REBUTTAL TESTIMONY OF JEFFREY R. GRUBB, FRANCISCO VALLE, LEE EVANS, MICHAEL B. ROBINSON, AND MICHAEL A. BUSH

IN SUPPORT OF GEORGIA POWER COMPANY'S 2023 INTEGRATED RESOURCE PLAN UPDATE 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 Francisco Valle. I am the Director of Forecasting and Analytics for Southern Company Services ("SCS"). My business address is 241 Ralph McGill Boulevard, N.E., Atlanta, Georgia 30308.

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

A. My name is Michael B. Robinson. I am the Vice President of Grid Transformation, Power Delivery for Georgia Power. 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 SCS. My business address is 600 North 18th Street, Birmingham, Alabama 35203.

Q. DID YOU PREVIOUSLY PRESENT DIRECT TESTIMONY ON BEHALF OF GEORGIA POWER IN THESE PROCEEDINGS?

A. Yes, other than Mr. Robinson, we all filed Direct Testimony in this docket on December 4, 2023.

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

A. I graduated from Auburn University in 1993 with a Bachelor of Electrical Engineering. I began my career as a cooperative education student with Georgia Power working in distribution and marketing. After leaving the Company to serve in the United States Navy, I worked for an electric municipality in Texas, the Kerrville Public Utility Board, for five years where I was responsible for all distribution and substation facilities. In 1999, I returned to Southern Company as an engineer on the Enhanced Power Quality team with Alabama Power. Throughout my career at Southern Company, I have served in a variety of positions, including as principal engineer in Transmission Planning; supervisor of the transmission maintenance center in Albany, Georgia; supervisor of the transmission control center in Valdosta, Georgia; transmission planning manager; South Georgia area transmission manager; Metro South distribution manager; and general manager of Transmission Planning and Operations.

From 2017 through 2020, I served as the Power Delivery Operations General Manager for Georgia Power. I served as Planning, Operations, and Policy Vice President until January 2024, when I transitioned into my current role as Vice President of Grid Transformation, Power Delivery. In my current role, I lead an organization responsible for distribution and transmission planning, administration of the Georgia Integrated Transmission System ("ITS"), data analytics and fiber strategy, and Power Delivery compliance. I work with multiple organizations to identify the Company's long-term transmission and distribution strategies to

address our future needs. I also actively engage with System and industry partners to appropriately identify industry-wide solutions, alternatives, and emerging technologies.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Yes, I testified before this Commission in Georgia Power's 2022 and 2019 base rate cases in Docket Nos. 44280 and 42516, respectively, as well as in Georgia Power's 2022 Integrated Resource Plan ("IRP") in Docket No. 44160.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of our testimony is to respond to the testimony of the Georgia Public Service Commission ("Commission") Public Interest Advocacy Staff ("PIA Staff") and various Intervenors filed in Docket No. 55378. Due to the number of Parties filing testimony in this case and the limited time available to file rebuttal, our testimony focuses on several key issues without attempting to address every issue raised in PIA Staff or intervenor testimony. The fact that the Company may not respond to a particular position of PIA Staff or an intervenor should not be construed as acceptance of such position.

Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR REBUTTAL TESTIMONY?

A. Yes. In response to PIA Staff's request that the Company file a Cost-of-Service Study (Tr. 241, lines 12–15) or something similar that shows the cost impact across rate groups (Tr. 672, lines 16–20), we have attached Exhibit 1, which shows Net Income and Return on Investment as presented in the 2022 Rate Case Test Year, distributed across each of the eight customer rate groups. Additionally, a sensitivity is included with the addition of the 2028 costs and revenues associated with investments and new loads presented in this 2023 IRP Update. Finally, a difference

Summary of Comments on 2023 IRP Update Rebuttal Testimony - Main Panel - Public Disclosure _GCES anotated.pdf

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Georgia Power fails in its IRP and in its testimony to address the many shortcomings and problems highlighted by multiple intervenors over multiple IRPs dating back to at least the 2007 IRP, particularly around the volatility risk of fuels whose costs are 100% pass-thru to customers with no risk at all to the Company (although Affiliate Companies to Georgia Power Company profit handsomely from the procurement, transport, hedging, and delivery of natural gas). Georgia Power Company demonstrates a pattern and practice of ignoring the critical issues that are inconvenient for them to address and would reduce their corporate earnings, including fewer gas-fired resources, more virtual power plant capacity solutions, and truly integrated GT&D planning, three examples among dozens which the Company is not pursuing in good faith or with alacrity.

between the two is calculated to represent the impact of such additional costs and revenues on each of the eight customer rate groups.

In addition, Exhibit 2 is a revised Attachment D to the Yates Certification Application updating the comparison of the proposed Yates Units 8-10 to other similar projects. Finally, Exhibit 3 is an excerpt from Lazard's 2023 Levelized Cost of Energy Analysis[1] identifying publicly available capital cost information for various generation technologies, including gas peaking technologies. Exhibits 2 and 3 provide evidence of the reasonableness of the costs for the Yates CTs as proposed.

Q. PLEASE SUMMARIZE THE REBUTTAL TESTIMONY OF THE PANEL.

A. As demonstrated by the load forecast in the 2023 IRP Update, Georgia is experiencing extraordinary economic growth that has significantly impacted the magnitude and timing of Georgia Power's capacity needs. A substantial portion of this rapid economic growth is expected to occur over the next five years. The Company must act expeditiously to address the significant energy needs associated with this economic growth and to ensure it continues to maintain an electric System that can reliably meet the needs of customers and our thriving state.

Between the conclusion of the 2022 IRP and the filing of the 2023 IRP Update, Georgia Power was selected to serve more than 3,350 megawatts ("MW") of new, large load customers, representing approximately 34 years of traditional customer choice growth in just over one year. While substantial, this growth represents only a fraction of the potential load growth from Georgia's economic development pipeline. In fact, since the 2023 IRP Update was filed in October of 2023, the economic development pipeline has continued to grow and has now expanded to

[1] https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/

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What is vital to understand in Exhibit 2 is that these cost comparisons of three Combustion Turbines (one of which is not yet built) are the capital costs to build the CTs but not the cost to operate them over the life of the assets, in particular the fuel costs and O&M costs.

When you factor in the fuel costs for the gas-fired Plant Yates CTs -- with a reminder that fuel costs skyrocketed in 2022 and at all times the cost for gas is always much greater than the $0 fuel cost for solar. In fact, the fuel cost for solar is so predictable that we can forecast it with 100% accuracy today, tomorrow, and every day in the future. When you factor in the fuel costs for solar ($0) and the Plant Yates CTs (over $107 million each and every year for 40 years or more), you begin to understand how including this comparison of full costs of a proposed capacity resource significantly undermines Georgia Power Company's central argument, that their plan puts downward pressure on rates. See GCES discussion of Mr. Abramovitz's Figure 1 bar graph.

Georgia Power Company will counter with the argument that we're talking about capacity resources like gas peaking technology, not energy resources like solar (that do in fact provide capacity products to support resource adequacy as measured by the Electric Load Carrying Capability or ELCC. But Georgia Power Company fails to account for hybrid solar+storage capacity and the capacity of standalone storage as two solutions, both of which are massively disadvantaged in the flawed 2023 IRP Update modeling. And more fundamentally, a capacity resource cannot function as a capacity resource with fuel and O&M costs, which must be accounted for when comparing different capacity resources. They cannot be stripped out like the Company regularly does with the nuclear construction cost recovery rider and the coal ash cleanup cost rider and others.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/31/2024 7:49:49 AM

Georgia Power Company 2023 IRP Update Rebuttal Testimony Exhibit 3 is an example of the manipulation the Company performs in this IRP and all past IRPs, in order to twist how it presents the Plant Yates CTs and other fossil assets.

In the Rebuttal Testimony (Exhibit 3), Georgia Power Company points toward the low cost of gas peaking technology. We see in this “Capital Cost Comparison” that Utility-Scale Solar PV is $700/kilowatt and for Gas Peaking it is the same $700/kW. We also see that for Utility-Scale Solar PV + Storage it is $1,075/kilowatt. What Georgia Power Company does not bring to your attention is this is a Capital Cost Comparison, which does not compare fuel costs or operating costs or maintenance costs or any other lifetime costs that do not appear in this graph, which is why Georgia Power Company selected this graph only from the LCOE study.

This is a fundamental misapplication of an LCOE comparison, which is meant to capture capacity and energy costs and indeed “costs levelized over the operating life.” This can be seen in the very next graphs in this report that Georgia Power Company cites. To be clear, Georgia Power Company specifically used this LCOE graph because it is capital costs only and ignores the greater total levelized costs of gas peaker energy.

In these subsequent graphs, the 2023 Lazard studies shows that Utility-Scale Solar PV costs on a $ per MWh basis are between $24 and $96/MWh, and for Utility-Scale Solar PV + Storage costs are between $46 and $102/MWh. Meanwhile gas peakers are between $115 and $221/MWh.

Conclusion: The Plant Yates CTs are immediately more expensive than utility-scale solar PV + storage.

This is a clear demonstration by Georgia Power Company of the manipulation of data to conform to the Company's desired outcome of selling natural gas to benefit its many affiliate companies whose profits flow to the same corporate parent as Georgia Power Company and to lock in decades of natural gas sales. The Plant Yates CTs would operate into the 2070s.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/31/2024 7:53:55 AM

Most intervenors criticize how Georgia Power Companyis fundamentally misapplying the P95 load growth outlook to drive this resource request for new gas build resources (the Company needs to stretch the load to justify building 3 new gas CTs to make it economic). This was previously characterized as unprecedented load growth, until they were corrected and changed their language in this present testimony.

In particular, look at the graph of peak load forecasted by Georgia Power Company in its 2007 IRP, 2010 IRP, and 2013 IRP, as compared to the load forecast they are claiming now. The graph can be seen at the link below - The 2007 IRP load forecast was clearly over-exaggerated and it was used to imprudently justify the need for capacity from Vogtle Units 3&4.

https://www.georgia-ces.org/vogtle-34

Please request the source data and I'll walk you through the information.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/31/2024 7:55:05 AM

Notwithstanding the multi-year delay of load growth due to the Rivian plant delay. GCES understands that many new prospective customers have requested new service with Georgia Power Company, and that many if not most of these new prospective customers are outside of the Company's service territory.

The real dispute GCES and many other intervenors has is that the Georgia Power Company proposal to meet this demand with risky, unaffordable, and heavily polluting PPAs and new build gas-fired resources when there are many solutions available to meet load growth without new fossil resources that are lower cost, less risky, and do not have emissions and associated environmental compliance costs.

more than 21,000 MW. In addition, the Company has now been selected to serve an additional 2,602 MW since its initial filing in this proceeding. What's more, several customers representing 2,173 MW of the new large load included in the 2023 IRP Update Forecast have now accelerated their load ramps, which would incorporate their entire load by 2031. These changes since October 2023 evidence the continued economic growth we are seeing in Georgia, continued customer interest in being served by Georgia Power, and the need to act now to reliably meet our customers' demand for energy as it continues to grow and accelerate. Moreover, it underscores the need to plan for a P95 load forecast, a load level supported by PIA Staff, to ensure the Company has sufficient resources to serve Georgia's substantial energy needs that are being driven by economic growth.

No party has reasonably challenged that the overall increase in demand is real and coming to the state. The only point of disagreement is the magnitude of the increase and the timing in which the projected large loads will materialize. PIA Staff and intervenors alike agree with the Company's proposed methodology to account for the increase in unexpected large load customer additions and only take issue with a few assumptions, the impact of which lessens the magnitude of the growth and assumes a slower pace for load realization.

With the 2023 IRP Update, Georgia Power is seeking approval of approximately 3,300 MW of generation capacity resources to serve its immediate growing customer demand. Specifically, the Company has requested certification of (i) 750 MW from the Mississippi Power Company ("MPC") Power Purchase Agreement ("PPA"), (ii) 230 MW from the Santa Rosa PPA, and (iii) 1,300 MW from three proposed combustion turbines ("CTs") at Plant Yates Units 8-10. The Company has also requested approval to build 1,000 MW of battery energy storage systems ("BESS"), including the Robins, Moody, and 200 MW BESS plus 200 MW solar projects. In addition, the Company has proposed two new distributed energy resource ("DER") customer programs, a demand response program, and an

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Georgia Power Company is certainly aware that there is more than 41,000 MW of energy and capacity resources in the SOCO interconnection queue as of December 2023 (all of which is exclusively solar and storage) waiting to meet load growth with far lower generation costs that expensive combustion turbines, but Georgia Power Company is actively excluding most of these solar and battery energy storage resources by overseeing failed RFPs (even though they were ordered by the GA PSC to procure said resources and failed to reach a negotiated settlement with any of the three successful bidders). In addition, there are nearly 33,000 MWs of solar and storage with Generator Interconnection Agreements in suspension for various reasons, many of which could be re-animated and brought to completion, but for the anti-competitive policies of Georgia Power Company. Anyone can request the data underlying all of these points by simply emailing GCES at peter@georgia-ces.org

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:35:45 PM

No it does not underscore the need for a P95 load forecast. This is a fundamental misunderstanding of a 95th percentile band. Georgia Power Company is claiming, as you will see later in this testimony, that a P50 level of planning is irresponsible. What the Company fails to recognize (or purposefully ignores in order to obfuscate) is that the 95th percentile represents reaching 95 percent of customer load assuming 95 percent of customers achieve their requested peak service load in each of the hundreds or thousands of stochastic iterations of future load growth scenarios, which is statistically highly improbable. Yet Georgia Power Company's misunderstanding is serving as the underlying basis for acceptance of the P95 load forecast. How can a P95 forecast be true if the largest ever economic development project in Georgia history, the Rivian electric vehicle plant, has delayed its construction by several years?

https://www.enr.com/articles/58290-rivian-pauses-5b-electric-vehicle-plant-in-georgia

Moreover, and this point was made and ignored by the Company during oral testimony, the risk is highly asymmetric. If Georgia Power Company is wrong and load does not materialize but they build new gas-fired power plants to meet that load, the Company will push the uneconomic costs of the gas plant onto ratepayers as it is doing right now by requesting regulatory asset treatment of the $250 million in imprudently incurred development costs for the Plant Yates CTs and rateapayers will absorb the losses. If the Company is right and load materializes as forecasted, then Georgia Power Company shares in the revenue upside.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 5:27:34 PM

There is concern from the Commission, staff, and intervenors around load growth related to cryptocurrency mining operations. There is significant concern over who will pay for the additional capacity needed to meet load growth. And there is concern over who will be responsible for these overbuilt capacity costs from the Plant Yates CTs if load fails to materialize as Georgia Power Company predicts, when they have been so wrong so often in every load forecast going back to the 2007 IRP.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 7:01:15 PM

This is categorically not a true statement. GCES disagrees with the P95 assumption and said so in its written and oral testimony, which thus far has been completely ignored by Georgia Power Company. This is an example of how this docket #55378 Georgia Power Company 2023 Integrated Resource Plan Update has been poorly litigated and the outcome is not expected to be in the Public Policy Interest.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 5:29:15 PM

This black box PPA is filled with the dregs of Mississippi Power Company's generation fleet, including uneconomic coal and nearly 70 year old gas plants. These units were set to retire when Georgia Power Company signed an extralegal Power Purchase Agreement without seeking Commission review or approval first.

This is a direct violation of the law, O.C.G.A. § 46-3A-3(a) that stipulates: "Actions prohibited without a certificate of public convenience and necessity (a) After January 31, 1992, no utility shall commence the construction of an electric plant, sell an existing plant or any portion thereof which is included in the retail rate base or which has been certified, enter into a long-term purchase of electric power, or make expenditures for a demand-side capacity option for serving the utility's Georgia retail customers without having first obtained from the commission a certificate that public convenience and necessity requires, or will require, such construction, sale, purchase, or expenditure."

Number: 6 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 5:35:02 PM

Georgia Power Company has failed to justify these proposed Plant Yates Combustion Turbines or CTs over less costly and better performing resources such as solar + storage and standalone storage and bilateral capacity sharing with neighboring Balancing Authorities. Until such time as Georgia Power Company follows the requirements of the IRP law and produces a plan that is in the Public Policy Interest, this IRP fails to meet the requirement for approval by the Georgia Public Service Commission. Georgia Power Company is doubling down on the Plant Yates CTs, insisting they are indispensable even as the crown jewel of load growth, the Rivian plant, has announced a multi-year delay of its expected factory (and electric load growth).

In particular, numerous intervenors beyond GCES have proposed many practical and low-cost solutions to address near-term load growth and capacity concerns (Virtual Power Plants, Grid-Enhancing Technologies, Battery Energy Storage Systems, etc.) that Georgia Power Company is ignoring and continues to ignore despite ongoing testimony and communications. This renders the 2023 IRP Update poorly litigated and not in the Public Policy Interest.

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Note that this Santa Rosa PPA was also acquired extra-legally outside the four corners of the Certificate of Public Convenience and Necessity

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more than 21,000 MW. In addition, the Company has now been selected to serve an additional 2,602 MW since its initial filing in this proceeding. What's more, several customers representing 2,173 MW of the new large load included in the 2023 IRP Update Forecast have now accelerated their load ramps, which would incorporate their entire load by 2031. These changes since October 2023 evidence the continued economic growth we are seeing in Georgia, continued customer interest in being served by Georgia Power, and the need to act now to reliably meet our customers' demand for energy as it continues to grow and accelerate. Moreover, it underscores the need to plan for a P95 load forecast, a load level supported by PIA Staff, to ensure the Company has sufficient resources to serve Georgia's substantial energy needs that are being driven by economic growth.

No party has reasonably challenged that the overall increase in demand is real and coming to the state. The only point of disagreement is the magnitude of the increase and the timing in which the projected large loads will materialize. PIA Staff and Intervenors alike agree with the Company's proposed methodology to account for the increase in unexpected large load customer additions and only take issue with a few assumptions, the impact of which lessens the magnitude of the growth and assumes a slower pace for load realization.

With the 2023 IRP Update, Georgia Power is seeking approval of approximately 3,300 MW of generation capacity resources to serve its immediate growing customer demand. Specifically, the Company has requested certification of (i) 750 MW from the Mississippi Power Company ("MPC") Power Purchase Agreement ("PPA"), (ii) 230 MW from the Santa Rosa PPA, and (iii) 1,300 MW from three proposed combustion turbines ("CTs") at Plant Yates Units 8-10. The Company has also requested approval to build 1,000 MW of battery energy storage systems ("BESS"), including the Robins, Moody, and 200 MW BESS plus 200 MW solar projects. In addition, the Company has proposed two new distributed energy resource ("DER") customer programs, a demand response program, and an

required by O.C.G.A. § 46-3A-3(a).

Number: 8 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 5:38:27 PM

These programs appear to be poorly constructed from the get-go, and unlikely to prove popular with customers and a valuable solution to the current capacity shortage. These two DER programs will provide only 75% of the expected value of the project as remuneration to the customer who brings their onw Distributed Energy Resource(s), while Georgia Power Company captures the other 25% (a significant premium over its typical Additional Sum).

expansion of its existing residential thermostat demand program. Each of these essential capacity resources will provide an economical and reliable supply of electric power or valuable demand response for the Company's customers. Significantly, these resources are in addition to and complement the resources the Company is authorized to procure through competitive RFPs, which includes the CARES Utility Scale ("US") RFPs, All-Source Capacity RFP, and 500 MW Energy Storage System ("ESS") RFP.

Our rebuttal testimony addresses PIA Staff and Intervenor challenges to the Company's load forecast assumptions, the procurement of resources outside of a competitive RFP process, and the Company's proposed mix of capacity solutions. Although PIA Staff and Intervenors made several recommendations regarding Georgia Power's long-term generation and transmission planning processes, none of those recommendations need to be decided in this case. The focus of this proceeding should remain on how Georgia Power can best address the significant near-term customer demand for electric power and the corresponding capacity need between 2026 and 2028. Accordingly, much of our rebuttal testimony appropriately focuses on those pressing issues. Other matters, including the balance of PIA Staff and Intervenor recommendations, can be addressed more fully in Georgia Power's 2025 IRP or a subsequent proceeding.

Georgia Power's 2023 IRP Update establishes a plan that ensures the Company can preserve and protect the reliability and quality of service our customers expect and continue to reliably serve Georgia's growing capacity needs corresponding to robust economic growth while also lowering rates for all retail customers by spreading the cost of electric service across a larger customer base. The Company's plan provides substantial economic and reliability benefits to the state and our customers. As such, we respectfully request the Commission approve the Company's request without modification.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 5:42:12 PM

There is nary a mention of the RNR-11 Tariff that discriminates against residential rooftop solar customers with an instantaneous metering calculation that unfairly assigns significantly less value to daytime solar exports than their actual value, particularly when the low-cost solar is paired with residential battery systems. There are considerable cost-savings to the grid from capacity and energy services provided by residential rooftop solar and battery customers. Unfortunately, Georgia Power Company continues to ignore this solution, suppressing the market with anti-competitive behavior that adds unjust cost to the operation of the electric grid in Georgia.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 5:44:37 PM

This deferral of decision-making is a common tactic employed by Georgia Power Company to deflect accountability, and despite the near-term cost savings these measures would create for the Company and its customers.. Georgia Power Company has shown no interest or understanding of the benefits of integrated generation and transmission planning (not what they Company does currently in any effective capacity). The Company often defers a relevant IRP topic to a rate case or the next IRP or some other docket. Then, in that rate case or next IRP, they will say that it is a matter for a different docket or it's too late to change their mind on something they already decided to do without Commission approval, like develop gas-fired resources for the Plant Yates CTs and incur $250 million in development costs before putting this plan before the Commission for review and approval.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:47:11 PM

These matters will be ignored by Georgia Power Company in the 2025 IRP or in subsequent proceedings, much as they are ignoring the same issues in this IRP and the same issues in the last IRP and those same issues in the IRPs before that.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/24/2024 7:10:02 PM

Georgia Power Company electricity service ranks in the bottom quartile (the lowest 25%) of reliability of service according to its own self-reported data, a graph of which can be found here: https://www.georgia-ces.org/gces-critique-of-2022-irp . So when they say the reliability and quality of service, they mean their failures to provide reliability and quality of service.

More than 25,000 residential customers are disconnected from service after 1-2 months of arrearages, often in the middle of winter leaving families without heat or in the middle of summer leaving families without air conditioning. Georgia Power Company says that the customer is at the core of everything they do, but they are quick to drop that customer in need after 1-2 months of notice.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:44:48 PM

Georgia Power Company has not demonstrated these claims of substantial economic and reliability benefits in the context of low-cost, pragmatic alternatives that Georgia Power Company continues to ignore, IRP after IRP. The Company claims this is the in the best interests of their customers but Exhibit 1 is a deceitful graph that fails to account for the full net benefits to customers. Once these true costs are accounted for, it becomes clear that the residential customer in particular is getting hosed by Georgia Power Company.

How unfair is the impact to residential electricity customers of Georgia Power Company? Well, just look at the Historical Average Electricity Price by Customer Class that can be seen here:

https://www.georgia-ces.org/2023-irp-update

The source of the data is found here: STF-DEA-3-4

https://psc.ga.gov/search/facts-document/?documentId=216861

The residential electricity rate has risen 68% while the industrial rate has risen 28% since the 2007 IRP.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. The remainder of our testimony is structured as follows:

- Section II discusses the timing of the 2023 IRP Update and the need to act now, before the 2025 IRP, to request Commission approval of the new capacity resources.

- Section III addresses critiques of the Company's 2023 IRP Load Forecast and assumptions incorporated into the Load Realization Model, which was used to adjust the forecast for the projected addition of large load customers to Georgia Power's System.

- Section IV discusses the Staff and Intervenor feedback and recommendations regarding the Company's ability to expedite or modify the RFPs approved in the 2022 IRP.

- Section V discusses Staff and Intervenor challenges to the Company's Target Reserve Margin.

- Section VI responds to Staff and Intervenor recommendations and critiques of the resources requested in this case.

- Section VII addresses the Company's transmission requests in the case and responds to calls from Staff and Intervenors to alter its long-term transmission planning process.

In addition to our testimony, the testimony of Aaron Abramovitz (i) explains why Georgia Power expects the 2023 IRP Update to place downward pressure on rates for customers, and (ii) addresses specific accounting aspects of the Company's request.

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Before the models are updated with realistic assumptions of solar, storage, and other clean energy and capacity options that are significantly advantaged by the Inflation Reduction Act but are being undervalued by Georgia Power Company in this 2023 IRP Update. The Company justification for new gas-fired resources will not materialize in the 2025 IRP if realistic modeling assumptions and accurate market and economic data are included in the modeling. Accordingly, Georgia Power Company is anxious to get this gas-fired capacity approved ASAP in this cycle so it can lock in another 40+ years of fossil fuel operations. This is critical for Georgia Power Company's role as the linchpin in Southern Company's long-term strategic corporate valuation extraction from hardworking Georgians, built on fossil fuel.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:46:51 PM

Georgia Power Company was ordered to procure 2,000 MW of renewable energy in the 2019 IRP Stipulated Agreement.

https://psc.ga.gov/search/facts-document/?documentId=215885

Georgia Power Company failed to procure this amount before the 2022 IRP or even the 2023 IRP Update and even before the 2025 IRP Update. Why is the Company allowed the flaunt the orders of the Commission to procure 2,000 MW of renewable resources, with now explanation as to why the RFP failed and why Georgia Power Company could not reach a commercially acceptable solution with the competitive tier bidders of the RFPs? A delay of years of 1,000 MW of renewable energy has a cost of hundreds of millions of dollars, which the Company knows and this is why it seeks to delay an increase in renewable energy resources.

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Notice that there is no accountability for the many, many times Georgia Power Company has made this claim in past IRPs and we've only ever seen rising rates for customers as demonstrated in STF-DEA-3-4

https://psc.ga.gov/search/facts-document/?documentId=216861

The Company cannot justify this request and has failed to demonstrate prudence in this IRP.

II. THE COMPANY'S REQUEST

Q. WHY IS THE 2023 IRP UPDATE NECESSARY?

A. As discussed in our direct testimony, the 2023 IRP Update is necessary to preserve and protect the reliability and quality of service our customers expect, address the extraordinary economic growth taking place in Georgia, and to ensure that Georgia Power can continue to reliably meet the rapidly growing energy needs of our customers and our state.

