BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION

DOCKET NO. 55378

In the Matter of:

Georgia Power Company's 2023 Integrated Resource Plan Update, Certification of the Power Purchase Agreement between Georgia Power Company and Mississippi Power Company, Certification of the Power Purchase Agreement between Georgia Power Company and Santa Rosa Energy Center LLC, and Amended Certification of the Residential Thermostat Demand Response Demand Side Management Program

DIRECT TESTIMONY

AND EXHIBITS

OF

PATTY DURAND, MBA

ON BEHALF OF

GEORGIA WAND EDUCATION FUND INC.

FEBRUARY 15, 2024

Q. Please state your name, profession, and business location.

My name is Patty Durand and I am founder and president of Cool Planet Solutions LLC which is a consultancy specializing in consumer engagement with energy and grid modernization. I am also a candidate for the Georgia Public Service Commission. My business is located online and my residence is Conyers, Georgia.

Q. On whose behalf are you testifying?

GEORGIA WAND (Women's Actions for New Directions). Georgia WAND Education Fund Inc. is a non-profit advocacy group focused on quality-of-life issues, health hazards resulting from nuclear energy and weapons, and social justice grounded in building racial equity.

Q. What is the purpose of your testimony?

On July 21, 2022, the GA Public Service Commission approved Georgia Power's 2022 Integrated Resource Plan which authorized the retirement of 1,517 megawatts of coal and the addition of 5,154 megawatts of gas and renewables for a net of 3,647 megawatts of new capacity. That does not include 1,020 megawatts of new capacity that Plant Vogtle will add to GA Power's capacity. Together the 2022 IRP and Plant Vogtle will add 4,667 megawatts of generating capacity. Just 15 months after the 2022 IRP was approved, a plan that is supposed to last 10 years, GA Power filed a surprise IRP on October 27, 2023, asking this commission for an additional 6600 megawatts of generating capacity. The purpose of my testimony is to explain why this new request is unreasonable, inappropriate, and should be disallowed.

Q. Ms. Durand, please summarize your educational background and professional experience.

A. I received a Bachelor of Science degree in Business from Virginia Commonwealth University in Richmond, Virginia in 1988, and a Master of Science in Business Administration in 1993 from the College of William and Mary in Williamsburg, Virginia. I worked for three years as a regulatory compliance agent with the Virginia Alcoholic Control Board, and 10 years in various roles in Information Technology before entering the field of environmental advocacy and energy research. Prior to the recent founding my consultancy, Cool Planet Solutions, for 10 years from 2010-2020 I served as President and CEO of the Smart Energy Consumer Collaborative. In that role I was responsible for conducting research studies on consumer and grid modernization, because by all accounts the electric grid was changing rapidly while few people in the energy industry knew much about what consumers knew and wanted in a future in which they were active participants. In addition to conducting research, we also directly educated consumers on the topic of grid modernization and energy through newsletters, videos, social media, infographics, and the like. During my role at SECC I had occasion to attend workshops or seminars at over a dozen state commissions where I presented consumer research to commissioners interested in expanding consumer participation in energy, and I presented consumer research at least three NARUC (National Association of Regulatory Utility Commissioners) meetings and two NASUCA (National Association of State Utility Consumer Advocates) meetings. In addition, I attended between 10 and 20 energy conferences annually in which I presented energy research content to professionals in the energy industry on the topic of consumers. In addition, I have spoken before the Georgia Public Service Commission at least six times, and presented consumer research findings to commissioners outside of formal hearings at least twice.

Q. Have you included a bio?

No. A bio is not necessary because my previous description is comprehensive.

Q. Ms Durand, have you previously testified as an expert witness before this Commission?

Yes. I testified on December 5th, 2023, as an expert witness for Concerned Ratepayers of Georgia regarding Plant Vogtle's stipulated agreement. In addition I have testified as a public witness numerous times.

