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Allison W. Pryor

May 21, 2024

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, Application for the Certification of Plant Yates Units 8-10 Docket No. 55378

Dear Ms. Tanner:

Enclosed for filing on behalf of Georgia Power Company ("Georgia Power") is the Direct Testimony of the Panel of Jeffrey R. Grubb and Michael A. Bush in support of Georgia Power's Application for the Certification of Plant Yates Units 8-10.

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

Sincerely,

Allison W. Pryor

Allison W. Pryor

Encl.

STATE OF GEORGIA

BEFORE THE

GEORGIA PUBLIC SERVICE COMMISSION

In Re:

Georgia Power Company's	**)**	**Docket No. 55378**
2023 Integrated Resource Plan Update,	**)**	
Application for the Certification	**)**	
of Plant Yates Units 8-10	**)**	

DIRECT TESTIMONY OF

JEFFREY R. GRUBB AND MICHAEL A. BUSH

MAY 21, 2024

DIRECT TESTIMONY OF
JEFFREY R. GRUBB AND MICHAEL A. BUSH

IN SUPPORT OF GEORGIA POWER COMPANY'S
2023 INTEGRATED RESOURCE PLAN UPDATE,
APPLICATION FOR THE CERTIFICATION OF PLANT YATES UNITS 8-10
DOCKET NO. 55378

I. INTRODUCTION

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

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

A. My name is Michael A. Bush. I am the Generation Development Director for Southern Company Services, Inc. ("SCS"). My business address is 600 North 18th Street, Birmingham, Alabama 35203.

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

A. I began my career with Georgia Power in 1992 as a cooperative education student in Commercial and Industrial Marketing. I graduated from the Georgia Institute of Technology in 1996 with a Bachelor of Science degree in Mechanical Engineering. After joining the Company as a full-time employee in 1997, I worked in various roles within Marketing until 2001, at which time I participated in a Company developmental program where I gained experience in a wide range of functional areas. During this period, I earned a Master of Business Administration degree from Auburn University in 2000.

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

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

A. Yes. I previously testified in this docket, Docket No. 55378, Georgia Power's 2023 IRP Update; Docket No. 44160, Georgia Power's 2022 IRP; Docket Nos. 4822, 16573, and 19279, the Georgia Public Service Commission's ("Commission") Review of Georgia Power's PURPA Avoided Cost Methodology; Docket No. 42310, Georgia Power's 2019 IRP; Docket No. 42625, Georgia Power's Application for the Certification of the 2020/2021 Renewable Energy Development Initiative ("REDI") Utility Scale Power Purchase Agreements ("PPAs"); Docket No. 41596, Georgia Power's Application for the Certification of the 2018/2019 REDI Utility Scale PPAs; Docket No. 41734, Georgia Power's Application for the Certification of the 2018/2019 REDI Utility Scale PPAs for the Commercial and Industrial ("C&I") Program.

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

A. I began my career with Mississippi Power Company ("Mississippi Power") in 1983 as a cooperative education student. I graduated from Auburn University with a

degree in Electrical Engineering. After working outside the Southern Company for a few years, I returned to work for Mississippi Power in 1990. From 1990 until 1995, I held various staff positions before transferring to SCS in Birmingham, Alabama to work in the wholesale marketing organization.

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

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

A. Yes. I testified in this docket, Docket No. 55378, Georgia Power's 2023 IRP Update. I was also a rebuttal witness in Docket No. 40161, Georgia Power's 2016 IRP, and a direct witness in Docket No. 42310, Georgia Power's 2019 IRP.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. Our testimony is filed in support of Georgia Power's Application for the Certification of Plant Yates Units 8-10 (the "Application") submitted pursuant to O.C.G.A. § 46-3A-4 and Commission Rule 515-3-4-.07(3). The Application, including Attachments A through E, were filed in this docket on January 31, 2024. We wish to incorporate that filing by reference into this testimony.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Our testimony supports Georgia Power's Application for the Certification of Plant Yates Units 8-10. As explained below and in the Company's 2023 IRP Update

proceeding, Georgia continues to be one of the fastest growing states in the country and is experiencing extraordinary economic growth. In its Order Adopting Stipulated Agreement,[1] the Commission approved a balanced portfolio of resources, including Plant Yates Units 8-10, to ensure that Georgia Power can meet the electricity needs of our growing state and continue to provide our customers with the reliability they deserve and expect. Specifically, the Commission found that by locating the combustion turbines ("CTs") at Plant Yates, "the Company can leverage current infrastructure and operational efficiencies to provide an optimal solution that meets immediate capacity needs while ensuring System reliability and resilience against evolving energy demands."[2] Plant Yates Units 8-10 and the other resources approved in the 2023 IRP Update are essential to addressing the Company's capacity needs, and will help ensure the Company is able to provide reliable electric service as it continues to transition its generation fleet to lower carbon resources. As the Commission recognized in the IRP Update Order, the Stipulation, of which these resources are a vital part, will preserve and protect reliability and provide significant benefits to Georgia Power's customers, including customer protections and the assurance of downward pressure on customer rates, all while supporting the economic growth of Georgia.[3]

