BEFORE THE STATE OF GEORGIA

PUBLIC SERVICE COMMISSION

	)	
In Re:	)	
Georgia Power Company's	)	**Docket Nos. 56002 and 56003**
2025 Integrated Resource Plan Update	)	

POST-HEARING BRIEF OF NATIONAL RESOURCES DEFENSE COUNCIL, SOUTHERN ALLIANCE FOR CLEAN ENERGY, AND SIERRA CLUB

JULY 3, 2025

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I. INTRODUCTION

Large load customers like data centers have been driving Georgia Power Company's ("Georgia Power" or "Company") resource needs since the 2023 Integrated Resource Plan ("IRP") Update. While Georgia Power indicated in the 2023 Update that "Georgia Power must act on an accelerated timeline to meet Georgia's energy needs,"[1] that sense of urgency is absent from the 2025 IRP. Instead, the 2025 IRP is a return to common utility planning; in Georgia Power's own words, "the 2025 IRP is a return to Georgia Power's triennial, long-term planning process."[2] Because Georgia is no longer facing an emergency, whether it ever was is highly questionable,[3] the Georgia Public Service Commission ("Commission") can calmly decide how to prepare for a gradual influx –not a sudden tsunami– of load growth. The Company's updated Load Forecast, filed as Exhibit 1 to the rebuttal testimony of Company witnesses Jeffrey R. Grubb, J. Randy Hubbert, M. Brandon Looney, Michael B. Robinson, and Francisco Valle (the "Updated Load Forecast"), finally reflects near term attrition. However, it still fails to account for the attrition of data center projects and the very slow growth in signed contracts for service and requests for service that is evident in the Company's quarterly Large Load Economic Development reports.[4] It is therefore unnecessary (and would be imprudent) to plan for approximately9 GW of growth over

[1] Ga. Power Co., 2023 IRP Update Main Document, Docket No. 55378 at 1 [hereinafter "2023 IRP Update"].
[2] Direct Testimony of Jeffrey R. Grubb, J. Randy Hubbert, M. Brandon Looney, Michael B. Robinson, and Francisco Valle on behalf of Ga. Power Co., Docket Nos. 56002 & 56003 at 7 [hereinafter "Grubb Direct Testimony."].
[3] During the 2023 IRP Update proceedings, Sierra Club argued that (i) it was more economic for Georgia Power to fill part of its firm capacity need with battery energy storage (BESS) and reduce or eliminate the gas CTs it installed; (ii) the Company's power purchase agreement ("PPA") with Mississippi Power Company ("MPC") began two years before Company needed capacity in the winter of 2025/2026; (iii) the PPA with Santa Rosa Energy Center began year and a half before the Company needed capacity in the winter of 2025/2026; and (iv) the Company did not justify procuring the capacity so far in advance of need and passing unnecessary costs on to Georgia ratepayers. *See* Direct Testimony of Devi Glick and Lucy Metz on behalf of Sierra Club, Docket No. 55378 at 5.
[4] *See* Direct Testimony of AJ Goulding on behalf of NRDC/SACE/Sierra Club, Docket Nos. 56002 & 56003 [hereinafter "Goulding Testimony"].

the next 6 years when the Company's own filings continue to reflect a consistent decrease in megawatts in the immediate future.[5]

In the words of NRDC/SACE/Sierra Club's expert Derek Stenclik, "much of [the Company's] projected load growth is highly speculative at this stage. This is especially true for large industrial and data center loads[] which represent around 7 GW of the forecasted increase in peak demand by 2031."[6] In fact, all parties in this proceeding, based on the Company's reporting, data and inputs, arrived at the same conclusion using a variety of methodologies: the Company's forecast presents "significant potential for overestimation of both energy and peak load".[7]

To prepare for speculative demand, Georgia Power is planning to keep online its aging coal fleet. It is undisputed that, but for large load customers like data centers, these units would have retired much sooner.[8] In the 2022 IRP, the Company's own "economic analysis demonstrate[d] that the continued operation of Plant Bowen Units 1-2 is not economic or in the best interest of customers."[9] Should the Commission approve the extension of the Scherer and Bowen units, all customers, not just data centers, will end up paying for uneconomic coal to remain online.[10] That basic fact has not changed; in fact, it has gotten worse. Company witnesses acknowledged that "[w]hile the specifics are trade secret," the cost for ELG treatment at plant Bowen is "significant,

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[5] "This represents nearly a 50% increase in peak demand over a seven-year period." Direct Testimony of Derek Stenclik on behalf of NRDC/SACE/Sierra Club, Docket Nos. 56002 & 56003 at 24 [hereinafter "Stenclick Testimony"].
[6] *Id.* at 25.
[7] Direct Testimony of Robert L. Trokey, Dylan A. Drugan, and Karan A. Pol on behalf of Ga. Power Co., Docket Nos. 56002 & 56003 at 11 [hereinafter "Trokey Testimony"]..
[8] Q. [Mr. Pawluk] Isn't it true that the only reason for keeping these coal units going, in spite of the costs and some of the engineering challenges that you've described, is because of the projected load increases from the large-load customers, including the data centers? A. (Witness McNelly) Yes. Hearing Transcript, Docket Nos. 56002 & 56003 at 1323 [hereinafter "Hearing Tr."].
[9] Rebuttal Testimony of Jeffrey R. Grubb, A. Wilson Mallard, Michael B. Robinson, Jeffrey B. Weathers, Francisco Valle, Andy Phillips, Jeff Smith, Lee Evans, and Aaron D. Mitchell, on behalf of Ga. Power Co., Docket No. 44160. at 2.
[10] *See Id.* at 16 ("[I]f the units continue operations beyond 2027, the Company would need to increase capital spend for these units").

on the order of hundreds of millions of dollars."[11] Instead of keeping coal online for longer, based on witness Stenclik's independent modeling, the Company should "accelerate coal retirements, increase procurement of solar and storage resources, limit new gas resource investment, and evaluate options for interregional transmission."[12] Compared to Georgia Power's MG20 Portfolio, witness Stenclik's proposed alternative would be almost 20% cheaper for ratepayers.[13]

As further explained below, the testimony and evidence presented to the Commission over the course of the IRP proceedings demonstrate that Georgia Power Company's 2025 IRP should not be approved as filed. Instead, the Commission should:

1. Deny approval of Georgia Power's load forecast. To protect ratepayers, the Commission should also adopt Staff's and witness Richwine's recommendation to order the Company to continue filing quarterly Large Load Development reports.[14]
2. Direct the Company to stay committed to retiring Plant Bowen Units 1-2 and Scherer Unit 3 because it saves ratepayer money.
3. Direct the Company to run a scenario that removes artificial solar and wind build limits from its Aurora model.
4. Direct the Company to adopt Staff's and intervenors' recommendations on transmission planning, particularly interregional transmission and transmission for large loads.