Q. What were some of the key points you testified to as an expert witness?

That the Commission erred in accepting the August 31, 2023 stipulated agreement because the agreement was reached by a subset of intervenors that were hand selected by Georgia Power, that both intervenors and PSC staff involved in negotiations had no training, experience or skills in negotiating billion-dollar business agreements, or even million-dollar agreements, and that it was wholly inappropriate for a small group of hand-selected nonprofit leaders to negotiate a deal with a sophisticated utility behind closed doors on behalf of 2.7 million Georgia Power customers, making the agreement literally the definition of a backroom deal, which violates the public process and undermines the public trust. And the Commission erred in accepting the August 31, 2023 stipulated agreement because, for the first time in history of PSC proceedings, the stipulated agreement was reached prior to any testimony, reports, filings, or hearings being held on the docket. Finally, the Commission failed to meet its own commitments to hold prudency hearings at the end of the construction process for Plant Vogtle, having declined to do so throughout the 15 years of construction with repeated and strong claims that it made no sense to review cost overruns until the end of the project during prudency hearings. Such hearings were then not held, thus eliminating insight into why Plant Vogtle went so far over budget and was

seven years behind schedule. In fact, as of this writing Plant Vogtle is still not done, with another delay for Unit 4's in-service date announced on January 31, 2024.

Q. Why do you state that GA Power's 2023 IRP should be rejected? GA Power indicates that the large amount of new economic development is creating this need.

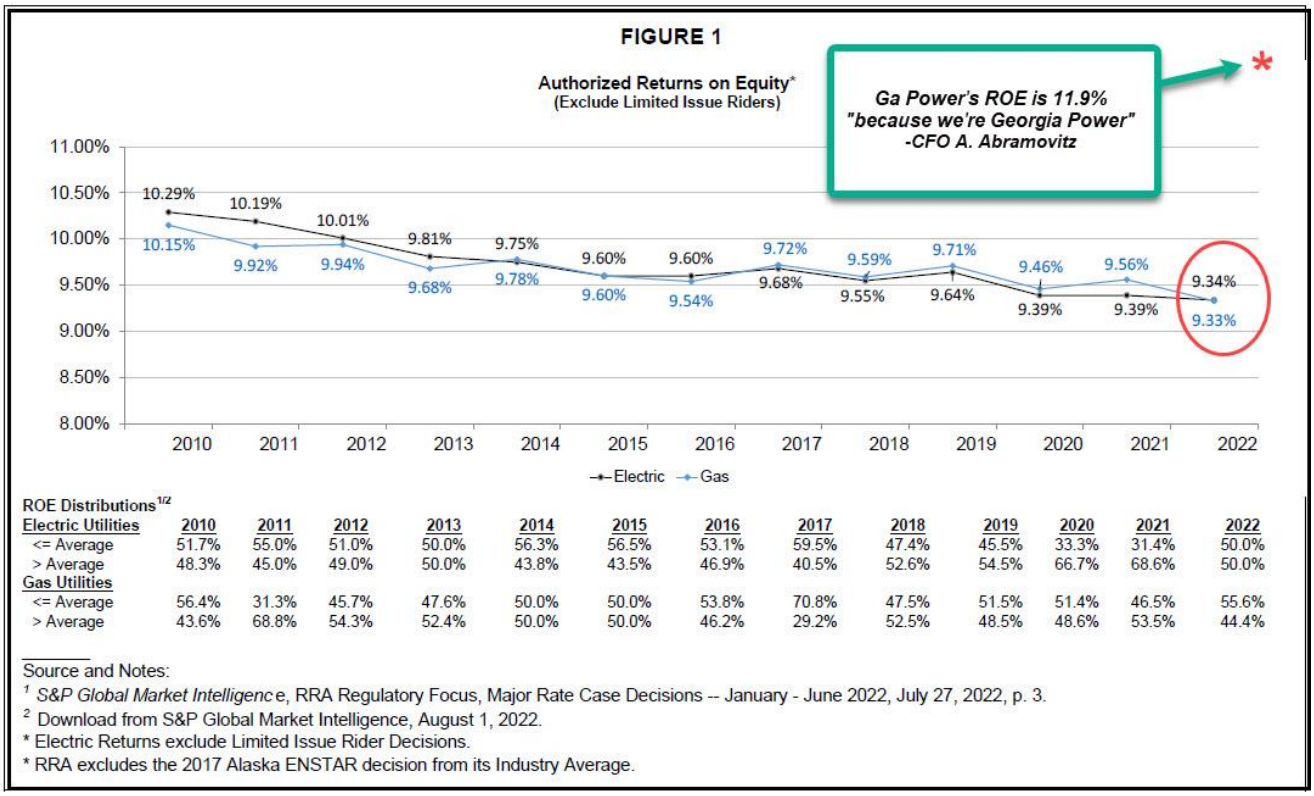
Georgia Power has a long history of submitting false growth projections that are used to justify expanding capacity but which does not materialize. The "Averch–Johnson effect" is an economic term used to describe the tendency of regulated utilities to engage in excessive amounts of capital accumulation in order to expand their profit.[1] This can happen when the allowed rate of return exceeds the cost of capital, since the difference between the two represents pure profit.

