STATE OF GEORGIA
BEFORE THE
PUBLIC SERVICE COMMISSION

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

POST-HEARING BRIEF BY GEORGIA COALITION OF LOCAL GOVERNMENTS

The Georgia Coalition of Local Governments ("Coalition") respectfully submits this Post-Hearing Brief with its comments and recommendations in response to the evidence before the Georgia Public Service Commission ("Commission") in Docket No. 55378: Georgia Power Company's 2023 Integrated Resource Plan Update. The Coalition also urges the Commission to adopt the Coalition's proposed Ordering Paragraphs in the final order in these dockets, which is attached as "**Exhibit A.**"

BACKGROUND

On October 27, 2023, Georgia Power Company ("Georgia Power" or "the Company") filed an update to its 2022 integrated resource plan ("IRP"), citing rapid, unprecedented, and unforeseeable load growth from new industrial facilities such as data centers and EV manufacturers. In this filing, the Company proposed a portfolio of energy resources to meet these needs, including:

- A power purchase agreement with Mississippi Power Company for 750 MW of capacity and energy

- A power purchase agreement with Santa Rosa Energy Center LLC for up to 230 MW of capacity and energy from a natural gas-fired combined cycle ("CC") unit located in Florida
- Approval to construct up to 1000 MW of battery energy storage resources ("BESS"), including 178 MW at existing solar facilities located on military bases and 200 MW paired with new solar at a trade secret location with existing transmission interconnection facilities
- Approval to construct three dual-fuel combustion turbines at Plant Yates with a nameplate capacity of up to 1400 MW, depending on the fuel being used
- Approval of new and expanded distributed energy resource ("DER") and demand response ("DR") programs

In addition, the Company requested approval of a "Flex Capacity" framework to allow the procurement of additional capacity needs ahead of the 2025 IRP filing, should the load forecast change sufficiently to require additional capacity on that timeframe.

The Commission heard direct testimony from the Company on January 16th and 17th of 2024; direct testimony from the Public Interest Advocacy Staff ("PIA Staff") and other intervenors on February 29th and March 1st of 2024; and rebuttal testimony from the Company on March 27th of 2024. This testimony establishes the record for these proceedings. On March 27, 2024, the Company and PIA Staff filed a stipulation proposing resolution of all issues in these proceedings, which has since been joined by various other intervening parties.

RECOMMENDATIONS

The Coalition respectfully requests that the Commission amend the Stipulation as follows and incorporate the Proposed Order in Exhibit A into its final order in this case:

1. Require Georgia Power, in coordination with Commission Staff and other interested parties, to develop a full-scale virtual power plant program consisting of residential and commercial solar arrays and battery systems for Commission approval within 180 days of the conclusion of this proceeding.
2. Reject the proposed combustion turbines at Plant Yates and disallow regulatory asset deferral for the costs that were incurred prior to the Commission's decision in this docket
3. Adopt the PIA Staff's proposed multi-value transmission planning framework.
4. Solicit CARES bidders for capacity by requesting the resubmission of standalone solar bids to also include battery storage
5. Adopt additional ratepayer protections, as proposed by Georgia Interfaith Power and Light (GIPL)

SUMMARY OF ARGUMENT

Virtual Power Plant

A Virtual Power Plant is Uniquely Suited to Address Rapid, Uncertain Load Growth

Throughout this proceeding, Georgia Power has described the load growth that it is observing on the system as "unprecedented," both in its speed and in its scale. This load growth has been so rapid, in fact, that the Company's pipeline of new large load projects grew by an additional 2,602 MW in the period between its initial filing in October and the filing of its rebuttal

testimony in March.[1] With the continued influence of the Inflation Reduction Act on industrial investment and the increasing digitization of our economy, there is no reason to believe that these trends will slow or reverse. If anything, the Company should be prepared for possible acceleration of load ramp timelines.[2]