[11] Hearing Tr. at 1322.
[12] Stenclik Testimony at 12.
[13] *Id.*
[14] NRDC/SACE/Sierra Club's Witness Richwine recommended that the Commission "[c]ontinue to require quarterly updates from GPC on the status of large load developments tied to transmission needs and update this requirement with additional information as necessary." Direct Testimony of Matthew Richwine on behalf of NRDC/SACE/Sierra Club, Docket Nos. 56002 & 56003 at 48 [hereinafter "Richwine Testimony"].

II. LEGAL STANDARD

An integrated resource plan (IRP) is a "utility resource planning process in which an integrated combination of demand-side and supply-side resources is selected to satisfy future energy service demands in the most economic and reliable manner while *balancing the interests of utility customers, utility shareholders and society-at-large*."[15] Georgia Power is obligated to file an IRP with the Commission at least every three years.[16] The Rules of the Commission require that an IRP be "in the public interest," and, if it is not, that the Commission reject the utility's resource plan or provide an alternate plan.[17] The Commission should therefore not approve an IRP that fails to be in the public interest, or that inadequately accounts for the interests of "utility customers" and "society-at-large".

Further, in developing its IRP, the utility must consider "all resources reasonably available to reliably meet future energy service demands" on a "fair and consistent basis."[18] The utility must "adequately demonstrate[] the economic, environmental, and other benefits to the state and to customers" that may result from "improvements in energy efficiency," "pooling of power," "purchases of power from neighboring states," "facilities which operate on alternative sources of energy," "facilities that operate on the principle of cogeneration or hydro-generation," and "other generation facilities and demand-side options."[19] As such, any IRP that does not consider *all resources* on a fair and reasonable basis, or that does not adequately demonstrate the benefits of alternative supply methods, should be rejected by the Commission.

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[15] Comm'n Rule 515-3-4-.02(25) (emphasis added).
[16] *See* O.C.G.A. § 46-3A-2(a) ("On or before January 31, 1992, and at least every three years thereafter as may be determined by the commission, each utility shall file with the commission an [IRP] as described in this chapter.").
[17] *See* Comm'n Rule 515-3-4-.01(2); 515-3-4-.06.
[18] Comm'n Rule 515-3-4-.01(25).
[19] O.G.C.A. § 46-3A-2(b)(3).

Finally, in evaluating the adequacy of the IRP, the Commission must examine whether it employs adequate forecasting. The IRP must be "based on substantially accurate data and an adequate method of forecasting."[20] It must "identif[y] and take[] into account any present and projected reductions in the demand for energy which may result from measures to improve energy efficiency in the industrial, commercial, residential, and energy-producing sectors of the state."[21] Therefore, the Commission should not approve an IRP that relies on inaccurate data or forecasting methods, or that fails to take into account projected energy demands based on energy efficiency improvements.

III. ARGUMENT

1. Georgia's Power Reliance on a Speculative Load Forecast of an Uncertain Industry Will Lead Them to Overbuild Capacity

Georgia Power's request for the Commission to adopt its Updated Load Forecast in the All Source Procurement proceeding is misplaced, as most of the projected load growth comes from large load customers like data centers –a new industry known for being inherently unpredictable.[22] All parties, including Commission Staff,[23] agree that the Company's data shows that this anticipated load growth is unlikely to occur in the near term. As further described below, if data center load materializes at a slower rate than expected, it will bring significant financial burdens for Georgia Power's ratepayers, who risk being on the hook for infrastructure that is "premised on speculative demand" and that "may sit idle for much of their operational life."[24]

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[20] O.G.C.A. § 46-3A-2(b)(1).
[21] O.G.C.A. § 46-3A-2(b)(2).
[22] Rebuttal Testimony of Jeffrey R. Grubb, J. Randy Hubbert, M. Brandon Looney, Michael B. Robinson, and Francisco Valle on behalf of Ga. Power Co., Docket Nos. 56002 & 56003, Exhibit 1 at 1 (not numbered in the original) [hereinafter "Main Panel Rebuttal Testimony"].
[23] In PIA Staff's terms, "The short-term Commercial Customer Growth model uniquely exhibits indicators of model fit and error that demonstrate statistical bias in the model, indicating a risk of overestimation." Trokey Testimony at 4.
[24] Stenclik Testimony at 28.

a. Georgia Power's rebuttal wrongly asks the Commission to approve use of the Updated Load Forecast in the All Source Procurement proceeding.

In rebuttal testimony, Georgia Power included a proposal to adopt the Updated Load Forecast "for use in the 2029-2031 All-Source RFP certification proceeding."[25] Because the IRP proceedings do not allow for surrebuttal testimony, Staff and intervenors were not able to offer an opinion or an expert analysis on the Company's eleventh-hour proposal. For the reasons explained in this section, the Commission should not lock in the Updated Load Forecast that Georgia Power filed with its rebuttal testimony. Instead, Georgia Power should be required to file a new load forecast as part of the All Source Procurement proceeding this fall.

b. The vast majority of Georgia Power's load growth is attributable to large load customers like data centers.

Georgia Power started the IRP proceedings arguing that "several factors" are contributing to its load growth. In the Main Panel's direct testimony , the Company stated that "[s]everal factors are contributing to the B2025 Load and Energy Forecast projections," for example, "[t]he state's population is [] growing, leading to more electricity use in homes," "[t]he rise in large commercial and industrial customers, such as data centers and manufacturing plants, is contributing to the new demand," and "the adoption of electric vehicles, both for personal and business use, is steadily driving up electricity consumption."[26]

Although Georgia Power's IRP Main Document suggests that the state's population growth and electric vehicle adoption are all "factors" contributing to its load growth, Georgia Power's witnesses readily admitted that 80% of its load forecast is attributable to large loads like data

[25] Main Panel Rebuttal Testimony at 8.
[26] Grubb Direct Testimony at 14.

centers.[27] The other factors Georgia Power mentions do not come close to the scale and impact that data centers are having on the grid, and they are certainly not driving growth or the need to add resources to the system. The Company's witnesses explained why electrification of buildings and vehicles are not, in fact, adding to the peak load at the scale data centers are:

> Q. [Ms. Ariza] And when you say that a primary factor that's driving load forecasts is how people use electricity, do you mean things like electrification of buildings and homes?
> A. (Witness Valle) Yes. For example. And it's also -- it was also the -- the organic growth in residential customer class. Last -- last year we gained over 40,000 additional customers. So there's growth that is coming from multiple sources.
> Q. Okay. And I'll -- I'll ask you about population growth in a second. But energy efficiency could give people incentives to use electricity -- electricity differently and lower demand; is that generally a –
> A. (Witness Valle) That is correct.
> Q. And by lowering peak demand, that would reduce costs for all customers; is that also a correct statement?
> A. (Witness Grubb) Depending on the price you have to pay to reduce that demand. And -- and the DSM programs and the filings that we have in the IRP are subject to Panel 2 for Ms. Goff and Mr. Phillips. But, yes, it can [...].
> Q. And same with EVs; right? You could plan in advance so that EV charging doesn't add to peak; is that also a correct statement?
> A. (Witness Valle) Correct. So we're -- we're planning for EV growth in our system.
> A. (Witness Grubb) And Mr. Valle can speak to that more, but I think when you do look at our EV growth in the forecast, it's not all on our peak, to your point, because we incentivize that charging to not be on the peak because it does cost less, you don't have to build generation to meet it.[28]

Because the Company is incentivizing electric vehicle charging at off-peak hours, it does not need to build generation to meet that load. Regarding population growth, the Company stated the following:

> Q. [Ms. Ariza] [R]egarding another factor on your list, population growth, the population of Georgia went from about 8.2 million in 2000 to 10.7 in 2020, according to U.S. census data. That's about a 30 percent increase over 30 years.

