/2031. Such an unprecedented decrease in the percentage of
8 Company resources dedicated to serving customers would be inconsistent with
9 Commission policy and present system reliability risks. Therefore, in the 2023 IRP
10 Update, the Company is notifying the Commission that Company-owned capacity
11 resources will fall below the minimum percentage required by Commission policy
12 if the Company's updated capacity need is met only through PPAs. As such, the
13 Company respectfully requests Commission approval of the Company-owned
14 resources identified in the 2023 IRP Update so the Company can maintain the
15 appropriate level of Company-owned resources set by Commission policy in the
16 interests of system liability and sufficient Commission oversight of the resources
17 serving Georgia Power's customers.

18 **Q. WHY IS THE COMPANY REQUESTING A WAIVER OF THE**
19 **COMMISSION'S RFP RULE?**

20 A. The duration of the RFP process and the limited number of existing resources on
21 the wholesale market prevent the Company from relying on the RFP process to
22 acquire the capacity needed to meet the increased energy needs of customers
23 identified in the 2023 IRP Update. Therefore, the Company is requesting
24 Commission approval to develop, procure, or purchase the capacity and energy
25 from the new supply-side capacity resources identified above under three
26 exceptions to the RFP process set forth under Commission Rule 515-3-4-.04(f).
27 First, there is an exception for supply-side capacity resources of extraordinary

1 advantage that require immediate action.¹ Second, the Commission has the
2 authority during an IRP proceeding to certify new supply-side resources without
3 first requiring an RFP process.² Third, when the Company nears or finds that it
4 would fall below the minimum percentage of self-owned capacity (70%), the
5 Commission rules require the Company to inform the Commission of this
6 eventuality in advance of the RFP process, at which time the Commission may
7 suspend the RFP requirements and provide guidance to the Company on how to
8 proceed.³

9 As previously discussed, time is of the essence. An RFP process cannot be
10 completed quickly enough to meet the capacity needs identified in the 2023 IRP
11 Update, and there is not enough existing capacity available in the wholesale market
12 to meet the cumulative need of 2,601 MW by the winter of 2027/2028. The
13 procurement of resources pursuant to the aforementioned exceptions will facilitate
14 the timely deployment of supply-side resources needed to serve customers, while
15 mitigating the risks that the market either cannot provide enough capacity or will
16 not offer enough firm and dispatchable resources to reliably serve customers.
17 Accordingly, the Company requests that the Commission approve the supply-side
18 resources in its 2023 IRP Update pursuant to the RFP Rule exceptions deemed
19 applicable and appropriate by the Commission.

20 **Q. ARE THE CAPACITY RESOURCES PROPOSED IN THE 2023 IRP**
21 **UPDATE ECONOMICAL AND RELIABLE?**

22 A. Yes. The resources proposed by the Company are both economical and reliable.
23 The proposed natural gas resources have a fuel supply plan that incorporates the
24 necessary firm gas transportation or oil capacity to support reliable operation. In

¹ Commission Rule 515-3-4-.04(3)(f)(3).

² Commission Rule 515-3-4-.04(3)(f)(6).

³ Commission Rule 515-3-4-.04(3)(f)(7).

1 the case of Plant Yates Units 8-10, on-site fuel storage is available, improving the
2 reliability and resilience of the resources by reducing the reliance on just in time
3 fuel supply. The proposed BESS additions can provide firm capacity with the
4 ability to charge from both the grid and adjacent solar facilities. The Mississippi
5 Power PPA provides firm capacity supported by the diverse portfolio of resources
6 within Mississippi Power's system. Each of these options has undergone a detailed
7 economic ranking analysis as shown in the Technical Appendix to the IRP Update.
8 This analysis provides detailed cost and benefit information demonstrating the cost-
9 effectiveness of each option.

10 **A. Certification of the Mississippi Power PPA**

11 **Q. PLEASE EXPLAIN THE COMPANY'S REQUEST FOR CERTIFICATION**
12 **OF A PPA WITH MISSISSIPPI POWER.**

13 On October 11, 2023, Georgia Power and Mississippi Power executed a PPA for
14 the sale of 750 MW of capacity and energy from Mississippi Power to Georgia
15 Power for the term of January 1, 2024, through December 31, 2028. Per the order
16 issued in Docket No. 2018-AD-145 before the Mississippi Public Service
17 Commission, Mississippi Power must retire approximately 950 MW of capacity by
18 the end of 2027 or show with detailed evidence why continued operation of the
19 resources is in the best interests of its customers.⁴ While this capacity is currently
20 available for Georgia Power customers in times of need due to reserve sharing
21 within the Southern Company pool, Mississippi Power planned to retire some of
22 that capacity by the end of 2023 and was actively remarketing the other capacity to
23 be sold off-system. These actions would have removed this capacity from the

⁴https://www.psc.state.ms.us/InSiteConnect/InSiteView.aspx?model=INSITE_CONNECT&queue=CTS_ARCHIVEQ&docid=655509

1 Southern Company pool, in which case it would not otherwise have been available
2 to serve Georgia Power customers.

3 By purchasing 750 MW from Mississippi Power through this PPA, Georgia Power
4 ensures that this capacity will remain within the Southern Company pool and
5 provide dedicated, reliable, market-priced capacity and energy to Georgia Power's
6 customers. The PPA obligations can be met by any resources available to
7 Mississippi Power. A certification application for the PPA between Georgia Power
8 and Mississippi Power is found in Attachment A of the 2023 IRP Update, and the
9 executed PPA is provided in the Technical Appendix.