Q. WHAT CAPACITY RESOURCES ARE NEEDED TO ENSURE THAT GEORGIA POWER CAN CONTINUE TO MEET THIS RAPID ECONOMIC GROWTH?

A. The 2023 IRP Update seeks approval of approximately 3,300 MW of additional capacity resources so that the Company can meet the state's energy needs for the period of December of 2025 through November of 2028. Specifically, the Company has requested certification of (i) 750 MW from the MPC PPA, (ii) 230 MW from the Santa Rosa PPA, and (iii) 1,300 MW from three CTs proposed at Plant Yates, Units 8-10. The Company has also requested permission to build 1,000 MW of BESS and proposed two new DER customer programs, approval of a new demand response program, and an amendment to the certificate to expand the existing residential thermostat demand response program. The proposed resource portfolio is an economic and reliable mix of resources available to meet the capacity needs identified in this 2023 IRP Update.

Q. HOW DOES THE COMPANY'S REQUEST FOR RESOURCES COMPARE TO THE TOTAL PIPELINE OF POTENTIAL ECONOMIC DEVELOPMENT PROJECTS IDENTIFIED IN ITS FORECAST?

A. The Company's request for 3,300 MW corresponds to the increase and the accelerated timing in the load growth forecast, which represents only a fraction of

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To be clear, the resources being proposed in this 2023 IRP Update and not the only solutions to load growth. The MPC PPA, Santa Rosa PPA, and the Plant Yates CTs are among the most expensive options the Company could propose. The PPAs were both obtain extra-legally according to O.C.G.A. § 46-3A-3 and currently remain a very poor Buy-5-Get-3 deal (Georgia Power Company bought all five years but only needs three years). The Plant Yates CTs are more expensive today to build and operate than battery energy storage systems and can provide similar reliability and resource adequacy when deployed strategically.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 7:23:10 PM

Note again that this Santa Rosa PPA was also acquired extra-legally outside the four corners of the Certificate of Public Convenience and Necessity required by O.C.G.A. § 46-3A-3(a).

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:48:51 PM

Again, this black box PPA is filled with the dregs of Mississippi Power Company's generation fleet, including uneconomic coal and nearly 70 year old gas plants. These units were set to retire when Georgia Power Company signed a PPA without Commission review or approval (a direct violation of the law, O.C.G.A. § 46-3A-3(a) that stipulates:

"Actions prohibited without a certificate of public convenience and necessity (a) After January 31, 1992, no utility shall commence the construction of an electric plant, sell an existing plant or any portion thereof which is included in the retail rate base or which has been certified, enter into a long-term purchase of electric power, or make expenditures for a demand-side capacity option for serving the utility's Georgia retail customers without having first obtained from the commission a certificate that public convenience and necessity requires, or will require, such construction, sale, purchase, or expenditure."

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 7:23:46 PM

Note again that Georgia Power Company has failed to justify these proposed Plant Yates Combustion Turbines or CTs over less costly and better performing resources such as solar + storage and standalone storage and bilateral capacity sharing with neighboring Balancing Authorities. Until such time as Georgia Power Company follows the requirements of the IRP law and produces a plan that is in the Public Policy Interest, this IRP fails to meet the requirement for approval by the Georgia Public Service Commission.

In particular, numerous intervenors beyond GCES have proposed many practical and low-cost solutions to address near-term load growth and capacity concerns that Georgia Power Company is ignoring and continues to ignore despite ongoing testimony and communications. This renders the 2023 IRP Update poorly litigated and not in the Public Policy Interest.

the now more than 21,000 MW of potential economic development projects seeking to meet their electricity needs.

Q. CAN THE COMPANY WAIT UNTIL THE 2025 IRP TO REQUEST THESE RESOURCES?

A. No. The magnitude and timing of the projected load that is being driven by economic growth require the Company to act now to secure the resources needed to continue to reliably serve our customers and meet our state's energy needs. Waiting until the conclusion of the 2025 IRP would be too late and would risk not being able to serve the new economic development load that is coming to Georgia. Failing to serve these new large loads would stifle economic development and prevent Georgia Power's customers from benefitting from the corresponding downward pressure on rates anticipated as a part of this 2023 IRP Update filing.

Q. WHY IS IT INAPPROPRIATE TO INCLUDE A COST-OF-SERVICE STUDY IN THIS IRP UPDATE OR THE 2025 IRP?

A. A cost-of-service study is a required aspect of base rate cases, which are the appropriate proceeding in which to determine the cost of service and allocation of those costs among rates and rate groups. The Company is not requesting to adjust rates as part of this IRP Update and a cost-of-service study is neither required nor possible. A cost-of-service study in its entirety takes multiple months and extensive Company resources to prepare. In addition, a rate case budget is required as an input to the cost-of-service study, and this information will not be finalized prior to the 2025 IRP filing.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:49:31 PM

Meanwhile, Georgia Power Company is has over 41,000 MW of solar and storage resources in the SOCO interconnection queue, most of which can be brought online in the next 1-4 years and that would put substantial downward pressure on rates. There is another nearly 33,000 MW of solar and storage resources whose Generator Interconnection Agreement is suspended but could potentially be brought online as well. Altogether, the solar and storage resources in the interconnection queue and available to Georgia Power Company is 73,920 MW or 92% of all the energy and capacity resources in the SOCO interconnection queue.

Source: http://www.oasis.oati.com/SOCO/index.html

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 6:29:10 AM

Georgia Power Company is actively ignoring the many practical and low-cost alternatives to meet the state of Georgia's energy needs without building 1,300 MW of new gas combustion turbines at Plant Yates, which is an imprudent mis-allocation of capital that ultimately is paid for by the Customer. Solar and battery energy storage resources are being held back by Georgia Power Company's business practices.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:50:58 PM

The Company is saying that it is innappropriate to consider the rate impacts of this unexpected 2023 IRP Update, that we will have to take it on faith and Chief Financial Office Aaron Abramovitz's word and experience with cost control on the Kemper Project and Plant Vogtle 3&4 that this IRP will put downward pressure on rates, when the facts show that rates have increased dramatically with each IRP, despite sworn testimony given by Georgia Power Company leadership. In this very testimony, Figure 1 purports to show the net benefit to customers but fails to account for significant costs directly related to this 2023 IRP Update that Georgia Power Company would rather sweep under the rug because they know their justification for their proposed plan would wither under scrutiny.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 6:37:25 AM

Of course it is possible for Georgia Power Company to prepare a cost-of-service study, which would pin them down on the extravagant costs of new gas-fired capacity they are proposing instead of lower cost options. They are simply declining to provide this information because they are not required to do so.

Note that the Inflation Reduction Act and CHIPS Act that precipitated this electric load growth in Georgia, those laws were passed in August 2022, at which time Georgia Power Company could have begun planning for a cost-of-service study, giving them as many as 15 months to contemplate and prepare for a cost-of-service study prior to filing this 2023 IRP Update in October

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 7:33:50 PM

Mind you, when the rate case and Cost-of-Service study is prepared and examined before the Commission, Georgia Power Company will object to any attempt to tie the massive rate increases back to decisions made in the preceding, 100% germane Integrated Resource Plan dockets or the Fuel Cost Recovery dockets or any other Shell Game that Georgia Power Company engages in to avoid addressing cost, reliability, sustainability and public policy interest topics before the Commission.

Q. IS THE COMPANY OPEN TO UPDATING RELEVANT PORTIONS OF THE COST-OF-SERVICE STUDY THAT IT FILED IN THE 2022 BASE RATE CASE TO SUPPORT ITS REQUEST IN THIS CASE?

A. Yes. For purposes of high-level sensitivity analysis only, the Company performed an adjustment to the cost-of-service study filed in the 2022 Base Rate Case to isolate the revenues and revenue requirement associated with the resources proposed in this case. Exhibit 1 reflects a sensitivity based on Exhibit LPE-1 from the 2022 Base Rate Case and includes the additional loads, costs and revenues associated with this filing, as requested by Staff Panel Newsome-Hayet-Wellborn during Staff Direct Hearings. The results of this sensitivity measure the benefits to customer rate groups as a result of the 2023 IRP Update by an increase to Net Income or Return on Investment ("ROI").[1] The results of Exhibit 1 show an increase in Net Income and improved or approximately equal ROI for each customer rate group and clearly demonstrates that customer benefit is equal or improved across the board. Since the billed revenue for non-marginal rate groups did not change as a result of the 2023 IRP Update, the results from Exhibit 1 show lower costs borne by other rate groups, which are now being allocated to the new large loads in the Marginal rate group. This allocation produces benefits for other customer rate groups, including Domestic and Small Business.

Q. DID THE COMPANY FILE THE 2023 IRP UPDATE AT THE APPROPRIATE TIME?

A. Yes. The Company filed the IRP Update at the appropriate time and as soon as reasonably possible based upon the information available to it and which was needed for Commission consideration.[2] Until June 2023, the capacity need driven by increased growth could be met with either (1) existing Company capacity resources, including the capacity PPAs approved in the 2022 IRP, or (2)[3] an increase in the megawatt targets for the All-Source Capacity RFP for 2029-2031. There simply was no need to consider returning to the Commission prior to June 2023,

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 8:48:52 AM

Bear in mind that this is a high-level sensitivity analysis only. GCES agrees that increasing the revenues from and allocating the costs to the Marginal rate group is marginally beneficial to the other rate groups. However, GCES disagrees that the net benefit is as large as the Company claims. Further, GCES disagrees with the supply-side solution of the two PPAs and the Plant Yates CTs as the best, least-cost, least-risky option to meet this load growth.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 7:37:12 PM

Note that the CHIPS Act and the Inflation Reduction Act were both passed in August 2022, a full 11 months until this date of June 2023 signpost the Company is marking, which is the time that Georgia Power Company had to "contemplate" load growth as a result of the law of the land. Note that Georgia Power Company was quick to clutch their pearls at the thought of compliance with the Clean Power Plan that was never enforced, but for actual laws that are on the books, the Company simply had no idea.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 8:53:38 AM

Note that Georgia Power Company is OK to increase the MW targets for the All-Source Capacity RFP for 2029-2031, but it is not OK to increase the MW targets for the recently held RFPs (including the 2023/2024 RFP that failed to procure any MWs due in part to Georgia Power Company's inability to reach a commercial compromise) or the recently held RFI, which is a pool of projects that can be brought online as quickly or more quickly than the Plant Yates CTs. This inflexibility on RFPs is a perplexing double standard and it would be good for Georgia Power Company to explain why it cannot offer flexibility, given the pressing urgency with which they are asking for more capacity resources.

when the Company's forecasting sensitivities indicated its capacity need year moved earlier by two years from winter 2028/2029 to winter 2026/2027. As further described in Section III below, once the Company determined that the capacity need advanced, it promptly took steps to alert the Commission and address that change, resulting in the 2023 IRP Update. The continued growth in the load forecast from September 2023 used in this IRP Update further accelerated the capacity need year to winter 2025/2026.

Q. WHY SHOULD THE COMMISSION APPROVE THE COMPANY'S REQUESTS IN THE 2023 IRP?

A. If approved, the Company's requests will allow it to timely meet the significant energy needs being driven by Georgia's extraordinary economic growth while also placing downward pressure on rates for the benefit of all customers. Thus, approval of the Company's request is in the best interests of our customers and our state and will help ensure Georgia Power can continue to provide safe, clean, reliable, and affordable electric service to Georgia's thriving and growing economy.

III. LOAD FORECAST AND PROJECTED GROWTH

Q. WHY SHOULD THE COMMISSION HAVE CONFIDENCE IN THE 2023 IRP UPDATE LOAD FORECAST?

A. The 2023 IRP Update is informed by the latest economic trends and uses proven methods to evaluate the probability, level, and timing in which the projected load will materialize. PIA Staff and the Intervenors submitting testimony on this issue accepted the validity of the Company's organic load forecast and the statistically sound methodology used to account for the growth in new large load customers. (See, e.g., Tr. 89, lines 10-11; Tr. 1190, lines 8-9.) All indications, including direct input from customers, demonstrate that Georgia's tremendous economic growth will continue and that we must invest in new resources now to meet the state's

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:52:29 PM

When did the Company alert the Commission to the "unprecedented" and "extraordinary" load growth? June 2023 appears to be the earliest date, with a new surprise IRP filing in October 2023. Note that Georgia Power Company did not promptly inform the Commission that the passage into law in August 2022 of the CHIPS Act and the Inflation Reduction Act could have a massive impact on the conclusions of the Company's 2022 IRP. Even with this long-lead time, Georgia Power Company is not fully accounting for the tax benefits and how unleashing clean energy projects in Georgia will put strong downward pressure on customer rates.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 8:25:02 PM

Georgia Power Company's argument supporting the Plant Yates CTs and Power Purchase Agreements is the need for capacity resources. Here, the Company says it needs to meet ***energy*** needs, whereas previously it says it needs to meet ***capacity*** needs. Which is the reason for the Plant Yates CTs and the PPAs (which Georgia Power Company bought from its affiliate company on sale with a special Buy-5-Get-3 (years) sale? There are cheaper ways to meet both capacity and energy requirements without building new gas-fired combustion turbines, but Georgia Power Company is ignoring these options to the detriment of the Public Policy Interest.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 8:28:57 PM

This 2023 IRP Update is a self-interested plan that Georgia Power Company is putting forward to enrich its affiliate companies and lock in decades more gas-fired capacity despite its corporate position of going net-zero carbon by 2050. The requests for the Power Purchase Agreements and the Plant Yates CTs are ***NOT*** in the best interest of Georgia Power Company customers, as GCES and other intervenors demonstrate with no substantive response from Georgia Power Company.

A simple test of whether this heavily-fossil 2023 IRP Update is in the public interest is -- does it align with the world today? No, it does not. The US Energy Information Administration shows that 94% of all new power projects will be solar, storage, and wind. Only 2% will be nuclear (the massively over-budget and behind-schedule Vogtle Units 3&4) and 4% will be gas-fired capacity, just like Georgia Power Company is promoting. Source data: https://www.eia.gov/todayinenergy/detail.php?id=61424

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 7:48:55 PM

Georgia Power Company is using a new load forecasting methodology that has not been used before.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:53:27 PM

Georgia Power Company is ignoring the very latest economic data on the Rivian plant, which has announced a multi-year delay in its massive electric vehicle factory coming online, instead shifting production toward Ohio.

No doubt Georgia Power Company is also gaming the latest economic trends on cryptocurrency, using the Bitcoin price surge past $75,000 to plan for significant load growth in cryptocurrency mining operations, without recognizing that such near-term demand will dry up once Bitcoin falls below a certain price.

The fact of the matter is that Georgia Power Company is layering its old technique that was wrong in every last IRP going back to the 2007 IRP (see the peak load graph on this web page:

https://www.georgia-ces.org/2023-irp-update

or go to the source of the data here in STF-DEA-3-12 Attachments A and B:

https://psc.ga.gov/search/facts-document/?documentId=216861

Moreover, Georgia Power Company is layering--on top of this historically inaccurate load forecast--a brand new load forecast to account for the CHIPS Act and the Inflation Reduction Act. This is unchartered territory and Georgia Power Company is fundamentally misunderstanding the 95th percentile probability band.

Number: 6 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 8:51:24 PM

This is categorically false - GCES objected in its written testimony that the 95th percentile band was an objectively poor target for load growth planning, which Georgia Power Company has so far ignored despite the meritorious claims. The fact of the matter is a 95th percentile probability band is highly unlikely to be realized in terms of peak load growth as a statistical matter. Rather, the 95th percentile represents the load across thousands of scenarios at the highly improbable stressed 95th percentile of peak load. But it does not mean that the Company must build to the 95th percentile or risk reliability issues, particularly when the system is already overbuilt and we do not not share capacity resources with neighboring Balancing Authorities. The 95th percentile represents a risk threshold, but planning to highly improbably events with expensive and rarely used resources is not in the public policy interest. Rather, the Company must account for and deploy the numerous demand-side solutions that are far lower cost than the PPAs or the Plant Yates CTs.

growing energy needs and preserve and protect the reliability and quality of service our customers expect.

The Company's forecasting methodology for large loads accounts for numerous types of uncertainty, including the potential that load will not materialize, will be delayed, or will materialize at a lower level than expected. Moreover, our forecast for large loads is based on the most recent economic trends, includes projects that have already selected Georgia Power as their electric service provider, and incorporates direct input from customers about growth in our state.[1] As of the 2023 IRP Update filing, the Company had already been chosen to serve over 3,600 MW of load from the approximately 17,000 MW pipeline of economic development — nearly 3,000 MW of which is already under construction. Since the 2023 IRP Update filing, the Company has been selected to serve an additional 2,602 MW out of the current economic development pipeline of approximately 21,000 MW. As such, the Company's forecast provides the most realistic depiction of large load growth in Georgia, and we have an extremely high degree of confidence in our forecast.

Q. WITH REGARD TO THE COMPANY'S FORECAST, HOW MANY MW ARE ASSOCIATED WITH ACTUAL ECONOMIC DEVELOPMENT PROJECTS ANNOUNCED IN GEORGIA?

A. Of the 51 large load customer projects included in the external adjustment to the Company's 2023 IRP Update Load Forecast, 32 projects, accounting for almost 10,500 MW, have already chosen to do business in Georgia. These customers have taken concrete actions evidencing their commitment to do business in Georgia, such as purchasing or leasing property.

Q. HOW MANY MW ARE ASSOCIATED WITH PROJECTS GEORGIA POWER HAS BEEN SELECTED TO SERVE?

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:54:18 PM

To be clear, the argument is less over the fact that electricity load growth is coming. The CHIPS Act and the Inflation Reduction Act guaranteed that Georgia and other states would benefit from re-onshoring of manufacturing, as we have seen with SK (batteries), QCells (solar modules), Rivian (electric vehicles, except that they've delayed their production plant in-service date by several years).

The real argument is over how to meet the capacity and energy needs of this load growth. Georgia Power Company is proposing gas-fired resources (Plant Yates CTs) and decades-old, inefficient coal and gas plants in Mississippi (the Mississippi Power Company Power Purchase Agreement) and Florida (the Santa Rosa PPA) that should be retired but will continue to pollute the lives and health of Mississippians and Floridians for five (5) more years, thanks to Georgia Power Company's extra-legal maneuver to contract for 750 MW of Mississippi Power Company capacity without revealing what is in that black box -- also the Santa Rosa PPA -- without seeking or acquiring Commission approval, and presuming with precedent that over-purchasing the capacity by 40% (two years out of a five year contract) and then re-marketing it without Commission approval is acceptable.

See O.C.G.A. § 46-3A-3

https://law.justia.com/codes/georgia/2010/title-46/chapter-3a/46-3a-3)

A. At the time of the filing in October 2023, 14 customers, accounting for 3,612 MW, had selected Georgia Power as their electric service provider. As of March 18, 2024, the Company has been selected to serve an additional 2,602 MW for a total of 6,214 MW. These additional 2,602 MW include 968 MW expected to be online by winter 2027/2028.

Q. WHAT IS THE STATUS OF THE CUSTOMER CHOICE PROJECTS THE COMPANY HAS BEEN SELECTED TO SERVE WITHIN THE LOAD REALIZATION MODEL?

A. Fourteen of the 51 projects included in the Company's load realization model in the 2023 IRP Update filing have executed a Request for Electric Service ("RFS"). As shown in Table 1 below, of these fourteen projects, nine have broken ground, four are pending construction, and only one is delayed. The thirteen projects that have broken ground or are pending construction comprise 3,546 MW of the total 3,612 MW. This evidence suggests that the biggest customer choice projects are moving forward and making progress without material delays.

Table 1: Status of Committed Customers

DATA CENTER - 8 Total Customers					
5 broken ground		**MW**	**3 pending construction**		**MW**
REDACTED		324	REDACTED		120
REDACTED		280	REDACTED		180
REDACTED		1,271	REDACTED		130
REDACTED		200			
REDACTED		240			
	Subtotal	**2,315**		**Subtotal**	**430**

INDUSTRIAL - 6 Total Customers					
4 broken ground		**MW**	**1 pending construction**		**MW**
REDACTED		126	REDACTED		170
REDACTED		243			
REDACTED		60	**1 project delayed**		
REDACTED		202	REDACTED		66
	Subtotal	**631**		**Subtotal**	**236**
9 out of 14 customers have broken ground		**2,946**	**5 out of 14 construction pending or delayed**		**666**

Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 8:56:28 PM

How does the multi-year delay of the $5 billion Rivian electric vehicle manufacturing plant affect the Georgia Power Company load growth plan? How can Georgia Power Company use this delay of several years to plan for a more sustainable energy source for Rivian (namely solar+storage)?

Q. HOW DOES THE COMPANY USE AN RFS TO INFORM THE COMPANY'S DECISION THAT IT WILL BE REQUIRED TO SERVE A CUSTOMER?

A. The RFS is a signed commitment that memorializes a customer's selection of Georgia Power as their electric service provider. RFSs have consistently been recognized to be a legally binding agreement and are routinely used in Georgia Territorial Electric Service Act ("Territorial Act") cases as evidence of customer choice.[2] The Company incorporates all of the new large load customers with signed RFS in the Company's adjusted Load Forecast, which serves as strong evidence supporting the Company's decision that it will be required to serve these customers.

Q. WHY DOES GEORGIA POWER NEED TO PROCURE CAPACITY TO SERVE ADDITIONAL LOAD THAT HAS NOT YET COMMITTED TO BE SERVED BY GEORGIA POWER?

A. Customers expect Georgia Power to be prepared to serve their load. As evidenced by our progress to date, which has led to securing 6,214 MW with committed customers, we anticipate that projects will continue to advance through various stages of economic development and ultimately continue to materialize. As mentioned previously, the economic development pipeline continues to grow and has increased to 21,000 MW since the Company filed this proceeding. Georgia Power has consistently demonstrated effectiveness in acquiring and retaining customers within a competitive market, achieving a historical win rate that exceeds 70% of projects (representing approximately 90% of the associated load). This

[2] See, e.g., Order for Transfer of Retail Electric Service, Docket No. 55460; Order for Transfer of Retail Electric Service, Docket No. 55473.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 8:04:17 PM

How do either of these numbers - 70% or 90% - support the Georgia Power Company position that the 95th percentile of load growth is the correct load growth forecast?

successful track record supports the inclusion of these projects in the Company's forecast and the capacity need associated with these projections.

Q. DOES THE IRP UPDATE ATTEMPT TO ADDRESS ALL OF GEORGIA'S POTENTIAL ECONOMIC DEVELOPMENT LOAD GROWTH?

A. No. The Company's forecast accounts for the fact that Georgia Power will ultimately only need to serve a portion of the large load customer projects it has identified. In August 2023, the Company identified approximately 17,000 MW of committed and potential projects, representing the full load of customers in the pipeline looking to locate or expand in Georgia through the mid-2030s. The 2023 IRP Update Forecast projects that, through the winter of 2030/2031, Georgia Power will be asked to serve only 6,600 MW of new load, representing only a portion of the 17,000 MW pipeline. The amount of customer projects in the pipeline has continued to grow and now stands at more than 21,000 MW, demonstrating that Georgia's economic development success continues to attract new customer growth.

[1] This IRP Update seeks authority to build or buy 3,300 MW of capacity resources to meet the Company's capacity needs from 2026-2028 and ensure the continued reliability of the electric System. Consistent with the 2022 IRP Order, the Company will continue to implement all existing RFPs and will use the All-Source RFP to source the balance of the capacity needed from 2029-2031.

Q. PLEASE PROVIDE ADDITIONAL DETAILS REGARDING THE INFORMATION THAT THE COMPANY PROVIDED STAFF TO ASSIST IN ITS EVALUATION OF THE LOAD FORECAST IN THIS CASE.

A. As part of its initial filing, the Company provided short-term, long-term, peak, and load realization models; workpapers including weather data, forecast inputs, short-term model outputs, and Peak Demand aggregate and Territorial files that contain

Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:54:59 PM

The question of need for capacity resources is far less salient than the question of what resources will be built or bought to provide that capacity and energy needed to meet load growth? The answer cannot be fossil gas, especially when it has been demonstrated time and again as ineffective and far costlier than solar, wind, and battery storage.

Again, Georgia Power Company must explain why 94% of power projects that will be built in 2024 will be solar, wind, or battery storage, while only 2% will be nuclear and 4% will be gas, the latter two being more expensive by far and Georgia Power Company is responsible for 100% of the costly nuclear in 2024 (even as it seeks to add costly gas).

Source: https://www.eia.gov/todayinenergy/detail.php?id=61424

final output information on peak and energy forecasts, and data supporting all charts and tables included in the filing. The Company also held a technical session, at PIA Staff's request, to help orient and familiarize PIA Staff's new consultant with Georgia Power's practices, processes, and forecasting methodology. The Company also provided guidance on how to acquire the software programs to aid in PIA Staff's and PIA Staff's consultant's analysis of the Company's data. Once acquired, the software programs are available for immediate use, and the models that were provided to PIA Staff were self-contained and able to be run upon acquisition of the software. The models shared with PIA Staff provided more information than would normally be included in a static technical appendix; these models can also be tested and used to develop PIA Staff's own comparable models. Ultimately, the Company met with PIA Staff and PIA Staff consultants to review the models and answer any questions, and to the extent PIA Staff had further questions or concerns, the Company was open to additional meetings with PIA Staff.

Q. DID ANY PARTY PRESENT TESTIMONY CHALLENGING THE METHODOLOGY SUPPORTING THE COMPANY'S BASE FORECAST?

A. No.

Q. DID ANY PARTY PRESENT TESTIMONY CHALLENGING THE COMPANY'S METHODOLOGY FOR ADJUSTING ITS BASE LOAD FORECAST TO ACCOUNT FOR LARGE LOAD CUSTOMER GROWTH?

A. No. In fact, PIA Staff agrees that the Company's methodology is appropriate and GIPL agrees that a new methodology was needed to account for this growth. PIA Staff and Intervenor objections regarding the load forecast are limited to the underlying assumptions on load ramp, load value, and delay.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:04:59 PM

Note that the only protection that Residential Ratepayers have, in the absence of a Consumer Utilitiy Counsel, is a new PIA Staff consultant who has no experience with Georgia Power Company's practices, processes, and forecasting methodology. So the Residential Ratepayer is now in the hands of a newb/noob (no disrespect) with zero experience.

The Georgia Public Service Commission sent its Executive Secretary before the Georgia Senate Regulated Industries Committee to argue that Residential Ratepayers have more that adequate representation with the Public Interest Advocacy Staff. While their cause is noble, they are poorly matched against the resources of Georgia Power Company. The results are clear when reviewing the Company's own data on Residential Rates vs. every other rate class over time (residential rates have grown 68% since the 2007 IRP - compare this to industrial rates growing only 28% in that same time frame) (source: STF-Dea-3-4 https://psc.ga.gov/search/facts-document/?documentId=216861)

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 8:08:56 PM

On the job training doesn't inspire confidence.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 8:27:19 PM

False.