[27] Hearing Tr. at 684-5 ("Q. You've spoken about the primary factors that are driving the 9 gigawatts that you say you'll need over the next five years. And it's in your testimony and you've talked about it. You mentioned factors like the state's population growing, rising large customers like data centers, which is 80 percent, adoption of EVs and the change in how people use electricity, right? A. (Witness Valle) Yes. That's correct.").
[28] Hearing Tr. at 685-6.

> Would it be fair to say that, nonetheless, demand growth was relatively low over that two-decade period? [...]
> A. [F]or the -- for the last ten years, the residential and commercial classes have grown about 1 percent per year. The industrial class ha[s] grown about half a percent. So it's relatively flat, but showing some growth, nonetheless.
> Q. Okay. And now that in 2025 Georgia's population growth -- Georgia population is estimated to be about 11 million, which is around a 4 percent increase since 2020, how much of the increased demand since the 2022 IRP is due to this growth?
> A. (Witness Valle) You mean 2025 IRP?
> Q. No. Since the 2022 IRP, to this one, how much of your growth is expected to be from the state's population growth?
> A. (Witness Valle) I don't have that -- that calculation, but I can tell, Commissioners, that the -- that the projected growth in the 2025 IRP for the residential class is about 1 1/2 percent, subject to check [...] we have seen over the last several years a change in use per customer, which is, you know, part of the energy efficiency, growth, those types of things, which is -- you know, everybody now is incented to get more LEDs and everything and lighting and those kind of things. So we have seen a lot of energy-efficiency changes over the last decade or so, which DSM will talk more about because a lot of that low-hanging fruit has been is -- is already factored in. But we have seen a decrease in usage per customer.[29]

The Company's admissions demonstrate that data centers are responsible for driving the system's energy and capacity needs, and not general electrification, electric vehicles, and certainly not the residential customer class. This is highlighted by the fact that, during the rebuttal hearing –after the Company filed its Updated Load Forecast—, Georgia Power's witnesses testified that the data center percentage had reached around 90%.[30] If 90% of load growth is attributable to a single set of customers, assessing the risk associated with it not materializing should be a priority for this Commission.

c. Data center industry load growth is particularly uncertain

As NRDC/SACE/Sierra Club's witness AJ Goulding testified, data center development is subject to supply and demand factors that can "lead to difficulties in forecasting their load".[31]

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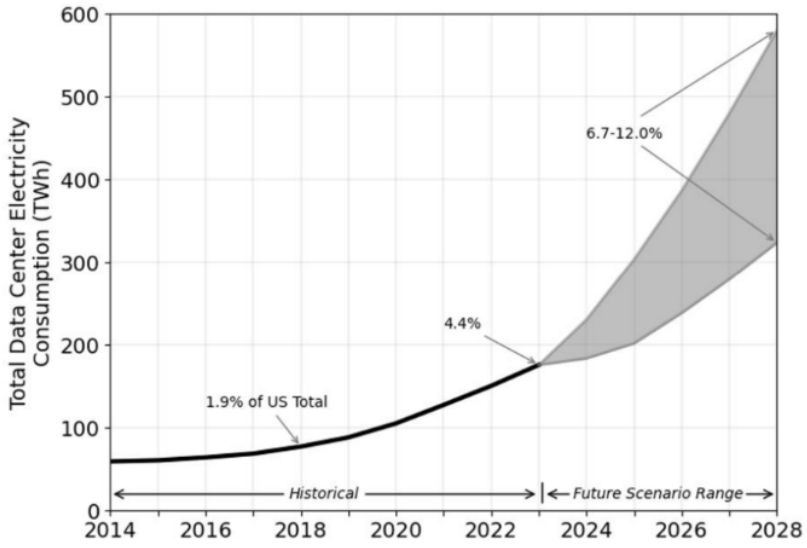
[29] *Id.* at 687-9.
[30] Response to NRDC/SACE/Sierra Club's Cross-Examination from Francisco Valle, on behalf of Ga. Power Co., 3rd Hearing, Docket Nos. 56002 & 56003, https://www.youtube.com/live/klLdgtp42Vc at 7:53:36.
[31] Goulding Testimony at 7.

NRDC/SACE/Sierra Club's witness Stenclik also testified that "the likelihood and timing of these loads materializing remains uncertain."[32] As shown in Figure 1 below, data center growth shows a "wide range of uncertainty".[33]

Figure 1: Total US data center electricity consumption from 2014 through 2028[34]



Source: Shehabi, A., Smith, S.J., Hubbard, A., Newkirk, A., Lei, N., Siddik, M.A.B., Holecek, B., Koomey, J., Masanet, E., Sartor, D. 2024. *2024 United States Data Center Energy Usage Report*. Lawrence Berkeley National Laboratory, Berkeley, California. LBNL-2001637.

On the supply side, there are many uncertainties related to the "efficiency of equipment for computing and the speed of expansion of chip manufacturing capability, both of which can impact the rate of growth of power needs of data centers."[35] On the demand side, even if a particular data center expects to use a certain amount of megawatts at some point in the future, in the first years, it will likely start with a lower amount and eventually ramp up as it adds tenants.[36] Despite Georgia Power acknowledging that there are "inherent uncertainties around whether such projects will

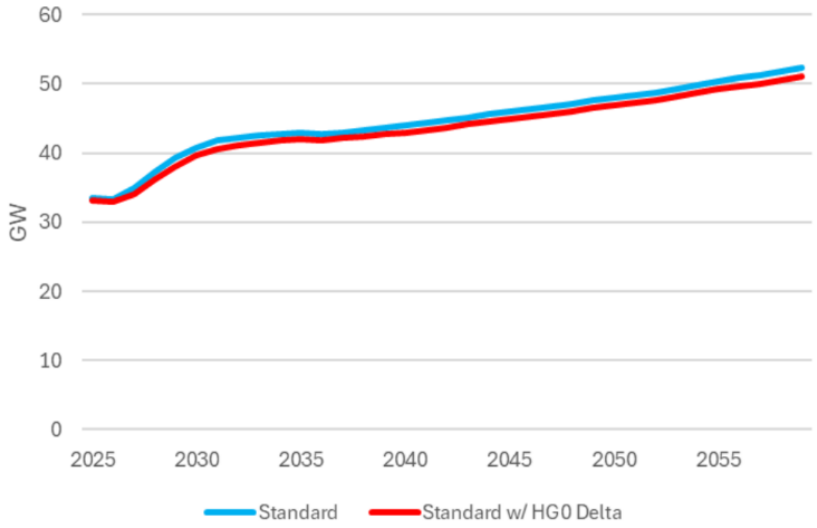
[32] Stenclik Testimony at 25.
[33] Goulding Testimony at 7.
[34] *Id* at 8.
[35] *Id*.
[36] *Id.* at 8-9.

ultimately locate in Georgia, select Georgia Power as the electric service provider, and come online with the anticipated load"[37], the Company is not properly assessing the risks of continued large load attrition in the near term.