10 **Q. WHAT IS THE COMPANY'S PLAN FOR THE CAPACITY PURCHASED**
11 **FROM MISSISSIPPI POWER PRIOR TO GEORGIA POWER'S YEAR OF**
12 **NEED?**

13 A. Southern Wholesale Energy ("SWE"), on behalf of Georgia Power, will attempt to
14 remarket this capacity for years prior to the winter of 2025/2026. The Company has
15 already sold 500 MW to a regional electrical service provider for January 1, 2024,
16 through September 30, 2025. To the extent the Company is unable to remarket all
17 of the capacity within this period and recover all the incremental costs, the
18 Company requests regulatory asset treatment to defer the capacity and non-fuel
19 energy payments made under the PPA, including additional sum, net of the
20 wholesale capacity and non-fuel revenues from any remarketed capacity sales from
21 January 1, 2024, through December 31, 2025, including this executed system sale
22 to a regional electrical service provider during that time, for recovery in the next
23 base rate case.

24 **Q. PLEASE EXPLAIN THE COMPANY'S REQUEST FOR AN ADDITIONAL**
25 **SUM ON THIS PPA.**

26 A. Pursuant to the IRP Statute, the Company is entitled to an additional sum for long
27 term power purchases. When calculating the additional sum, the statute requires

1 that lost revenues, changed risks, and an equitable sharing of benefits between the
2 utility and its retail customers be considered. For the Mississippi Power PPA, as
3 well as the Santa Rosa PPA below, the Company requests an additional sum of
4 \$3/kW-year, consistent with the Commission-approved additional sum amounts
5 applied to the Capacity PPAs certified in the 2022 IRP.

6 **B. Certification of the Santa Rosa PPA**

7 **Q. PLEASE DESCRIBE THE SANTA ROSA ENERGY CENTER.**

8 A. The Santa Rosa Energy Center is a combined-cycle resource located in Pace,
9 Florida. The Santa Rosa PPA offers several benefits for the Company and
10 customers. Due to its location and existing grandfather rights, no additional
11 transmission improvements or transmission service is needed for power to be
12 delivered from the Santa Rosa Energy Center to the Southern Company System. In
13 addition, System Operators have purchased energy and capacity from the Santa
14 Rosa Energy Center in the past and are familiar with the facility and seller.

15 **Q. PLEASE EXPLAIN THE COMPANY'S REQUEST FOR CERTIFICATION**
16 **OF A PPA WITH SANTA ROSA ENERGY CENTER LLC.**

17 A. On October 22, 2023, Georgia Power and Santa Rosa Energy Center LLC executed
18 a PPA for the sale of up to 230 MW of capacity and energy. Capacity and energy
19 will be available beginning in the first of the month following Commission
20 approval and will continue through December 31, 2028. This agreement allows
21 Georgia Power to take advantage of the near-term availability of this resource to
22 address the capacity needs identified in the 2023 IRP Update. The short-term nature
23 of this PPA also allows the Company to bridge its capacity needs until the All-
24 Source Capacity RFP procures resources for the winter of 2028/2029 and beyond.
25 A certification application for the PPA between Georgia Power and Santa Rosa
26 Energy Center LLC is found in Attachment B of the 2023 IRP Update, and the
27 executed PPA is provided in the Technical Appendix.

1 **Q. WHAT IS THE COMPANY'S PLAN FOR THE CAPACITY PURCHASED**
2 **FROM SANTA ROSA ENERGY CENTER PRIOR TO 2026?**

3 A. As with the Mississippi Power PPA, SWE, on behalf of Georgia Power, will
4 attempt to remarket the Santa Rosa Energy Center capacity for the years prior to
5 the winter of 2025/2026. To the extent the Company is unable to remarket all of the
6 capacity within this period and recover all the incremental costs, the Company
7 requests regulatory asset treatment to defer the capacity and non-fuel energy
8 payments made under the PPA, including additional sum, net of any wholesale
9 capacity and non-fuel revenues from any remarketed capacity sales from January
10 1, 2024 through December 31, 2025, for recovery in the next base rate case.

11 **C. BESS**

12 **Q. PLEASE DESCRIBE THE COMPANY'S REQUEST IN THIS IRP UPDATE**
13 **WITH RESPECT TO BESS.**

14 A. Georgia Power is proposing new BESS projects to provide capacity as early as the
15 winter of 2026/2027. Specifically, the Company proposes to add 178 MW of 4-
16 hour duration lithium-ion BESS to existing Company-owned solar facilities at
17 Robins and Moody Air Force Bases and 200 MW of BESS plus 200 MW of solar
18 at a new site. Additional details regarding the specific proposed BESS projects and
19 the estimated cost of each resource are found in the Technical Appendix.

20 **Q. WHY IS THE COMPANY PROPOSING TO DEVELOP BESS PROJECTS**
21 **AT ROBINS AND MOODY AIR FORCE BASES?**

22 A. The proposed BESS projects at Georgia Power's Robins and Moody Air Force Base
23 solar facilities will leverage existing interconnection rights and transmission
24 deliverability. These resources can be charged by the Company's largest owned
25 solar resources located adjacent to each site but may have opportunities to be
26 charged by the grid depending on the availability of firm transmission capacity. As

1 such, these projects save time and avoid additional capital investment that
2 otherwise would be required to construct interconnection facilities and transmission
3 system upgrades to charge and discharge the BESS. The proposed BESS resources
4 will also optimize energy savings by shifting the energy output of the facilities from
5 hours with a relatively low system marginal cost to hours with a relatively high
6 system marginal cost. The BESS will also firm up the winter planning capacity of
7 the existing solar facilities at both sites by storing energy that can then be
8 dispatched by system operators to benefit the grid. Without BESS, the winter
9 planning capacity for the solar resources at each site is 10% of the nameplate
10 capacity of each facility. With the BESS, each facility can provide 100% of the
11 solar nameplate capacity to meet winter capacity needs, thus maximizing the
12 utilization of the existing solar resources.