Q: Has this happened in Georgia?

Yes. Not only does GA Power's allowed rate of return exceed the cost of capital, GA Power's allowed rate of return exceeds that of nearly every investor-owned utility (IOU) in the United States and is far above industry norms. Thus, GA Power has even more incentive than most IOUs to overinvest capital in order to increase profits. During both the 2019 Rate case and the 2022 Rate Case, expert witness Michael P. Gorman testified that GA Power's ROE requests were not justified and that the utility can easily meet its needs for financial stability and investor profits with a normal ROE. Mr. Gorman prepared a chart to accompany his testimony which depicted the history and current status of utility IOU returns on equity in the United States.

[1] Averch–Johnson effect (March 19, 2023) In *Wikipedia* https://en.wikipedia.org/wiki/Averch%E2%80%93Johnson_effect

Figure 1 – Authorized Returns on Equity [2]



ROE Distributions[1/2]

Electric Utilities	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<= Average	51.7%	55.0%	51.0%	50.0%	56.3%	56.5%	53.1%	59.5%	47.4%	45.5%	33.3%	31.4%	50.0%
> Average	48.3%	45.0%	49.0%	50.0%	43.8%	43.5%	46.9%	40.5%	52.6%	54.5%	66.7%	68.6%	50.0%
Gas Utilities													
<= Average	56.4%	31.3%	45.7%	47.6%	50.0%	50.0%	53.8%	70.8%	47.5%	51.5%	51.4%	46.5%	55.6%
> Average	43.6%	68.8%	54.3%	52.4%	50.0%	50.0%	46.2%	29.2%	52.5%	48.5%	48.6%	53.5%	44.4%

Source and Notes:
[1] *S&P Global Market Intelligence*, RRA Regulatory Focus, Major Rate Case Decisions -- January - June 2022, July 27, 2022, p. 3.
[2] Download from S&P Global Market Intelligence, August 1, 2022.
* Electric Returns exclude Limited Issue Rider Decisions.
* RRA excludes the 2017 Alaska ENSTAR decision from its Industry Average.

However, in 2019 the Georgia Public Service Commission authorized GA Power's ROE's earnings band far above industry norms at a 11.25%, and in 2022 commissioners set GA Power's ROE earnings band even higher at 11.9%, so far above industry norms as to be nearly off the charts when plotting their ROE on Mr. Gorman's chart.

This generous earnings band appears to place an upper limit on GA Power ROE; however the commission allows GA Power to keep profits above the top tier of the earnings band. In 2022 GA Power's ROE was an astonishing 13.69%. This extremely high ROE violates the basic risk return ratio that governs capital investments which says that the greater the risk, the greater the return. GA Power earns a return far above the risk it faces for capital investments.

[2] Gorman, Michael P. Rate of Return expert witness testimony "https://psc.ga.gov/search/facts-document/?documentId=191870 p. 5

Figure 2 – GA Power ROE 2022 [3]

GEORGIA POWER COMPANY
RETAIL RATE OF RETURN SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2022

	Retail Return Consistent with Rate Treatment
Return on Investment - Retail (from Section 2)	9.33%
Less:	
Weighted Component Cost of Long-Term Debt	-1.64%
Return Available on Retail Equity	7.69%
Divided by: Equity as a Percent of Total Capital	56.16%
Retail Return on Equity	13.69%

Q. Why does the commission allow GA Power to receive a rate of return above industry norms?

One reason is that commissioners were trying to avoid a credit downgrade for GA Power that credit and stock markets would normally assess on a publicly traded company such as Southern Company (GA Power is a wholly owned subsidiary of Southern Company) due to the excessive risk for the extreme cost overruns, cash flow problems, and delays from Plant Vogtle.