Q. WHAT WERE PIA STAFF'S RECOMMENDATIONS REGARDING THE ASSUMPTIONS USED IN THE LOAD REALIZATION MODEL?

A. PIA Staff recommends three changes to the load realization model:

1. Use uniform load materialization probabilities for all customers, rather than assume that data centers and cryptocurrency customers will materialize at a different probability than other customer segments.
2. Use a REDACTED delay assumption for load ramp associated with data centers, rather than the REDACTED delay proposed by the Company, which is based on PIA Staff's assumption that supply chain delays and labor shortages are likely to delay data center construction timelines.
3. Increase the range of alternative futures by varying the key assumptions to produce a range of potential load additions along with a range of timing for those load additions to assess risks to the Company and customers. (Tr. 9-12.)

Q. PLEASE RESPOND TO PIA STAFF'S ALLEGATION THAT THE COMPANY HAS NOT PROVIDED EVIDENCE TO SUPPORT ITS ASSUMPTION THAT DATA CENTERS AND CRYPTOCURRENCY CUSTOMERS WILL MATERIALIZE AT A DIFFERENT RATE THAN OTHER CUSTOMERS IN THE SAME INDUSTRY SEGMENT.

A. The Company relied on prior experience with its 60 existing data center customers to inform the assumption that data centers and cryptocurrency customers will materialize at a different rate than other customer segments. The Company relied on the expertise of its employees who are in direct contact with existing and potential customers, including data centers, daily and who are intimately involved in the progress of these customers from the initial request for service to the date their facility is energized. The only distinction regarding the data center load anticipated in this case and the data center customers already served by Georgia

Power is the speed and magnitude in which the load is projected to materialize. In addition, one of Georgia Power's existing large load data center customers recently informed the Company that the load realization for two of its hyperscale data centers is approximately 80%, corroborating the Company's assumed load realization.

Q. DID STAFF PROVIDE EMPIRICAL EVIDENCE TO SUPPORT CHANGING THE DATA CENTER AND CRYPTOCURRENCY CUSTOMER LOAD REALIZATION ASSUMPTION?

A. No. Staff simply rejected the Company's assumption, arguing that because the Company relied only on its informed judgment, there was no reason to treat data center and cryptocurrency customers differently than customers in other segments.

Q. PLEASE DISCUSS YOUR CONCERNS WITH PIA STAFF'S CHANGES TO THE COMPANY'S LOAD RAMP DELAY ASSUMPTION.

A. PIA Staff's proposed change to the data center load ramp assumption lacks any reasonable support. Indeed, PIA Staff relied on unrelated anecdotal references from Google searches of dated construction trade press, blog posts, and a FOX 5 news article to suggest that labor shortages and supply chain issues have delayed data center construction elsewhere in the country. PIA Staff admitted during the hearing that these articles may not be the best or most accurate sources but stated that their intent in citing these articles was merely to demonstrate uncertainty. (Tr. 227-228.) However, PIA Staff's references are not specific to Georgia and are unrelated to the data centers seeking service from Georgia Power. Without justification, PIA Staff assumes that potential delays have not already been addressed by the construction timelines and load ramps of the large load customers coming to Georgia. In contrast, the Company's assumptions are based on information obtained directly from the customers developing the projects in question. These customers are best positioned to address their project timelines based on their

substantial industry experience and intimate knowledge of the projects themselves. Moreover, by altering the assumptions of the load realization model, PIA Staff's efforts go beyond identifying areas of uncertainty or risk. If adopted, PIA Staff's load forecast recommendations will materially impact the Company's ability to serve new large load customer projects.

Q. DID STAFF USE A RANGE OF ALTERNATIVE FUTURES LIKE IT RECOMMENDS THE COMPANY USE?

A. No. Staff only considered scenarios involving a delay in load and did not evaluate what the load forecast would look like if loads materialized faster than projected. Significantly, three large load customers included in the external adjustment to the Company's forecast have now requested to accelerate their load ramp – seeking 2,331 MW to be served by 2031 rather than 2,173 MW by 2036 as they initially requested. In certain years, such as 2028 and 2029, this acceleration would result in approximately 800 MW of additional load than was assumed for the 2023 IRP Update Load Forecast and demonstrates the potential for substantial load to materialize at a faster pace than projected.

Q. WHY WOULD IT BE INAPPROPRIATE TO USE A P50 LOAD VALUE AS PROPOSED BY GIPL WITNESS HOTALING?

A. Planning generation resources to the P50 load value presents unacceptable risk when seeking to serve the significant large loads coming to the state. Planning to P50 can help support a slower, steady growth in load. But the load growth being experienced in Georgia is extraordinary, not slow and steady. Planning generation resources to P50 necessarily means that the Company would not have sufficient resources to meet customer needs in half of the potential scenarios for new large load customers and would thus not be able to support as much new economic development load coming to the state. Notably, GIPL used the Company's large load forecast methodology and assumptions but proposed using a P50 level load

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:38:56 AM

How does this acceleration of load across three large load customers (which amounts to 158 MW) compare to the delay in load by several years with respect to the Rivian electric vehicle manufacturing plant delay?

The 158 MW certainly looks to be less than the presumed 170 MW for the Industrial pending construction shwon in Table 1 of this testimony.

Source: https://www.ajc.com/news/business/with-rivians-georgia-plant-paused-massive-sites-fate-is-uncertain/JCNXUO2EOFBVZLLNBRQGRDC6UE/

So it appears to be a wash in terms of acceleration and deceleration, using these examples here.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 8:32:55 PM

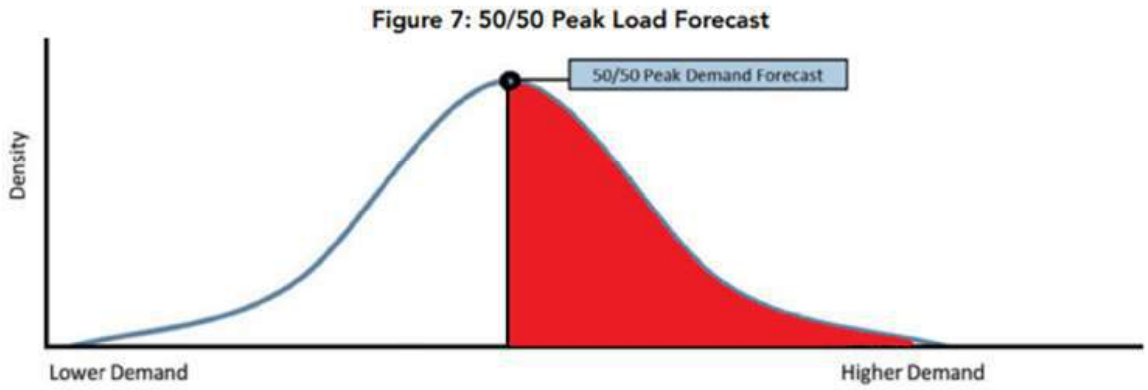
The load growth is less than what was forecasted in the 2007 IRP, the 2010 IRP, and the 2013 IRP. Georgia Power Company has failed to demonstrate that this load growth is "extraordinary" other than they failed to forecast load growth by a factor of 17, which is a testament to their mismanagement and ineptitude.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:10:02 PM

This is a fundamental misunderstanding of how probability bands work in stochastic modeling. The P50 level represents the average across hundreds or thousands of randomly generated load forecasts, given the Company's own criteria for whether that load would actually materialize or not. Assuming that the 50th percentile load will manifest is prudent planning, given the massive risk of overbuilding capacity on an already over-built system with excess capacity. There are also many demand-side solutions, distributed energy resources, and even non-wire alternatives that can meet load growth and preserve resource adequacy -- such as Virtual Power Plants, Battery Energy Storage Systems, and Grid-Enhancing Technologies -- that the company is simply choosing not to engage on, since it would be less profitable and lucrative than pursuing gas-fired capacity resources.

value instead of the P95 load value used by the Company. In doing so, GIPL asserted that the P50 value is, statistically speaking, the most likely outcome and should, therefore, be used in lieu of the P95 value. Using Figure 7 from GIPL Witness Hotaling's testimony, you can see that the P50 value occurs at the peak of the bell curve on the distribution of possible outcomes.[1] However, as shown in the modified Figure 7 graphic below, electing to use the P50 value for the large load forecast means that there is a 50% chance that loads exceed the predicted value, as seen by the red shaded area under the curve. Simply put, if Georgia Power were to plan its System using the P50 value, that would mean there is a 50% chance that it would have too few resources to meet large load customer needs, and therefore would not be able to reliably support the demands of new economic load growth.

Figure 1: 50/50 Peak Load Forecast



Further, the load forecast is a static snapshot in time that does not capture the fact that additional load growth is taking place. (Tr. 1312, lines 12-15.)[2] For each new large load customer that comes onto the System, the load level previously planned for becomes less representative of the higher needs the Company must serve. (Tr. 1312-1313.) Thus, as customer load continues to grow, it is even more risky to plan according to the P50 load level than the P95 load level. This further demonstrates why it would be inappropriate to plan for the P50 load level, as recommended by

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:10:33 PM

False. This means Georgia Power Company would have a lower target reserve margin to serve large load customer needs, but would still be able to serve large load customer energy needs without sacrificing resource adequacy requirements. Georgia Power Company has a fundamental misunderstanding of statistical probability graphs and related percentile bands.

Moreover, Georgia Power Company completely ignores the demand side resources that it is required to evaluate as part of the IRP process. These demand side resources such as Virtual Power Plants would create significant value for Georgia Power Company customers but would negatively impact the corporate earnings of Georgia Power Company, which is why it is not a solution that is being embraced by the Company and in fact is being ignored as too complicated for Georgia Power Company engineers.

See page 44, where the Company states, " Fully leveraging additional load flexibility programs, like virtual power plants ("VPP"), will require more planning time and further operational capabilities than exist in this 2023 IRP Update. The Company is in the process of evaluating and planning demand-side programs that will be filed in the 2025 IRP, including potential VPP programs. Deriving System value from mass market load flexibility programs will require continued investment in enterprise Distributed Energy Resource Management Systems (DERMS) for visibility, predictability, and enhanced operational capabilities of these resources."

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:16:18 PM

How much of the 95th percentile load growth forecast uncertainty is backed out with each new large load customer? If we're using Georgia Power Company math, then if Rivian backs out and there is only 5% of load to spare, we don't have a lot of leftover load growth to work with.

Witness Hotaling, than the P95 load level, which better ensures the Company has sufficient resources needed to reliably serve the growing customer demand.

Q. IS THE COMPANY WILLING TO ADOPT A TRACKING SYSTEM TO MONITOR MARKET ACTIVITIES AND TRACK THE STATUS AND OUTCOMES OF POTENTIAL LARGE LOAD CUSTOMER PROJECTS?

A. Yes. In fact, the Company began tracking this data in greater detail in 2023 in response to the extraordinary growth in the state and the increase in large load customers asking to be served by Georgia Power.

Q. PLEASE RESPOND TO STAFF AND INTERVENOR SUGGESTIONS THAT THE COMPANY SHOULD HAVE KNOWN EARLIER THAT CUSTOMER LOAD GROWTH WAS SIGNIFICANT ENOUGH TO REQUIRE RETURNING TO THE COMMISSION TO REQUEST ADDITIONAL RESOURCES.

A. The Company could not have foreseen the changes prompting the 2023 IRP Update earlier than it did. As background, in August 2021, when the Load Forecast supporting the 2022 IRP was completed, there was no indication that commercial and industrial sectors would experience the exponential growth observed in 2022 and 2023. Before 2021, the Company averaged only about 100 MW of new large load economic development customers per year. This total rose to 336 MW in 2021 (due to the win of a single customer), tripling the historical average, and 2,197 MW in 2022, which was 22 times the historical average. The Company first identified a new increase in projected load when it created its Budget 2023 load forecast in August 2022 as part of its annual planning process. The Budget 2023 Forecast, which was based on the latest data available at the time, identified an expected load increase of only 1,100 MW through the winter of 2030/2031, as compared to the 2022 IRP filing.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:20:21 PM

Again, to be perfectly clear, the CHIPS Act and the Inflation Reduction Act were passed in early August 2022, with months and months of analysis available well before passage and signature into law in August 2022. The 2022 IRP was concluded and the stipulation agreement was approved in late June 2022 with amendments and updates continuing through December 2022. There were many months during which Georgia Power Company could have "contemplated" and "foreseen" changes prompting the 2023 IRP Update and informed the Commission, even before the conclusion of the 2022 IRP. Georgia Power Company was quick to play up the scaremongering and urge the Commission to act to protect against the Clean Power Plan that was never enacted, but with the CHIPS Act and IRA as the law of the land, the Company simply could not have seen their impacts coming.

In January 2023, following the continued increase in economic development projects, the Company began more detailed tracking of customer choice activity on a monthly basis. It also developed a model to produce load forecast sensitivities with greater frequency than the typical annual load forecast to help further inform its resource planning decisions. The load forecast sensitivities developed in June 2023 identified considerable increases in projected load and, for the first time, identified an accelerated capacity need for the winter of 2026/2027.

To be clear, until June of 2023, all increases in projected load could be covered by existing resources or addressed by increasing the size of the 2029-2031 All-Source Capacity RFP that was approved in the 2022 IRP. Thus, it was not until June 2023 that the Company detected a change in the Company's capacity need year (i.e., the year in which the Company will require additional resources moved from winter 2028/2029 to winter 2026/2027). It was this change that necessitated the development of the 2023 IRP Update to procure resources to meet an even earlier capacity need beginning in the winter of 2025/2026 based on the final load forecast from September 2023.

Q. HOW DO YOU RESPOND TO THE CONCERNS RAISED BY PIA STAFF REGARDING THE COMMISSION'S RULES FOR IRP LOAD FORECASTING AND THE COMPANY'S FILING IN THIS CASE?

A. The Company complied with the Commission's Rules regarding the contents and validity of a load forecast. As acknowledged by PIA Staff (*See* Tr. 244, lines 10-13) and the procedural and scheduling order in this docket, the Company's IRP Update is of a limited scope. Although the Company would typically provide a high and low load growth sensitivity to the load forecast supporting the triennial IRP, the Load Realization Model used to adjust the forecast in this case for the new large load customer growth appropriately evaluated a range of outcomes and possible futures within the context of the changed circumstances the IRP Update was intended to address. The Company ran multiple load forecast sensitivities in the

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 9:13:55 PM

In January 2023...(six months after the passage of the CHIPS Act and the Inflation Reduction Act)...the Company began more detailed tracking of customer choice activity on a monthly basis.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:23:11 PM

The 2023 IRP Update is not a full-blown IRP because of the corners cust (for example, no cost-of-service study). However, it has full-blown IRP implications by proposing new build gas-fired resources and prolonging existing fossil resources with the intent to meet significant new load growth. In no way is this of limited scope in terms of costly outcomes, except for the analyses and investigations that Georgia Power Company did not conduct in conjunction with the 2023 IRP Update, which would otherwise be conducted in a regular IRP cycle.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/25/2024 9:24:02 PM

Note, this is a brand new load forecasting model that Georgia Power Company is employing for the very first time. They are also asking the Commission to trust them on this tried-and-true methodology, even though it is being layered on top or possibly replacing the typical High Load Growth sensitivity and the Low Load Growth sensitivity that would support the normal triennial IRP process.

months leading up to the IRP Update filing, each of which was provided to PIA Staff in STF-DEA-1-4. The fact that the Company analyzed the different sensitivities, chose the most reasonable load forecast to plan to, and proposed a portfolio of resource solutions to meet the need is not a failure to meet Commission rules directed at the triennial IRP filing and certainly did not prevent PIA Staff or Intervenors from proposing an alternative forecast.

Second, the base forecast, which captures organic growth on the System, was compiled using the same methodologies, models, and techniques as used in prior IRPs and as accurately described in the Load Forecast Technical Appendix to the 2022 IRP. In addition, the Company provided alternate levels of expected growth as part of its resource mix study. A description of all load forecast determinants was provided in response to STF-JKA-2-10. The impact of self-generation and cogeneration is included in the Load Forecast Technical Appendix of the 2022 IRP, and the transparency of the Company's forecasting tools are as transparent and appropriate as they have been in every IRP since 2001. In relying on the same methodology previously used, it was not necessary to re-submit Sections 4 through 6 of the Technical Appendix of the 2022 IRP. The 2023 IRP Update was appropriately focused on the Load Realization Model and forecast adjustments supporting the substantial new large loads coming to the state.

Q. WHAT IS THE RISK OF ADOPTING STAFF'S RESOURCE PLAN BASED ON STAFF OR GIPL'S LOAD FORECAST IF MORE LOAD MATERIALIZES THAN THEY PROJECTED?

A. If the load materializes at a rate higher than projected and outpaces the generation approved to serve that load, the Company would not be able to reliably serve its growing customer load or support Georgia's economic growth. If there is insufficient generation to support the addition of more customer load, the Company will have to stop making offers to businesses looking to locate or expand in Georgia. Customers who would otherwise locate or expand in Georgia are likely to

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/2/2024 11:58:01 PM

Georgia Power Company has chosen the 95th percentile probability band for its "most reasonable load forecast to plan to." However, there is ample evidence to support that Georgia Power Company is over-estimating the load forecast and is mistakenly over-forecasting load by using the statistically improbable 95th percentile band for load growth.

The 95th percentile is even less likely to be realized with the news of the multi-year delay of the Rivian Plant.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:41:44 AM

The Company certainly could reliably serve its growing customer load with Virtual Power Plants, Distributed Energy Resources, Grid-Enhancing Technologies, and Battery Energy Storage Systems as well as Demand-Side Management measures , all of which allow the Company to better use the resources it already has, rather than imprudently build resources that will only be used a few hours each year but cost over a billion dollars to build, while locking in climate changing emissions for decades more time.

take their business elsewhere. In such case, Georgia would miss out on economic growth, and the Company and its customers would lose the opportunity to place downward pressure on rates by spreading the cost of electric service across a larger customer base.

Q. CAN THE COMPANY AND THE COMMISSION MITIGATE POTENTIAL RISK IF THE COMMISSION ACCEPTS THE COMPANY'S PROPOSED PLAN BUT LESS LOAD MATERIALIZES THAN PROJECTED?

A. Yes. There are several actions the Company and the Commission can take to mitigate risks associated with load materializing at a lower level than forecasted by the Company. Primarily, the Company can sell capacity in the wholesale market or slow down, reduce, or halt generation development in such a case. Other than remarketing capacity, the Company can also manage the development timeline of approved resources or the procurement amount from approved RFPs. For example, the Company can (1) reduce the amount of BESS it develops based on the unidentified balance of BESS MW in this case, and it can (2) reduce the target capacity (MW) to be procured in one or more future RFPs, including the All-Source RFP.

IV. THE REQUEST FOR PROPOSAL PROCESS

Q. WHY DID THE COMPANY REQUEST AN EXCEPTION TO THE COMMISSION'S RFP PROCESS IN THE IRP UPDATE?

A. Due to the Company's capacity need in the winters of 2025/2026, 2026/2027, and 2027/2028, there simply isn't enough time to use an RFP, which typically takes two to two-and-a-half years to implement, evaluate, contract, and certify resources to meet the need. This is especially true in a constrained market with few existing resources available for contracting as additional time is needed to construct new resources and any necessary supporting transmission projects. Therefore, the

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:48:07 AM

If the load does not materialize as Georgia Power Company is aggressively forecasting at the improbable 95th percentile band, then ratepayers will have paid for an expensive gas-fired power plant that is not needed. There will still be downward pressure on customer rates, both because the large load growth will be greater than 0% and any new MW customers are joining an already overbuilt system whose costs were pushed much higher by mismanagement among Georgia Power Company affiliates at Plant Vogtle and manipulation and misinformation in these IRP proceedings.

A key pillar of load growth outlook was the $5 Billion Rivian electric vehicle manufacturing plant just east of Atlanta. Rivian announced in March 2024 that it would pause its plans to move forward with the factory.

Source: https://www.ajc.com/news/business/with-rivians-georgia-plant-paused-massive-sites-fate-is-uncertain/JCNXUO2EOFBVZLLNBRQGRDC6UE/

On the topic of manipulation of IRPs:

Georgia Power Company already uses the poorly outdated Aurora model for its IRP, then adds its own disinformation to arrive at a pre-determined outcome. A list of GPC IRP flaws includes, but is not limited to:

(1) the long-term capacity expansion plan modeled in Aurora was constrained to only allow for generic capacity expansion beginning in the year of capacity need, which in the 2022 IRP was 2029. Yet in 2024, GPC announces the year of capacity need is 2025, but that is not reflected in the published Avoided Cost.

(2) The Company failed to address the issue of uneconomic dispatch commitment examined by Synapse in their November 2021 report “Georgia Power’s Uneconomic Coal Practices Cost Customers Millions.” Synapse determined that the Company’s uneconomic unit commitment practices resulted in $232 million in excess costs for Customers from 2017 to 2020. As in past IRPs, this coal and gas-heavy proposed portfolio fails to adequately demonstrate the economic benefits to Georgia and to Customers as required by O.C.G.A. § 46-3A-2.

(3) Continued over-reliance on a non-diverse, gas-heavy portfolio. The Company’s own scenario modeling shows that there is significant upside risk that Total System Costs could be much higher than the Base Case. This creates upward rate pressure risk from any level of carbon pricing and from high gas prices. The Base Case is six (6) times riskier than a low gas future if each scenario is equally likely as the Company claims. This is not an acceptable risk when existing, commercial technologies like solar+storage can provide all the energy, capacity, and ancillary services that gas fired units can provide, except at lower cost and lower risk than gas.

(4) Georgia Power Company assigns a 0% capacity accreditation to solar in the winter, which is incorrect. It also assigns a 100% capacity accreditation to gas and coal thermal plants, which is also very incorrect. This biases the model toward fossil thermal generation.

(5) The System reserve margin is too high because the generation capacity of Georgia Power Company and Affiliates is overbuilt, beyond what is recommended in the company’s economic Target Reserve Margin. Furthermore, there are significant historical energy exports to neighboring Balancing Authorities, which is a strong signal of excess capacity, uneconomic unit commitment, or both. Overbuilt capacity is a significant cost that is not in the interests of Georgia and Customers of the Company.

(6) Transmission planning is conducted independently of the generation planning and is only planned out 10 years, half the time horizon as generation planning. Generation and transmission planning analysis can be performed together, which provides internal consistency to the modeling and increased confidence in results, after which more detailed transmission analysis (voltage, frequency, thermal violations, etc.) can be conducted.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:57:13 AM

These are irresponsible and highly imprudent suggestions made by Georgia Power Company and it betrays the lack of seriousness on their part to managing the energy transition. The underinvestment in solar and battery storage is a major financial drag on Georgia's economy, as we see with the rate increase after rate increase.

Since the fuel cost increase approved in FCR-26 last year fuel costs for residential customers have increased approximately 75%. Residential and small commercial customers take service as Secondary Distribution customers.

Sources are FCR-25 Docket 44280/ Document 193023 and FCR-26 Docket 29849/ Document 216217

The increase for base rates is also substantial. A comparison of the Residential Service Schedule: R-26 (effective March 2023) and R-29 (effective April 2024) shows a 34% increase. In the R-29 schedule the Nuclear Construction Cost Recovery rider is not included.

Sources: The rate information for the R-26 tariff came from Docket 44280/ Document 193023 filed January 30, 2023, and the R-29 tariff was from Docket 29849/ Document 216217 filed November 1, 2023.

One has to ask why it is that 94% of all power projects built this year will be solar, wind, and battery storage, while the remaining 4% is gas and 2% is nuclear which is exactly what Georgia Power Company is building. What does this Company know that 94% of other power projects being built don't know?

Source: https://www.eia.gov/todayinenergy/detail.php?id=61424

Comments from page 28 continued on next page

take their business elsewhere. In such case, Georgia would miss out on economic growth, and the Company and its customers would lose the opportunity to place downward pressure on rates by spreading the cost of electric service across a larger customer base.

Q. CAN THE COMPANY AND THE COMMISSION MITIGATE POTENTIAL RISK IF THE COMMISSION ACCEPTS THE COMPANY'S PROPOSED PLAN BUT LESS LOAD MATERIALIZES THAN PROJECTED?

A. Yes. There are several actions the Company and the Commission can take to mitigate risks associated with load materializing at a lower level than forecasted by the Company. Primarily, the Company can sell capacity in the wholesale market or slow down, reduce, or halt generation development in such a case. Other than remarketing capacity, the Company can also manage the development timeline of approved resources or the procurement amount from approved RFPs. For example, the Company can (1) reduce the amount of BESS it develops based on the unidentified balance of BESS MW in this case, and it can (2) reduce the target capacity (MW) to be procured in one or more future RFPs, including the All-Source RFP.

IV. THE REQUEST FOR PROPOSAL PROCESS

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A. Due to the Company's capacity need in the winters of 2025/2026, 2026/2027, and 2027/2028, there simply isn't enough time to use an RFP, which typically takes two to two-and-a-half years to implement, evaluate, contract, and certify resources to meet the need. This is especially true in a constrained market with few existing resources available for contracting as additional time is needed to construct new resources and any necessary supporting transmission projects. Therefore, the

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:58:02 AM

In its response to STF-JKA-6-5, Georgia Power Company states, "Yes, the Company could consider an agreement outside of a RFP process for the potential new or planned projects." The Commission should require the Company to add MWs to the current RFP and entertain proposals received outside of announced RFPs and RFIs, which would be subject the same rigorous scrutiny for interconnection and other requirements without being burdened by Georgia Power Company's onerous, time-intensive, and inefficient RFP and RFI solicitation process.

Source: https://psc.ga.gov/search/facts-document/?documentId=217231

Company requested to procure resources pursuant to one or more of the RFP exceptions to ensure it can serve the customer load identified in its forecast and continue to maintain a reliable electric System.

Q. DOES GEORGIA POWER SUPPORT THE COMMISSION'S RFP PROCESS?

A. Yes. Georgia Power supports the Commission's RFP process and has conducted over 20 RFPs since 2006. The Company is currently developing and implementing numerous RFPs, including the All-Source Capacity RFP, CARES US RFP, the Biomass RFP, the DG RFP, and the 500 MW ESS RFP that were approved in the 2022 IRP. The Company fully intends to continue implementing its current RFPs and utilizing the RFP process in procuring generation resources in the future.