13 **Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED BESS PLUS SOLAR**
14 **PROJECT.**

15 A. The proposed BESS plus solar project will be comprised of 200 MW of BESS plus
16 200 MW of new solar. The proposed BESS plus solar project is projected to be
17 online by the winter of 2026/2027. The BESS will be initially charged by the
18 accompanying new solar resource but may have opportunities to be charged by the
19 grid depending on the availability of firm transmission capacity. As with the BESS
20 proposed for the Robins and Moody Air Force Base projects, the BESS plus solar
21 project can leverage existing interconnection and transmission system capabilities
22 that mitigate delays associated with long-lead time transmission system
23 improvements.

24 **Q. IS THE COMPANY PURSUING ANY OTHER BESS OPPORTUNITIES?**

25 A. Yes. The Company is also pursuing additional BESS opportunities at facilities that
26 may have transmission capacity available as early as the winter of 2026/2027. This
27 includes standalone BESS, BESS added to existing solar facilities, or BESS plus
28 charging solar. Since the availability of additional transmission capacity could limit

1 the timeframe in which the Company can deploy new resources, the Company
2 requests the flexibility to add up to 1,000 MW total of BESS resources to be online
3 by the end of 2027, inclusive of 378 MW for the proposed Robins, Moody, and
4 BESS plus solar projects. This added flexibility will allow the Company to utilize
5 resources that provide the best value to Georgia Power customers. When the
6 Company identifies additional BESS project options, the Company will return for
7 Commission approval and certification.

8 **Q. WHY IS THE COMPANY PURSUING BESS AS A RESOURCE?**

9 A. The time to construct BESS is shorter than other types of generation and, therefore,
10 can be more quickly deployed to help meet the earlier capacity needs identified in
11 the 2023 IRP Update. Moreover, the Company's Resource Mix Study, provided in
12 the Technical Appendix, selects BESS as an economically optimal resource
13 beginning in the winter of 2026/2027, and selects solar as an economically optimal
14 resource beginning in the winter of 2027/2028. The Company-owned BESS
15 proposed in the 2023 IRP Update would contribute to the significant amount of
16 capacity required for the Company to maintain at least 70% utility ownership of the
17 resources serving Georgia Power's customers, consistent with Commission Policy.

18 **Q. HOW DOES THE COMPANY PROPOSE TO TREAT THE BESS**
19 **RESOURCES FROM A RATEMAKING PERSPECTIVE?**

20 A. The Company intends to pursue available tax credits through the IRA and similar
21 incentives for the proposed BESS projects and to pass those benefits to customers.
22 If these BESS requests are denied by the Commission, the Company requests any
23 development costs not useful or transferable to other projects to be deferred to a
24 regulatory asset with the amortization period of the recovery to be determined in
25 the next base rate case.

D. CT Resources

Q. PLEASE DESCRIBE THE COMPANY'S CT RESOURCE REQUEST IN THIS IRP UPDATE.

A. The Company proposes to construct three advanced, dual-fuel CTs at Plant Yates. Advanced gas turbines also allow for the incorporation of catalyst control systems to lower emissions significantly compared to previous generations of the technology. In addition, the Company proposes to locate the CTs at Plant Yates to leverage current infrastructure and operational efficiencies.

The three advanced gas turbines proposed at Plant Yates would provide between 1,000 to 1,400 MW of capacity, depending on the fuel source being utilized, providing higher output and greater efficiency than previous generations of simple cycle CT designs. When gas is available, the units would provide up to approximately 1,400 MW of capacity. If gas is unavailable, the units could run on oil and provide approximately 1,000 MW to 1,100 MW of capacity, with on-site oil storage capability to provide reliability and resiliency benefits to the electric system. Based on the results of the transmission screening analyses provided in the Technical Appendix of the 2023 IRP Update, the total firm output of the proposed CTs will be limited to 600 MW until transmission improvements are completed in the summer of 2028. Additional details regarding the proposed dual-fuel simple cycle CT resources and estimated costs are found in the Technical Appendix of the 2023 IRP Update.

Q. WHY IS THE COMPANY PROPOSING THESE CT RESOURCES RATHER THAN PROPOSING TO BUILD MORE ENERGY STORAGE RESOURCES?

A. As evidenced in recent IRPs as well as the 2023 IRP update, the Company remains very supportive of energy storage and anticipates the continued growth of that technology. However, to preserve system reliability and resilience for all customers

1 during all hours, the Company needs a diverse portfolio of dispatchable resources.
2 During extended periods, or multi-day events, of limited solar generation, such as
3 during rainy periods or cloudy days, CTs will provide dispatchable generation that
4 is not limited to 2- or 4-hour durations, thus supporting system reliability and
5 resilience. These resources complement battery storage resources, which rely on
6 generation from other assets to charge, by providing dispatchable peaking power
7 when it is needed to meet customers' energy needs. As energy storage resources
8 continue to grow as a percentage of Georgia Power's portfolio, and to support
9 renewable integration, the Company must maintain a diverse generation portfolio
10 that does not rely too heavily on any single technology, such as short-duration
11 storage, to meet its capacity needs. Notably, energy storage resources do not
12 generate energy and must be charged either from the grid or another resource.

13 Thus, at times, energy storage resources act as additional load to the Company's
14 system. When dispatched, currently economical energy storage is limited to two or
15 four hours of full discharge output. To serve customer load, the Company needs
16 dispatchable resources that are not inherently limited by the specified discharge
17 duration of the resource or a need to charge. While energy storage resources do
18 have high levels of capacity equivalence because they can help to serve load during
19 peak loads, they have limitations and need to be supported by other resources.
20 These characteristics are reflected in the Company's Resource Mix Study, which
21 selects not only BESS and solar but also CTs and CCs as economically optimal
22 additions to meet system capacity needs. Specifically, CTs are selected beginning
23 as early as the winter of 2026/2027.