The fact that "[f]or every reduction in load in the Company's [Load Realization Model], there has been an equal or greater load increase" should not be cause for comfort.[38] Even a large and growing pipeline of announcements does not impact near-term growth. As witness Stenclik testified, "[w]hile it is appropriate for the Company to anticipate and plan for new sources of demand, it is critical to recognize that much of the growth embedded in the forecast lacks formal commitments or verified timelines for interconnection."[39] Precisely because data center demand is particularly uncertain, it was critical for the Company to evaluate a wide range of scenarios, which it failed to do. Instead of asking the critical question of "what would happen if a different amount of data centers show up," the Company's only difference in forecasted demand was *de minimis* (see Figure 2 below). As witness Stenclik criticized, "the actual load forecasts used in the capacity expansion modeling were nearly identical across all scenarios."[40]

[37] Main Panel Rebuttal Testimony Exhibit 1 at 1-2 (not numbered in the original).
[38] *Id.* at 12.
[39] Stenclik Testimony at 25.
[40] Stenclik Testimony at 27.

Figure 2: System Winter Peak Load[41]



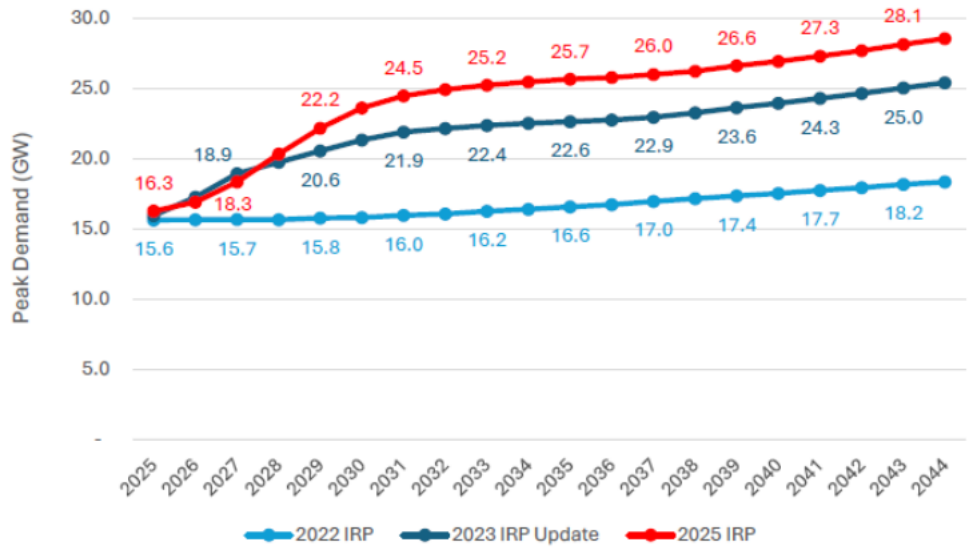
Instead, other parties in this proceeding, including NRDC/SACE/Sierra Club, did what the Company should have: conduct a meaningful sensitivity analysis on load uncertainty. Indeed, "the IRP would have benefited from modeling that explicitly isolates the impact of large new loads on resource portfolio decisions, system costs, and emissions outcomes."[42] Georgia Power's reliance on a single viewed load forecast is a critical oversight—especially in a sector where ramping, timing, magnitude, and even location of loads are uncertain.

d. Data gathered by the Company indicates that load will not materialize in the immediate future.

Georgia Power's own projections (see Figure 3 below) showed that the 2025 forecast was lower than the 2023 IRP Update forecast in the very immediate future (a 3 to 4 year timeframe).

[41] Ga. Power Co., 2025 IRP Main Document, Docket Nos. 56002 & 56003 at 24 [hereinafter "2025 IRP Main Document"].
[42] Stenclik Testimony at 32.

Figure 3: Georgia Power Projected Winter Peak Demand[43]



During cross examination, Company witnesses explained that it is possible that demand over the long term continues to grow, but does not materialize in the near term:

> Q. I just want to make sure I am interpreting that figure correctly. I believe staff also asked about this, but the 2025 red line is slightly below the 2023 dark blue for the very immediate future; right?
> A. (Witness Valle) Yes. The -- the red line represents the 2025 IRP, which is at the top of the three lines.
> Q. Okay. So is it correct to say that you overforecasted for years 2025 through 2027?
> A. (Witness Valle) No, I wouldn't say that, Commissioners. The -- as I've said before and I have repeated multiple times, the forecast always incorporates the latest available information. So to the extent that we have had near-term cancellations, we have had near-term revisions of the -- of the the load, those get reflected and that have resulted into a lower forecast. But with every forecast, our commitment to you and to our customers is to reflect the best available information through the use and accurate forecasts at the time of the development of the forecast. So if now we have a slightly lower forecast than the previous vintage, it's not an anomaly. It's just a reflection of the new information available.
> Q. But it is lower than the 2023 Update projection?
> A. (Witness Valle) It is lower, yes.
> Q. Is it possible that this happens again: that demand over the long term continues to grow, but over the very immediate term it doesn't?
> A. (Witness Valle) It is a possibility.[44]

[43] 2025 IRP Main Document at 35.
[44] Hearing Tr. at 694-6.

If the drop-in-near term load trend continues –which it has consistently since the 2023 IRP Update was filed— then demand may well be exponential, but resources will be sitting there waiting for the demand to materialize. This will "place significant risk on GPC ratepayers for stranded assets that would increase rates if new large loads do not materialize as expected."[45] More importantly, Georgia Power did not provide a bookend analysis to determine how much it would cost to serve large loads like data centers. Without isolating the costs, the Commission has no tools to quantify how much large loads should pay for, and therefore it becomes harder to ensure that non-data center ratepayers will not pay for all the costs to serve those large load customers. In Stenclik's terms, the importance of isolating large load impacts is to "ensure that long-term infrastructure investments are aligned with actual, realizable system needs and to minimize the risk of overbuilding and stranded assets."[46] In a worst-case scenario, by relying on overly optimistic load growth assumptions, the Company could end up overbuilding its system. This is the kind of misalignment that prudent IRP planning should avoid.

e. Materialization of data center growth at a lower rate has real risks to ratepayers.