Q. WHY CAN'T THE COMPANY RELY ON EXISTING RFPS TO PROCURE THE RESOURCES REQUIRED IN THE 2023 IRP UPDATE?

A. The Company needs resources online to meet the capacity need in the winters of 2025/2026, 2026/2027 and 2027/2028, and the RFP process typically takes two to two-and-a-half years to identify, evaluate (including associated transmission), select, and certify capacity resources. Any new-build resources selected through such an RFP would not only have to be identified on an expedited timeline but constructed and brought online as early as November 2025 through November 2027, which is simply not feasible. Moreover, there is no guarantee that the market would offer a sufficient quantity of firm, dispatchable resources in response to an RFP to provide the required capacity in the timeframe needed. Also, the existing RFPs are crucial to meeting the needs identified in the 2022 IRP for renewable energy resources, ESS resources, and capacity resources for the needs in the 2029-2031 timeframe and therefore must be conducted to best meet those specific needs.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:38:03 AM

As a result of this exception, Georgia Power Company procured nearly 1,000 MW of some of the worst performing and uneconomic coal and gas-fired resources that were on the brink of retiring, but pulled back into service and given five more years of profit-making for Georgia Power Company.

Reminder: these PPAs were executed extra-legally without Georgia Public Service Commission review or approval. Please see: O.C.G.A. § 46-3A-3

Source: https://law.justia.com/codes/georgia/2010/title-46/chapter-3a/46-3a-3

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:37:41 AM

Here, Georgia Power Company fails to mention that the 2023/2024 Utility Scale RFP failed completely and Georgia Power Company was unable or unwilling to reach a commercial solution to bring forward the 1,030 MW of solar and storage resources that the Company was required to do under the 2022 IRP Stipulation, but simply pushes off into the future without justifying why they could not reach a compromise and the entire RFP failed. As a result, this failed RFP put upward pressure on rates and the Company is to blame.

Source: https://psc.ga.gov/search/facts-document/?documentId=215885

In January 2024, a major developer of renewable capacity and energy resources filed a petition before the Commission in Docket #4822 that states, "At a time when Georgia Power acknowledges its urgent need for new generation capacity, [this developer] urges the Commission to remove unlawful barriers blocking the development of 420 MW of new, clean, affordable power generation that [this developer] stands ready to build and operate." This developer has significant solar and storage capacity it could bring online to help meet the acute short-term capacity shortage, but for GPC standing in the way.

In the 2022 IRP and again in the 2023 IRP Update, the Incremental Capacity Equivalent (ICE) Factor showed utility scale solar with a 10% winter and 35% summer capacity value (rooftop solar is 5% and 25%, respectively). Solar has non-zero capacity value at all times, yet solar received a 0% capacity credit in the Company's RFPs.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:37:30 AM

In its response to STF-JKA-6-5, Georgia Power Company states, "Yes, the Company could consider an agreement outside of a RFP process for the potential new or planned projects." The Commission should require the Company to add MWs to the current RFP and entertain proposals received outside of announced RFPs and RFIs, which would be subject the same rigorous scrutiny for interconnection and other requirements without being burdened by Georgia Power Company's onerous, time-intensive, and inefficient RFP and RFI solicitation process.

Source: https://psc.ga.gov/search/facts-document/?documentId=217231

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:30:41 AM

Georgia Power Company suppresses the wholesale market in the SERC Southeast region of Georgia, Alabama, and Mississippi, so it is no surprise that they are skeptical there are sufficient resources.

The Company has a long history of anti-competitive behavior. In particular, GPC intentionally makes it difficult to develop cheap, clean, firm new generation resources in Georgia by obscuring and changing the calculation of system Avoided Cost, which is the cost GPC avoids by not producing for itself an equivalent amount of energy and capacity. PURPA requires electric utilities to purchase the electric energy and capacity made available by these generators at just and reasonable rates. However, independent power producers have had difficulty selling energy and capacity to GPC, whether as a PURPA qualifying facility or when trying to secure a Power Purchase Agreement.

Q. STAFF WITNESS KADUK PROPOSED ADDING 500 MW OF CAPACITY EQUIVALENCE TO THE RESOURCE LEDGER US SCALE RFP. WHY WOULD THIS NOT BE APPROPRIATE?

A. The Company only includes installed, planned, and committed resources in its resource ledger beginning in the year the resource is known to be in-service and for which the Company knows the resource's contribution to meeting capacity needs. [1] It is impossible to know how many bids submitted into the CARES 2023 US RFP will be selected and will include renewable plus storage resources. There is also no guarantee the Company can fill the suggested 500 MW of storage from the portfolio of the 2023 CARES US RFP, which is the largest renewable RFP the Company has ever conducted. In addition, no Georgia Power US RFP portfolio has ever had every project achieve commercial operation at the same time, which PIA Staff Witness Kaduk acknowledged on the stand. There are risks in assuming there will be 500 MW of renewable plus storage resources all online at the same time before 2028.

[2] Ultimately, this decision does not have to be made in this case. The Company plans to give the appropriate capacity credit to any storage resources that are selected in the 2023 CARES US RFP. If Staff's prediction comes to fruition, the Company and the Commission can act at the time of certification, when the resources procured through the 2023 US RFP are known, to reduce the amount of capacity resources the Company needs to procure in a future RFP such as the 2029-2031 All-Source RFP.

Q. PLEASE RESPOND TO THE TIMELINE OF DISCUSSIONS BETWEEN THE COMPANY AND STAFF PRESENTED IN THE NEWSOME, HAYET, WELLBORN PANEL.

A. The Company always appreciates the opportunity to collaborate and work with Staff to discuss issues and possible solutions as they arise, which affirmatively evidences the constructive regulatory environment in Georgia. Although PIA

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:35:21 AM

"It is impossible..." or Georgia Power Company could ask.

It would be incredibly prudent to tee-up the bidders and request that they incorporate battery energy storage systems or BESS into their design and bids, whether configured as AC-coupled or DC-coupled BESS, and whether the BESS component is built concurrently with the solar resource or at a later date, and also consider standalone BESS as well as AC-coupled BESS built at or near existing utility scale solar resources.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:37:19 AM

Yes, it does need to be decided now. There is an urgency to getting solar and storage resources online, for the energy and capacity they bring, for the cost savings and reliability, and to make up for the failure of Georgia Power Company

The 2023/2024 Utility Scale RFP failed completely and Georgia Power Company was unable or unwilling to reach a commercial solution to bring forward the 1,030 MW of solar and storage resources that the Company was required to do under the 2022 IRP Stipulation, but simply pushes off into the future without justifying why they could not reach a compromise and the entire RFP failed. As a result, this failed RFP put upward pressure on rates and the Company is to blame.

Source: https://psc.ga.gov/search/facts-document/?documentId=215885

Staff's timeline accurately accounts for the chronology of the discussions, their presentation of what was discussed omits some important details that misconstrues the nature and timing of the Company's request.

PIA Staff's timeline suggests that the Company failed to notify the Commission early enough that its projected customer load had significantly increased. However, this ignores that in the 2022 IRP the Commission approved six capacity PPAs for over 2,200 MW and the All-Source RFP for needs in 2029-2031, which together would have been able to serve additional customer growth coming to the Company through 2031. As previously discussed, until June 2023 this additional load only increased the size of the Company's capacity needs in 2029 and beyond but did not advance the need year. The Company appropriately alerted the Commission of the need to act when the load forecast sensitivities first indicated an acceleration in the Company's capacity need year to winter 2026/2027.

PIA Staff's timeline also leaves out the Company's June 2023 proposal to divide the All-Source Capacity RFP into phases and issue an expedited "Phase 1" of the All-Source RFP in the fall of 2023. The Company proposed to shorten the RFP development timeline and to seek resources similar to those sought in the prior capacity RFP using the Commission-approved contracts from the 2022-2028 Capacity RFP.[1] In response, PIA Staff questioned (i) whether the Company had the authority to issue more than one All-Source RFP under the terms of the 2022 IRP Final Order, and (ii) the appropriateness of procuring additional resources due to increased capacity needs without vetting the revised load forecast in a proceeding with hearings and public comment. Throughout the summer, the Company responded to follow-up questions, informal data requests, exchanged regular emails, and provided substantial data to PIA Staff that was not fully captured in PIA Staff's Testimony. Even though the nature of the Company and PIA Staff's discussions prior to the filing of the 2023 IRP Update does not change the Company's requests in this case, we wanted to clarify both the Company's and PIA

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:01:20 AM

This doesn't sound like a constructive regulatory environment. Georgia Power Company was unable to convince the Public Interest Advocacy Staff of the urgency of the moment, which the Company's data should have supported if it were valid.

Georgia Power Company went out on its own initiative and has already spent $250 million on the Plant Yates CTs without any review or approval from the Commission.

Georgia Power Company already signed a precedent agreement for gas pipeline service possibly from its own pipeline affiliate and also contracted for engineering services with a major EPC contractor and also began procurement with a major turbine OEM, already signed and in effect as of last month, and also signed a Payment for Ecosystem Services agreement for the Plant Yates CTs, and initiated LGIP applications for interconnection request for the Plant Yates CTs and even held the interconnection request scoping meeting for Plant Yates CTs back in August 2023. All these actions and costs were made imprudently before allowing the Commission to review and approve them. This is why there is breathless urgency from Georgia Power Company to make haste and approve this massive build-out of new gas-fired units…or at least get their imprudent costs covered as regulatory assets. This is a waste of $250 million in sunk costs for which Georgia Power Company is already asking preemptively to be given regulatory asset treatment.

Moreover, the Plant Yates CTs will not be able to deliver full firm Network Resource Interconnection Service or NRIS transmission capacity to meet peak loads until 2028—many years after the current capacity shortage. The Company only requested Energy Resource Integration Service or ERIS in the interconnection queue for the Plant Yates CTs, which means the Plant Yates CTs can be curtailed during peak demand and cannot provide full deliverability to the network during periods of stress (until 2028).

Staff's efforts to productively investigate and address the substantial energy need facing the state.

Q. DID THE COMPANY CONSIDER ISSUING AN RFI EARLIER, AS PROPOSED BY SIERRA CLUB?

A. Yes. In the absence of a targeted, expedited Phase 1 All-Source Capacity RFP, the Company sought to issue an RFI as soon as possible to gain information regarding the availability of existing and planned capacity resources for the capacity need identified for years 2026 through 2028 (the timeframe being addressed in the Company's 2023 IRP Update) as well as for years 2029 through 2031, the time period to be addressed in the Company's 2029-2031 All-Source Capacity RFP. For the years 2026 through 2028, the RFI would be very valuable in determining if there were additional existing resources available beyond those already identified by the Company.[1] In August 2023, the Company proposed to issue the RFI through the independent evaluator ("IE") website with the oversight of the IE that was selected for the All-Source Capacity RFP. However, delay in finalizing the IE contract led to the Company issuing the RFI on its own in September 2023 in an effort to solicit timely feedback from the market.

V. TARGET RESERVE MARGIN

Q. WHAT TARGET RESERVE MARGIN DID THE COMPANY USE IN THE 2023 IRP UPDATE?

A. Consistent with the 2022 IRP Final Order, the Company used a 26% winter target reserve margin for planning purposes. Planning for 26% in the long term and 25.5% in the short term resulted in an 80% increase in reliability in the Company's 2021 Reserve Margin Study as compared to a 20% reserve margin, which was the 1:10 Loss of Load Expectation ("LOLE") threshold. The Company's winter target reserve margin served the state well in recent extreme weather events, such as

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As a result of this decision, Georgia Power Company is now claiming that the RFI cannot be used for market procurement purposes because not every project provided indicative pricing. Now the Company claims that any new procurement will take 2.5 years to complete and certify, which is a claim they make having solicited information that they now say cannot be used, thereby causing yet another delay in the procurement of capacity resources from all sources.

Winter Storm Elliott on Christmas Eve in 2022 and Winter Storm Heather, which occurred earlier this year on the second day of direct hearings in this case. Planning to a 26% winter target reserve margin ensures that the Company is prepared to handle reliability events such as these, even as customer behavior evolves over time. Further, maintaining a 26% target reserve margin lowers expected customer costs as compared to a 20% reserve margin per the 2021 Reserve Margin Study, which considers not only capacity costs, but also production costs and reliability costs.

Q. IS THERE A GENERAL TREND IN THE INDUSTRY TOWARD WINTER RESERVE MARGINS?

A. Yes. Several utilities are now either establishing winter reserve margins or are starting to plan for higher winter reserve margins. Duke Energy Carolinas, Duke Energy Progress, Santee Cooper, MISO, SPP, and PJM have either increased their winter target reserve margins or established winter target reserve margins in the last few years. Decreasing the Company's reserve margin would be a step in the opposite direction compared to the industry and would reduce Georgia Power's System reliability.

Q. WHY IS STAFF'S PROPOSED 24.5% TARGET RESERVE MARGIN INAPPROPRIATE?

A. Customers benefit from the enhanced reliability offered by planning to a winter target reserve margin of 26% for very little additional cost. Planning to a lower target reserve margin like the 24.5% recommended by PIA Staff reduces System reliability and does not provide substantial cost savings. If the Company planned to a 24.5% winter target reserve margin, the System's performance during extreme winter weather events like Winter Storm Elliott would have been diminished. Also, Staff's recommendation in the 2022 IRP for 24.5% sought to remove the risk of under forecasting loads from the Reserve Margin Study, while only planning for

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:30:25 AM

These utilities also assign the correct capacity accreditation to solar in the winter. Georgia Power Company assigns a 0% capacity accreditation to solar in the winter, which is incorrect. It also assigns a 100% capacity accreditation to gas and coal thermal plants, which is also very incorrect. This biases the model toward fossil thermal generation and is a prime example of how the Company can manipulate the IRP to argue for uneconomically high reserve margins.

risks associated with over forecasting loads. Planning for only one direction of movement on something like a load forecast is inappropriate because it fails to sufficiently capture the reliability risk. The 2023 IRP Update is itself strong evidence that loads can be higher than forecasted.

Q. PLEASE RESPOND TO INTERVENOR RECOMMENDATIONS THAT RE-RUNNING THE RESERVE MARGIN STUDY WOULD PLACE DOWNWARD PRESSURE ON THE ECONOMICS OF RESOURCES CONSIDERED BY THE COMPANY.

A. Witness Hotaling suggested that higher current capacity prices might reduce the Target Reserve Margin down to the 20% threshold for 1:10 LOLE. (Tr. 1286, lines 15–17.) While capacity prices do impact the economic evaluation in a Reserve Margin Study, it would be inappropriate to update a single variable without considering how other variables may have also changed. The assumption that a higher capacity price could result in a lower Economic Optimum Reserve Margin ("EORM") also ignores the Value at Risk component to the Company's Reserve Margin Study, which considers the value to customers for a reserve margin higher than the EORM. The Company will update all the relevant variables and perform a full Reserve Margin Study that will be filed as part of its 2025 IRP. At that time, the impact of capacity price changes can be properly evaluated in the context of all other changes in the study, including any updates to the level of reserve margin associated with a 1:10 LOLE.

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Pointing out here that Georgia Power Company did exactly this -- update a single variable without considering how other variables may have also changed -- when it provided in this very testimony Exhibit 1 - Cost Impact by Rate Group Sensitivity.

Q. SHOULD THE COMPANY SIMPLY REDUCE ITS WINTER TARGET RESERVE MARGIN TO 20%, EQUIVALENT TO THE 1 IN 10 LOLE, AS RECOMMENDED BY PIA STAFF AND SOME INTERVENORS?

A. No. The Company does not recommend reducing the winter target reserve margin below the 26% approved for planning purposes. Although some utilities plan to a level of reliability associated with a 1:10 LOLE, the Company considers that to be a minimum threshold, and also considers the costs and risks to customers when the target reserve margin is set. Lowering the winter target reserve margin to 20% would result in a reduced level of reliability, on par with or even below other regions that had firm load shed during recent winter events. Lowering the reserve margin to 20% would result in an 80% increase in the likelihood the Company would need to shed firm load, and the loss of firm load would be expected to be twice as severe, with a 110% higher amount of Expected Unserved Energy ("EUE"). With a 20% target reserve margin, the Company would be twice as reliant on interruptible loads and would expect higher generation production costs and purchased power costs. This lower level of reliability without consideration of costs and risks is not what the Company endeavors to provide its customers. System wide, adoption of a 20% winter planning reserve margin reduces the System capacity by approximately 1,800 MW. [1] This 1,800 MW, embedded in the Company's 26% winter target reserve margin, was necessary to maintain reliability during Winter Storm Elliott, and there is no evidence to the contrary.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:39:56 AM

There are many unanswered questions from Winter Storm Elliott regarding Georgia Power Company's performance and decision-making during and prior to WS Elliott.

Analysis from Simon Mahan:

"Georgia Power presented information to the Georgia PSC this morning on Winter Storm Elliott. Unlike TVA and Duke Energy, Southern Company didn't experience blackouts, so there's been little public discussion about their performance, here's a summary..

GPC reported they're a vertically integrated monopoly, have coal, gas, nuclear, are connected to their neighbors, has a 26% winter reserve margin, and followed NERC standards. But the problem is...those things describe TVA/Duke, too & they had blackouts. What's different?

"We had a pretty big purchase that came in and helped." From Florida. Here's the EIA data showing all the imports/exports into the Southern Company balancing area during the week of Elliott. You can see on 12/24 large imports (negative) from Duke/TVA/FPL.

The EIA chart is messy, power flowing into/out of SoCo. If you net everything out, here's what it looks like. Southern Company's BA was a net importer for two days during 12/23, 12/24, the most extreme days. SoCo's BA wasn't a net help to their neighbors.

GPC said they entered into a NERC Energy Emergency Alert Level 2 on Dec. 24 - the same day TVA and Duke had rolling blackouts. By noon ET, TVA and Duke had cut off large amounts of exports to SoCo; SoCo called FPL to fill in the gap. (negative = imports)

By noon ET on 12/24, solar performance was doing great (of the solar installed). Coal seemed to have an 800 MW hiccup at 10AM. At peak, gas generation ~25 GW, but there are about 35 GW of installed gas capacity in the SoCo balancing area. Where was about 30% of the gas?

At 5AM ET on 12/24, the SoCo balancing area underestimated demand forecast by about 1 GW, similar to neighbors, and were short on generation by about 1.5 GW. Duke was providing SoCo 1.1 GW at that time. Within an hour, Duke went into rolling blackouts & still providing >500 MW.

Imports and exports aren't bad; they're vital to keeping the system low cost and reliable. But when you're a small balancing authority, like a Duke, TVA or SoCo, you're effectively an island on your own in emergencies. A lot like Texas was w/ Winter Storm Uri.

What we still don't know: what units went offline (GPC said some did)? How long? Why? How much? How much did the imports cost and how will those costs be socialized across the Southern system? How was the gas pressure in the system? Were interruptible customers cut off? How much?

These are all questions being asked by other state commissions, by state legislatures, by FERC and NERC. These were questions asked after Winter Storm Uri. If we don't know what went wrong, we can't prepare. MS and AL should follow GA's lead and ask their utilities to present.

So how was the Southern Company BA able to avoid the blackouts their neighbors TVA and Duke had? One reason is their connection with Florida. Another is their solar investments. But things were pretty serious, and we've still got a lot of questions."

Video: https://www.youtube.com/watch?v=TYktpHDPBM4&t=596s

Source: https://twitter.com/SimonMahan/status/1621188474043863040

VI. PROPOSED RESOURCE SOLUTIONS

Staff Economic Analysis

Q. PLEASE DESCRIBE STAFF'S ECONOMIC ANALYSIS AND RESOURCE MIX ANALYSIS.

A. PIA Staff conducted a review of the resources proposed by the Company. Their review encompassed two primary analyses – a Resource Mix Study and a Ranking Analysis – utilizing the Aurora optimization model, within the defined study period of 2024 to 2040, which was used to expedite simulation times. The Resource Mix Study was conducted to determine the optimal selection of resources. This study was also intended to address the perceived shortcomings in the Company's economic analysis. In reevaluating the proposed resource investments, PIA Staff aimed to ascertain the necessity and economic viability of procurement of the Company's proposed resources. The analysis purported to weigh the proposed new resources against generic candidate units. Additionally, an economic ranking analysis was carried out, positioning the Company's identified resources on a spectrum from most to least favorable. This supplementary analysis was intended to provide the Commission with a structured reference should there be a requirement to pursue additional resources beyond the PIA Staff's endorsement.

Q. DOES THE COMPANY HAVE CONCERNS WITH PIA STAFF'S ECONOMIC ANALYSIS AND RESOURCE MIX STUDY USED IN THE 2023 IRP UPDATE?

A. Yes. The Company has several reservations regarding PIA Staff's Economic Analysis and Resource Mix Study in the 2023 IRP Update.[1] The extent of the issues signals to the Company that PIA Staff's findings are flawed and merit no consideration by the Commission. The identified discrepancies and oversights in PIA Staff's analysis are in the following key points:

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:02:28 AM

There is a long, long list of fundamental flaws and meritorious objections to Georgia Power Company's 2023 Integrated Resource Plan and methodologies that have been presented in written testimony, in oral testimony, in emails to the Company's attorneys, in this IRP proceeding and in many prior IRP proceedings, which are simply going unanswered by Georgia Power Company. They can be found here:

https://www.georgia-ces.org/2023-irp-update

and here:

https://psc.ga.gov/facts-advanced-search/document/?documentId=217582

The topics that Georgia Power Company ignores that are fatal flaws to its analysis and merit no consideration by the Commission include:

GPC-Manipulated Modeling Assumptions
Carbon Capture is not Reality
Fictional $0 Emissions Cost
Over-Exaggerated Load Growth
The True Cost of Fossil Gas
Failing to Use the Inflation Reduction Act
Mississippi Power Company PPA
Santa Rosa PPA
Yates Combustion Turbine Units 8,9,10

- The abbreviated study duration ending in 2040 inadvertently skews results and biases the model against all new construction proposed by the Company, primarily because it fails to account for the complete operational lifespan of the proposed new construction Company-owned assets. This short study period also precipitated fundamental mistakes producing inaccurate results.
- PIA Staff's analysis relied on generic units that are not feasible for construction within the time frame of 2026-2028, yet they were assumed to be available regardless.
- The conditions set by PIA Staff only allowed for the selection of new Company-owned proposals at their explicit Commercial Operation Dates ("COD"), in stark contrast to the ongoing availability afforded to generic alternatives, which could be selected at any time. This discrepancy, combined with an error related to the incorrect entry of the CODs for Plant Yates Units 8-10, hindered the model's ability to consider the Company's proposed resources appropriately, effectively excluding Yates Units 8-10 from consideration.
- Finally, the approach taken did not consider variability of natural gas, ignoring the low and high gas price scenarios.

Q. PLEASE EXPLAIN THE IMPACT OF THE SHORTER STUDY PERIOD.

A. The truncated study period chosen by PIA Staff has considerable implications, not the least of which is the disregard for the long-term benefits that Company-owned assets with extended lifespans could offer customers. By arbitrarily setting 2040 as the study cutoff, PIA Staff's economic analysis fails to account for unit performance and cost savings that would accrue from assets like Plant Yates Units 8-10, the proposed BESS projects, and the proposed BESS plus Solar project—all of which are anticipated to operate beyond the end date assumed by PIA Staff.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:03:29 AM

Here, Georgia Power Company is stating that it plans to use its brand new gas-fired capacity resources well past 2040, continuing to release planet warming carbon emissions, cause significant upstream methane leakage (also planet warming) and also emit asthma-inducing SOx and NOx pollutants, to the tune of 3,000,000 tons per year of emissions and pollutants.

Source: https://psc.ga.gov/search/facts-document/?documentId=217240

Look for Table 3-3 Proposed CT Units: Annual Potential Emissions for Each Fuel in the AECOM "Yates Steam-Electric Generating Plant
Combustion Turbine Units 8, 9, and 10
Prevention of Significant Deterioration
Permit Application" if this information was not subsequently pulled down from public access by the Company for its embarrassing details.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:57:56 AM

Georgia Power Company said in its response to STF-JKA-6-5, *"Yes, the Company could consider an agreement outside of a RFP process for the potential new or planned projects."* The Commission should require the Company to add MWs to the current RFP and entertain proposals received outside of announced RFPs and RFIs, which would be subject the same rigorous scrutiny for interconnection and other requirements without being burdened by Georgia Power Company's onerous, time-intensive, and inefficient RFP and RFI solicitation process. The Company also said that it could accelerate the development of battery energy storage system resources, particularly when siting them next to existing utility-scale solar and near retiring fossil units.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:59:58 AM

Here is where having an experienced modeler with experience using Aurora capacity expansion and chronological dispatch modeling software plus also experience with Georgia Power Company's arcane methodologies would be useful. But we don't have that and the residential ratepayers in particular suffer from rushed and uninformed decision-making.

PIA Staff's methodological oversight in adjusting for the shortened study period also introduced significant errors, particularly in the assessment of Combined Cycle units with carbon capture and sequestration ("CC with CCS"). PIA Staff's selection of a substantial volume of CC with CCS in the moderate gas, zero-dollar carbon scenario ("MG0") raises questions about the legitimacy of their analysis. By limiting the final study year to 2040 in PIA Staff's analysis, the availability of the 45Q tax credit — which is applicable only for the first 12 years of CC with CCS operation — was not correctly factored into the long-term economic model. Consequently, the stark cost increases that are expected to follow the 45Q tax credit's expiration were disregarded in PIA Staff's analysis. This oversight signifies broader analytical inaccuracies and undervalues the perceived benefits of the resources proposed by the Company, which in turn has contributed to PIA Staff's recommendation to reject these resources.

Q. DID STAFF'S RESOURCE MIX ANALYSIS CONSIDER ADDING THE PROPOSED PLANT YATES UNITS 8-10?

A. No. PIA Staff's analysis included a combination of errors that prevented the evaluation of Plant Yates Units 8-10 in the Resource Mix Analysis. Notably, the allowed selection dates for Plant Yates Units 8-9 and Unit 10 were incorrectly set to 1/1/2026 and 1/1/2027, respectively. In addition, there was no capacity modeled for Unit 9 in 2026, as the actual projected COD is in 2027, and only one month of capacity was modeled for Unit 8. PIA Staff artificially limited the opportunity for the model to pick Plant Yates Units 8-10 exclusively to the year of the entered selection dates and before any winter capacity contributions could be recognized by the model. Such limited parameters led to the Aurora model's optimization algorithm dismissing the Yates Units outright without sufficient consideration.