24 **Q. WHAT OTHER BENEFITS DO THE PROPOSED CT RESOURCES**
25 **BRING TO THE 2023 IRP UPDATE?**

26 A. CTs can be constructed in the short time frame needed to develop new generation
27 that can help address the Company's capacity needs identified in the 2023 IRP
28 Update. The Company-owned CTs would also contribute to the significant amount

1 of capacity required to maintain at least 70% utility ownership of resources serving
2 Georgia Power's customers, consistent with Commission policy.

3 **Q. WHAT STEPS HAS THE COMPANY TAKEN TO SUPPORT THE**
4 **DEVELOPMENT OF THE PROPOSED CT UNITS?**

5 A. The Company entered an Agreement for Preliminary Engineering and
6 Development Services and Option to Purchase Equipment that allows it to engage
7 a joint and several consortium consisting of an Engineering, Procurement and
8 Construction ("EPC") vendor and an Original Equipment Manufacturer ("OEM")
9 in connection with the development of the CT units proposed at Plant Yates. The
10 agreement provides a framework through which, the Company can negotiate an
11 EPC contract under which the consortium will provide the necessary engineering,
12 procurement, and construction services for the development of the CT units. To
13 support the timely development of these units, the company has advanced a
14 reservation fee to the consortium to provide for the procurement of long lead time
15 equipment and required services. These steps help ensure the proposed CT units
16 can be developed in the timeframe needed to support the Company's capacity needs
17 identified in the 2023 IRP Update.

18 **Q. IF THE COMMISSION DENIES THE COMPANY'S REQUEST TO**
19 **CONSTRUCT THE CT RESOURCES AT PLANT YATES, WHAT DOES**
20 **THE COMPANY REQUEST REGARDING COSTS SPENT TO DATE?**

21 A. If this request is denied by the Commission, the Company requests any
22 development costs not useful or transferable to other projects be deferred to a
23 regulatory asset with the amortization period of the recovery to be determined in
24 the next base rate case.

E. Potential Acquisition of Additional Ownership Interest in an Existing Asset

Q. IS THE COMPANY STILL EXPLORING THE POTENTIAL OPTION TO ACQUIRE AN ADDITIONAL OWNERSHIP INTEREST IN AN EXISTING GENERATING ASSET WITHIN THE SOUTHERN COMPANY FOOTPRINT TO ADDRESS THE FORECASTED NEEDS IN THIS IRP UPDATE?

A. No. Georgia Power was negotiating a potential option to acquire an additional ownership interest in an existing asset within the Southern Company footprint. However, the Parties were unable to reach an agreement at this time. The Company will continue to explore other potential resource solutions and opportunities to meet its projected capacity needs and will return to the Commission if additional resource options become viable.

V. DER AND DEMAND RESPONSE SOLUTIONS

Q. WHAT NEW DISTRIBUTED ENERGY RESOURCE AND DEMAND RESPONSE PROGRAMS ARE THE COMPANY REQUESTING IN THE 2023 IRP UPDATE?

A. The Company is proposing to increase its DER and demand response offerings to customers and leverage the benefits of these resources for all customers. The Company's proposal includes: (1) two new customer-sited DER programs, known as the DER Colocation and the DER Customer Owned programs; (2) a new Curtailable Load program for commercial and industrial customers; and (3) an expansion of the Residential Thermostat Demand Response DSM Program. These programs will more fully leverage resources that customers are seeking and support system reliability for the benefit of all customers.

A. DER Programs

1 **Q. PLEASE DESCRIBE THE DER COLOCATION PROGRAM.**

2 A. The DER Colocation program, as implemented through tariff DCL-1, will be an
3 optional program available to qualifying commercial and industrial customers.
4 Through tariff DCL-1, Georgia Power will own, operate, maintain, and control
5 dispatchable DER 10 MW and above at customer premises, and dispatch the
6 resources to provide system benefits to all customers. The DER will be connected
7 to the electric system, thus allowing the Company to transmit the energy they
8 produce to the system. During a local electric service outage, the supply-side DER
9 will continue to provide participating customers with electric energy, enabling
10 more resilient operations. At no time will the DER generation impact the
11 participating customer's retail billed electric service while participating in DCL-
12 1. In exchange for the enhanced resiliency service they receive, participating
13 customers will make payments such that the resulting rate base value of the DER
14 is below the system value realized over its asset life, thus benefiting all customers.
15 Customers participating under the DCL-1 tariff will also be required to enter a
16 program agreement with Georgia Power that will further establish the terms and
17 conditions of participation.

18 **Q. WHAT ARE THE BENEFITS OF THE DER COLOCATION PROGRAM?**

19 A. The DER Colocation Program allows for all stakeholders to benefit. Participating
20 customers receive enhanced resiliency service at a cost below the full price of an
21 on-site asset. Non-participating customers benefit from system capacity resources
22 that are procured below the value received by these customers. The program
23 leverages DER to strengthen grid reliability for all customers, creates a more
24 flexible and diverse resource mix, promotes cleaner DER resources, and increases
25 resilience for participating customers.

26 **Q. HOW WILL THE PARTICIPATING CUSTOMER PAYMENT BE**
27 **CALCULATED?**

1 A. The participating customer's payment will be calculated as the total cost of the asset
2 less 75% of the net present system value over the life of the asset. This structure (1)
3 ensures all customers will see a benefit based on the discounted system value
4 credited, (2) mitigates the bad debt risk to non-participants, and (3) ensures that
5 participating customers receive resilience benefits.