As further discussed in our testimony, the certification of Plant Yates Units 8-10 will allow the Company to access dispatchable resources and provide customers with a combined total of approximately 1,300 megawatts ("MW") of reliable and economical capacity that is required as early as the winter of 2026/2027. The proposed construction of Plant Yates Units 8-10 utilizes existing Company infrastructure at the Plant Yates site, which avoids issues related to the development of a greenfield site and leverages, to the benefit of customers, Georgia Power's

[1] Order Adopting Stipulated Agreement, Docket No. 55378 (April 26, 2024) ("IRP Update Order").
[2] *Id.* at 14.
[3] *Id.* at 7-8.

familiarity with the Plant Yates site and existing site infrastructure. Once complete, Plant Yates Units 8-10 will be the most efficient CTs in Georgia Power's system.

For the foregoing reasons and as discussed further in our testimony, Plant Yates Units 8-10 are needed to ensure an economical and reliable supply of electric power for Georgia Power's customers and our growing state. Therefore, we respectfully request the Commission approve the Company's Application.

II. DESCRIPTION OF PLANT YATES UNITS 8-10

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S APPLICATION FOR CERTIFICATION.

A. The Company's Application was filed in this docket on January 31, 2024, and seeks certification of Plant Yates Units 8-10, which represent approximately 1,300 of the 3,300 megawatts ("MW") of essential capacity resources that are required to meet the capacity needs identified in the Company's 2023 IRP Update. Attachment A to the Company's Application includes Trade Secret and Public Disclosure copies of the Engineering, Procurement, and Construction ("EPC") contracts for Plant Yates Units 8-10. In addition, the Company filed an Updated Economic Analysis in this docket on January 12, 2024, which provides a cost-benefit analysis of Plant Yates Units 8-10.

Q. PLEASE DESCRIBE PLANT YATES UNITS 8-10 AS PRESENTED IN THE COMPANY'S APPLICATION.

A. Plant Yates Units 8-10 will serve as dispatchable resources that provide customers with a reliable and economical source of electricity that is required as early as the winter of 2026/2027. Plant Yates Units 8-10 are three advanced frame, dual-fuel simple cycle CTs that will provide a combined total of approximately 1,300 MW of capacity and associated energy. Georgia Power selected cost-effective advanced CT technology developed by Mitsubishi for these units. Each Yates CT is a dual-fuel capable unit that consists of a high-efficiency compressor, combustor, and

high-efficiency turbine along with Selective Catalytic Reduction ("SCR") emission controls. When operating on natural gas, each unit will provide approximately 441 MW of capacity, totaling approximately 1,323 MW of total capacity from the three units. If natural gas is unavailable, the units will run on ultra-low sulfur diesel ("ULSD") fuel, providing approximately 357 MW each, or 1,070 total MW of capacity. The units will run on ULSD fuel during peak winter and summer periods if natural gas is unavailable. Plant Yates Units 8-10 will be the most efficient CTs on the Company's system and capable of providing cost-effective and dispatchable energy to customers for decades.

Q. WHERE WILL PLANT YATES UNITS 8-10 BE CONSTRUCTED?

Plant Yates Units 8-10 will be located at Georgia Power's Plant Eugene A. Yates in Coweta County, Georgia. This location was selected for several key reasons that support expedited development. First, Georgia Power has completed work in recent years at Plant Yates, including assessments of available space for construction of new generation. Additionally, the site has been reviewed for engineering and construction factors such as geotechnical conditions, accessibility for heavy equipment, delivery of oversized equipment, and the ability to leverage existing site infrastructure. The Company also evaluated the environmental conditions, fuel supply, and life cycle operation and maintenance associated with locating three CTs at Plant Yates, finding favorable results. Developing the new units at Plant Yates also leverages the use of an existing and suitable generation site with proximity to north Georgia and the Atlanta metro area, which continues to experience load growth. This combination of factors enables the Plant Yates site to support the expedited development of Plant Yates Units 8-10 and helps contribute to meeting the essential capacity needs outlined in the 2023 IRP Update.

Q. HOW DOES THE PLANT YATES SITE SUPPORT THE PROPOSED UNITS' FUEL NEEDS?

A. Natural gas is delivered to the plant site via existing firm gas transportation for Plant Yates Units 6-7. Georgia Power has not proposed any modifications to firm transportation arrangements or additional gas capacity from Transco to support the additional units because the units can operate on ULSD fuel when natural gas is unavailable, similar to other CTs on the Company's system. On-site ULSD fuel storage will provide 72 hours of continuous operation to provide reliability and resiliency benefits should natural gas service be unavailable. The Company is also proposing to build a new natural gas pipeline lateral from Transco's interstate pipeline to the plant so natural gas can be delivered to Plant Yates Units 8-10 when it is available for the Company to procure and take delivery. The new lateral would be adjacent to an existing pipeline lateral to Plant Yates from Transco.