In response to hearing requests, PIA Staff acknowledged that allowing the Yates CTs the flexibility to be chosen in years beyond 2026 and 2027 would have resulted

Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 10:09:55 AM
GCES wholeheartedly agrees with this.

In Document Filing #216658, Supplemental Filing Errata dated 12-7-2023, Georgia Power Company provides only six (6) capacity expansion plans out of the 14 portfolios evaluated in the 2022 IRP. Three of these capacity expansion plans (MG0, LG0, HG0) include a $0 CO2 price while varying the wholesale price of gas, which significantly favors selection of gas-fired resources by shifting costs onto GPC customers. As a result, these three portfolios heavily select 8 to 11 GWs of new gas-fired capacity by 2036. These same three portfolios include 1 to 2 GWs of brand new nuclear beginning in 2035, which is impossible for several reasons.

In the next two capacity expansion plans (MG20, MG50), GPC clings to its gas-fired capacity by conjuring up Carbon Capture and Sequestration (CCS). GPC only has to look to their affiliate in Mississippi Power Company and the ruinous disaster that was the Kemper Project (where CFO Aaraon Abramovitz was a chief executive in charge and who is asking us to trust him now) to understand that CCS is not a commercial technology with too many failures to count.

We could ask Southern Company, who manages and operates the National Carbon Capture Center south of Birmingham, Alabama. Their website notes they've spent 150,000 testing hours with no commercial CCS project, but there is a DOE funded report2 that states, "*Our models indicate that our technology can meet the DOE cost targets for carbon capture by 2035. The technology is flexible to multiple applications including post-combustion carbon capture from industrial sources or direct air capture*." GPC is proposing 4 to 8 GWs of gas-fired combined cycle capacity w/ CCS in 2034.

In its response to STF-PIA-10-8 question, "*Has the Company evaluated the cost of installing carbon sequestration and storage, hydrogen conversion, or gas dual firing or conversion at any of its existing fossil plants (coal or gas-fired)?*" GPC responds, "*Georgia Power has not evaluated the cost of installing carbon sequestration and storage, hydrogen conversion, or gas fuel firing or conversion at any of the Company's existing fossil plants (coal or gas19*
fired). However, at the direction of counsel, in 2021, Southern Company Services conducted a system level pre-screening analysis related to the installation of carbon sequestration and storage at fossil plants across the system. This is a confidential technical and legal analysis." Be that as it may, CCS is not commercial.

Then in its response to STF-PIA-10-9 question, "*Has the Company evaluated the cost of installing carbon sequestration and storage, hydrogen conversion, or gas dual firing or conversion at any of its newly proposed fossil plants?*" GPC responds, *"The Company has proposed to construct Plant Yates Units 8-10 as a new fossil generation resource and submitted the air permit application to the Georgia Environmental Protection Division on December 8, 2023. As a part of the control technology evaluation required in the air permit application, the Company evaluated the feasibility of installing carbon capture and sequestration ("CCS") or low-greenhouse gas ("GHG") hydrogen co-firing for Plant Yates Units 8-10. Although these technologies are not demonstrated nor technically feasible for implementation on simple cycle combustion turbines, the Company nonetheless included an assessment of possible costs using generic and publicly available information. In this evaluation, there were still certain costs that could not be quantified, and no site-specific engineering was completed. The control technology evaluation concluded that even the partial costs for CCS or low-GHG hydrogen co-firing are unreasonable for Plant Yates Units 8-10."*

This is GPC itself saying that the Yates CTs will never see CCS technology bolted on, not now, not ever. The Yates CTs are guaranteed to become stranded assets in a rapidly decarbonizing world.

in the selection of Plant Yates Unit 8 in 2028, even without extending the study period.

Q. CAN GENERIC RESOURCES MEET CAPACITY NEEDS IN 2026-2028?

A. No. Asserting that generic resources could meet the Company's capacity requirements in 2026-2028 is fundamentally inappropriate. Generic resources lack defined specifics such as location, transmission interconnection and deliverability, land and fuel availability, finalized engineering plans, and the necessary environmental permits.

The utilization of these hypothetical constructs in place of the Company's proposed projects undermines reliability, as generic resources cannot be built swiftly enough (if at all) to meet imminent capacity needs. A more reasonable approach would bypass the use of generics from 2026-2028, focusing solely on actual, executable resources.

Q. DID THE COMPANY COMPLETE AN ANALYSIS CORRECTING FOR STAFF'S ERRORS?

A. Yes. The Company modified PIA Staff's modeling, which used the Company's load forecast, to correct for the errors described above to conduct an updated analysis. Specifically, the Company's analysis extends the study period to 2058 and corrects the limitation on Plant Yates Unit 8-10 CODs. This recalibration not only rectifies the CC with CCS error but also provides a more accurate representation of new construction resource lifespans.

The results achieved by using PIA Staff's own model—with the Company's corrections—led to the selection of previously excluded projects, including the Robins and Moody BESS projects and Plant Yates Units 8-10. These outcomes demonstrate that these projects included in the Company's proposed portfolio of resources are economically favorable when evaluated without errors. The

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:52:42 PM

GCES rejects this assertion. This is categorically false and so-called "generic" resources (those projects rejected by Georgia Power Company's failed 2023/2024 Utility Scale RFP) could be sited and built with the 2026-2028 time period. As a reminder, the state of Georgia has won the award for Best State for Business for over a decade from Area Development magazine, which is specifically focused on finding the right real estate and location for projects like solar, battery storage, and hybrid resources. When paired with Georgia Power Company's deep knowledge of the transmission interconnection and deliverability, which it must provide by 2025 in the form of a transmission hosting capacity map to be in compliance with FERC Order 2023.

The state can facilitate the necessary environmental permits. Engineering plans take 1 year from start to Issued for Constructions, less if you're planning well ahead. The fact that Georgia Power Company failed to procure 1,030 MW of solar and storage capacity resources in the 2023/2024 Utility-Scale RFP is all the more reason to bring on "generic" resources that could be available now or well within the required time frame of need.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:04:23 AM

"Hypothetical constructs" translates to "projects rejected by Georgia Power Company's failed 2023/2024 Utility Scale RFP."

Source: https://psc.ga.gov/search/facts-document/?documentId=215885

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:55:58 PM

The Georgia Center for Energy Solutions would like to know, *"How does this 2023 IRP Update meet the 2050 Net Zero Carbon commitment of Georgia Power Company, as the largest subsidiary of Southern Company who has made this pledge?"*

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 8:57:24 PM

But while still ignoring the multiple modeling errors identified by GCES and other intervenors.

Source: https://www.georgia-ces.org/2023-irp-update

Company's revised analysis correcting PIA Staff's modeling casts reasonable doubt on PIA Staff's initial rejection of the proposed Yates CTs and Robins and Moody BESS projects and underscores the importance of a more thorough and long-term evaluation provided by the Company's adjustments to PIA Staff's analysis.

The MPC and Santa Rosa PPAs

Q. WOULD FULLY INTEGRATED, JOINT RESOURCE PLANNING WITH OTHER SOUTHERN COMPANY SUBSIDIARIES LIKE MPC HAVE NEGATED THE NEED FOR THE MPC PPA AS ALLEGED BY GAM?

A. No. To be clear, we do plan jointly with other Southern Company operating companies. However, each retail operating company is subject to the oversight of a different state regulator and is ultimately responsible for maintaining the generation capacity needed to serve its customers consistent with the requirements of the state in which it operates. Indeed, GAM witness Pollock acknowledged this under cross-examination, stating that "over the long term, the notion is that each utility, each operating company [of Southern Company], should stand on its own" in terms of bringing resources online to meet their own load. (Tr. 1048, lines 810) In addition, per the terms of the IIC, a utility may retire or seek off System wholesale sales of excess capacity if in the best interest of its own customers. The Mississippi Public Service Commission directed MPC to retire 950 MW of capacity resources no longer needed to serve retail load in Mississippi. As previously explained, the MPC PPA was necessary to secure the available capacity for Georgia Power customers, and ensure that such capacity remained in the pool, dedicated to Georgia Power customers, and was not sold off the Southern Company System or otherwise retired. Had the Company not acted, Georgia Power would not have been able to ensure that these resources were available to serve our customers.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:00:27 PM

"Off System Wholesale Sales of Excess Capacity" is a lot of words to say "the left hand passing money to the right hand." All these words to say that a Georgia Power Company affiliate company is passing its worst performing assets that were set to retire to Georgia Power Company, allowing for five more years of uneconomic operations and the accompany millions of tons of harmful emissions.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:00:53 PM

No longer economical to operate.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:02:27 PM

Had Georgia Power Company not acted extra-legally by executing these PPAs and remarketing them prior to seeking Commission review and certification...

Source: See O.C.G.A. § 46-3A-3

https://law.justia.com/codes/georgia/2010/title-46/chapter-3a/46-3a-3

Q. CERTAIN INTERVENORS EXPRESSED CONCERN ABOUT THE LACK OF FIRM TRANSMISSION SERVICE FOR THE SANTA ROSA PPA. DO YOU HAVE AN UPDATE ON THAT ISSUE?

A. Yes. Georgia Power was able to secure firm transmission on the Southern Transmission System for transfer across the FPL/Southern Company interface through the Winter of 2024/2025. The Company will continue to seek firm transmission service for the remainder of term of the agreement.

Q. HAS GEORGIA POWER BEEN ABLE TO REMARKET ANY MORE OF THE CAPACITY FROM THE MPC PPA OR SANTA ROSA PPA FOR 2024 AND 2025?

A. While no further contracts have been executed, the Company is actively engaged with and in negotiations with other entities through its agent Southern Wholesale Energy ("SWE") for capacity sales in the years 2024 and 2025.

Proposed Yates CTs

Q. WHY SHOULD THE COMMISSION CERTIFY THE YATES CTS?

A. Plant Yates Units 8-10 are critical components of the 2023 IRP Update that will provide reliable and economical peaking resources needed to ensure Georgia Power can continue to reliably meet the electricity needs of its customers and support continued economic development in Georgia. Notably, the new units will be located at the existing Plant Yates site, allowing the Company to avoid costs and other issues related to the development of a greenfield site, while taking advantage of existing site infrastructure. Moreover, the environmental conditions, fuel supply, and life cycle operation and maintenance associated with the Plant Yates site are all favorable. Plant Yates is also located in an area of the state that is continuing to see significant electrical growth. Thus, locating these new CTs in this growing area

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:08:06 PM

These intervenors rightly expressed concern, because Georgia Power Company expressed concern about moving solar energy from south to north without transmission upgrades. Evidently that south to north transmission wheeling capacity was available to the Santa Rosa plant and its five-year-life-extending PPA with Georgia Power Company, but new resources didn't necessarily have access to that apparently available south to north transmission capacity.

South to north transmission capacity would be an excellent area to focus on deploying Grid Enhancing Technologies, specifically Heimdall balls. These puppies have been deployed in the Nordic countries and now Minnesota, and add significant transmission capacity based on real-time weather, particularly in the winter. Georgia Power Company continues to give GETs short shrift.

Source: https://insideclimatenews.org/news/21032024/inside-clean-energy-grid-enhancing-sensor-minnesota

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:09:12 PM

Southern Wholesale Energy is a 100% affiliated company of Georgia Power Company. All the corporate profits flow upward to the exact same corporate parent, Southern Company (SO).

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:13:25 PM

False. GCES and many other intervenors have introduced pragmatic and low-cost solutions that can provide the same critical capacity resources as the Plant Yates CTs at lower cost. "Components" are not "critical" when they are more expensive, more risky, and more harmful than the better alternative in battery energy storage systems (BESS).

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:11:30 PM

Battery energy storage systems can be located at this site just the same, and provide just as much or more resource adequacy as fuel-dependent and fuel-cost-hungry gas-fired units. Georgia Power Company is ignoring them in this 2023 IRP Update, having already spent $250 million in development costs on the Plant Yates CTs in a foregone conclusion.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:18:35 PM

Translation: The environmental conditions are favorable due to a pliable Georgia Environmental Protection Division who will approve the Plant Yates CTs 3 million tons of emissions per year - no problem. The fuel supply is favorable because Georgia Power Company's passes through 100% of fuel cost to the customer, so they bear zero risk. PLUS the affiliate companies of Georgia Power Company, whose profits flow straight up to Southern Company (the owner of Georgia Power Company) get to profit off the procurement of the natural gas fuel, the transportation of the natural gas fuel, the marketing of the natural gas fuel, the hedging of the natural gas fuel, the deliverability of the natural gas fuel, and the combustion of natural gas fuel to generate electricity, all of which is accretive to Georgia Power Company parent/affiliate profits.

provides additional reliability to the area, which has seen limited growth in generation development.

Finally, the Yates CTs will support the continued integration and penetration of renewables and storage on the electric System. Notably, the Company's correction of PIA Staff's expansion plans resulted in the selection of Yates 8 in winter 2027 and Yates 9-10 in winter 2028 as the Company proposed.

Q. PLEASE RESPOND TO THE ASSERTIONS MADE BY INTERVENORS THAT THE COMPANY DOES NOT NEED ALL THREE OF THE YATES CTS IF TRANSMISSION RESTRICTS THE OUTPUT OF THE PLANT DURING PEAK PERIODS WITH TRANSMISSION CONTINGENCIES?

A. There is only one specific transmission case where the full output of the three units was restricted. In all other scenarios, once online, all three units will be available to be economically dispatched. It is more economical to build three units consecutively to take advantage of economies of scale, especially when the expansion plan indicates a need for CTs to meet future needs. Additionally, the three CTs will be the most efficient CTs on the Southern Company System, which enables all three units to be dispatched ahead of other CTs and the Yates 6-7 steam units.

Q. WHY SHOULD THE COMMISSION HAVE CONFIDENCE IN THE ECONOMICS OF THE PROPOSED YATES UNITS?

A. Even though the proposed Yates units are being procured outside the typical RFP process, the Commission can have confidence in the economics of Plant Yates Units 8-10. The Company routinely engages with established original equipment manufacturers ("OEMs") and engineering, procurement, and construction ("EPC") firms to evaluate the costs and risks associated with projects like those proposed at Plant Yates. The expertise garnered from these engagements ensures a high level

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:19:54 PM

Once the model was returned to Georgia Power Company's typical bias toward gas-fired resource solutions, the Company saw its preferred plan come out of the modeling.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:05:54 AM

Hence, ERIS, not NRIS. When Georgia Power Company says that the Plant Yates CTs have full deliverability, it is a fundamental misunderstanding of the meaning of ERIS and/or a fundamental misapplication of the NERC definitions of ERIS and NRIS.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:21:48 PM

It is less economical to build any of the three Plant Yates CTs, as they are immediately uneconomical compared to solar and battery energy storage solutions today.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:22:48 PM

This will lock in another 3-4 decades of Plant Yates CTs operations, which is a highly lucrative business for Georgia Power Company and its affiliate companies.

of economic scrutiny and cost-effectiveness. Moreover, the Plant Yates project is strategically positioned to meet the anticipated load growth in a timely manner. As explained in the testimony of Aaron Abramovitz, the capacity additions from Plant Yates Units 8-10, in conjunction with the other resources proposed in this IRP Update and the expected energy sales' revenues, are projected to put downward pressure on rates. The combination of timely delivery through credible partnerships and the positive impact on rates underscores the economic viability of the Plant Yates Units.

Additionally, when comparing to publicly available information for similar technologies, the estimated costs for Plant Yates is comparable to other CTs. This is demonstrated in "TS Attachment D – Cost Comparison of Similar Projects" filed with the Yates Certification Application in this docket on January 31, 2024, as well as Exhibit 2, which provides a supplemental update to this attachment to more accurately capture the cost adjustment for one of the comparison units. In addition, the cost of Yates Units 8-10 fall within the cost range for gas peaking technologies included in Lazard's 2023 Levelized Cost of Energy Analysis attached as Exhibit 3. And while there are several site-specific aspects to the costs of the proposed CTs, these references demonstrate that the Company's cost for Plant Yates Units 8-10 are in line with costs of comparable CTs.

Q. IS GEORGIA POWER STILL COMMITTED TO RESPONSIBLY TRANSITIONING ITS GENERATION FLEET TO INCLUDE MORE ECONOMICAL, LOW- OR ZERO- CARBON RESOURCES?

A. Yes, and we will continue to work constructively with the Commission to transition the generation fleet in an economical and reliable way that is in the best interests of our customers. This commitment includes a well-balanced and diversified approach to strategically deploying clean, highly efficient, dispatchable BESS and natural gas resources, such as those proposed at Plant Yates, needed to provide reliable electric service. Significantly, we are already conducting some of the largest

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:25:01 PM

Noted architect of the failed Kemper Project and the massively over-budget and behind-schedule Vogtle Units 3&4, who is asking us to trust him that this plan will put downward pressure on customer rates...

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:34:18 PM

This is not the correct comparison. The correct comparison is to the 94% of projects that will come online in the U.S. in 2024 that are solar, wind, or battery storage. The remaining 4% is gas and 2% is nuclear (specifically Vogtle). So the correct comparison is to the the vast majority of projects that are being built that are not gas or nuclear, but rather renewables and batteries. Why is Georgia Power Company swimming against the current, except for the profits it will make by locking in gas-fired capacity?

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:06:54 AM

Georgia Power Company 2023 IRP Update Rebuttal Testimony (source: https://psc.ga.gov/search/facts-document/?documentId=218033) is an example of the manipulation the Company performs in this IRP and all past IRPs, in order to twist how it presents the Plant Yates CTs and other fossil assets.

In the Rebuttal Testimony (Exhibit 3), Georgia Power Company points toward the low cost of gas peaking technology. We see in this "Capital Cost Comparison" that Utility-Scale Solar PV is $700/kilowatt and for Gas Peaking it is the same $700/kW. We also see that for Utility-Scale Solar PV + Storage it is $1,075/kilowatt. What Georgia Power Company does not bring to your attention is this is a Capital Cost Comparison, which does not compare fuel costs or operating costs or maintenance costs or any other lifetime costs that do not appear in this graph, which is why Georgia Power Company selected this graph only from the LCOE study.

This is a fundamental misapplication of an LCOE comparison, which is meant to capture capacity and energy costs and indeed "costs levelized over the operating life." This can be seen in the very next graphs in this report that Georgia Power Company cites. To be clear, Georgia Power Company specifically used this LCOE graph because it is capital costs only and ignores the greater total levelized costs of gas peaker energy.

In these subsequent graphs, the 2023 Lazard studies shows that Utility-Scale Solar PV costs on a $ per MWh basis are between $24 and $96/MWh, and for Utility-Scale Solar PV + Storage costs are between $46 and $102/MWh. Meanwhile gas peakers are between $115 and $221/MWh.

Conclusion: The Plant Yates CTs are immediately more expensive than utility-scale solar PV + storage.

This is a clear demonstration by Georgia Power Company of the manipulation of data to conform to the Company's desired outcome of selling natural gas to benefit its many affiliate companies whose profits flow to the same corporate parent as Georgia Power Company and to lock in decades of natural gas sales. The Plant Yates CTs would operate into the 2070s.

Source: https://www.lazard.com/media/2ozoovyg/lazards-lcoeplus-april-2023.pdf

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:38:08 PM

Meanwhile, although they criticize PIA Staff for not modeling to 208 as they do, Georgia Power Company is completely ignoring the Net Zero Carbon by 2050 commitment that it is bound to as the largest subsidiary of Southern Company.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:39:58 PM

The heavy over-reliance on gas-fired capacity resources, and the continued push for more gas-fired capacity resources, is not well-balanced or diversified. Georgia Power Company has admitted as much in past filings.

Just a few IRP cycles ago in 2016, Georgia Power Company said, "*Adding only natural gas-fired resources would result in an over-reliance on a fuel with a history of volatility and which is subject to potential future cost increases driven by regulation, changing market conditions and other factors.*" Meanwhile they locked in nearly 2,400 MWs of gas-fired capacity in 2022 and now they want 2,300 more MWs of gas in this IRP. At the same time, Georgia Power Company has scaled back their fuel price hedging program in its Fuel Cost Recovery FCR-26 docket because Georgia Power Company passes 100% of the cost of fuel onto ratepayers. They can be cavalier about gas prices in their modeling because they bear no risk. In 2023, Georgia Power Company came before the Georgia Public Service Commission to recover an extra $2 billion in fuel costs for fossil gas on top of their normal annual gas bill of $2 billion. Meanwhile, solar and wind are continuing their record-long streak of $0 fuel costs. By contrast, with gas, there are hundreds of millions of dollars, likely billions of dollars in hidden costs to gas-fired power plants that Georgia Power Company cleverly manipulates to be excluded or minimized in its IRP analysis.

Number: 6 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:40:47 PM

Largest doesn't count when the RFPs that should procure 1,030 MWs fail entirely and procure zero MWs.

renewable RFPs in the country and plan to continue to develop more renewable resources in the future. Specifically, updated modeling for the 2023 IRP Update indicates that adding up to approximately 10,000 MW of new renewable resources by 2035 can provide economic benefits for customers. The certification of the proposed resource plan in this IRP Update, including the Yates CTs, is a necessary component of the Company's long-term fleet transition plan while maintaining a reliable electric System to address customers' energy needs.

Q. WOULD IT BE APPROPRIATE TO INCORPORATE INTO THIS IRP UPDATE PROPOSED ENVIRONMENTAL REGULATIONS, LIKE THE 111 RULE, PRIOR TO FINAL APPROVAL, AS PROPOSED BY SIERRA CLUB?

A. No. It would be inappropriate to plan for the specific requirements of a proposed environmental regulation such as the proposed 111 Rule, which would regulate greenhouse gas emissions at fossil fuel-fired power plants.

The Company believes that the implications of a final 111 Rule are captured within the range of carbon pressure scenarios included in the 2023 IRP Update. Since the proposed 111 Rule has yet to be finalized and state plans have not yet been developed or approved for existing unit requirements (which may take up to three years under the proposal), the Company believes that detailed analysis of the compliance options and development of the compliance strategy for the proposed 111 Rule would be premature and speculative. Specifically for the requests in this 2023 IRP Update, the contract periods for the PPAs with Mississippi Power and Santa Rosa Energy Center LLC end prior to the compliance dates for existing units in the proposed 111 Rule; therefore, these PPAs are not expected to be impacted by this rule. Also, BESS are not subject to the 111 Rule.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:42:18 PM

Georgia Power Company has yet to provide dispositve proof that the Plant Yates CTs are critical and cannot be replaced by cheaper, more pragmatic capacity resouces such as Virtual Power Plants and a program similar to Hawaii Electric Company's Battery Bonus program.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:47:07 PM

Georgia Power Company did exactly this, namely it used premature and speculative action focused on the Clean Power Plan, to manipulate the IRP process in 2016.

Georgia Power Company expressed grave concern about the cost of the US EPA Mercury and Air Toxics Standards (MATS) rule in its interim 2011 IRP Update, but in 2013 was able to eliminate significant uncertainty and select a MATS compliance plan that, “equates to a savings of several hundred million dollars for customers."

In its 2016 IRP, GPC moved from MATS to the newest grave concern over the EPA’s Clean Power Plan that result in nearly $1.4 billion in higher costs and to compensate GPC for retiring its fossil-fired units. The Clean Power Plan never happened but Georgia Power Company didn't let a good opportunity to take advantage go to waste.

Based on the proposed rule, the Company expects the proposed CTs at Plant Yates to comply with the 111 Rule and does not anticipate any changes impacting the decision to request these additional resources.

1,000 MW BESS – Robins, Moody, 200 MW BESS plus 200 MW Solar

Q. WHAT IS THE STATUS OF THE ROBINS, MOODY, AND 200 MW BESS PLUS 200 MW SOLAR PROJECTS?

A. All the BESS projects proposed in this proceeding continue to move forward in order to meet a December 2026 in-service requirement. The Company issued inquiry packages to several BESS OEMs and EPC contractors. The Company is currently in the process of evaluating and finalizing contracts around these supplier options. Additionally, the Company has continued negotiations with the developer of the 200 MW BESS plus 200 MW Solar facility with the goal of having final contracts signed as soon as possible.

Q. HAS THE COMPANY IDENTIFIED ANY OTHER BESS PROJECTS TO MEET PART OF THE 1,000 MW REQUEST IN THIS CASE?

A. Yes. The Company has identified several BESS projects it is pursuing as part of the need to deploy 1,000 MW of BESS by the end of 2027 to address the capacity needs associated with serving the new load coming to Georgia.

DER

Q. DOES THE COMPANY AGREE WITH PIA STAFF WITNESS KADUK'S PROPOSED SIZE CAP TO THE DER CUSTOMER PROGRAMS?

A. No. The Company does not agree with the size cap PIA Staff Witness Kaduk recommended for DERs in the DER Co-location program. The Co-location program was designed to make more efficient use of resiliency resources that customers are bringing to provide backup power for their operations, and to incent

cleaner resources certified and permitted for non-emergency use.[1] Introducing a 10 MW cap would exclude a significant portion of the resiliency resources large load customers will be procuring and prevent them from being used for the benefit of all customers.

Further, PIA Staff recommends setting the limit on the installed DER to match the customer's annual peak load at the premises, up to, but not exceeding the program maximum DER size limit. This recommendation is inappropriate for two reasons. First, resiliency assets designed to provide full back up are typically sized with nameplate capacity exceeding peak load. This accounts for operational best practice not to run resources for extended periods at maximum output and mitigates concerns should an individual asset fail. Second, unlike resources utilized in the DRC-1 tariff Witness Kaduk references, the resources deployed through these programs will be supply side assets capable of pushing back to the grid.[2] As a result, there is no need or basis for putting a size cap based on load.