6 **Q. PLEASE DESCRIBE THE DER CUSTOMER OWNED PROGRAM.**

7 A. The DER Customer Owned Program, as implemented through the DCO-1 tariff,
8 will be an optional program available to qualifying commercial and industrial
9 customers and will operate much like the DER Colocation program, but with a few
10 key differences. Through DCO-1, Georgia Power will operate and control
11 customer-owned, new dispatchable DER 1 MW or greater, but less than 10 MW,
12 located at customer premises and economically dispatch the resources to provide
13 energy and capacity benefits to all customers. Customers may aggregate assets at
14 multiple accounts to meet the 1 MW minimum requirement, provided that each
15 account's DER is 250 kW or greater. Like with DCL-1, interconnection of the DER
16 with the Company's electric system will allow the energy produced by the DCO-1
17 DER to be transmitted to the electric grid. During times of electric service outage
18 or need, the supply-side DER will continue to provide participating customers with
19 electric energy, enabling more resilient operations. At no time will the DER
20 generation impact the participating customer's billed retail electric service while
21 participating in DCO-1. Under this program, Georgia Power will provide
22 participating customers with a credit on their electric bills in exchange for the
23 Company's use of the customer's DER for dispatch. The DCO-1 credit will be
24 based on the system value of the participating customer's DER over the period
25 during which they subscribe to the DCO-1 program. As a condition of participation,

1 participating customers will be required to enter into a program agreement with
2 Georgia Power that will further establish the terms and conditions of participation.

3 **Q. WHAT WILL BE THE TERM LENGTH OF THE DER CUSTOMER**
4 **OWNED PROGRAM CONTRACTS?**

5 A. The DER Customer Owned Program will allow for contracts through 2031. At that
6 time, the Company will evaluate the ongoing benefits that these resources may
7 continue to provide to the system and all customers. This contractual arrangement
8 will provide great benefits to non-participants, providing firm capacity in the short-
9 term, without committing to longer-term agreements. Participating customers will
10 receive guaranteed benefits and payments through 2031 with future payments and
11 the associated system value for their customer-owned DER being assessed at that
12 time.

13 **Q. HOW WILL THE COMPANY CALCULATE THE CREDIT PAID TO**
14 **PARTICIPATING CUSTOMERS IN THE DCO-1 PROGRAM?**

15 A. A levelized credit payment equal to 75% of the system value of the DER asset will
16 be paid over the contract period. This structure ensures that all customers will see
17 a benefit based on the discounted system value credited, and that participating
18 customers receive a fixed payment stream through 2031 on their DER asset,
19 offsetting their investment costs.

20 **Q. WHAT ARE THE BENEFITS OF THE DER CUSTOMER OWNED**
21 **PROGRAM?**

22 A. The DER Customer Owned Program allows for all customers to benefit.
23 Participating customers receive a firm credit payment over several years, offsetting
24 the cost of their DER investment. Non-participating customers benefit from
25 capacity resources being procured below the system value. The program leverages
26 DER to strengthen grid reliability for all customers, creates a more flexible and

1 diverse resource mix, promotes cleaner DER resources, and increases resilience for
2 Georgia Power's participating customers.

3 **Q. WHAT TYPE OF ASSETS WILL BE ABLE TO PARTICIPATE IN THE**
4 **DER COLOCATION AND DER CUSTOMER OWNED PROGRAMS?**

5 A. DER technology that may be utilized under DCL-1 includes, but is not limited to
6 combustion turbines, reciprocating internal combustion engines ("RICE"), and
7 other dispatchable technologies with firm fuel supply. The Company will limit
8 eligible DER to dispatchable assets that are certified and permitted for non-
9 emergency use by the Georgia Environmental Protection Division of the
10 Department of Natural Resources. All participating DER assets will be subject to
11 the requirements of interconnection studies.

12 **Q. HOW MUCH GENERATION CAPACITY WILL BE RELIED ON**
13 **THROUGH THE DER COLOCATION AND DER CUSTOMER OWNED**
14 **PROGRAMS?**

15 A. The DER utilized in these programs will be peaking type resources and as such they
16 should not exceed the unfilled peaking capacity needs in the system resource plan.
17 These customer-sited DER programs allow the Company to meet its peaking
18 resource needs by leveraging the same resources participating customers are
19 seeking for their resiliency needs. In meeting this dual purpose, the programs can
20 achieve greater overall economic efficiency.

21 **Q. HOW WILL THE DER COLOCATION AND DER CUSTOMER OWNED**
22 **PROGRAMS BE UTILIZED?**

23 A. The DER in these programs will be dispatched for system use for both economic
24 and reliability purposes, maximizing their value to all customers. Assets will also
25 operate in the event of a local outage to provide resiliency to the customer.

1 **Q. HOW WILL DER IN THE DER COLOCATION AND DER CUSTOMER**
2 **OWNED PROGRAMS BE APPROVED?**

3 A. In this IRP Update filing, the Company is seeking approval of the proposed
4 programs, and the authority to begin developing projects with participating
5 customers. The Company plans to submit the proposed DCL-1 and DCO-1 tariffs,
6 along with the CL-1 tariff, for Commission approval prior to the direct hearings of
7 Georgia Power. Once DCL-1 and DCO-1 projects are fully developed and contracts
8 are executed, they will then be filed for certification and approval with the
9 Commission.

10 **Q. ARE THE DER COLOCATION AND DER CUSTOMER OWNED**
11 **PROGRAMS APPROPRIATE FOR INCLUSION IN THE 2023 IRP**
12 **UPDATE?**

13 A. Yes. The enrollment of participating customers coupled with the development and
14 construction of DERs require substantial lead time before the DERs become
15 operational. Approving the DER Colocation and DER Customer Owned programs
16 now expedites the realization of capacity benefits that these resources can provide
17 to all customers. Any delay in approving these programs produces a delay in any
18 potential capacity benefits to all customers.