Q. How do you know that?

Commissioner Tim Echols denied a motion from Commissioner Bubba McDonald on 12/17/2019 during the 2019 administrative session in which Commissioner McDonald asked for

[3] GA Power Company Annual Surveillance Report 2022
https://psc.ga.gov/search/facts-document/?documentId=193593

a slight reduction on GA Power's ROE to save GA Power ratepayers hundreds of millions of dollars. Commissioner Echols stated, "I will not agree to that reduction because that would trigger a downgrade based on what I heard last week in New York."[4].

Figure 3 – GA PSC Administrative Session 12/17/19



Commissioner Tim Echols insists on high ROE

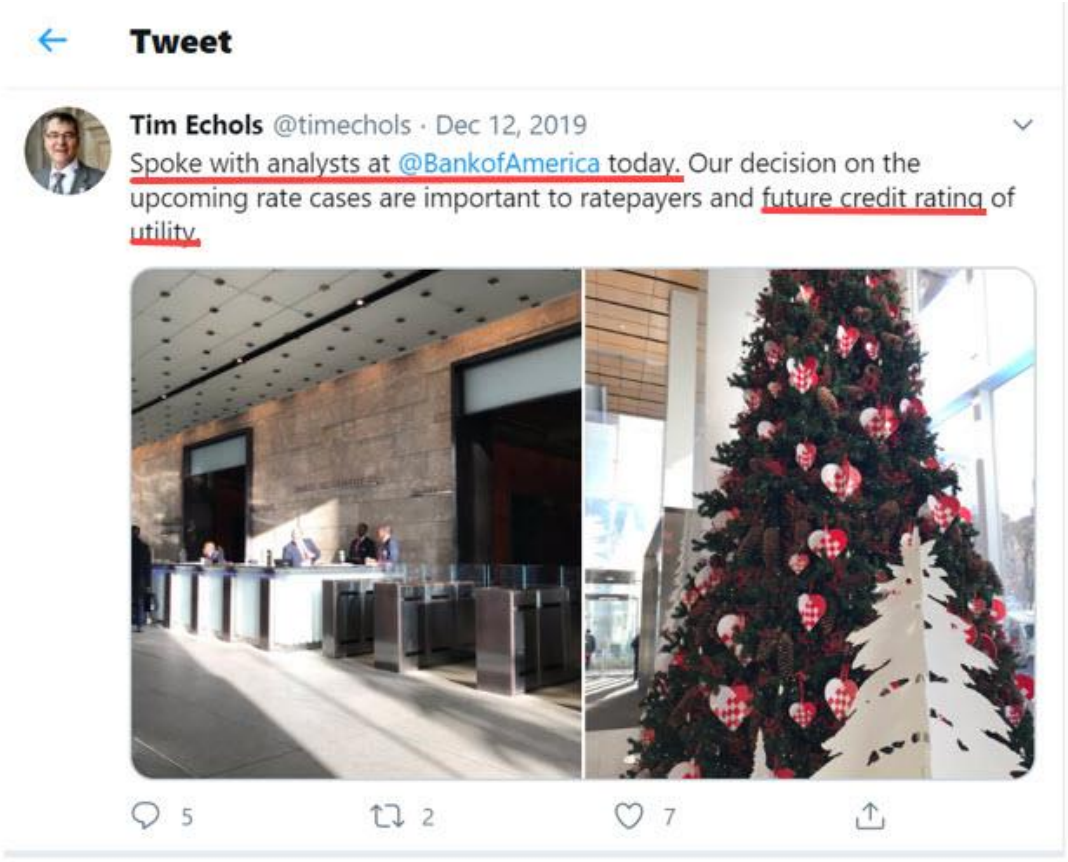
On December 12, 2019 Commissioner Echols was in New York to ask Wall Street analysts at Bank of America what they wanted from the Commission for the 2019 rate proceeding.