That said, as the Company described in its filing, there is a lot of uncertainty to the realization of new large loads. Businesses often engage multiple states when choosing where to locate a new factory or facility, so there is a chance that an organization might express interest in Georgia only to locate elsewhere. Then, once a company selects Georgia, the Territorial Act allows that customer to choose their utility service provider, which could be a utility other than Georgia Power. After that, it is possible that the load realization is delayed beyond the originally planned time, or that the load materializes at a lower level than anticipated. All of these uncertainties create risks for customers. If resources are built too quickly, ratepayers will be left to pay for power plants that are seldom used without the attendant increase in revenues from new customers, which will increase costs. Though the stipulation offers a modest degree of protection to customers, those protections expire in 2028,[3] even as some resources have lifetimes in excess of 40 years.[4] This is particularly notable since some of the resources, including the combustion turbines ("CTs") at

[1] Rebuttal Testimony Of Jeffrey R. Grubb, Francisco Valle, Lee Evans, Michael B. Robinson, And Michael A. Bush (Docket 55378). Pg 5. Lines 1-2.
[2] Rebuttal Testimony Of Jeffrey R. Grubb, Francisco Valle, Lee Evans, Michael B. Robinson, And Michael A. Bush (Docket 55378). Pg 5. Lines 2-5.
[3] Stipulated Agreement between Staff and the Company. Paragraph 3.
[4] Main Document. Technical Appendix Chapter 6 – Yates CTs.

Plant Yates, won't begin operation until the end of 2026 or second quarter of 2027, assuming the projects proceed on-time and according to schedule.[5]

The Company is not without alternatives. A virtual power plant consisting of customer-sited solar and battery storage resources represents a clean, affordable, flexible, and modular alternative to some of the resources proposed in this case. While resources like the Plant Yates CTs are modular in increments of hundreds of megawatts, virtual power plants are modular in increments of kilowatts, which substantially reduces the risk of overbuilding capacity. Moreover, these resources can be deployed in a matter of weeks or months, rather than years, which allows time for greater information on load realization to become available before investment decisions must be made.

Under cross examination about a different DER program, the Company agreed that it is important to approve customer-sited programs now. As witness Evans stated:

> *"[I]t's also imperative that we get the program approved now such that that process can begin and that capacity can be realized as soon as possible."*[6]

Moreover, following questions from a Commissioner, the Company further recognized the value of Company control of customer-sited resources to maximize system benefit. As Witness Evans explained:

> *"Whenever we look at batteries and the benefits that they can potentially provide going forward from a behind-the-meter customer type. The real benefit there is being able to dispatch them when we need them; right? Going back to Winter Storm Elliott, using your example, whenever we needed capacity on the system during Winter Storm Elliott, was well before 7:00 a.m. So if we were incenting customers to a fixed price signal, right, that was*

[5] Company response to data request STF-JKA-2-22(f)
[6] Hearing #1 Transcript. Pg. 330. Lines 12-15

not dynamic that we cannot dispatch and send that to them whenever we actually needed it, they might have not responded, waited until 7:00 a.m. when we really needed it at 4:00 or 5:00 a.m."

Despite recognizing this value, the Company has advocated for delaying development of a VPP program until the 2025 IRP,[7] all but ensuring that additional fossil fuel resources that otherwise might have been displaced will be brought to the Commission for consideration, at greater expense to ratepayers and the environment. More than that, the Company will almost certainly bring a suite of transmission and distribution investments to the Commission for approval, at great cost to ratepayers, without considering whether these could have been deferred or downsized by the virtual power plant program.