19 **B. Curtable Load Program**

20 **Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED CURTAILABLE**
21 **LOAD PROGRAM.**

22 A. The Curtable Load program will enable additional demand response
23 participation options to commercial and industrial customers and provide
24 corresponding system capacity and reliability benefits to all customers. This
25 optional DCL-1 tariff, through which the program will be implemented, will be
26 available to qualifying commercial and industrial customers able to make multi-

1 year commitments to reduce their load during extreme supply and demand
2 conditions.

3 **Q. WHAT ARE THE BENEFITS OF THE PROGRAM?**

4 A. The curtailable load program provides significant benefits to both participating
5 customers and the system by reducing consumption during extreme conditions for
6 grid reliability. Participating customers receive lower electric bills and non-
7 participating customers receive the savings of deferred generation capacity
8 infrastructure. The program leverages load flexibility to strengthen grid reliability
9 for all customers, creates a more flexible resource mix, and provides economic
10 benefits for participating customers.

11 **Q. HOW DOES THE CURTAILABLE LOAD PROGRAM DIFFER FROM**
12 **THE COMPANY'S EXISTING DEMAND RESPONSE PLUS ENERGY**
13 **CREDIT ("DPEC") DEMAND RESPONSE PROGRAM?**

14 A. This program will differ from the Company's existing DPEC demand response
15 program in several ways. First, it will require multi-year contracts, which provide
16 increased system value and assurance, and resulting increased credit values for
17 participating customers. Second, the Curtailable Load program will reflect a value
18 for capacity in both the winter and summer periods. Third, the curtailable load
19 program will require demonstration on a regular basis to ensure demand response
20 availability. Finally, the program will also have an updated compliance incentive
21 to provide ongoing inducement to participate.

22 **Q. WHY IS THE CURTAILABLE LOAD PROGRAM APPROPRIATE FOR**
23 **INCLUSION IN THE 2023 IRP UPDATE?**

24 A. Demand side options have long been a source of capacity for the system reflected
25 in the resource plan. The Curtailable Load program can provide a more reliable
26 source of new carbon-free capacity in an environment where firm capacity assets

1 are becoming scarce. Additionally, since demand response does not necessarily
2 require any construction, realization of benefits can materialize more quickly and
3 defer the procurement of future, additional capacity.

4 **C. Expansion of Residential Thermostat Demand Response DSM Program**

5 **Q. PLEASE DESCRIBE THE COMPANY’S RESIDENTIAL THERMOSTAT**
6 **PROGRAM.**

7 A. Georgia Power’s Temp Check is a residential thermostat demand response
8 (“TSTAT DR” or “Temp Check”) DSM program that allows the Company to make
9 event calls that adjust participating customers’ thermostat behavior during a limited
10 period. The Company pays participating customers an incentive for this ability.

11 **Q. WHAT CHANGES IS THE COMPANY PROPOSING TO MAKE IN THE**
12 **TSTAT DR PROGRAM?**

13 A. The Company proposes expanding customer enrollment in the Temp Check
14 program to 50,000 customers.

15 **Q. WHY IS EXPANDING THE TSTAT DR PROGRAM APPROPRIATE FOR**
16 **INCLUSION IN THE 2023 IRP UPDATE?**

17 A. The Temp Check program is a source of demand response potential that translates
18 to capacity value. The program has seen robust customer participation and is
19 currently closed to new enrollment. In addition, the program now reflects positive
20 Total Resource Cost (“TRC”) results for the evaluation life of the program and,
21 therefore, no longer requires a waiver of the TRC requirement within Commission
22 Rule 515-3-4-.04(4)(a)(3) as was approved in the 2022 IRP.

1 **Q. DOES THE COMPANY BELIEVE THAT ADDITIONAL POTENTIAL**
2 **EXISTS BEYOND THE REQUESTED 50,000 TSTAT PARTICIPANTS?**

3 A. Yes, the Company believes that further residential load flexibility potential exists.
4 The Company believes doubling the existing TSTAT DR program over the
5 remainder of the DSM cycle reflects an aggressive but achievable expansion of the
6 program. The Company will continue to evaluate and expand load flexibility
7 programs where those options can deliver cost-effective value to all customers.

8 **VI. CUSTOMER IMPACTS**

9 **Q. WHAT COSTS ARE ASSOCIATED WITH THE COMPANY'S PLAN**
10 **PROPOSED IN THIS 2023 IRP UPDATE?**

11 A. Georgia Power is committed to maintaining affordable rates for all customers and
12 to ensuring that the costs of electricity are appropriately allocated among
13 customers. Regarding the capacity resources requested in the 2023 IRP Update,
14 Georgia Power will continue to adhere to its long-standing requirement that new
15 economic development projects have long-term projected net benefits to Georgia
16 Power customers. Accordingly, each new economic development project has to
17 pass financial and economic screening requirements, including the Ratepayer
18 Impact Measure ("RIM") test. Georgia Power expects existing and new customers
19 to recognize economic benefits from this energy usage growth, which will help
20 offset and balance the cost of investments needed to serve Georgia's growing
21 energy needs.

22 **Q. IS THE COMPANY REQUESTING A RATE INCREASE AS PART OF THE**
23 **2023 IRP UPDATE?**

24 A. No. Consistent with the Company's prior IRP filings, Georgia Power is not
25 requesting a rate adjustment in the 2023 IRP Update.

1 **Q. WILL CUSTOMER BILLS EVENTUALLY INCREASE BECAUSE OF**
2 **THE REQUESTS INCLUDED IN THE 2023 IRP UPDATE?**

3 A. All else being equal, considering the expected load growth and cost of the solutions
4 proposed in this 2023 IRP update, the Company does not expect customer rates to
5 increase. The recovery of costs associated with new facilities that serve customers
6 will continue to be addressed through the rate case process, where the Commission
7 will establish reasonable rates based upon the Company's overall cost to serve. As
8 noted above, each economic development project must pass financial and economic
9 screening requirements, including the RIM test.