Q. How do you know that?

Commissioner Echols stated that in a tweet he sent on 12/12/2019 with a picture of the lobby of Bank of America in New York.

[4] GA Public Service Commission Administrative session 12/17/2019 https://youtu.be/R-RNUZHlmNc

Figure 4 – Commissioner Tim Echols in New York City [5]



In 2019, not only did GA Power receive an ROE far higher than industry norms, but GA Power also received a larger rate increase than the next 10 utilities combined according to data obtained from S&P Global:

[5] X formerly known as Twitter @timechols tweet https://twitter.com/timechols/status/1205128936432324608

Figure 5 – 2019 IOU rate increases

Utility	State	2019 Rate Increase ($ millions)
Georgia Power	Georgia	909
DTE Electric	Michigan	273
Duke Energy Carolinas	South Carolina	107
Virginia Electric & Power Company	Virginia	104
Massachusetts Electric	Massachusetts	90
Wisconsin Electric Power	Wisconsin	81
Atlantic City Electric	New Jersey	70
Kentucky Utilities	Kentucky	56
Southwestern Electric Power	Arkansas	53
Pacific Gas & Electric	California	46
Public Service Company of Oklahoma	Oklahoma	46
Northern Indiana Public Service Company	Indiana	45
Appalachian Power Company	West Virginia	44
Northern Indiana Public Service Company	Indiana	43
Duke Energy Progress	South Carolina	41
Wisconsin Public Service Corporation	Wisconsin	39
Virginia Electric & Power Company	Virginia	38
San Diego Gas & Electric Company	California	36
NSTAR Electric Company	Massachusetts	34
Duke Energy Florida LLC	Florida	29
Southern California Edison Company	California	25
Baltimore Gas and Electric Company	Maryland	25
Duke Energy Indiana, LLC	Indiana	24
Virginia Electric & Power Company	Virginia	18
Green Mountain Power Corporation	Vermont	17
Northern Indiana Public Service Company	Indiana	17
Orange & Rockland Utilities	New York	13
Maui Electric Company	Hawaii	12
Virginia Electric & Power Company	Virginia	10
Potomac Electric Power Company	Maryland	10
Entergy Arkansas	Arkansas	10
MDU Resources Group	Montana	9
Appalachian Power Company	Virginia	7
Southern Indiana Gas & Electric	Indiana	7
NorthWestern Corporation	Montana	7
The Potomac Edison Company	Maryland	6
Otter Tail Power Company	South Dakota	5
Southern Indiana Gas & Electric Company	Indiana	4
Oklahoma Gas and Electric Company	Arkansas	3
Virginia Electric & Power Company	Virginia	3
Louisville Gas & Electric Company	Kentucky	2
Virginia Electric & Power Company	Virginia	2
Upper Peninsula Power Company	Michigan	2

Northern States Power Company	Wisconsin	1
Empire District Electric Company	Kansas	0
Oklahoma Gas and Electric Company	Oklahoma	0
Puget Sound Energy	Washington	0
Monongahela Power Company	West Virginia	0
Appalachian Power Company	Virginia	0
Ameren Illinois	Illinois	(3)
Commonwealth Edison Company	Illinois	(3)
Virginia Electric & Power Company	Virginia	(3)
Virginia Electric & Power Company	Virginia	(4)
Virginia Electric & Power Company	Virginia	(4)
Sierra Pacific Power Company	Nevada	(5)
Avista Corporation	Idaho	(7)
Virginia Electric & Power Company	Virginia	(9)
Wind Energy Transmission Texas	Texas	(16)
Virginia Electric & Power Company	Virginia	(18)
Consumers Energy Company	Michigan	(24)
Entergy New Orleans LLC	Louisiana	(42)
Monongahela Power Company	West Virginia	(101)
Southern California Edison Company	California	(523)
	Average Increase	**26**

Source: S&P Global, 2019 rate increase[6]

And again, in 2022's rate proceeding, GA Power's rate increase was among the top three largest in the United States, up there with California, the most populated U.S. state with over 39 million people and the 5th largest economy in the world. California's IOUs are faced with making huge investments to underground power lines to reduce wildfire risk.