Q. PLEASE RESPOND TO GAM WITNESS POLLOCK'S RECOMMENDED MODIFICATIONS TO THE DER CUSTOMER PROGRAMS.

A. One of GAM Witness Pollock's concerns is that the proposed tariffs do not specify the amount of the required credits/payments. He believes that this gives the Company "undue discretion" and that the "customer would have no opportunity to either vet the proposed credits/payments or seek a remedy from the Commission." (Tr. 962.) However, by not detailing the specific credit or payment within the terms of the tariff, the programs have flexibility to accommodate different types of resources, can expand to reflect additional use cases should they materialize, and are able to adjust to changing conditions.[3] That does not mean that customers and the Commission will not have an opportunity to view or vet the values and associated calculation methodologies. In fact, each of the proposed programs and tariffs requires an additional customer agreement. The customer agreement and supporting documents will provide further details, requirements, and specifications

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:48:21 PM
GCES agrees.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:49:55 PM
GCES agrees.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/31/2024 6:13:24 AM
In other words, customers and the Commission will have to remain proactively vigilant to seek out miscalculations and errors that favor Georgia Power Company. Meanwhile, Georgia Power Company will be trusted to provide fair calculations and methodologies, even as they manipulate and deceive the Commission and customers in this very Rebuttal Testimony and throughout the 2023 IRP Update that building new gas-fired resources is the most affordable, reliable, and sustainable option.

for the individual customer and resources. The resources participating in DCL-1 and DCO-1 will be supply side resources subject to Commission certification and approval.

Witness Pollock also expressed concern about the procurement of resources in the proposed DER Co-location Program and wants to require a competitive solicitation with engagement from the customer. The Company agrees that the participating customer must be engaged in the selection of resources but does not support a requirement that each resource must be competitively sourced. A participating customer may have existing vendor relationships or specific preferences on what technologies and or companies they would like to work with outside of a competitive procurement process. In addition, the Company has already issued an RFP and selected qualified vendors for the current DER Customer Pilot. These same vendors can be utilized for the proposed DER programs.

Q. DO THE DER CO-LOCATION AND CUSTOMER OWNED PROGRAMS EXCLUDE CARBON FREE RESOURCES?

A. No. The program is designed to be resource neutral; provided that such resources are dispatchable, have a firm fuel supply, and are interconnected to transmit the energy they produce to the electric grid. This could include microgrids, fuel cells, or other carbon free resources. Ultimately, the participating customer will be responsible for determining the set of resources that meet their needs and the Company will evaluate and reflect the appropriate System value associated with those resources.

Q. SHOULD THE COMPANY CONSIDER ADDING A VIRTUAL POWER PLANT OPTION TO ITS RESOURCE PORTFOLIO IN THIS CASE, AS SUGGESTED BY THE COALITION OF LOCAL GOVERNMENTS AND GEORGIA SOLAR ENERGY ASSOCIATION?

A. No. The Company proposed expansions of existing and new distributed energy resource programs that rely on end-use or customer-sited technology. [1] Fully leveraging additional load flexibility programs, like virtual power plants ("VPP"), will require more planning time and further operational capabilities than exist in this 2023 IRP Update. [2] The Company is in the process of evaluating and planning demand-side programs that will be filed in the 2025 IRP, including potential VPP programs. [3] Deriving System value from mass market load flexibility programs will require continued investment in enterprise Distributed Energy Resource Management Systems (DERMS) for visibility, predictability, and enhanced operational capabilities of these resources.

Minimum Ownership

Q. SHOULD THE COMMISSION REVISE THE MINIMUM OWNERSHIP REQUIREMENT IN ITS RULES?

A. No. [4] The Commission's longstanding 70/30 policy ensures System reliability and sufficient Commission oversight of the resources serving customers. Staff and Intervenors dismiss the Commission's 70/30 rule claiming that it is outdated and does not ensure that the Company procures the least cost resources for customers. However, this ignores the fact that apart from the resources requested in this case, the vast majority of all other capacity resources since 2001 were successfully procured through an RFP process. Further, allegations that the ratio is too high and biased in favor of Company-owned resources are based on comparisons to utilities in RTOs and deregulated markets, where service reliability has been a challenge in extreme weather events. Notably, Georgia is not alone in providing a minimum

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/31/2024 6:16:31 AM

Georgia Power Company's willful ignorance and chronic lack of action on Virtual Power Plants is not a reason to not implement proven, effective, and accepted VPP programs to help create new capacity and meet load growth. This is a proven solution that can be implemented today to provide vital capacity resources to help meet the near-term load growth. Georgia Power Company got its wish when the Distributed Energy Resource Management System (DERMS) proposal was not approved by the Commission in the 2022 IRP because the Company fundamentally does not want customers to own their own resources. This directly conflicts with their profit motive of building new assets and putting them in the rate base.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:52:51 PM

This is not good enough. The Company has had years to put forward a plan to implement VPPs and better demand-side programs. Georgia Power Company is woefully behind many major utilities with respect to demand-side programs.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/26/2024 9:55:02 PM

It's not clear why the PIA Staff recommend not studying a DERMS analysis of benefits and costs.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 9:07:08 AM

Many other Commission's use 50/50 with none of the concerns raised by the Company about reliability, specifically DTE and Consumers exercise a 50/50 rule with the Michigan Public Service Commission.

Source: see page 12
https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/068t000000PPEXYAA5

The 70/30 policy in Georgia has no basis or justification. Moreover, when the Company does point to PPA reliability vs. owned reliability, they fail to account for their affiliate's ownership of those PPAs. It is the left hand criticizing the right hand on the same corporate body. Georgia Power Company is saying we can't rely on PPAs because we don't own them and can't control them (which contracts can do, FYI) and the PPAs are inherently more unreliable, but they fail to acknowledge that their own affiliate company is the counter-party on the other side of the PPA. You cannot complain about unreliable PPA providers if your affiliate company is the PPA provider.

Georgia Power Company should compare the reliability of its self-owned generation fleet with that of the Mississippi Power Company Power Purchase Agreement. Which one is less reliable and is that a good deal for the customers of Georgia Power Company?

number of utility-owned and controlled resources to ensure a sufficient level of reliability and oversight. For example, the 70/30 ratio is comparable to that set in Virginia, where 65% of all new renewables are to be utility owned, and N.C.G.S. § 62-110.9(2)(b) in North Carolina, which provides for all new resources to be company owned except for 45% renewables and storage.

VII. TRANSMISSION

Q. PLEASE CLARIFY THE COMPANY'S TRANSMISSION REQUEST IN THIS CASE.

A. The Company requests approval of the transmission improvements necessary to accommodate the resources proposed in the 2023 IRP Update. These improvements were identified in the preliminary transmission screening analyses filed in the Technical Appendix to the 2023 IRP Update, confirmed in the Transmission Supplemental Filing, and are consistent with the types of transmission improvements typically required to accommodate new generation added to the System.

Q. IS THE COMPANY REQUESTING COMMISSION APPROVAL OF EACH OF THE EIGHT PROJECTS LISTED IN THE TRANSMISSION SUPPLEMENTAL FILING?

A. No. Consistent with Georgia Power's annual transmission planning processes, the Company will continue to study and reevaluate the actual transmission projects needed to bring the Yates CTs online. The eight projects identified are the slate of projects currently identified as necessary to support the Yates CTs. As the transmission system changes and additional studies are completed through established processes, it is possible that the projects necessary to bring the Yates CTs online may change or be replaced with better alternatives. This is consistent

with how the Company conducts its standard transmission planning process in the triennial IRP.

Q. ARE THE TRANSMISSION SCREENING ANALYSES AND TRANSMISSION SUPPLEMENTAL FILING COMPREHENSIVE ENOUGH TO SUPPORT THE COMPANY'S REQUEST IN THIS CASE?

A. Yes. The Company conducted initial screening analyses for the 2023 IRP Update filing at a base load level that includes all committed large loads. The Company then continued to refine the analyses for the supplemental filing with an updated load forecast that includes committed and potential large loads. Both versions of the analyses yielded the same results for transmission needs validating the comprehensive process conducted by the Company. Additionally, the Company conducted a Unit Designation Study for the Yates CTs that further validated the transmission needs.

Q. DO THE TRANSMISSION LIMITATIONS ON THE PROPOSED YATES UNITS LIMIT DELIVERY FROM THE UNITS ALL THE TIME?

A. No. The transmission upgrades required to unlock the full designated capacity of the three proposed Yates CTs only impact power delivery in peak demand periods under certain transmission contingencies. For most hours throughout the year, the new Yates CTs will be available to serve load up to the full designated capacity as soon as they come online.

Q. DID THE COMPANY PROVIDE SUPPORT FOR THE 600 MW TEMPORARY DELIVERY LIMITATION FOR THE YATES CTS IN PEAK PERIODS UNTIL 2028 WHEN TRANSMISSION CONSTRAINTS ARE ALLEVIATED?

A. Yes. As shown in the supporting studies and workpapers accompanying the Transmission Supplemental Filing on January 19, 2024, the Company provided

documentation of its analysis and results regarding the transmission limitations on the proposed Plant Yates CTs until required transmission improvements as listed in the Supplemental Filings are complete.

Q. ARE THE PROPOSED YATES CTS SUBJECT TO TRANSMISSION CURTAILMENT RISK AS A RESULT OF THE COMPANY HAVING REQUESTED ENERGY RESOURCE INTERCONNECTION SERVICE RATHER THAN NETWORK RESOURCE INTERCONNECTION SERVICE?

A. No. Since the Company's transmission planning process includes firm and future firm commitments only, there is no curtailment risk for the delivery of power from the proposed Yates CTs because of the Company's interconnection service request. This concern from Staff Witness Goggin and SREA Witness Olson represents a fundamental misunderstanding between the requests and studies for interconnection service and delivery service on the Southern Company System. As explained in the Company's response to STF-GS-2-1, neither Energy Resource Interconnection Service ("ERIS") nor Network Resource Interconnection Service ("NRIS") conveys delivery rights to a generator. Delivery service in the Southern Company System is separately requested through a transmission service request for point-to-point transmission or through the designation of the resource as a network resource for networked transmission service. The Company has already requested that Plant Yates Units 8-10 be designated as network resources and that designation study is complete.

The fact that transmission operators in other parts of the country and in different market structures combine interconnection and delivery service as part of a NRIS request does not signal a fundamental flaw or risk in how the Company has planned for the delivery of power from the proposed Yates CTs.

Q. DOES THE COMPANY CONSIDER NON-WIRES ALTERNATIVES IN ITS TRANSMISSION PLANNING AND, IF SO, WHAT ALTERNATIVES WERE CONSIDERED IN THIS CASE?

A. Yes, the Company considers non-wires alternatives in its transmission planning and has demonstrated the integration of these solutions in past projects where they added operational flexibility and were more cost effective.[1] However, given the time constraints in this case, the Company was unable to explore all the options typically available for a given transmission constraint or deficiency as part of the transmission analyses supporting the resource requests in this case. Nevertheless, the transmission projects identified to support the Yates CTs are consistent with the typical types of projects needed to accommodate the addition of large generation resources to the System.

Q. PLEASE RESPOND TO STAFF AND INTERVENOR RECOMMENDATIONS THAT THE COMPANY EMPLOY EMERGING, GRID ENHANCING TECHNOLOGIES AND NON-WIRES ALTERNATIVES LIKE DYNAMIC LINE RATING, GEOLOGICAL TYPOLOGY OPTIMIZATION, FLEXIBLE AC TRANSMISSION SYSTEMS ("FACTS"), ETC.

A. The Company already employs many of the alternative and advancing solutions that Staff and Intervenors propose where they provide value to customers. Grid Enhancing Technologies refers to a broad range of technologies, and these are considered as part of the Company's 10-year Transmission Planning Process. For example, the Company already uses FACTS on the System through its deployment of static VAR compensators and static synchronous compensators to improve power quality and efficiency of the transmission grid. The Company has also specified the use of series reactors and series compensation as power flow control devices in addition to advanced conductors. As a standard practice and through collaboration with the Southern Company Research and Development team, the

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:09:43 AM

There was ample time after the 2019 IRP when Non-Wire Alternatives (NWA) were strongly recommended, and after the 2022 IRP when NWAs were strongly recommended, and a comprehensive analysis of a suite of NWAs should be imminently feasible for the 2025 IRP.

Company continues to consider new types of technologies in its evaluation criteria. However, there are limitations to using some of the suggested technologies as they are not mature enough for deployment on the System, require long lead times, or are inappropriate for long term planning. To this point, dynamic line ratings ("DLR") have the potential to enhance operational flexibility by incorporating various factors such as wind speed, temperature, load profiles, and solar irradiance. These benefits occur in real-time or near real-time conditions, however, which make it inappropriate to use DLR capabilities as a long-term planning solution because it is impossible to know today what speeds the wind will blow at or what the solar irradiance will be many years in the future. Although not a long-term planning solution, the Company is evaluating opportunities for DLR implementation under unique circumstances to provide real-time operational benefits as a temporary solution until a long-term solution can be executed.

Q. DOES THE COMPANY USE AMBIENT-ADJUSTED RATINGS ("AAR") IN THEIR OPERATIONS AND PLANNING PROCESSES?

A. Yes. The Company uses AAR in its dynamic ampacity ratings program for transmission planning and operations planning processes that includes local parameters such as weather and wind. By use of this program, the Company equips its operators with current System conditions and minimizes risks associated with short-term, excess conductor loading. Within the Company's transmission planning processes, the Company leverages AAR as a bridge to permanent solutions, where appropriate. These applications tend to occur in the early years of the planning horizon when there is not sufficient time to construct a project.

Q. WHY DIDN'T THE COMPANY CONSIDER BATTERIES SITED CLOSE TO LOAD AS A TRANSMISSION SOLUTION IN THIS CASE?

A. Batteries sited near load are not a practical solution or replacement for the identified transmission upgrades for several reasons. First, the battery would need to charge

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Georgia Power Company is saying that it is impossible to know how much sunshine the state of Georgia will receive in the 3 years, 5 years, even 10 years in the future. Who knows what speeds the wind will blow in the future? This is laughable and pathetic at the same time.

from the grid, which causes it to act like additional load, thereby exacerbating the problem the additional resources and transmission solutions are trying to resolve. Second, a battery serving as a solution to a *transmission* contingency cannot be counted as both generation capacity and a transmission solution by planners on the Southern Company System. To serve as a transmission solution, a battery would need to be fully charged around the clock, available when and if called upon to address a contingency since contingencies can occur at any time and potentially for extended durations. Third, a 4-hour battery is not a practical solution to address transmission contingency scenarios. For example, a tornado could create an unexpected outage during hot weather conditions that lasts for a week. For batteries to resolve the transmission constraints identified in the transmission supplemental filing analysis, the transmission grid would need to have enough available capacity to charge the battery system(s), they would need to be of significant size and discharge time, and there would need to be multiple battery systems to cover the multiple contingencies across different locations identified in the analysis. The overall cost and land requirements to support battery projects that can cover extended duration outages would be cost prohibitive, especially when contemplating the relatively small magnitude of the total amount of transmission projects identified in the supplemental transmission filing. In addition, a total net present value of the battery systems versus wire solutions would need to be run to contemplate the total life-cycle costs of the two alternatives.

Q. SHOULD THE COMPANY PROACTIVELY INVEST IN MORE 500 KV TRANSMISSION LINES ACROSS THE STATE AS RECOMMENDED BY STAFF WITNESS GOGGIN, SACE WITNESS PATEL, AND SREA WITNESS OLSON?

A. No, not as part of its request in this case. Intervenor-proposed 500kV solutions cannot be implemented in the required timeframe and would not completely address the local area 230kV constraints identified to bring the Yates CTs online. That said,

the solutions proposed in the 2023 IRP Update and supplemental filings could complement future 500kV development.

Further, simply proposing to build more 500kV lines in the state misunderstands how transmission planning is coordinated with generation resource planning in Georgia and would result in very expensive infrastructure investment with no guarantee to alleviate known or anticipated transmission constraints. In deregulated markets, transmission owners build large transmission lines across states hoping that they have sited the infrastructure where independent power producers will seek to interconnect. In contrast, Georgia Power builds transmission as needed to deliver power from facilities that have been sited, financed, and have initiated the process of interconnecting to the System. Georgia Power's integrated approach ensures interconnections actually occur and minimizes transmission investments based upon speculation. Further, Witness Goggin's testimony seems to ignore the integrated nature of the transmission system in Georgia whereby Georgia Power jointly plans and operates the networked transmission system with the other Georgia ITS participants in the state: Georgia Transmission Corporation ("GTC") and the Municipal Electric Authority of Georgia ("MEAG").

In addition, adding or upgrading existing line voltage to 500 kV is not as simple as swapping out the line on existing structures. The Company requires additional rights of way access for larger voltage lines, the acquisition of which adds substantial time and cost to the process of rebuilding or retrofitting a line. Finally, Witness Goggin seems to gloss over the significant costs and time requirements associated with changing the voltage level of existing facilities, which would be additional costs borne by Georgia Power customers.

Q. PLEASE RESPOND TO THE RECOMMENDATION OF SEVERAL PARTIES THAT THE COMPANY IMPLEMENT A MORE HOLISTIC, INTEGRATED PLANNING BETWEEN TRANSMISSION AND GENERATION THAT IS PROACTIVE RATHER THAN REACTIVE.

A. The Company already does most of the planning improvements parties recommend. Unlike deregulated markets, which lack the insight and structural mechanisms to jointly plan transmission and generation, the Company's IRP process already holistically and intentionally considers the balance between transmission investment and generation deployment. While transmission is a significant aspect of IRP processes, long-term firm commitments by third parties under a FERC-jurisdictional Open Access Transmission Tariff ("OATT") is also a key driver in the development of transmission expansion planning. Additionally, Southern Company and Southeastern Regional Transmission Planning ("SERTP") Sponsors' transmission planning processes utilizes multi-disciplined analyses that identify System needs using least-cost and reliable solutions from all reasonably available alternatives. As an added step, the Commission reviews, regulates, and approves the Company's planning process and ensures that the assets built are reliable, economic, and in the public interest.

Q. DOES GEORGIA POWER ALREADY PARTICIPATE IN REGIONAL PLANNING WITH NEIGHBORING SYSTEMS?

A. Yes. That is the purpose of the SERTP organization. Georgia Power is also a Participant in the Georgia ITS with GTC, MEAG, and Dalton Utilities.

VIII. CONCLUSION

Q. IN CONCLUSION, PLEASE SUMMARIZE WHY THE COMMISSION SHOULD APPROVE THE COMPANY'S REQUEST WITHOUT MODIFICATION.

A. The 2023IRP Update presents a plan that will ensure Georgia Power can continue to reliably serve the state's growing capacity needs while supporting economic growth and lowering rates for all retail customers. The Company's plan provides substantial benefits for our customers and our state, and we request that the Commission approve the Company's request without modification.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

PUBLIC DISCLOSURE

EXHIBIT 1 – Cost Impact by Rate Group Sensitivity

	Domestic	Small Business	Medium Business	Large Business	Agricultural	Government	Lighting	Marginal	Total Retail
2022 Rate Case Test Year									
Net Income	668,694	169,009	331,733	69,040	3,556	21,616	33,058	219,114	1,515,820
Return On Investment	5.21%	7.28%	9.35%	8.66%	6.31%	3.71%	7.96%	6.33%	6.31%
from Exhibit LPE-1, Schedule 1.00									
Adjusted with 2023 IRP Update - 2028 Costs and Revenues									
Net Income	755,793	181,601	358,497	76,106	3,894	26,158	33,630	530,865	1,966,544
Return On Investment	5.51%	7.40%	9.35%	8.74%	6.47%	4.15%	8.05%	9.83%	7.18%
Difference									
Net Income	87,099	12,592	26,764	7,066	338	4,542	571	311,751	450,724
Return On Investment	0.3%	0.1%	0.0%	0.1%	0.2%	0.4%	0.1%	3.5%	0.9%

EXHIBIT 2 – Revised TS Attachment D to the Yates Certification Application

Comparison of Advanced Frame Simple-Cycle Combustion Turbine Projects - Amended Canal 3 and Grand River 2024 $ Cost (in red)

Project	Plant Yates CT Units 8, 9, & 10*	Canal 3 (ref 1,2,3)***	Grand River Dam Authority (ref 4,5)****
Plant Capacity (MW)	1,325	350	420
Reported Completion Cost (k$)	**REDACTED**	$280,000	$410,000
Actual Project Cost ($/kW)	**REDACTED**	*$800*	*$976*
Reported Completion Cost (2024 k$)**	**REDACTED**	$336,375	**REDACTED**
*Current Project Cost (2024$/kW)***	**REDACTED**	*$961*	**REDACTED**
Location	Newnan, GA	Sandwich, MA	Chouteau, OK
Site	Existing	Existing	Existing
Owner	Georgia Power Company	Stonepeak Infrastructure Partners	Grand River Dam Authority
EPC Contractor	Black and Veatch/Mitsubishi	Burns & McDonnell/Skanska USA Civil	Unknown
Commercial Operation	12/1/2026, 5/1/2027, 8/1/2027	June-2019	April-2026
Configuration	Simple Cycle CT	Simple Cycle CT	Simple Cycle CT
Turbine Technology	Mitsubishi M501 JAC	GE 7HA.02	Mitsubishi M501 JAC
Fuel Type	NG/ULSD	NG/ULSD	NG/Unknown
Emissions Control	Hot SCR	Hot SCR	Unknown

*Yates CT cost of gas lateral and financing excluded for comparison

Values adjusted using escalation of **REDACTED

***Amended values for Canal 3 based on GDP Price Deflator | U.S. Bureau of Economic Analysis (BEA) (https://www.bea.gov/data/prices-inflation/gdp-price-deflator)

****Amended values for Grand River to assume published cost is in nominal 2026$

References

1) https://gasturbineworld.com/simple-cycle-350-mw-7ha-02-peaking-plant/

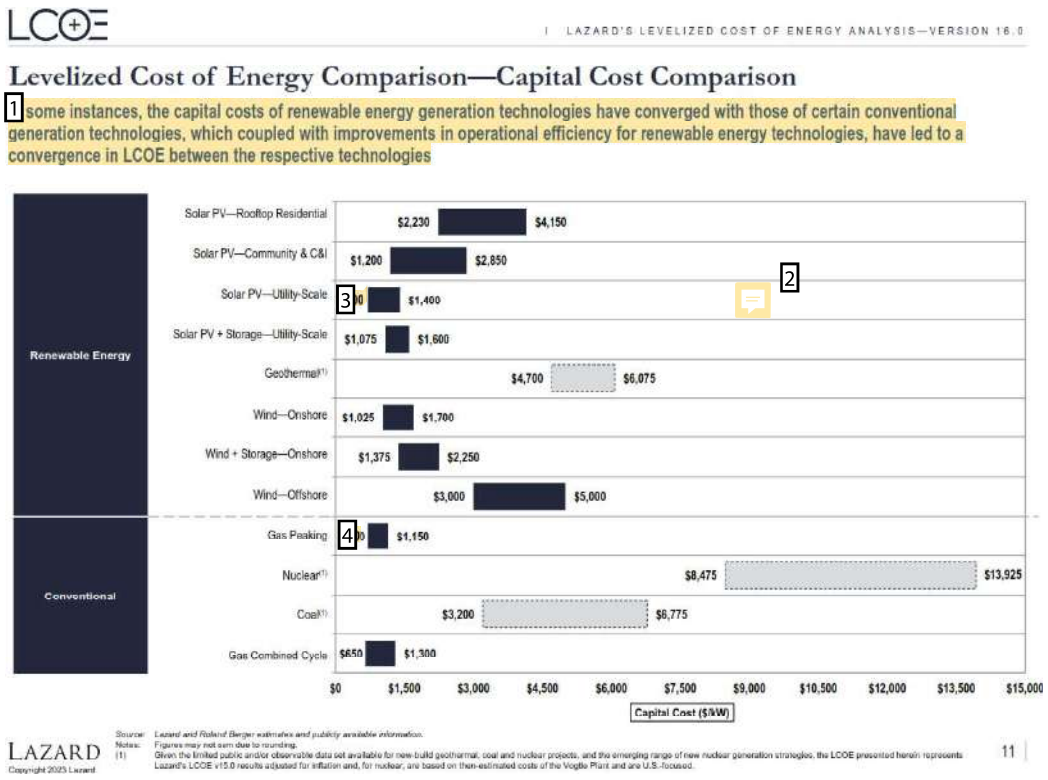
2) https://www.nsenergybusiness.com/news/burns-mcdonnell-canal-3-power-plant/

3) https://www.power-eng.com/gas/gas-and-diesel-fired-canal-3-station-completed-at-cape-cod/#gref

4) https://power.mhi.com/regions/amer/news/100323

5) https://www.readfrontier.org/stories/grand-river-dam-authority-looks-to-replace-its-last-coal-fired-generator-with-a-new-410-million-project/#:~:text=The%20Grand%20River%20Dam%20Authority,River%20Energy%20Center%20in%20Choteau.

EXHIBIT 3 – Capital Cost Comparison from Lazard's 2023 Levelized Cost of Energy Analysis



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Number: 1 Author: Georgia Center for Energy Solutions Subject: Highlight Date: 3/23/2024 1:49:16 PM

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/31/2024 7:50:30 AM

This is a great example of the manipulation that Georgia Power Company brings in this IRP and in all past IRPs. Note that the Capital Cost Comparison of Utility-Scale Solar PV is $700/kilowatt and for Gas Peaking it is also $700/kW, while for Utility-Scale Solar PV + Storage it is $1,075/kilowatt. What Georgia Power Company attempts to put past this Commission without critical examination is that this is a *capital cost comparison*, which does not compare levelized costs of operation. You cannot evaluate a the cost of capacity resource without including the costs to fuel and operate and maintain that capacity resource, otherwise the capacity resource is non-functioning as a capacity resource. A new Ford F-350 truck is non-functional with an empty tank of gas.

In the Rebuttal Testimony (Exhibit 3), Georgia Power Company points toward the low cost of gas peaking technology. We see in this "Capital Cost Comparison" that Utility-Scale Solar PV is $700/kilowatt and for Gas Peaking it is the same $700/kW. We also see that for Utility-Scale Solar PV + Storage it is $1,075/kilowatt. What Georgia Power Company does not bring to your attention is this is a Capital Cost Comparison, which does not compare fuel costs or operating costs or maintenance costs or any other lifetime costs that do not appear in this graph, which is why Georgia Power Company selected this graph only from the LCOE study.

This is a fundamental misapplication of an LCOE comparison, which is meant to capture capacity and energy costs and indeed "costs levelized over the operating life." This can be seen in the very next graphs in this report that Georgia Power Company cites. To be clear, Georgia Power Company specifically used this LCOE graph because it is capital costs only and ignores the greater total levelized costs of gas peaker energy.

In these subsequent graphs, the 2023 Lazard studies shows that Utility-Scale Solar PV costs on a $ per MWh basis are between $24 and $96/MWh, and for Utility-Scale Solar PV + Storage costs are between $46 and $102/MWh. Meanwhile gas peakers are between $115 and $221/MWh.

Conclusion: The Plant Yates CTs are immediately more expensive than utility-scale solar PV + storage.