Q. WHEN ARE PLANT YATES UNITS 8-10 SCHEDULED TO REACH COMMERCIAL OPERATION?

A. The Company entered an EPC Agreement with a consortium of Mitsubishi Power Americas, Inc., and Black and Veatch Construction, Inc., (the "Consortium") for the construction of Plant Yates Units 8-10. Under the terms of the EPC Agreement, Unit 8 will reach commercial operation by December 1, 2026, Unit 9 will reach commercial operation by May 1, 2027, and Unit 10 will reach commercial operation by August 1, 2027. The Consortium has substantial experience building CTs, and recently completed a similar project for Southern Company. The EPC Agreement provides a mechanism to meet the necessary in-service dates for Plant Yates Units 8-10, while mitigating construction risk for the Company and appropriately incentivizing the Consortium to develop the units on time and on budget. The Company has experienced personnel in place to provide project oversight and appropriate execution of the EPC Agreement by the Consortium. Georgia Power is highly confident in its ability to successfully execute the project within the expected timeframe and budget.

Q. WHAT ARE THE COSTS THE COMPANY IS ASKING THE COMMISSION TO CERTIFY FOR PLANT YATES 8-10?

A. The Company asks that the Commission certify the construction and capital costs for Plant Yates 8-10, as filed in the Company's Application. As approved in the Commission's IRP Update Order, Georgia Power will not seek recovery of any project construction costs that exceed the proposed project construction costs included in the Application, absent a showing that such costs are the result of circumstances beyond the Company's reasonable control.

Q. HOW DOES GEORGIA POWER PROPOSE TO RECOVER THE COSTS ASSOCIATED WITH PLANT YATES UNITS 8-10?

A. Consistent with the treatment of Georgia Power's existing retail generation facilities, the Company proposes to recover the costs associated with the construction of Plant Yates Units 8-10 in rate base and will reflect the operating expenses associated with the units in its retail cost of service.

Q. ARE PLANT YATES UNITS 8-10 ECONOMICAL AND RELIABLE?

A. Yes, the Units are both economical and reliable. The Company's January 12, 2024, Updated Economic Analysis includes a cost-benefit analysis that reflects the costs and schedules from the EPC Agreement between Georgia Power and the Consortium. To capture the uncertainty of future fuel prices and carbon pressure, the analysis was performed over a range of fuel prices and carbon price paths, resulting in five distinct planning scenarios. Plant Yates Units 8-10 are expected to operate during peak load conditions and will provide necessary capacity that will allow Georgia Power to meet the winter 2026/2027 capacity needs in a cost-effective way that benefits all customers. Further, to support reliable operation, the Units have a fuel supply plan that incorporates the necessary gas transportation or oil capacity to support reliable operation with on-site fuel storage if natural gas is unavailable during any given time.

III. CONSTRUCTION MONITORING

Q. HOW WILL THE COMPANY APPRISE THE COMMISSION OF THE PROGRESS IN THE CONSTRUCTION OF PLANT YATES UNITS 8-10?

A. Georgia Power will file semi-annual monitoring reports in accordance with Paragraph 12 of the Stipulation and the Commission's IRP Update Order.

Q. WHAT INFORMATION WILL GEORGIA POWER INCLUDE IN ITS CONSTRUCTION MONITORING REPORTS?

A. The Company proposes to include information on capital expenditures and financial cost data, detailed schedule reporting on critical path activity, status updates on the procurement of new licenses and permits, variances in major contracts, and the procurement status of long-lead time equipment. As stated earlier in our testimony, Georgia Power is highly confident in its ability to successfully execute the project, and the Company has mechanisms in place to meet the necessary in-service dates, while mitigating construction risk and appropriately incentivizing the Consortium to develop the units on time and within budget.

Q. IS THE COMPANY OPEN TO PROVIDING ADDITIONAL INFORMATION IN ITS SEMI-ANNUAL REPORTS?

A. Yes. The Company will work with Public Interest Advocacy Staff to ensure that it has the requisite information necessary to evaluate the progress and status of construction at Plant Yates Units 8-10.

IV. CONCLUSION

Q. WHAT IS GEORGIA POWER REQUESTING OF THE COMMISSION IN THE YATES CERTIFICATION?

A. The Company requests that the Commission certify Plant Yates Units 8-10 as proposed in the Application and approved in the IRP Update Order, and that it grant the Company recovery of the costs set forth in its Application. As described in the

Company's 2023 IRP Update and recognized in the Commission's Order Approving Stipulation, Georgia Power's current supply-side and demand-side plans, as revised in the 2023 IRP Update and specifically including Plant Yates Units 8-10, will provide cost-effective and reliable sources of capacity and energy for customers. The request in this Application complies with applicable Commission rules and is in the public interest, as Plant Yates Units 8-10 will help ensure Georgia Power can economically and reliably meet customers' energy needs beginning in the winter of 2026/2027.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.