10 **VII. FLEX CAPACITY**

11 **Q. IF THE COMMISSION APPROVES THE REQUESTS IN THE 2023 IRP**
12 **UPDATE, WILL THE STATE'S ENERGY NEEDS BE MET UNTIL THE**
13 **2025 IRP?**

14 A. If approved, the requests in the 2023 IRP Update should allow Georgia Power to
15 meet the needs of its customers and the state based on current projections. Given
16 the extraordinary economic growth in Georgia, the Company is closely monitoring
17 the energy needs of customers and will work with the Commission to address future
18 changes should they be necessary. To that end, the 2023 IRP Update establishes a
19 framework within which the Company can request approval to acquire additional
20 capacity ("Flex Capacity") ahead of the 2025 IRP if an updated load forecast
21 projects additional capacity needs.

22 **Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED FLEX CAPACITY**
23 **FRAMEWORK.**

24 A. The Flex Capacity framework would authorize Georgia Power to undertake and
25 recover the cost for preliminary development activities in connection with the
26 development, operation, and ownership of new capacity resources. Additionally,

1 the Company would be authorized to continue to explore PPA or acquisition
2 options that could be presented for Commission approval and certification prior to
3 the filing of the Company's 2025 IRP and recover any incremental cost incurred
4 for this effort. Georgia Power proposes that the following criteria must be met
5 before the Company could pursue such options: (1) an update to the 2023 IRP
6 Update load forecast that results in a 500 MW or greater capacity need prior to the
7 winter of 2028/2029; and (2) the Company submits the proposed resource(s) for
8 certification with an updated capacity needs chart and associated load forecast
9 update.

10 **Q. WHAT IS THE PURPOSE OF THE COMPANY'S PROPOSED FLEX**
11 **CAPACITY FRAMEWORK?**

12 A. The Flex Capacity framework allows for continued resource development
13 flexibility in the coming years. Georgia Power plans to continue to identify
14 supplemental or "Flex Capacity" resource options that could help meet additional
15 capacity needs prior to the winter of 2028/2029, if necessary. For example, Georgia
16 Power may identify BESS capacity opportunities in addition to the 1,000 MW
17 proposed in this 2023 IRP Update. Additionally, the Company could continue to
18 explore the possibility of additional PPA options associated with limited market
19 resources, although none were identified by the Company's RFI issued in
20 September and filed in the Company's Supplemental Filing on December 4, 2023,
21 in this proceeding. If approved by the Commission, the Flex Capacity framework
22 would help Georgia Power address rapid increases in load prior to the Company
23 filing its 2025 IRP and continue to support economic growth in Georgia.

24 **Q. WHAT REGULATORY AND RATEMAKING TREATMENT IS THE**
25 **COMPANY SEEKING FOR ITS FLEX CAPACITY FRAMEWORK?**

26 A. Under this proposal, the Company would be approved to defer any developmental
27 costs for such activities that would otherwise be expensed into a regulatory asset,
28 with the amortization period to be determined in the Company's next base rate case.

1 Once resources are identified under this framework, the Company will seek
2 expedited certification for such resources.

3 **VIII. TRANSMISSION**

4 **Q. PLEASE DESCRIBE THE SCREENING ANALYSES THE COMPANY**
5 **USED TO EVALUATE THE TRANSMISSION IMPACTS OF THE**
6 **RESOURCE SOLUTIONS INCLUDED IN THE 2023 IRP UPDATE.**

7 Georgia Power performed transmission screens for various generation resource
8 options considered by the Company to support its generation resource needs as
9 described in the 2023 IRP Update. The screens utilized transmission power flow
10 analyses across various scenarios of incremental resource additions. Each scenario
11 included all the large load projects that have selected Georgia Power as well as prior
12 queued projects. The screens provided estimated costs for transmission
13 improvements that are attributable to resources proposed in this 2023 IRP Update,
14 and they identified temporary capacity limitations until certain transmission
15 improvements are completed.

16 **Q. PLEASE EXPLAIN THE COMPANY'S REQUEST RELATED TO**
17 **TRANSMISSION.**

18 A. In the 2023 IRP Update filing, the Company requested approval of "expansion of
19 the transmission system to accommodate the above-requested resources and the
20 Company's Load and Energy Forecast as described in the Technical Appendix."
21 Following discussions with Commission Staff, the Company seeks to clarify this
22 request. Specifically, the Company requests approval of the transmission
23 improvements necessary to accommodate the resources proposed in the 2023 IRP
24 Update. Such improvements were identified in the preliminary transmission
25 screening analyses filed in the Technical Appendix to the 2023 IRP Update and are
26 consistent with the types of transmission improvements typically required to
27 accommodate new generation added to the System.

1 **Q. HAS THE COMPANY PROVIDED ANY ADDITIONAL SUPPORT OR**
2 **ANALYSIS SUPPORTING THE TRANSMISSION REQUEST?**

3 A. The Company is currently conducting additional, more detailed transmission
4 studies on the transmission impacts of the 2023 IRP Update. The Company will
5 submit a 2023 IRP Update Supplemental Filing in January 2024 that will include
6 this additional analysis and support. Importantly, the supplemental transmission
7 studies will incorporate potential new large loads consistent with the 2023 IRP
8 Update Load and Energy Forecast in addition to the committed loads included in
9 the preliminary transmission screening analyses described above. The Company
10 does not anticipate the results from the supplemental transmission studies to
11 materially deviate from the results of the screening analyses.

12 **Q. WHY IS TRANSMISSION CRITICAL FOR AN EFFECTIVE AND**
13 **RELIABLE FLEET?**

14 A. The Company's generation fleet does not operate in a vacuum and cannot reliably
15 serve customers without a reliable transmission system. Georgia Power must
16 consider how resource planning decisions impact the transmission system,
17 especially considering the planned fleet transition and retirement of the Company's
18 coal resources. The Company identified transmission constraints relevant to fleet
19 transition both in the ten-year plan and other unit retirement scenarios that were
20 evaluated.