This is a clear demonstration by Georgia Power Company of the manipulation of data to conform to the Company's desired outcome of selling natural gas to benefit its many affiliate companies whose profits flow to the same corporate parent as Georgia Power Company and to lock in decades of natural gas sales. The Plant Yates CTs would operate into the 2070s.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Highlight Date: 3/23/2024 1:49:27 PM

Number: 4 Author: Georgia Center for Energy Solutions Subject: Highlight Date: 3/23/2024 1:49:30 PM

STATE OF GEORGIA

BEFORE THE

GEORGIA PUBLIC SERVICE COMMISSION

In Re:

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

REBUTTAL TESTIMONY OF

AARON P. ABRAMOVITZ

MARCH 18, 2024

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 9:21:47 AM

In cross-examination with intervenor GIPL, the question, "*As a result of the new large load coming to Georgia, does Georgia Power expect residential bills to decrease?*" Mr. Abramovitz answered, "*As a result of what this case, if you will, applies to, if you just take this case in isolation, residential bills should go down. But for the 2023 IRP Update, all else being equal, rates should go down.*" [Note: the official hearing transcript for legal citation is only available after paying thousands of dollars to a private company for transliteration services, instead of the Commission paying this fee for an official transcript and making it available.]

To the question, "Does this include and is accounting for other rates and riders like fuel?" Mr. Abramovitz says, "No. This is a resource proceeding not a fuel proceeding." In other words, Mr. Abramovitz says that the fuel costs cannot be considered here even though you cannot operate a power plant as a capacity resource without fuel nor can you operate the power plant without engineers and technicians. Mr. Abramovitz argues that fuel costs and O&M costs and labor costs should not be included when evaluating a capacity resource and whether that resource will reduce customer bills or increase them. The analogy would be saying you can only look at the sticker price of a new $70,000 Ford Super Duty F-350 but you can't take into account the $7,000 per year in fuel costs and replacement tires and brakes and other maintenance costs when determining if the truck is a good value and in the best (public policy) interest of the customer.

Georgia Power Company will immediately claim that this is an IRP and that is a Rate Case or Fuel Cost Recovery proceeding. that these proceedings can't intermingle when they are clearly inextricably related and cannot be separated in a meaningful way, except as a shell game to hide costs from customers and the Commission.

When you do actually factor in the fuel and operations and maintenance costs, the Plant Yates CTs and the two PPAs are immediately more expensive as capacity resources than the Company is revealing (a subtle but powerful manipulation of this IRP to subvert the public policy interest). Georgia Power Company is concealing the fuel and O&M costs from its Figure 1 in Mr. Abramovitz's Rebuttal Testimony because it would show that the proposed fossil resources will put immediate update pressure on customer bills. It also implies as false the claim that Georgia Power Company's new large load customer rates are sufficiently high to automatically put downward pressure on all customer rates.

REBUTTAL TESTIMONY OF
AARON P. ABRAMOVITZ

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

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A. My name is Aaron P. Abramovitz. I am the Executive Vice President, Chief Financial Officer, and Treasurer for Georgia Power Company ("Georgia Power" or the "Company"). My business address is 241 Ralph McGill Boulevard N.E., Atlanta, Georgia 30308.

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

A. I graduated from the University of Georgia with a Bachelor of Business Administration in Finance and Management Information Systems. I joined Southern Company as a contractor in the Financial Strategy and Decision Support organization. This position was followed by a series of Financial Analyst roles in various disciplines that included Financial Planning, Financial Analysis, and Regulatory Support. From there I transitioned to Georgia Power to serve as the Coordinator for Forestry and Right of Way services. In 2008, I was assigned to the Kemper Project in Mississippi, where I served in financial leadership roles of increasing responsibility, eventually serving as the Project's Finance Director, where I was responsible for governance, reporting, regulatory support, and communications to Executives and the Board of Directors. In 2015, I returned to Atlanta to serve as the Director of Investor Relations for Southern Company, where

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:46:16 PM

None of Georgia Power Company's expert witness or management executives have addressed the following:

- The 2050 Net Zero Commitment that it must plan toward, despite this 2023 IRP Update load forecast stretching to 2060.

- The enrichment of affiliate companies to Georgia Power Company that will profit from the acquisition, transport, marketing and hedging, and sale of natural gas for this plan they are insisting is in the public policy interest, for which they have already spent $250 million in development costs for the Plant Yates CTs without receiving approval or even providing the opportunity for review by the regulator, the Georgia Public Service Commission, and for which the Company is already asking for that $250 million to be treated as a regulatory asset and those costs recovered, which would cut in half the alleged $500 million net benefit over three years that Georgia Power Company is trumpeting to great fanfare in this rebuttal testimony.

- The fact that fuel costs like natural gas are 100% passed through to customers, with Georgia Power Company recently reducing its fuel hedging program and further exposing ratepayers to volatile fuel costs.

- xxx

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:46:10 PM

It cannot be overstated how enormous of a failure the Kemper Project was. Mr Abramovitz is a direct architect of the Kemper catastrophe, taking a key leadership role during the height of the failures, and he continues to this day to gaslight this Commission and the state of Georgia with imprudent plans for brand new gas power plants that are not in the public policy interest and that will enrich the many affiliate companies of Georgia Power Company."

AP News: "*Mississippi Power initially estimated a price tag of $1.8 billion when the plant was announced it in 2006. In a sprint to grab federal tax credits, Mississippi Power started construction in 2010 with only 10 percent of the design completed. The company underestimated the concrete, steel, pipe and cable it needed, and how many workers would have to build the plant. Some parts had to be torn out and rebuilt, even as a whistleblower said intense schedule pressure led the company to mislead others on its progress. The Kemper Project ended up costing $7.5 billion. A built-from-scratch natural-gas plant of the same capacity would have cost less than $600 million.*"

https://apnews.com/general-news-26f8da1d4e474148b073b2a182537b59

I was responsible for Southern Company's communications and relationships with the investment community. In 2018, I was named the Southern Nuclear Vogtle Units 3 and 4 Vice President of Business Operations. In this role, I had responsibility for Southern Nuclear's Project Controls, Risk Management, Budgeting and Reporting, and Commercial Analysis & Controls. I moved to my current role as Executive Vice President, Chief Financial Officer, and Treasurer for Georgia Power in September 2021. I now oversee all accounting and finance functions for the Company including financial reporting, regulatory accounting, financial planning, analysis, and enterprise risk management.

Q. MR. ABRAMOVITZ, HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION ("COMMISSION")?

A. Yes. I testified in the Vogtle Construction Monitoring ("VCM") proceeding, Docket No. 29849, regarding the Nineteenth, Twentieth/Twenty-first, Twenty-second, Twenty-third, and Twenty-fourth Semi-annual VCM Reports and in support of the Company's Application to Adjust Rates to Include Reasonable and Prudent Plant Vogtle Units 3 and 4 Costs in Docket No. 29849 ("Vogtle Prudence Proceeding"); the Plant Vogtle Unit 3 and Common Rate Adjustment proceeding in Docket No. 43838 ("Unit 3 Rate Adjustment"); and the Company's 2022 base rate case proceeding in Docket No. 44280 ("2022 Rate Case").

Q. DID YOU PREVIOUSLY PRESENT DIRECT TESTIMONY ON BEHALF OF GEORGIA POWER IN THIS PROCEEDING?

A. No.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My testimony (i) explains why Georgia Power projects the 2023 IRP Update to place downward pressure on rates for customers, and (ii) addresses specific accounting aspects of the Company's request.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:46:05 PM

Here again, Mr. Abramovitz is a direct architect of the most expensive power plant in the world. His abysmal track record of risk management, cost control, budgeting and reporting, and accountability is one of the worst executive records in the history of US business. In exchange for his wisdom and business skills, Mr. Abramovitz earns over $5 million in annual compensation as CFO -- in charge of all the books.

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. As outlined in the direct testimony of Jeffrey R. Grubb, Francisco Valle, Lee Evans, and Michael A. Bush (the "Company Direct Panel"), the Company is requesting, among other things, 3,300 MW of capacity resources in the form of Power Purchase Agreements ("PPAs"), three simple cycle combustion turbine ("CT") resources at Plant Yates, and battery energy storage system ("BESS") resources. These capacity resources are necessary to meet the substantial energy needs being driven by the extraordinary pace and magnitude of economic development in Georgia. Importantly, the Public Interest Advocacy ("PIA") Staff and other parties to this case acknowledge that this growth is very real. As further explained by the Company Direct Panel, based on our forecast and in-depth understanding of our customers' energy needs and plans, we are confident that this growth will materialize in the 2026-2028 timeframe, and the capacity resources requested in the Company's 2023 IRP Update will ensure Georgia Power can continue to reliably serve our customers and support Georgia's growing economy.

The 2023 IRP Update will provide substantial benefits to customers, and we expect that the revenues associated with energy sales from incremental large load customers will put downward pressure on rates for all customers, including residential and small business customers. If approved, the 2023 IRP Update is projected to provide approximately $168 million of levelized net benefit annually for customers for 2026 through 2028, or more than $500 million of net benefit on a cumulative basis for the three years. This benefit would put estimated downward pressure on total retail rates of approximately 1.6% as a key variable in our next base rate case filing. The Company expects that the projected revenues associated with energy sales from large load customers will exceed the revenue requirement associated with the incremental resources requested to serve the forecasted increase in peak demand materializing in 2026-2028. Downward pressure on rates would be achieved for all retail customers when, as a part of our next base rate case, Georgia

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:46:01 PM

There is no legitimate reason that all of the proposed new-build natural gas-fired resources cannot be built as battery energy storage system resources, at significantly lower cost and risk over the 20 year forecast of this IRP. Georgia Power Company is pushing hard for gas-fired CTs in order to enrich its affiliate companies with the purchase, transport, sale, and hedging of natural gas, and to lock in decades of new fossil fuel capacity.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:56 PM

Not energy, but capacity. Each of those resources (the PPAs, the Yates CTs, and the BESS resources) are capacity resources. Language matters. In this same sentence, the testimony calls them capacity resources and then switches to hailing them as energy resources. This is a signal of the sloppiness and haste with which Georgia Power Company conducted this IRP.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:52 PM

While other parties to this case disagree with Georgia Power Company's 95th percentile load growth, lack of bilateral capacity agreements with IPPs and neighboring Balancing Authorities, and failure to better utilize existing resources before building brand new power plants.

Also, Georgia Power Company has yet to acknowledge the role that the CHIPS Act and the Inflation Reduction Act continue to play in this 17x increase (that's 1,700%) in load growth. Instead, they attribute all this growth to the ranking of No.1 state to do business from a magazine called Area Development and to the "constructive regulatory environment" they enjoy.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:46 PM

Just as Georgia Power Company was confident in its failed 2007 IRP load forecast, its failed 2010 IRP load forecast, its failed 2013 IRP load forecast, its failed 2016 IRP load forecast, its failed 2019 IRP load forecast, and its failed 2022 IRP load forecast, but otherwise sterling track record of load forecasts.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:16:01 AM

This is a known falsehood that Georgia Power Company is putting forth. The Company is only showing downward pressure on the capacity-only portion of rates, while ignoring the fuel and O&M costs that are required for a capacity resource to serve as a capacity resource.

Power would use the net excess revenues resulting from the 2023 IRP Update to decrease the impact of other revenue requirements when calculating the requested rate adjustments.

The regulatory asset deferrals and additional sum requested by the Company in this case are appropriate and should be approved. The deferrals will allow the costs and benefits from the proposed resources to be concurrently recognized in the year the resources are needed. Consistent with existing regulatory assets and regulatory liabilities previously approved by this Commission, the costs related to the 2023 IRP Update stem from unforeseen circumstances that could not have been accounted for during our last base rate case. These costs could not have been, nor were they, contemplated when the Commission established the Company's current base rates. The additional sum requested by the Company in this case is appropriate and consistent with the amount per kW recently approved by the Commission.

As acknowledged by Staff, the Company considered a wide array of federal incentives made available by the Inflation Reduction Act ("IRA") as part of its request. (Tr. 519-521.) This includes considering the IRA's Domestic Content Bonus Credit and Energy Community Bonus Credit as part of the selection of resources and identifying specific BESS projects that incorporate the benefits of the IRA. The Company will continue to pursue additional opportunities to leverage these and other federal incentives to lower costs for customers.

If the Commission approves the Company's request and load growth materializes as the Company expects, Georgia Power will be able to serve all of its customers—both current customers and anticipated future customers—while supporting Georgia's growing economy and related energy needs. If load growth does not materialize as expected, both the Company and the Commission have multiple levers available to manage the timing and extent of generation resources and related costs to customers.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:26 PM

The past is not necessarily indicative of the future, and is not sufficient justification as precedent for continuation in a rapidly changing energy transition with "unprecedented load growth" as Georgia Power Company claims (note that they have claimed even higher load growth in their 2007 IRP in order to justify the Vogtle Units 3&4 expansion).

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:21 PM

"These costs could not have been contemplated, nor were they contemplated..." The 2022 Rate Case ended in December 2022. The Inflation Reduction Act was signed into law in August 2022, with significant analysis publicly available to ponder the impact. Georgia Power Company began taking concrete actions in 2023 and incurred $250 million in development costs as of their filing of the 2023 IRP Update. If Georgia Power Company did not have the foresight to see a few months into the future, nor even to use the months between August and December 2022 to contemplate these regulatory liabilities in imprudent costs to develop the Plant Yates CTs, then perhaps the Commission should hold Georgia Power Company accountable for their imprudent spending.

It is also worth noting that in May and June 2022 when Georgia Power Company was witnessing massive increases in the cost of natural gas fuel, they were simultaneously asking the Commission for authorization to lock in 2,356 MW of gas-fired capacity for up to 15 years. No doubt they couldn't have contemplated natural gas prices rising and being passed through to ratepayers as they were actively reducing their fuel hedging program to further expose ratepayers to volatile wholesale market prices for natural gas. See: https://www.georgia-ces.org/2023-fuel-cost-recovery

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:16 PM

Georgia Power Company is a gatekeeper to additional federal incentives in the Inflation Reduction Act. By not retiring Plant Bowen and Plant Scherer, which are both coal power plants, Georgia Power Company is actively suppressing the competitiveness of renewable energy projects such as solar and battery energy storage that would otherwise receive a bonus federal tax credit of 10% for Energy Community status, but for Georgia Power Company's anti-competitiveness. These coal-fired power plants are not economic to run today and haven't been economic to run for years and years.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:12 PM

Again, with a brand new forecasting methodology at the 95th percentile, which is statistically near-impossible.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:17:17 AM

Georgia Power Company proposes three (3) levers, one of which is to reduce BESS deployment. This is a non-starter non-serious proposal demonstrating the Company's anti-competitiveness. The US Department of Energy "Today in Energy" February 15, 2024 post shows that 94% of installed capacity in 2024 will be solar (58%), battery (23%), and wind (13%). The remaining 6% is for Plant Vogtle (2%) and natural gas (4%). So the question is why is Georgia Power Company pushing a natural gas-fired capacity solution when the market is responding overwhelmingly with 94% of projects being renewable and the remaining projects are actually exclusively Georgia Power Company's plants (Vogtle and gas) that are being rejected by the marketplace?

Source: https://www.eia.gov/todayinenergy/detail.php?id=61424

In this request, Georgia Power has sought to balance the need created by projected growing peak energy demands with the timing of the generation resources necessary to support Georgia's extraordinary growth and economic development. This Commission's long-standing history of forward-thinking and constructive regulation is highly correlated to Georgia's continued ability to attract and retain businesses – ranging from technology and manufacturing to small business – and without approval from the Commission to acquire these necessary capacity resources, Georgia Power would be unable to serve its existing and growing customer base with the reliability customers value and expect.

At Georgia Power, our customers are at the center of everything we do, and we are unwavering in our commitment to provide them with clean, safe, reliable, and affordable energy. Approval of our 2023 IRP Update will preserve and protect the reliability and quality of service our customers expect and support the continued economic development of our state, while placing downward pressure on rates for the benefit of all customers.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. In Section II of my testimony, I explain how the 2023 IRP Update will put downward pressure on rates for all of Georgia Power's customers through the projected changes to the Company's revenue requirement associated with this request. In Section III, I address several accounting matters raised by intervenors, including the appropriateness of regulatory asset treatment for certain costs, the additional sums associated with the MPC and Santa Rosa PPAs, and the federal incentives associated with the Company's BESS resource requests. Section IV sets forth my concluding remarks.

II. DOWNWARD PRESSURE ON RATES FOR ALL CUSTOMERS

Q. PLEASE EXPLAIN HOW, IF APPROVED, THE 2023 IRP UPDATE WILL PUT DOWNWARD PRESSURE ON RATES.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:45:01 PM

Again, note the subtle language shift from "unprecedented" to "extraordinary" (it's not unprecedented because Georgia Power Company used massive load growth in its 2007 IRP to imprudently justify Vogtle Units 3&4)

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:17:57 AM

The "Constructive Regulatory Environment" is a beautiful thing, isn't it? It allows Georgia Power Company to collect a Return on Equity of 13.59% in 2022 when the industry average in that year was 9.5%. That represents a 44% premium for the "wisdom" and "stewardship" of Georgia Power Company.

source: https://psc.ga.gov/search/facts-document/?documentId=193593

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:44:52 PM

Correction: Attracting and retaining business is highly correlated to the subtle shift of electric rates onto residential ratepayers to the benefit of other rate classes, with a much lighter burden on commercial and especially industrial customers. This can be directly witnessed by reviewing Georgia Power Company's effective monthly ratepayer data in this source document: https://psc.ga.gov/search/facts-document/?documentId=216861) - note that you have to download this compressed .zip file, unzip it, open the unzipped file, click into the STF-DEA-3-4 folder, then open the attachment and reformat it so it is readable.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:44:46 PM

Aaron Abramovitz, the CFO of Georgia Power Company, means by this statement that Residential Ratepayers are the central customer from whom we can extract the most rate increases while shifting that burden onto other customer classes.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:44:42 PM

Georgia Power Company failed to address the lack of cleanliness of the Plant Yates CTs in this IRP, claiming here that they are clean when they will create up to 3 million tons of emissions annually according to their filing with the Georgia Environmental Protection Division (source: https://psc.ga.gov/search/facts-document/?documentId=217240). Note - you hav to download the file, unzip it, access the folder within called STF-PIA-10-9 and then open the large 30 MB attachment and scroll down to Table 3-3 to see the Plant Yates CTs annual emissions of 3,000,000 tons per year. Of course, we haven't touched upon the massive Coal Combustion Residuals cost that is $9 billion and growing due to imprudent Georgia Power Company IRPs and stewardship of the state of Georgia.

Number: 6 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:44:37 PM

This claim of reliable energy is not supported by the evidence or even the data that Georgia Power Company reports to the US Department of Energy. Georgia Power Company advertises its reliability on radio, TV, and social media, but it comes in at the bottom quartile on a list of 114 utilities that self-report their reliability data to the EIA. Reliability is vital—hospitals and other critical health services depend on reliable electricity. The Company metrics are even worse with pandemic Customer shut-offs, which continue today (2024) at the rate of 25,000 residential customer electricity shutoffs each month, while chief executives at Georgia Power Company and Southern Company make $5 million to $35 million per year.

Number: 7 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:44:32 PM

Georgia Power Company electricity rates -- especially for residential customers -- have risen faster than most utilities around the nation since the 2007 IRP when the Vogtle Units 3&4 were desperately needed. These rates increases are due to a variety of factors, including extremely poor management and oversight of Vogtle, Kemper, IRPs, and more; anti-competitive behavior among low-cost solution providers like solar and battery developers; negligence toward economic dispatch and the self-scheduling and unit commitment of coal plants despite poor economics; and many other gross negligence incidents combine to result in unaffordable energy rate increases, especially since the 2007 IRP.

Number: 8 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:44:26 PM

To be explicitly clear to Mr. Abramovitz, Georgia Power Company, their attorneys, and future litigants and judges reviewing the record, there is an active dispute raised in this proceeding by at least 1 intervenor that is being actively ignored by Georgia Power Company, related to this claim that this 2023 IRP Update will put downward pressure on customer rates.

A. The incremental forecasted load projected in the 2023 IRP Update would result in additional revenues that will benefit all retail customers in future rate adjustments. When those revenues exceed the revenue requirement, or costs, this creates excess revenues that helps to offset other costs in the computation of rate adjustments.

Georgia Power filed its 2023 IRP Update to serve the extraordinary energy demand of Georgia's economic growth. Although there is a cost to serve this increased and accelerated demand, there is also a benefit that materializes through increased energy sales and revenues. In this case, with this request, the incremental revenue benefits outweigh the costs. Downward pressure on retail rates occurs when the costs associated with the resources requested in the 2023 IRP Update are more than offset by the projected energy sales' revenues associated with the large load customers.

Q. HOW DOES THE 2023 IRP UPDATE IMPACT THE COMPANY'S REVENUE REQUIREMENT?

A. As shown in Figure 1 below, in the context of Georgia Power's upcoming 2025 base rate case, and assuming a three-year Alternate Rate Plan for the years 2026, 2027, and 2028,[1] the revenues from the incremental large customer loads projected by the Company are expected to exceed the revenue requirement associated with the capacity resources requested in the 2023 IRP Update. Consistent with the Company's typical practice, Georgia Power would include both the projected revenues and the costs associated with these resources when calculating the rate adjustments in our next base rate case and would use the net excess revenues related to these resources to reduce the impact of other revenue requirements, placing downward pressure on rates for all retail customers.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:19:08 AM

Georgia Power Company 2023 IRP Update Rebuttal Testimony (source: https://psc.ga.gov/search/facts-document/?documentId=218033) is an example of the manipulation the Company performs in this IRP and all past IRPs, in order to twist how it presents the Plant Yates CTs and other fossil assets.

In the Rebuttal Testimony (Exhibit 3), Georgia Power Company points toward the low cost of gas peaking technology. We see in this "Capital Cost Comparison" that Utility-Scale Solar PV is $700/kilowatt and for Gas Peaking it is the same $700/kW. We also see that for Utility-Scale Solar PV + Storage it is $1,075/kilowatt. What Georgia Power Company does not bring to your attention is this is a Capital Cost Comparison, which does not compare fuel costs or operating costs or maintenance costs or any other lifetime costs that do not appear in this graph, which is why Georgia Power Company selected this graph only from the LCOE study.

This is a fundamental misapplication of an LCOE comparison, which is meant to capture capacity and energy costs and indeed "costs levelized over the operating life." This can be seen in the very next graphs in this report that Georgia Power Company cites. To be clear, Georgia Power Company specifically used this LCOE graph because it is capital costs only and ignores the greater total levelized costs of gas peaker energy.

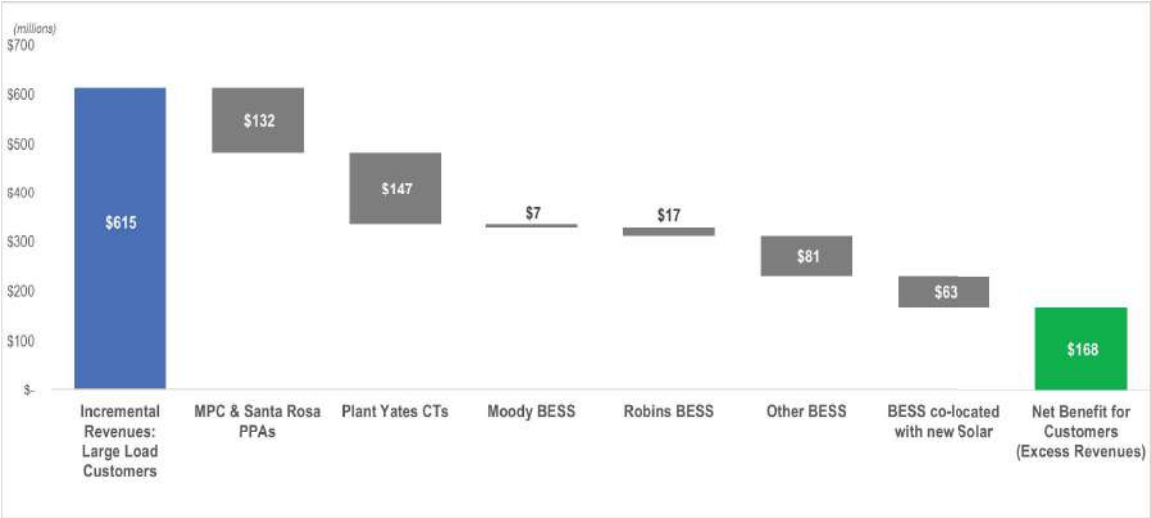
In these subsequent graphs, the 2023 Lazard studies shows that Utility-Scale Solar PV costs on a $ per MWh basis are between $24 and $96/MWh, and for Utility-Scale Solar PV + Storage costs are between $46 and $102/MWh. Meanwhile gas peakers are between $115 and $221/MWh.

Conclusion: The Plant Yates CTs are immediately more expensive than utility-scale solar PV + storage.

This is a clear demonstration by Georgia Power Company of the manipulation of data to conform to the Company's desired outcome of selling natural gas to benefit its many affiliate companies whose profits flow to the same corporate parent as Georgia Power Company and to lock in decades of natural gas sales. The Plant Yates CTs would operate into the 2070s.

Source: https://www.lazard.com/media/2ozoovyg/lazards-lcoeplus-april-2023.pdf

Figure 1: 2023 IRP Update: Levelized Revenue Requirement Impact (2026 - 2028)



Q. PLEASE DESCRIBE THE REVENUE REQUIREMENT COMPONENTS IN FIGURE 1.

A. The amounts presented in Figure 1 represent projected net revenue requirements for 2026 through 2028 on a levelized basis. The projected retail base revenues for incremental large load customers in Figure 1 are consistent with the revenues presented in the Company's response to STF-DEA-3-6. These projected revenues include estimated energy sales growth of nearly 9% over the next three to five years, with data centers representing more than 80% of that growth based on our most recent data. The revenue requirement blocks represent the projected revenue requirements of the capacity resources proposed in the 2023 IRP Update. As depicted in Figure 1, the projected result of the incremental revenues and the revenue requirement associated with the capacity resources is a levelized net benefit to customers of approximately $168 million, which would equate to a cumulative three-year net benefit of more than $500 million attributable to the Company's request in the 2023 IRP Update. This $500 million net benefit would help to offset other costs and mitigate, or lessen, rate adjustments for customers. Figure 1 clearly

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:20:05 AM

The correct way to view this Figure 1 graph is first that the incremental revenues from new large load customers can only be treated in isolation because the system is

Next, the MPC & Santa Rosa PPAs and the Plant Yates CTs are the largest costs that end up dramatically reducing by nearly half the $615 million benefit of new customers. Meanwhile the BESS added to existing DOD solar is very low-cost and highly beneficial as is the remaining BESS. Another interpretation is that it would be extremely foolish to follow Georgia Power Company's recommendation of reducing BESS as a cost-saving measure.