The Company's Reasons for Delay Are Insufficient

The Company's primary argument against immediate development and deployment of a solar and battery virtual power plant program is the assumption that a Distributed Energy Resource Management System (DERMS) is an essential pre-requisite.[8] If the Company had spoken to key players in the VPP space when it first learned that it would need new capacity on an accelerated timeframe, including Georgia-based sonnen USA, it would have known that this is not the case and potentially saved ratepayers millions of dollars in avoided investments in centralized power plants. Better yet, if the Company had listened to the expert testimony presented by the Coalition on the subject, it could have opted to reconsider whether the tens of millions of dollars it plans to spend on DERMS investments[9] is still necessary and whether a VPP could be developed on an

[7] Rebuttal Testimony of Jeffrey R. Grubb, Francisco Valle, Lee Evans, Michael B. Robinson, and Michael A. Bush. Pg. 44. Lines 5-11.
[8] Rebuttal Testimony of Jeffrey R. Grubb, Francisco Valle, Lee Evans, Michael B. Robinson, and Michael A. Bush. Pg. 44. Lines 11-14.
[9] Stipulated Agreement (Docket 44280). Paragraph 3, subparagraphs c and d.

accelerated timeframe to the benefit of ratepayers. Instead, the Company opted to not ask a single question of cross,[10] or to seek a less adversarial meeting with our witness panel to learn more, despite the fact that the Coalition notified the Company of its intention to file such testimony several weeks before hearings began.[11]

The Benefits of a Virtual Power Plant are Far Greater Than Just Capacity

As the Coalition demonstrated in direct testimony, battery-based virtual power plants can provide a wide range of grid services. While peak shaving and resource adequacy are the most obvious of these, the Coalition demonstrated that virtual power plants can be used for local load pocket decongestion and T&D deferral; demand response; capacity planning; energy; frequency response; mitigation of the "duck curve" effect; individual and system-level resiliency; and spinning and non-spinning reserves. All of these grid services will affect the resources put forth in the Company's 2025 IRP filing, meaning there is a serious opportunity cost to not having a VPP program structure built out for comparison as part of the Company's economic analyses.

In addition to serving as a Swiss Army Knife of utility resources, battery-based virtual power plants can be deployed quicker than most, if not all, other energy resources. As Coalition witness Richetta testified, sonnen was able to integrate with Rocky Mountain Power's grid management system and control both sonnen and non-sonnen batteries within a year. With the lessons learned

[10] Hearing #2. Pg. 1255. Lines 13 and 14.
[11] Meeting held in Atlanta and by Teams on January 8, 2024.

from the Rocky Mountain Power program, that time could likely be shortened considerably, since the need for an IEEE2030.5 server to control non-sonnen batteries is now known.[12]

There are Downsides to Further Delay

While the Coalition appreciates the Company's commitment to develop a residential and small commercial battery pilot program as part of its 2025 IRP filing, we are concerned about the impacts of delaying approval and implementation of this program. If the program is not approved until the 2025 IRP, even an accelerated implementation period such as the one offered by sonnen will not be quick enough to support customer enrollment until early 2026, and even that assumes that progress is not slowed by the subsequent rate case proceeding. This provides very little operating time for the program to prove its value before the Company begins developing its 2028 IRP.

Another reason to avoid delay is the opportunity to maximize the impact of federal funding. In the coming days, the Environmental Protection Agency is expected to announce the winners of the Solar for All competition, a competitive grant program that is designed to make solar and battery storage accessible in disadvantaged communities. This program, which could bring up to $250 million to the state of Georgia, has all but guaranteed that each state will have a winner. Therefore, it is in the state's best interest to consider ways to maximize the impact of this once in a generation investment through supportive programming, such as a VPP program that includes incentives for customer-sited batteries, and policy change, such as uncapping the RNR system size limit for solar paired with batteries, as advocated by the Coalition. As Coalition witness Posner testified, having a Rocky Mountain Power-type VPP program in place could increase the number of households served by the Solar for All program by as much as 15% by making battery storage

[12] Direct Testimony of Blake Richetta and Andy Posner. Pg. 9. Lines 11-15

more affordable. Moreover, having a VPP program and related battery incentives in place would support participant acquisition, allowing more grant dollars to go to solar arrays and workforce training and less to go to marketing.