21 **Q. ARE THERE TRANSMISSION IMPACTS AND RELATED COSTS**
22 **ASSOCIATED WITH THE ADDITION OF THE NEW LARGE LOAD**
23 **PROJECTS?**

24 A. Yes. The Company studies and evaluates the transmission infrastructure necessary
25 to accommodate the additional large load projects as they are proposed to be added
26 to the System. The costs for such transmission impacts will be direct assigned,
27 local, or upstream from the project.

1 **Q. HOW ARE TRANSMISSION COST ASSOCIATED WITH NEW LARGE**
2 **LOAD PROJECTS RECOVERED?**

3 A. Direct assigned and local costs will be paid for by the customer either directly,
4 through upfront payments, or through their rate offering and resulting revenue. Any
5 upstream transmission costs caused by the addition of the new large load customer
6 are built into the customer's rate and will be paid for by the new customer over time
7 for the life of the project. Prior to making an offer to serve a customer choice
8 opportunity, the Company analyzes the cost to serve the customer including the
9 necessary transmission upgrades and investments needed to accommodate the load
10 addition. The Company only extends competitive offers to eligible customers that
11 pass financial and economic screening requirements, including the RIM test.

12 **IX. CONCLUSION**

13 **Q. WHAT IS GEORGIA POWER REQUESTING OF THE COMMISSION IN**
14 **THE 2023 IRP UPDATE?**

15 A. The Company seeks approval of its 2023 IRP Update as proposed, including the
16 following:

- 17 1. Authorization to procure the resources described in items 2-6 and 9 below
18 in accordance with Commission Rules through the exceptions to the
19 Commission's RFP process set forth in Commission Rules 515-3-4-
20 .04(3)(f)(3), 515-3-4-.04(3)(f)(6), and 515-3-4-.04(3)(f)(7).
- 21 2. A certificate of public convenience and necessity for the PPA Between
22 Georgia Power Company and Mississippi Power Company as described in
23 Attachment A and the Technical Appendix.
- 24 a. Regulatory asset treatment to defer the capacity and non-fuel energy
25 payments made under the PPA, including additional sum, net of the
26 wholesale capacity and non-fuel revenues from any remarketed capacity
27 sales from January 1, 2024, through December 31, 2025, including an
28 executed system sale to a regional electrical service provider during that
29 time, for recovery in the next base rate case.

- 1 3. A certificate of public convenience and necessity for the PPA Between
2 Georgia Power Company and Santa Rosa Energy Center LLC as described
3 in Attachment B and the Technical Appendix.
- 4 a. Regulatory asset treatment to defer the capacity and non-fuel energy
5 payments made under the PPA, including additional sum, net of any
6 wholesale capacity and non-fuel revenues from any remarketed capacity
7 sales from January 1, 2024, through December 31, 2025, for recovery
8 in the next base rate case.
- 9 4. Authority to develop, own, and operate up to 1,000 MW of BESS at various
10 sites as described in this IRP Update and the Technical Appendix.
- 11 a. Approval that any development costs not useful or transferable to other
12 projects be deferred to a regulatory asset for recovery in the next base
13 rate case in the event this request is denied.
- 14 5. Authority to develop, own, and operate up to 1,400 MW from three simple
15 cycle CT resources at Plant Yates as described in this IRP Update and the
16 Technical Appendix.
- 17 a. Approval that any development costs not useful or transferable to other
18 projects be deferred to a regulatory asset for recovery in the next base
19 rate case in the event this request is denied.
- 20 6. Approval of two new customer-sited DER programs as described in this IRP
21 Update.
- 22 7. Approval of one new tariff-based demand response program as described in
23 this IRP Update.
- 24 8. Approval of an amended certificate for one existing demand response DSM
25 program as described in this IRP Update and Attachment C.
- 26 9. Approval of the Flex Capacity framework as described in the Flex Capacity
27 section.
- 28 a. Regulatory asset treatment to defer any developmental costs for such
29 activities that would otherwise be expensed for recovery in the next base
30 rate case.

1 10. Transmission system improvements to accommodate the above-requested
2 resources needed in support of the Company's Load and Energy Forecast
3 as described in the Technical Appendix.

4 **Q. DO THE REQUESTS IN THE 2023 IRP UPDATE RELIABLY MEET**
5 **CUSTOMERS' GROWING ENERGY NEEDS AND PROVIDE**
6 **ECONOMIC BENEFITS TO EXISTING AND NEW CUSTOMERS?**

7 A. Yes. The balanced portfolio of resources proposed in the 2023 IRP Update provides
8 reliable power to meet Georgia Power's capacity needs starting in the winter of
9 2025/2026 and provides a foundation for the Company's long-term capacity needs
10 and the continued transition of its generation fleet to cleaner resources. The
11 Company expects that the projected revenues associated with incremental customer
12 load will offset the costs of the resources requested in this filing and put downward
13 pressure on overall retail rates as Georgia Power continues to provide clean, safe,
14 reliable, and affordable power for its 2.7 million customers.

15 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

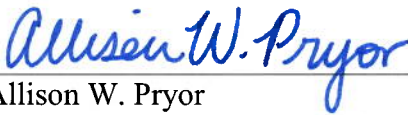
16 A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the within and foregoing DIRECT TESTIMONY OF THE PANEL OF JEFFREY R. GRUBB, FRANCISCO VALLE, LEE EVANS, AND MICHAEL A. BUSH ON BEHALF OF GEORGIA POWER COMPANY IN DOCKET NO. 55378 upon all parties listed below via electronic service or by hand delivery and addressed as follows:

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This 4th day of December 2023.


Allison W. Pryor
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