An IRP is an *Integrated* Resource Plan, not a capacity only plan. A capacity resource can only serve as a capacity resource if it has fuel for operations. Removing the fuel costs, fixed and variable O&M costs, and environmental compliance costs in order to compare only capacity costs is like buying a $70,000 Ford Super Duty F-350 but not accounting for the $7,000 per year in fuel and maintenance costs. All three fossil plants the Plant Yates CTs, the Power Purchase Agreement (PPA) from Mississippi Power Company for retiring Plant Daniel's uneconomic coal power, and the Santa Rosa PPA cannot function as capacity resources without these costs included, and any attempt to exclude them from the economic analysis is flawed and misleading.

Georgia Power Company Chief Financial Officer (CFO) Abramovitz presented "Figure 1: 2023 IRP Update: Levelized Revenue Requirement Impact (2026-2028)" in his written testimony and clarified in his oral testimony that only capacity costs were considered in Figure 1. Combustion turbines have a low capital cost but high operating cost, whereas Battery Energy Storage Systems (BESS) have a high capital cost but low operating cost. Mr. Abramovitz presents Figure 1 without fuel costs, O&M costs, etc. because the Net Benefit for Customers of the Georgia Power Company proposed fossil capacity plan would appear much smaller ($77 million per year), even after factoring in the incremental revenues from the variable portion of the large load tariff. By contrast, a plan that focuses on BESS would see a Net Benefit for Customers that is nearly double ($134 million per year) that of a plan with Plant Yates CTs and the PPAs. Finally, a plan that focuses on Virtual Power Plants such as the Battery Bonus Program at Hawaii Electric Co. would multiply the Net Benefit for Customers by nearly 6x to **$443 million per year** or $1,329 million over the three years 2026-2028.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:21:54 AM

The much vaunted $500 million net benefit is reduced to less than half the projected net benefit after accounting for true capacity costs, including the fuel to operate the actual capacity resources (without fuel, the Plant Yates CTs and PPAs are completely useless).

demonstrates the basis for the Company's expected downward pressure on customer rates.

Q. WHAT GIVES YOU CONFIDENCE THAT THE LOAD FROM THESE LARGE LOAD CUSTOMERS IS GOING TO MATERIALIZE IN THE 2026-2028 TIMEFRAME?

A. As Mr. Valle will explain further, Georgia Power's confidence is founded on robust forecasting methodologies, strong economic development activity, customer activity data, and customer commitments. The 2023 IRP Update is informed by current economic trends and utilizes established forecasting methods to predict the likelihood, scale, and timing of the projected load increases. Notably, PIA Staff and the Intervenors submitting testimony on the issue have not challenged the Company's organic load forecast and the statistical approach for anticipating growth from new large load customers. (Tr. 89, lines 10-11; Tr. 1190, lines 8-9.)

Georgia Power's forecast is realistic and appropriately risk adjusted. With a long-term economic development pipeline capacity of 21,000 MW in committed and potential projects by the mid-2030's, our near-term winter 2028/2029 economic development pipeline capacity is now estimated at nearly 14,200 MW, up from the 11,600 MW at the time of our initial filing in October 2023. Consistent with our past practices, we are estimating that Georgia Power will ultimately serve just a portion of all anticipated economic development projects, and the 2023 IRP Update forecasts Georgia Power's winter of 2028/2029 peak demand will be approximately 5,260 MW higher than the winter peak of 2023/2024.

At the time of our initial filing, Georgia Power was chosen by fourteen large load customers, securing agreements accounting for 3,612 MW of load, with 2,810 MW anticipated by winter 2028/2029. Nine of these projects have initiated construction, four are pending construction, and one 66 MW project is delayed. The trend of robust economic activity has continued, and since our initial filing, Georgia Power

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:48 PM
This forecasting methodology is being used for the first time.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:42 PM
This is categorically false and only someone who has not reviewed the other intervenor testimony would respond with such disregard for fact of matter. GCES and many other intervenors zeroed in on the statistically improbable 95th percentile load growth outlook, which completely fails to account for demand side management and battery energy storage system resources as far lower cost and more reliable alternatives.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:36 PM
How has Georgia Power Company adjusted for the missing load growth from the Rivian plant's announced multi-year delay, particularly in light of Georgia Power Company's insistence on using the 95th percentile probability band (which in and of itself is a fundamental misunderstanding of how to use and interpret statistical results such as probability bands).

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:27 PM
Compare this 21,000 MW figure by 2035 to the 40,000 MW of clean energy resources that are ready to be built within 2-3 years but for the anti-competitive roadblocks that Georgia Power Company sets for corporate clean energy buyers, independent power producers, clean energy developers, and anyone trying to chip away at the monopoly power that Georgia Power Company has and uses to its advantage, resulting in higher consumer prices.

Number: 5 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:20 PM
Is this the Rivian plant multi-year delay or are there others not being reported here?

has secured an additional 2,602 MW from committed customers contributing 1,647 MW by winter 2028/2029. This information clearly indicates that these large load customers are materializing and will need to be served sooner rather than later.

All signs, including direct input from customers, support Georgia Power's expectation for continued robust economic growth in Georgia and the timing of new large customers, and further my confidence that the load from these large load customers will indeed materialize in the 2026-2028 timeframe.

Q. DOES THE COMPANY'S ANALYSIS IN FIGURE 1 INCLUDE AN ADDITIONAL SUM AND THE DEFERRALS THE COMPANY REQUESTED IN 2024 AND 2025?

A. Yes, our analysis includes the cost recovery of an additional sum for all five years (2024-2028), the deferral and subsequent three-year recovery of capacity and non-fuel expenses associated with the MPC and Santa Rosa PPAs, and a credit for the off-System sale of that capacity during 2024 and 2025. Importantly, Georgia Power is proposing that any additional sale of the capacity from the PPAs mentioned above would increase the net benefit to customers reflected during this period, which would further contribute to the downward pressure on rates.

Q. HOW WOULD THE NET BENEFIT TO CUSTOMERS FROM THE 2023 IRP UPDATE IMPACT TOTAL RETAIL RATES?

A. Based on the current estimate, the net benefit to customers illustrated in Figure 1 from the 2023 IRP Update would be equivalent to a decrease in total retail rates of 1.6%.

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:14 PM

Again, these signs are from prospective customers, not existing customers. Meanwhile, existing customers like the US Department of Defense are not seeing their needs met, despite being among the largest and most lucrative of Georgia Power Company's existing customer base, not to mention the national security implications of making energy costs more expensive for military installations in Georgia.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:43:07 PM

Bear in mind that Mr. Aaron Abramovitz was personally responsible for the cost overruns of the Kemper Plant -- a carbon capture fiasco that Georgia Power Company is including in this very moment in time in 2024 as possible (which is verifiable and false) in its 2023 IRP Update -- as well as the cost overruns at Vogtle Units 3&4, the most expensive power plant in the world. Let us trust in his personal confidence.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:23:31 AM

Reminder, the executed PPAs with MPC and Santa Rosa were entered into without obtaining a Certificate of Public Convenience and Necessity from the Commission, and thus are not in the Public Policy Interest, and the Company is only asking for permission in this 2023 IRP Update, which is extra-legal per O.G.C.A. § 46-3A-3

Actions prohibited without a certificate of public convenience and necessity: (a) After January 31, 1992, no utility shall commence the construction of an electric plant, sell an existing plant or any portion thereof which is included in the retail rate base or which has been certified, enter into a long-term purchase of electric power, or make expenditures for a demand-side capacity option for serving the utility's Georgia retail customers without having first obtained from the commission a certificate that public convenience and necessity requires, or will require, such construction, sale, purchase, or expenditure.

Source: https://law.justia.com/codes/georgia/2010/title-46/chapter-3a/46-3a-3

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:42:34 PM

The overall strategy of Georgia Power Company since at least the 2007 IRP, when they asked for expensive nuclear or coal capacity, was to overbuild the system with expensive but rate-base-able capacity (either nuclear or coal, but so much the better if nuclear that is prone to massive cost overruns). This massively increased rates, and then in addition Georgia Power Company has significant overbuild of capacity (it says that it targets a reserve margin but it overshoots this target with even greater efficiency than it overshoots the Return on Equity target). Then, having overshot the targert, Georgia Power Company can lightly pull back on all of the rate increases that they have already been collecting on.

Q. HOW HAS THE COMPANY TRADITIONALLY FILED FOR RATE ADJUSTMENTS IN BASE RATE CASES?

A. In previous base rate cases, the Company filed base tariffs whereby the adjustment was applied to each traditional base rate on an equal percentage basis.

Q. HOW WOULD THE BILL FOR A TYPICAL RESIDENTIAL CUSTOMER BE IMPACTED IF THE NET BENEFIT TO CUSTOMERS PRESENTED IN THIS FILING WAS ALLOCATED TO ALL RATE GROUPS ON AN EQUAL PERCENTAGE BASIS?

A. The Company estimates that the net benefit to customers from the 2023 IRP Update would be equivalent to a decrease of $2.89 per month to the typical residential customer using an average of 1,000 kWh per month.

Q. WILL RATES CHANGE AS PART OF THIS PROCEEDING?

A. No. The Company is operating under the three-year Alternate Rate Plan approved in the 2022 Base Rate Case and is not requesting a change in rates in connection with the 2023 IRP Update. As explained above, the Company expects the increased revenues associated with the 2023 IRP Update to more than offset the cost of the resources requested in this case, and that impact would be addressed in the Company's next base rate case.

Q. WHAT IS THE ESTIMATED IMPACT TO RETAIL RATES AFTER 2028 AS A RESULT OF THE 2023 IRP UPDATE?

A. With the 2023 IRP Update, the Company expects continued downward pressure on rates for all retail customers beyond 2028. If approved, the cost of the proposed resources requested in this filing would be more than offset by the revenues from the forecasted incremental load beyond 2028. Since the revenue requirement associated with the Company-owned resources is expected to decline over time, the forecasted revenues from the incremental large customer loads included in this

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:25:33 AM

Georgia Power Company "expects" continued downward pressure on rates but has provided only evidence to support this claim from the point of view of capacity capital costs (but not the fuel or O&M to actually operate said capacity resources) and is deemed to be deficient in its response to the claim that the net benefit is significant or even greater than zero, when this claim is not supported by the evidence, ignores costs that are excluded from this calculus, and has not been addressed by Georgia Power Company.

request are expected to continue to exceed the total revenue requirement of the resources included in the 2023 IRP Update.

Q. WHAT LEVERS ARE AVAILABLE TO THE COMPANY AND THE COMMISSION TO MITIGATE THE RISK OF RATE PRESSURE IF THE LOAD GROWTH DOES NOT MATERIALIZE AS PROJECTED?

A. Let me first reiterate that we are confident the load will materialize as projected and that the requested resources will be critical to ensuring Georgia Power is able to serve its existing and growing customer base with the reliability customers value and expect. However, even if the forecasted load does not materialize as we expect, there are multiple levers in place to mitigate the risk of upward pressure on rates.

The IRP framework provides ample opportunities to adjust our resource plan in subsequent IRP cycles by reducing future investments in generation resources. First, the framework allows us to adjust procurement plans for the resources requested in this proceeding based on the most recent load forecast at the time resources are submitted for certification. For example, the Company could reduce the capacity procured for 2029 through 2031 through the All-Source Capacity RFP, which was approved in the 2022 IRP. Second, the Company can make sales in the wholesale market for any capacity above its target reserve margin to reduce the cost obligation for customers, just as we did to secure off-System sale related to the MPC PPA. Third, the Company could slow, reduce, or halt the development of BESS resources if load growth is slower than expected or fails to materialize. .

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 4:57:57 PM

Including the Rivian plant

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 5:03:16 PM

The Company is suggesting it can pull back on third-party owned Power Purchase Agreements for clean energy resources (#1 option), sell its overcapacity in the wholesale market (#2), or reduce the MWs it procures in BESS resources (#3). However, there is no mention or possibility of pulling back on the Plant Yates CTs, which according to Figure 1 in Mr. Aaron Abramovitz's sworn testimony, is the most expensive solution in the figure, costing $147 million annually before accounting for development costs and transmission upgrades and ongoing fuel costs. This is another exampe of the manipulation of data that Georgia Power Company does with each IRP, putting forward non-solutions that only serve their end purpose of increasing corporate profits at the expensive of ratepayers.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 5:24:24 PM

Why doesn't Georgia Power Company already do this for any and all capacity over its target reserve margin? Why should they carry extra capacity year over year?

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:47:39 PM

This sentence was clearly worked over numerous times, given the double punctuation at the end. This would be a massive failure of foresight, planning, and prudency. The BESS resources can serve many important services and put significant and forceful downward pressure on rates when carefully sited to serve as the bellows of the electrical grid. Georgia Power Company is sabotaging this state's economic transition by holding back the development of solar and storage resources and ignoring the broad benefits that would come from DERs and VPPs.

III. ACCOUNTING MATTERS

A. Deferrals

Q. WHY IS THE COMPANY'S REQUEST TO DEFER CERTAIN COSTS TO REGULATORY ASSETS APPROPRIATE?

A. The Company is seeking regulatory asset treatment for the following: (i) capacity and non-fuel energy payments made under the MPC and Santa Rosa PPAs in 2024 and 2025 (including additional sum and net of amounts remarketed to third parties); (ii) non-useful and non-transferable development costs associated with the requested BESS systems and Yates Units 8-10 CTs if the Commission denies these requests; and (iii) the development costs associated with the Flex Capacity framework that would otherwise be expensed for recovery in the next base rate case. The deferral of these costs to a regulatory asset is appropriate because both the costs and benefits from these capacity resources should be concurrently recognized in the year the resources are needed. Like existing regulatory assets and regulatory liabilities that were previously approved by this Commission, the costs related to the 2023 IRP Update stem from unforeseen and extraordinary circumstances. These costs could not have been, nor were they, contemplated when the Commission established the Company's current base rates.

Q. HAS THE COMMISSION ROUTINELY GRANTED DEFERRAL REQUESTS OUTSIDE OF A BASE RATE CASE?

A. Yes. The Commission has approved deferrals to regulatory assets numerous times in an IRP. For example, in the 2019 IRP, the Commission approved deferrals for Plant Hammond Units 1-4, Plant McIntosh Unit 1, Plant Estatoah Unit 1, Plant Langdale Units 5-6, and Plant Riverview Units 1-2. In the 2016 IRP, the Commission approved a deferral associated with Plant Mitchell Unit 3. In the 2013 IRP, the Commission approved a deferral for Plant Branch Units 3-4 and Plant

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Number: 1 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 4/3/2024 12:27:11 AM

These PPAs were procured extra-legally according to O.C.G.A. § 46-3A-3(a)https://law.justia.com/codes/georgia/2010/title-46/chapter-3a/46-3a-3 that states: "Actions prohibited without a certificate of public convenience and necessity (a) After January 31, 1992, no utility shall commence the construction of an electric plant, sell an existing plant or any portion thereof which is included in the retail rate base or which has been certified, enter into a long-term purchase of electric power, or make expenditures for a demand-side capacity option for serving the utility's Georgia retail customers without having first obtained from the commission a certificate that public convenience and necessity requires, or will require, such construction, sale, purchase, or expenditure. and any regulatory asset treatment should be denied."

The Commission states in its docket #55378 Procedural and Scheduling Order (https://psc.ga.gov/search/facts-document/?documentId=216450) that "the current filings are in part a result of Commission directives from previous orders." However, Georgia Power Company executive Mr. Aaron Abramovitz clearly states that Georgia company could not, nor did they, contemplate such a load increase at any point during the 2022 IRP proceeding (again, even though the 2022 IRP was still being amended in December 2022 along with the 2022 Rate Case and the Inflation Reduction Act was passed into law in August 2022, given them many months of contemplation). So the question of the legality of the MPC and Santa Rosa PPAs remains unanswered by Georgia Power Company or by the Georgia Public Service Commission.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:47:48 PM

The $250 million in development costs for the Yates Units 8-10 CTs was grossly imprudent and conducted with no regard to Commission authority. Moreover, the deferral of $250 million in failed Yates CT development costs greatly surpasses the three year cost savings from new customers of just $168 million.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 1:47:53 PM

The Company should not be rewarded (by being let off the financial hook with another regulatory asset treatment of poorly expended capital on poorly designed and failed products like the Flex Capacity framework.

Number: 4 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 5:37:22 PM

Regulatory asset treatment must be on case-by-case basis and past precedent has no merit on current decisions. Moreover, as has been said before, Georgia Power Company executive Mr. Aaron Abramovitz clearly states that Georgia company could not, nor did they, contemplate such a load increase at any point during the 2022 IRP proceeding (again, even though the 2022 IRP concluded in December 2022 and the Inflation Reduction Act was passed into law in August 2022, given them many months of contemplation). Georgia Power Company chose to ignore the Inflation Reduction Act passed in August and not contemplate the "unforeseen and extraordinary circumstances" through the months of August, September, October, November, and December 2022, then the 2022 IRP was approved as stipulated in a secretly-negotiated stipulation agreement. that intervenors were excluded from participating in.

Boulevard Units 2-3. In the 2011 IRP Update, the Commission approved deferrals for Plant Branch Units 1-2 and Plant Mitchell Unit 4C.

In addition to deferrals granted in the Company's IRPs, the Commission approved cost deferrals in 2020 related to the COVID-19 pandemic, as well as the deferral and subsequent disbursement of hundreds of millions of dollars in customer refunds during 2018 and 2019 resulting from the Tax Cuts and Jobs Act. Notably, these deferrals were approved during the three-year ARP periods for items that were not contemplated in the respective base rate cases.

Q. DO THE DEFERRALS REQUESTED BY THE COMPANY IN THIS CASE PLACE UPWARD PRESSURE ON RATES?

A. No. As previously mentioned, when the incremental revenues from the additional large customer load presented in this filing are properly considered in conjunction with the total revenue requirement of the capacity resources requested in this filing, including the cost of the deferrals, the revenues are expected to exceed the revenue requirement, putting downward pressure on rates for customers.

These deferral requests are directly associated with the capacity resources necessary to serve our customers. Absent the efforts taken by the Company to secure these resources to serve peak demand starting in 2026, Georgia Power would be unable to serve its existing and growing customer base with the reliability customers value and expect.

Q. CAN THE COMPANY WAIT UNTIL THE 2025 BASE RATE CASE TO MAKE A DEFERRAL REQUEST?

A. No. The costs being deferred will be incurred in 2024 and 2025, and the Company will need to account for those costs in that time period. Without Commission approval to defer the costs, the Company will be required to expense these costs in the Company's financial statements during that period. The Company cannot wait

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This long list of deferrals is strong evidence of the virtually risk-free environment in which Georgia Power Company is allowed to collect a Return on Equity that is 50% higher than the average market return on all the electric utilities in the United States. This is an evergreen sweetheart deal that Georgia Power Company has enjoyed for decades and is often called the "constructive regulatory environment."

to request deferral treatment in the 2025 Base Rate Case because, even if the Commission were to grant the deferral in that case, the Company could not retroactively reflect the deferral treatment in its financials for the periods when the costs were incurred.

B. Additional Sum

Q. ARE POWER PURCHASE AGREEMENTS REQUIRED TO BE PROCURED THROUGH AN RFP TO QUALIFY FOR AN ADDITIONAL SUM?

A. No. The IRP Act authorizes an additional sum on any long-term power purchase, and only instructs the Commission to consider lost revenues, if any, changed risks, and an equitable sharing of benefits between the utility and its retail customers when setting the additional sum. The purpose of the additional sum is to provide an incentive to the Company to encourage long-term power purchases in lieu of building or buying generation assets on which it can earn a return. Contrary to Georgia Association of Manufacturers Witness Pollock's assertion that the statutory criteria for the Company to recover an additional sum is unmet, it is not a requirement that the Company procure the purchased power through an RFP for it to be eligible for an additional sum. More importantly, the additional sum incents the Company to act for the benefit of its customers to secure capacity, whether Company-owned or power purchases, when that capacity is needed. This is exactly what the Company has done in this case.

Q. WHY IS IT APPROPRIATE FOR THE COMPANY TO RECOVER THE ADDITIONAL SUMS ASSOCIATED WITH THE MPC AND SANTA ROSA PPAS?

A. The MPC and Santa Rosa PPAs are needed to serve Georgia Power customers. Commission Staff acknowledges this fact. (Tr. 248, lines 11-12; 297, line 10; 298, lines 1-3.) The Company's request for an additional sum in this case is consistent

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It is, however, a requirement of the law of Georgia that the Company procure the purchase power after receiving a certificate of public convenience and necessity, specifically O.C.G.A. § 46-3A-3. These PPAs were not contemplated as part of the 2022 IRP and not part of a directive from the Commission.

Moreover, it is striking that Georgia Power Company set aside the market-based mechanism for price discovery and helping to ensure fair prices for ratepayers by seeking out resources from its affiliate company Mississippi Power Company, resources that are scraping the bottom of the barrel and were set to retire due to poor economics until Georgia Power Company bought them another five years of operations without approval from the Georgia Public Service Commission. And yet the Company cannot be bothered to hold an all-source RFP or amend the current RFP to add to the targeted MWs being sought or any other rationale and pragmatic and reasonable and prudent action to mitigate the near-term acute load growth crisis that Georgia Power Company has brought to our attention. Instead, the Company brings solutions that they want, that benefit their bottom line and that of their corporate affiliate companies, but come at the expense of Georgia Power Company customers who pay higher rates.

with the treatment of other Georgia Power long-term power purchases needed to serve our customers' capacity needs. Further, the amount per kW-year requested is consistent with what was approved by the Commission for the six capacity PPAs certified in the 2022 IRP, of which, five were affiliated PPAs. Although some Intervenors have argued that the Company should not receive an additional sum for a PPA with an affiliate (Tr. 939, lines 21-23), there is no statutory restriction on the Company's ability to receive an additional sum for a long-term power purchase with an affiliate. To the contrary, Commission practice has been to routinely allow additional sums for affiliate PPAs.

C. Federal Incentives

Q. WHAT FEDERAL INCENTIVES DID THE COMPANY CONSIDER AS PART OF ITS REQUEST?

A. The Company considered a wide array of federal incentives as part of its request. As stated by Staff Witnesses Smith and Deitchman in their testimony, "the Company was aware of and considered many of the tax incentives that have been made available by the IRA." (Tr. 484, lines 19-20.) Witnesses Smith and Deitchman also acknowledged this during the February 28 hearing. (Tr. 624, lines 13-15.) They note that the Company considered the IRA's Domestic Content Bonus Credit and Energy Community Bonus Credit as part of the selection of resources and identified the BESS projects that incorporate the benefits of the IRA (Tr. 520-521.) Specifically, these projects, some of which include co-located solar projects, qualify for certain investment tax credits and production tax credits, the benefit of which were included in the Company's economic evaluation for the 2023 IRP Update.

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Georgia Power Company is stating that 5 of the 6 gas-fired capacity PPAs it signed in the 2022 IRP were with its own affiliate companies, and it should receive the Additional Sum bonus (in Louisiana politics that call it *lagniappe*, on Long Island they call it the *vig*) and its affiliate companies should receive the guaranteed risk-free business and associated profits, allowing the corporate parent of Georgia Power Company to profit on both sides of the transaction. Here, Georgia Power Company is arguing that because it has always profited on both sides of the transaction, this long-standing precedent should be honored similarly for the extra-legally procured MPC PPA and Santa Rosa PPA.

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Nor has Georgia Power Company provided any reasoning, whether compelling or otherwise, as to why they should receive a double-dip Additional Sum, other than the precedent argument that "It's Always Been Done This Way!" which is not prudent or in the Public Policy Interest.

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Notice how Georgia Power Company lets the Public Interest Advocacy Staff answer this question for them. There is no time frame they give and general lack of enthusiasm or truthfulness in Mr. Abramovitz's written and oral response to the question of whether Georgia Power Company is investigating federal incentives, the Company is unlikely to take seriously any federal funding opportunities in time for the 2025 IRP.

Q. WILL THE COMPANY PURSUE ADDITIONAL OPPORTUNITIES TO LEVERAGE FEDERAL INCENTIVES?

A. Yes. The Company is continually pursuing new and evolving opportunities to leverage federal incentives, including financing through DOE Loan Guarantees, tax incentives, and other credits to lower costs for customers.

IV. CONCLUSION

Q. WHY SHOULD THE COMMISSION APPROVE THE COMPANY'S REQUEST AS FILED?

A. At Georgia Power, the customer is at the center of everything we do. We are unwavering in our commitment to provide our customers with clean, safe, reliable, and affordable energy. Our request in this 2023 IRP Update seeks to continue delivering on our customer commitment, as the forecasted load growth and resulting need for additional capacity presents a significant opportunity to continue to reliably serve our customers. Approval of our 2023 IRP Update will preserve and protect the valuable reliability and quality of service both our current and future customers expect and will support the continued economic development of Georgia, while placing downward pressure on rates for the benefit of all customers.

Georgia's continued ability to attract and retain businesses - ranging from technology and manufacturing to small business - is highly correlated to the Commission's long-standing history of forward-thinking and constructive regulation, which facilitates Georgia Power's ability to provide customers with clean, safe, reliable, and affordable energy. We respectfully request that the Commission approve the Company's 2023 IRP Update without modification.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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Translation: the Customer is the cash cow that we milk every month that is the center of everything we do.

Number: 2 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 6:15:20 PM

This "respectful request" comes after Georgia Power Company has spent $250 million in development costs for the Plant Yates CTs before the Company saw fit to bring these costs and a request for certification before the Commission for review and approval.

Number: 3 Author: Georgia Center for Energy Solutions Subject: Comment on Text Date: 3/23/2024 6:19:46 PM

That's it, boys! We got everything right and no need for self-reflection or introspection. Georgia Power Company nailed it the first time, just as they nailed the cost and timeline of Vogtle and just as they nailed the load forecast two years ago that ended up being 1,700 % higher that the Company forecast, so there is definitely no need for modification of their emergency hair-on-fire 2023 IRP Update request. Congratulations everybody, great job, let's pack it up and head home!