Georgia Power's Updated Load Forecast, which incorporates its updated Large Load Development reports, is slightly lower than its 2025 IRP outlook for 2026-2029. Although the Updated Load Forecast shows an additional GW by 2034, there is still a risk of near-term large load projections not materializing at the pace Georgia Power initially forecasted.

Despite Georgia Power's preference to "to err on the side of having more resources," this preference has a direct impact on customers' bills.[47] As witness Stenclik explained, "[e]ven if the

[45] Stenclik Testimony at 11.
[46] Stenclik Testimony at 41.
[47] Hearing Tr. at 693.

forecasted load ultimately materializes, a slower realization will not justify the Company proactively building resources far in advance."[48] Witness Stenclik cites several reasons for this:

- First, rapid advancements in AI development and chip efficiency could significantly alter the long-term demand trajectory, making early infrastructure investments premature.
- Second, current supply chain constraints are elevating capital costs for new resources, meaning early procurement could lock in unnecessarily high costs.
- Finally, due to discounting in NPV analysis, costs incurred earlier in the IRP horizon have a disproportionate impact on total system cost, increasing the financial risk of early overbuild.[49]

In addition, witness Stenclik's modeling showed that large load additions result in a 41% increase in total system costs under the Company's MG20 portfolio (see Table 1 below).

Table 1: 20-year NPV Comparison by Large Load Scenario[50]

Scenario	NPV ($M)	Change in NPV ($M)	Change in NPV (%)
MG20-GPC	[redacted]	-	-
Half Large Load	[redacted]	[redacted]	-22%
No Large Load	[redacted]	[redacted]	-41%

These increased costs demonstrate that the Company will need to spend significant ratepayer dollars to invest in "accelerated gas capacity additions, deferred coal retirements, and higher fuel and operating costs."[51] simply to serve data centers –large and highly uncertain loads. Further, even "with the accelerated retirement of the Bowen and Scherer coal units to the end of 2031," witness Stenclik's independent modeling showed that "no new natural gas capacity [would be] required until 2032 in the No Large Loads case."[52] The resulting portfolios are shown in Figure 4 below.

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[48] Stenclik Testimony at 29.
[49] *Id.*
[50] *Id.* at 42.
[51] *Id.*
[52] *Id.* at 39.

Figure 4: Cumulative Capacity Builds to 2044 by Resource Type, by Load Scenario[53]

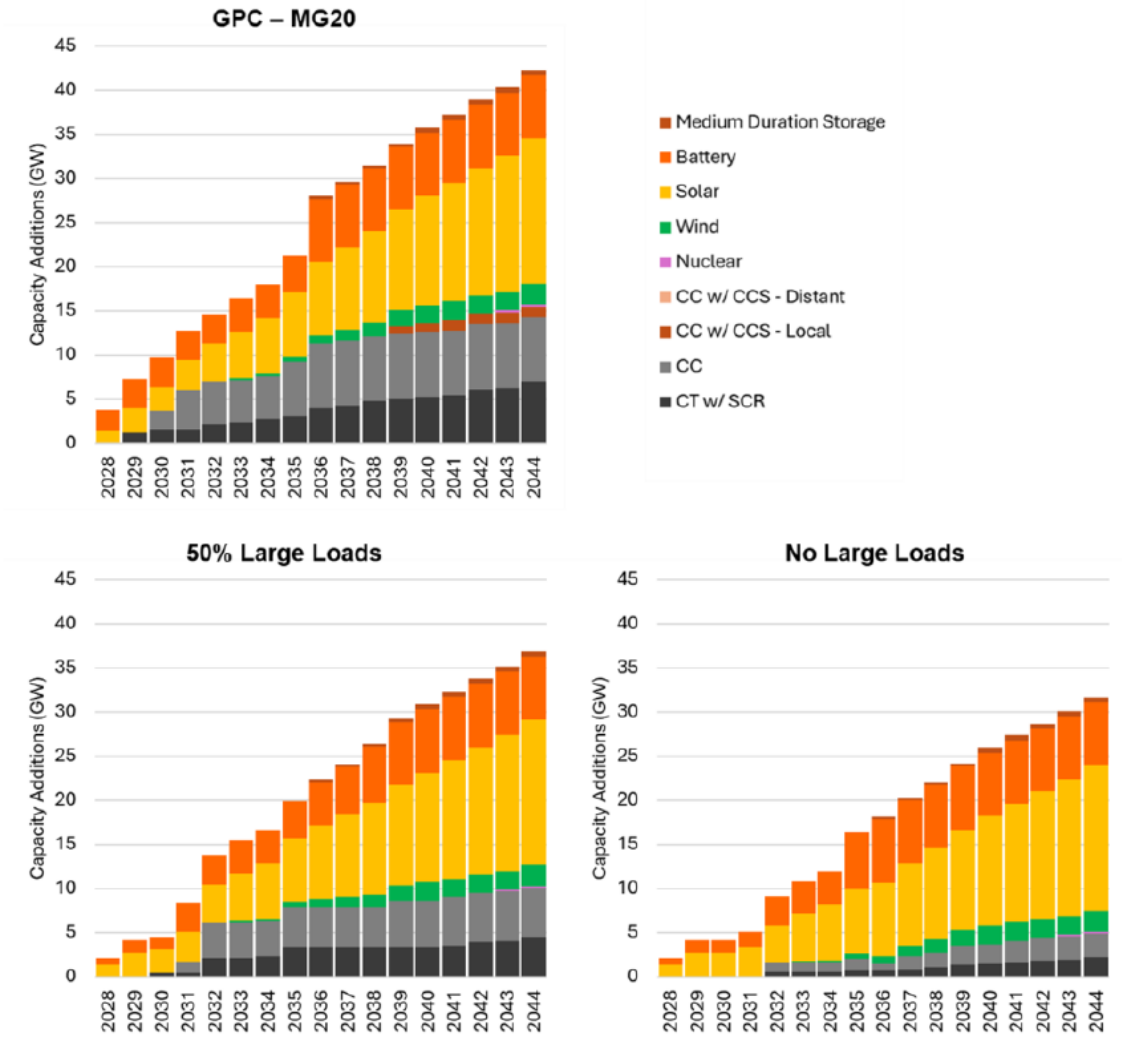

Figure 4 shows alternative capacity builds in possible futures in which 0% or 50% of data centers materialize. Notably, but for data center growth, Georgia Power would be on track to retire its coal units, meaning that speculative data center growth will be responsible for keeping coal online for longer. Witness Stenclik's results indicate that "the inclusion of large, uncertain data center load in the Company's planning process is directly responsible for delaying coal retirements to 2036 and prompting up to 9,350 MW of new gas capacity additions."[54] However, as described

[53] Stenclik Testimony at 40. Note: the lower loads scenarios also assume accelerated retirement of Bowen and Scherer coal plants.
[54] *Id.* at 41.

in the next section, the Commission should require Georgia Power to remain on track to retire the Bowen and Scherer coal units as previously scheduled.