The final reason to avoid delay is the urgency of the clean energy transition, not only for reasons of climate change but also as a gesture of support for the clean energy goals advanced by several of Georgia's local governments, our federal government, and various business entities. As every public comment period has demonstrated, customers of all classes are demanding additional renewables, and utility scale resources will only get us so far until additional transmission can be built. A virtual power plant provides an opportunity to greatly accelerate renewable energy deployment in a manner that reduces costs for all ratepayers and maximizes system benefit, while also supporting local jobs and minimizing land use impacts. In short, a battery-based virtual power plant is a win-win-win-win for participants, non-participants, the local economy, and the environment. There is simply no reason to delay the opportunity to gain operational experience with and benefit from this cutting edge, yet proven, technology.

Reject Plant Yates

As referenced in the previous section, the Company is proposing to construct three dual-fueled combustion turbines at Plant Yates with asset lifetimes of 45 years. This long lifetime represents a serious risk to ratepayers from a regulatory perspective. While the Company may not be subject to any carbon taxes or caps at this time, it is very unlikely that carbon will not be regulated within the next forty five years. If this prediction is correct, these units are at a high risk of becoming stranded. At a minimum, these units will require expensive retrofits to support hydrogen fuel or to include carbon capture equipment. At worst, these units will have to be retired

and replaced with cleaner resources. Rather than risk these additional costs to ratepayers, the Coalition recommends that the Company invest in future-proof resources like solar and storage.

Another risk that is not properly considered in this proceeding is fuel costs. As the Company itself concedes, the natural gas system in Georgia is constrained, particularly in winter periods of high demand. If gas is unavailable, the turbines are designed to run on fuel oil, which is significantly more expensive than gas. Even if the units are able to run on gas, Plant Yates only has firm gas supply for the existing steam units. Though this can be re-directed to the newer, more efficient units, in a maximum generation situation this means the Company is turning to the spot market for gas, where it will face higher prices due to high demand. All of these fuel costs will be passed through directly to consumers.

Another reason to deny the Plant Yates CTs is that they will only be used a fraction of the time.[13] The Coalition recognizes that low capacity factors are somewhat inherent to "peaking" generation, but it must be understood that this acceptance of spending millions or even billions of dollars is an anachronism from a time when the only flexible resources of any scale were fossil-fueled or hydroelectric. Now that battery storage is able to provide these services, in addition to others services that are needed with greater frequency, there is no reason to spend this much money to construct facilities that will be used so rarely.

Finally, the Coalition notes that the Plant Yates CTs are inconsistent with Southern Company's stated clean energy goals, not to mention the clean energy goals of several large Georgia Power customers including members of the Coalition, the U.S. Department of Defense and all other federal agencies, and the members of the Clean Energy Buyers' Association.

Multi-Value Transmission Planning Framework

[13] Rebuttal Hearing Transcript. Page 226.

One of the key reasons that the Company is relying so heavily on fossil fuels is the challenge of interconnecting additional renewable energy resources in the parts of the state that are most suitable for that production. This challenge is due in part to the Company's continued reliance on a myopic transmission planning approach that only considers reliability. While the Coalition is deeply supportive of the Company's strong commitment to reliability, the Coalition also believes that transmission can serve multiple purposes, including ensuring that low-cost generation can be transmitted to load and supporting public policy goals like the clean energy transition.

Recognizing that transmission can provide multiple values to the grid, including reliability benefits, economic benefits, and public policy benefits, the Coalition encourages the Commission to order the Company to adopt the multi-value transmission planning framework put forward by staff witnesses for the 2025 IRP. In addition to reducing ratepayer costs and supporting a transition to low-cost, clean energy, the Coalition believes that this new framework will help the Company be better prepared if an even more unprecedented period of load growth occurs in the future, for example, due to a larger than expected adoption of heat pumps or EVs.