2. Extending the Life of Coal Plants Is Not Necessary to Serve Georgia Power's New Data Centers.

a. Bowen and Scherer are no longer economic and not in the best interests of ratepayers.

In the 2022 IRP final order, the Commission approved the retirement and decertification of Plant Scherer Unit 3 by December 31, 2028, and the Company proposed the retirement of Plant Bowen Units 1 and 2 by December 31, 2027. This requirement is still economic and in the best interest of ratepayers; the 2025 IRP proposal is not. The Company's 2025 IRP proposal reverses course to unnecessarily extend the life of these coal plants for speculative data centers , rather than what is in the best interests of non-data center ratepayers or for economic reasons. In addition, expert testimony and admissions by Commission Staff support a finding that Bowen and Scherer are no longer economic and not in the best interest of ratepayers.

In his testimony, witness Stenclik explained the unfounded basis for the Company reversing course and delaying retirement of the Bowen and Scherer coal units: "Under scenarios with lower load forecasts, the Company's MG20 resource portfolio becomes oversized relative to the reserve margin requirement."[55] Stenclik also found that "the inclusion of large, uncertain data center load in the Company's planning process is directly responsible for delaying coal retirements to 2036 and prompting up to 9,350 MW of new gas capacity additions."[56] Hence, the data center industry's uncertain loads will "defer[] coal retirements."[57]

[55] Stenclik Testimony at 38.
[56] *Id.* at 41.
[57] *Id.* at 42.

In addition to the potential negative economic impacts of keeping these coal plants online, there are environmental benefits to rejecting the 2025 IRP proposal. If the Company prepares for coal retirements as scheduled, it could "reduce reliance on older, less flexible, and higher-emitting generation. At the same time, if load materializes more quickly than expected or if clean energy deployment is delayed, the Company retains the flexibility to extend the operation of these coal units temporarily, allowing time for new resources to come online."[58] On top of the economic benefits, Georgians would see emissions reductions. While Georgia Power decided not to quantify those,[59] witness Stenclik's testimony calculated the difference in cumulative CO2 emissions between Georgia Power's base forecast and scenarios where half or none of the large loads materialize. His results are summarized in Figure 5 below:

Figure 5: Cumulative, System Wide, CO2 Emissions by Load Scenario[60]

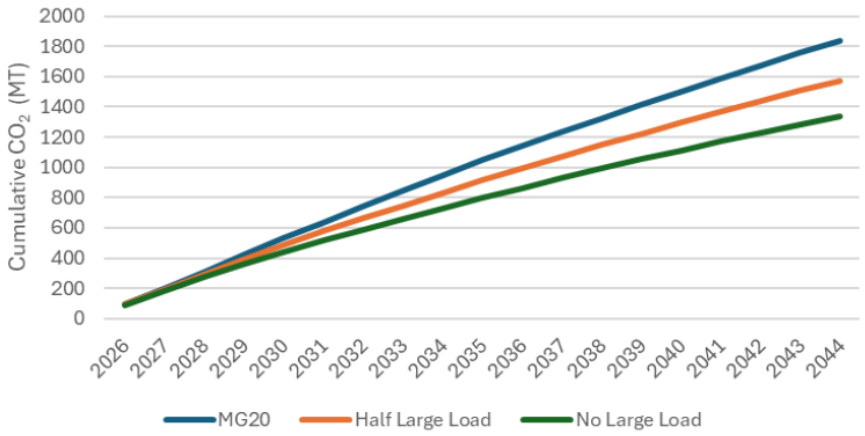

Figure 5 above indicates that serving their load would significantly increase carbon emissions in Georgia. In sum, the 2022 IRP final order is still a reflection of what is most economic

[58] *Id.* at 38.
[59] Hearing Tr. at 1341. "Q. Okay. Did you create a -- so please turn to Figure 1 of your environmental compliance strategy. It's on page 8. Did you create a figure similar to this one which shows NOx and SO2 and CO2 emission trends but for future years? A. (Witness McNelly) No. Q. You don't know -- so you don't know how much your emissions will fluctuate in the future? A. (Witness McNelly) Not precisely... "
[60] Stenclik Testimony at 43.

and in the best interest of ratepayers and the retirements of Bowen and Scherer should not be delayed.

b. Staff's analysis indicates that retiring Plants Bowen and Scherer is in the best interest of customers

Staff's testimony echoed that of Mr. Stenclik's in several ways. In written testimony, Staff explained their recommendation that Georgia Power should remove the transmission costs from the Company's Unit Retirement Study for both Plants Bowen and Scherer. In Staff's view, the Company's modeling approach for the Unit Retirement Study "assumed new CC resources would have a transmission cost, and that continued operation of existing facilities would defer that cost until retirement occurs. This may be one possible outcome, though another is that replacement generation could be sited at the retiring facility and therefore transmission investment would be minimized."[61] "With transmission costs removed, Imminent Retirement would be the most economic option" for Bowen.[62]

Similarly, for Plant Scherer, Staff determined that complying with the EPA's 111 Rule by "cofiring would also be a close call with retirement by January 2032."[63] Staff's results are shown in Tables 2 and 3 below.[64]

[61] Hearing Tr. at 1685.
[62] *Id.* at 1685.
[63] *Id*. at 1686.
[64] *Id.* at 1685-6.

Table 2: Staff Adjusted Bowen Results without Transmission (PVRR $M)[65]

Stage	Case Description	Retire Date	RR	Trans.	Term Equi	Benefits[114]	Net Costs (Benefits)
ELG (Phase 1) MG0	Retire, build CC	Dec 2028	[redacted]	0	[redacted]	[redacted]	[redacted]
	Extended Operation	Dec 2043	[redacted]	0	[redacted]	[redacted]	[redacted]
	Imminent Retirement	Dec 2034	[redacted]	0	[redacted]	[redacted]	[redacted]
ELG + 111 GHG Rule (Phase 2) MG0-111	Retire, build CC	Dec 2028	[redacted]	0	[redacted]	[redacted]	[redacted]
	Imminent Retirement	Jan 2032	[redacted]	0	[redacted]	[redacted]	[redacted]
	Co-Fire Gas 40%	Jan 2039	[redacted]	0	[redacted]	[redacted]	[redacted]
	100% gas Conversion	Dec 2043	[redacted]	0	[redacted]	[redacted]	[redacted]
	CCS	Dec 2043	[redacted]	0	[redacted]	[redacted]	[redacted]

Table 3: Staff Adjusted Scherer 3 Results without Transmission (PVRR $M)[66]