Capacity from CARES RFP

Given the Coalition's recommendation to disallow the Plant Yates CTs, there is likely a need for capacity beyond what our VPP could provide, particularly if the program remains limited to residential and small commercial customers. Thus, the Coalition recommends that the Commission order the Company to solicit all CARES bidders who did not already propose systems paired with storage for revised bids that include storage and to revise the scoring criteria as needed to properly value this capacity contribution. The Coalition believes that adding storage to all CARES bids will not only address the Company's near term capacity needs, but also reduce costs

and risks for ratepayers by eliminating fuel cost risk and taking fuller advantage of incentives in the Inflation Reduction Act. Moreover, storage is generally able to be deployed more quickly than combustion turbines, so this approach will better prepare the Company for additional unanticipated load ramps. Finally, pairing standalone solar projects with storage would firm up this source of low-cost clean energy, minimizing curtailment and allowing for maximum system benefit, while also potentially streamlining and accelerating interconnection relative to PV-only sites.

Additional Ratepayer Protections are Needed

Throughout this proceeding, Georgia Power has indicated that the investments requested in this case and the new large load customers that these investments are intended to support will result in "downward pressure in rates." While the Coalition appreciates the modest ratepayer protections included in the stipulated agreement, the Coalition remains concerned about the limited duration of these protections, given the construction schedule and asset lifetime for some of these resources, and the lack of assurances that were offered for non-base rate costs. Specifically, the Coalition remains unconvinced that fuel costs and ECCR costs will not rise due to:

- Greater utilization of fuel oil, which is a comparatively expensive fuel
- The lack of firm gas supply for the new Yates units. Despite the Company's assertion that the firm gas supply for other units at Plant Yates can be diverted to the new units, it remains true that in a maximum generation situation some units at Plant Yates will either be purchasing gas from the spot market at an elevated price or burning expensive fuel oil.
- Greater utilization of existing coal resources, which could increase ECCR costs
- The inherent volatility of natural gas prices, which can be affected by everything from severe weather events (which are increasingly frequent and severe due to climate change) to geopolitical events, which have also been an issue of concern in the past few months.

In light of these risks and others, including previously cited risks of overbuilding capacity or building it too quickly, the Coalition urges the Commission to adopt the ratepayer protection language provided by Georgia Interfaith Power and Light.

EXHIBIT A – PROPOSED ORDER

WHEREFORE, IT IS ORDERED, that the Company, in coordination with staff and other interested intervenors, develop a residential and commercial "virtual power plant" program and bring a proposal to the Commission for approval within 180 days of the conclusion of this proceeding. As part of this development process, the Company shall hold at least two collaboration meetings with interested parties and incorporate their feedback into their filing;

ORDERED FURTHER, the Company's request to construct three combustion turbines at Plant Yates is denied;

ORDERED FURTHER, the Company's request for regulatory asset treatment for development costs to date for the Plant Yates combustion turbines is denied;

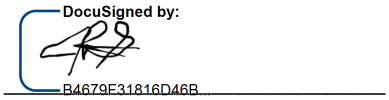
ORDERED FURTHER, the Company shall adopt a multi-value transmission planning framework in the form described by PIA staff witness Goggin for its 2025 IRP filing;

ORDERED FURTHER, the Company shall solicit bidders in the latest CARES RFP for capacity by requesting the resubmission of standalone solar bids to also include battery storage. In carrying out this order, the Company shall revise scoring criteria for this solicitation as necessary in coordination with staff.

ORDERED FURTHER, the Company – in the relevant rate cases – is directed to identify all costs associated with the capacity additions identified in the 2023 IRP Update to serve this new demand for energy capacity in Georgia and to allocate those costs to large load customers, resulting in benefits for non-marginal classes consistent with the Company's rebuttal testimony. "Large

load customers" shall mean the customers who have been or will be identified by the Company in its Large Load Realization Model.

Respectfully submitted this 4th day of April, 2024



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