Stage	Case Description	Retire Date	RR	Trans.	Term Equi	Benefits[116]	Net Costs (Benefits)
ELG (Phase 1) MG0	Retire, build CC	Dec 2028	[redacted]	0	[redacted]	[redacted]	[redacted]
	Extended Operation	Dec 2043	[redacted]	0	[redacted]	[redacted]	[redacted]
	Imminent Retirement	Dec 2034	[redacted]	0	[redacted]	[redacted]	[redacted]
ELG + 111 GHG Rule (Phase 2) MG0-111	Retire, build CC	Dec 2028	[redacted]	0	[redacted]	[redacted]	[redacted]
	Imminent Retirement	Jan 2032	[redacted]	0	[redacted]	[redacted]	[redacted]
	Co-Fire Gas 40%	Jan 2039	[redacted]	0	[redacted]	[redacted]	[redacted]
	100% gas Conversion	Dec 2043	[redacted]	0	[redacted]	[redacted]	[redacted]
	CCS	Dec 2043	[redacted]	0	[redacted]	[redacted]	[redacted]

Further, during cross examination, Staff admitted that "the decision between retirement, co-firing, and full gas conversion is a close call."[67] When discussing concerns Staff had about the Company's modeling approach for the Unit Retirement Study, again, co-firing appeared to be a "close call with retirement [of Bowen] by January 2032."[68] The same is true for Staff's analysis of the 111 GHG Rule (MG0-111) Evaluation.[69] During the hearing, Witness Newsome reiterated this stance of Staff:

> Q. And you acknowledged in your testimony in responding to Commissioner McDonald's question that additional -- keeping additional reserve capacity might provide reliability to the system, which you just mentioned, um, but it also has a cost; right?
> A. (Witness Newsome) Yes, but that was more – the context of that was about building new capacity. We know that's very expensive.

[65] *Id.* at 1685.
[66] *Id.* at 1686.
[67] *Id.* at 1682.
[68] *Id.* at 1686.
[69] *Id.* at 1704.

> That's kind of why the Scherer and Bowen became an option because it's less expensive than new capacity.
> Q. But, again, your testimony shows it's a close call on many of the scenarios?
> A. (Witness Newsome) Yes.[70]

Since the 2022 IRP, the results of the Company's analysis have indicated that the long-term operation of its coal units is "no longer in the best economic interest of customers" and the Company's coal units "lack the necessary economic and flexibility attributes to remain a competitive resource within an electric system with large renewable penetration or in a future with continued environmental pressures."[71] The pressures that Georgia Power identified in 2022 are even more pressing today, as Company witnesses acknowledged that the cost for Effluent Limitation Guidelines ("ELG") treatment at plant Bowen is "significant, on the order of hundreds of millions of dollars."[72] The unnecessary delay of coal plant retirements to serve data center growth will come at the expense of existing ratepayers. Plus, if data center materialization is delayed –which is a real risk, as explained in Section 1 above–, ratepayers will end up keeping coal online at a great expense with no justification. Staff's testimony agrees with this fact:

> Q. And if the Commission approves Georgia Power's current load forecast without staf"'s or anyone else's adjustments, that would lead to over-procurement potentially; correct?
> A. (Witness Trokey) That's correct.
> Q. Including the risk of keeping coal online longer, keeping Bowen and Scherer, right, should the load be lower, then Georgia Power could have a different vision on whether Bowen and Scherer should remain online at all; correct?
> A. (Witness Trokey) It would be a combination of continuing to operate existing plants and also procuring additional resources that may not be needed from the market.[73]

[70] *Id.* at 1801.
[71] Ga. Power Co., 2022 IRP Main Document, Docket No. 44160 at 11-72.
[72] Hearing Tr. at 1322 (quote from Witness McNelly).
[73] *Id.* at 1536-37.

In sum, the 2025 IRP's rollback of the planned Bowen and Scherer coal plants retirement undermines the best interest of ratepayers and "underscores the importance of isolating large load impacts to ensure that long-term infrastructure investments are aligned with actual, realizable system needs and to minimize the risk of overbuilding and stranded assets."[74]

3. Georgia Power Should Remove Artificial Solar and Wind Build Limits.

The Company arbitrarily limited the amount of solar and wind added to the system in the 2025 IRP proposal, which constrained the resource options available to meet rising load. As several intervenors testified, the 1,500 MW per year solar limit and 300 MW per year wind limit are unreasonable. The Company claims the IRP evaluated a wide range of resource candidates; in truth, "they limited builds of clean energy technologies so there were no available options for the model to meet load growth and coal retirements without significant gas build."[75] By disregarding this potential, the Company fails to explore cost-effective and geographically diverse resource options that could improve reliability and lower costs for ratepayers. Georgia Power's own modeling showed that solar, wind, and battery storage are among the most cost-effective resources available. However, without providing any explanation, between the 2023 IRP Update and the 2025 IRP filing, Georgia Power "reduced its annual maximum build limit for wind by 50%, and cumulative maximum build limit by 44%".[76]

As part of its rebuttal testimony, Georgia Power claimed that "the Company's build limits help ensure the model is performing its analysis within realistic parameters and providing appropriate projections of avoided energy costs."[77] However, that doesn't negate the fact that Georgia Power (i) did not justify the limits it imposed on the model, (ii) failed to evaluate a

[74] Stenclik Testimony at 41.
[75] *Id.* at 53.
[76] *Id.* at 54.
[77] Main Panel Rebuttal Testimony at 35.

scenario in which those limits are removed, and (iii) inappropriately assumed that constraints that exist today (i.e., limitations to the solar RFP process) will continue, and not improve, over the planning period. As witness Stenclik testified, "any claims of an 'optimized' capacity expansion [is] meaningless, as the results are entirely driven by the Company's exogenous, arbitrary assumption limits on solar PV and wind that can be integrated in a single year."[78]

Witness Stenclik's main point still stands: "[t]he Company continues to use unrealistic, unsupported constraints on solar, wind, and storage resources in its optimized Aurora modeling, specifically, limiting the annual build of solar resources to 1500 MW and wind resources to 300 MW per year across Georgia Power, Mississippi Power, and Alabama Power Companies."[79] This is a disservice to ratepayers. In fact, Company witnesses acknowledged that witness Stenclik's testimony did not merely say that build limits could be unrealistic—he also said that after letting the model select the megawatts of solar it needed without a strict limit, *then* the Company and the Commission could use that information to make decisions:

> Q. But you don't disagree with that basic fact, correct? That you always need to use the model as a great source of information, but then the Company's experience and the Commission's experience must then affect the ultimate decisions that are being made? [80]
> A. (Witness Hubert) I think what we testified to is like for the mixed study and all the assumptions that go into the mix study the importance of that it's a few things. One, it does establish an indicator of the types of resources that would be economic for customers. Number two, it serves as the basis, the direct expansion plan along with the existing fleet, serves as the basis for developing avoiding energy costs, which are used to identify the benefits of resource decisions whether it's, you know, retirements [...] renewable expansion, advanced side programs, all the above, many of which are part of this IRP, that's the importance. But it's important for us to apply practical, reasonable limits in the modeling that's used for those very important purposes for our system.

[78] Stenclik Testimony at 53.
[79] *Id.* at 52.
[80] Response to NRDC/SACE/Sierra Club's Cross-Examination from Randy Hubbert, on behalf of Ga. Power Co., 3rd Hearing, Docket Nos. 56002 & 56003, https://www.youtube.com/live/klLdgtp42Vc at 8:13:45.

> Q. And regardless, after you've done your modeling, you still need to use your experience and the Commission's guidelines to make the final decisions of the resources you're going to use?
> A. (Witness Hubert) That's right.

The modeling allows for "what if" scenarios that the Commission can use to inform its judgment. The role of modeling solar and wind as resource options in the IRP is to provide accurate information to stakeholders, who can then make informed decisions about what is realistic after considering what is economic and in the best interest of ratepayers. The goal is "not to constrain the analysis based on pre-determined decisions about what the utility considers reasonable or achievable."[81] Instead, here, the Company limited builds of clean technologies in its proposal, so there were no available options to meet load growth and coal retirements without a significant gas build. The Company's 2025 IRP proposal is doing the opposite of their identified charge: Georgia Power is "embedding subjective decision-making assumptions into the model itself, thereby limiting the ability of the model to identify the least-cost or most prudent portfolio."[82] Removing artificial solar and wind build limits provides the opportunity for a higher clean energy buildout which can reduce emissions, mitigate financial risk, and offer comparable—if not lower—cost outcomes for customers.

4. Georgia Power Should Condition the Approval of Load-driven Transmission Projects on Measurable Customer Commitments and Increase Regional Transmission Planning Transparency

NRDC/SACE/Sierra Club's witness Richwine found that several of the proposed transmission projects are driven by large, location-specific load additions. If large load customers like data centers fail to materialize –which is likely, as analyzed in Section 1–, then several of the

[81] Stenclik Testimony at 54.
[82] *Id.*

Strategic Transmission investments will be under-utilized in the ten-year transmission planning horizon. To address this, witness Richwine recommended that Georgia Power "clearly attribute transmission project justifications to their primary drivers, be it large loads, solar integration, reliability reinforcement, or generation retirements, so the Commission and stakeholders can evaluate cost causation and system benefit".[83] This will enable the Commission to evaluate cost causation and system benefit, particularly for highly uncertain drivers like large loads. Witness Richwine also recommended that the Company "[c]ondition the approval, timing, or phasing of load-driven transmission projects on measurable customer commitments (e.g., executed interconnection agreements, construction milestones)."[84] Conditioning approval to measurable commitments should be done consistently, whether the transmission project is needed to interconnect new generation or to interconnect new large loads.

Among other recommendations, Witness Richwine also recommended that the Company:

● acknowledge that the geographic dispersion of smaller generation resources reduces stress on transmission infrastructure relative to large centralized generation and enables flexible, lower-cost interconnection, and

● revise its modeling assumptions for battery resources to reflect real-world operations—specifically, their ability to discharge during peak and contingency conditions and provide voltage support at all times– which is reflected in the Company's historical operating data for Mossy Branch.[85]

Finally, regarding transmission planning transparency, while Georgia Power's rebuttal states that it will meet several of the intervenor suggestions through its compliance with FERC

[83] Richwine Testimony at 47.
[84] *Id.* at 48.
[85] *See generally* Richwine Testimony.

Order 1920, that will not begin until June 2026. However, FERC's Order 1920 requires three stakeholder meetings per multi-value strategic transmission planning cycle, which will be a 5-year cycle; additionally, the Southeastern Regional Transmission Planning ("SERTP") stakeholder meetings are attended by Southern Company transmission planning staff, not Georgia Power, , and include all of the utilities that are members of SERTP. In contrast, Duke Energy, which is also a member of SERTP, holds a local planning process that is separate from the SERTP process–called the Carolinas Transmission Planning Collaborative or CTPC. Duke's CTPC mirrors the Integrated Transmission System or ITS in Georgia in that it is a way for the large investor-owned utility to coordinate transmission with the cooperative and municipal utilities that are interconnected with its transmission system. However, one key difference between ITS and CTPC is that CTPC has a history of transparency and stakeholder engagement that the ITS lacks.[86]

The CTPC has a Transmission Advisory Group ("TAG") that has held more than a dozen meetings since the beginning of 2022.[87] Duke's TAG is separate from coordinating with other utilities.[88] Through the main stakeholder engagement body in the SERTP process (the Regional Planning Stakeholders Group), stakeholders are limited to certain industry sectors, and only two representatives from each sector can participate. In contrast, the CTPC's TAG doesn't have limits on the sectors that can participate or the number of representatives from each sector, and anyone from the general public may sign up to attend.[89]

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[86] The same projects in the GA 2024 ITS study in Technical Appendix 3 are listed in the 2025 SERTP Preliminary Expansion Plan Report that was released the week of June 16, 2025. However, in the SERTP expansion report, the project's supporting statement is not redacted, and does not require signing an NDA to read. https://www.southeasternrtp.com/docs/general/2025/2025%20SERTP%20Preliminary%20Expansion%20Plan%20Report%20(Non-CEII).pdf.

[87] Response to NRDC/SACE/Sierra Club's Cross-Examination from Michael Robinson, on behalf of Ga. Power Co., 3rd Hearing, Docket Nos. 56002 & 56003, https://www.youtube.com/live/klLdgtp42Vc at 8:10:16.

[88] *Id.*

[89] *Id.*

As part of this IRP, the Commission can take action to increase transparency in the transmission planning process. Although transmission planning is the jurisdiction of FERC, these processes are still influenced by state commissions. Duke recently updated its transmission planning process to include multiple scenario planning. In its December 30, 2022 order approving Duke's IRP and Carbon Plan, the North Carolina Utilities Commission directed that the NCTPC should "evolve by expanding transparency and coordination to address the increasing complexity and potential cost of the addition of proactive transmission planning into the NCTPC process."[90] This is just one example of an enhanced transmission planning process that the Commission could encourage the Company to adopt.

IV. CONCLUSION

For the reasons stated above, the Commission should deny approval of Georgia Power's load forecast, direct the Company to stay committed to retiring Plant Bowen Units 1-2 and Scherer Unit 3, direct the Company to run a scenario that removes artificial solar and wind build limits, and direct Georgia Power to adopt Staff's and intervenors' recommendations on transmission planning, particularly interregional transmission and transmission for large loads.

Respectfully submitted this 3rd day of July, 2025.

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[90] NCUC 2022 Carbon Plan IRP Order, #58, Docket No. E-100, Sub 179, North Carolina Utilities Commission, starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=7b947adf-b340-4c20-9368-9780dd88107a at 41.

CERTIFICATE OF SERVICE

I do hereby certify that I have this 3rd day of July 2025, served the following parties with the foregoing **POST-HEARING BRIEF OF THE NRDC, SACE, AND SIERRA CLUB**, via hand delivery, email and or US mail to all recipients on the service list for this docket.

This July 3, 2025

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