[6] S&P Global Reports 4th Quarter and Full-Year 2019 Results
https://press.spglobal.com/2020-02-06-S-P-Global-Reports-4th-Quarter-and-Full-Year-2019-Results

Figure 6 – 2022 IOU rate increases [7]

Utility	State	**2022 Requested Increase ($ millions)**
Pacific Gas & Electric*	California	3452
Consolidated Edison Company of New York	New York	1038
Georgia Power	**Georgia**	**1004**
Southern California Edison Company	California	971

** PG&E announced last year that it will underground 10,000 miles of power lines at a projected cost of $15 billion to $30 billion, basically rebuilding the grid.*

That GA Power's rate increase would be situated among these much larger populated states demonstrates gold plating as predicted by the Averch Johnson effect.

GA Power now makes a surprise 2023 IRP filing claiming enormous capacity expansion need even though large grid investments far above any other state were delivered from their 2019 and 2022's rate proceedings.

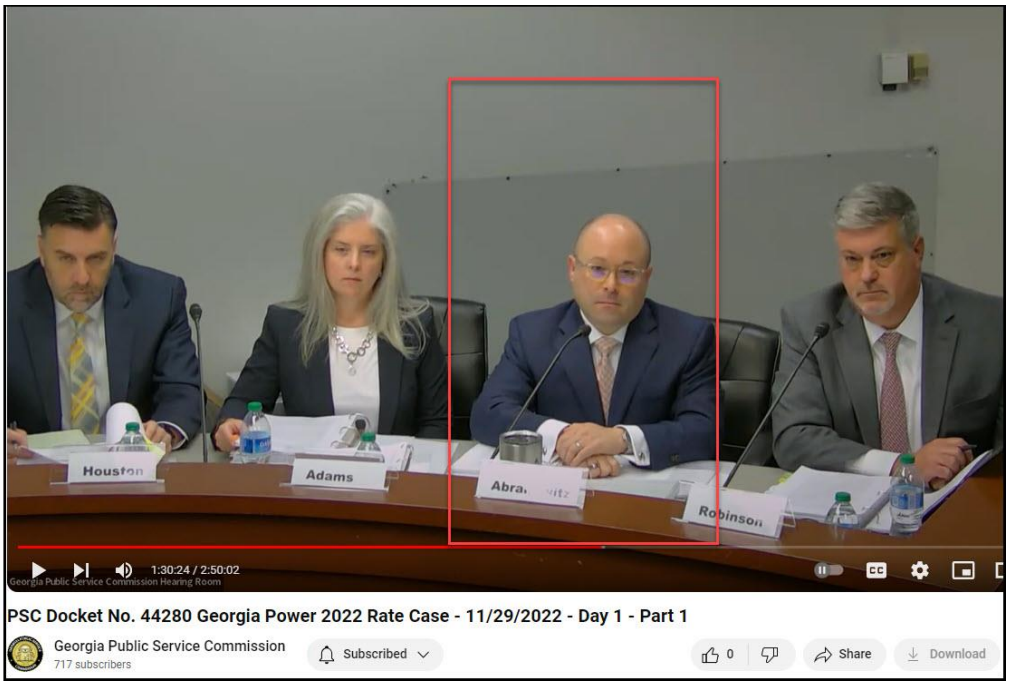
Q. How does GA Power explain these grid investments far larger than any other utility in 2019 and in line with California utilities in 2022, and its above industry norm ROE requests?

During the 2022 rate proceeding, when GA Power's CFO Aaron Abramovitz was asked to explain why GA Power should receive an ROE far above industry norms, and why GA Power had characterized GA Public Interest Advocacy staff as "radical" for asking the Commission to grant GA Power an ROE that matched utility industry norms, Mr. Abramovitz had no meaningful reply, not being able to admit that GA Power's failure to deliver Plant Vogtle increased risk to investors, and thus increased costs of credit – normal market behavior. Or it

[7] S&P Global Reports 4th Quarter and Full-Year 2022 Results https://investor.spglobal.com/news-releases/news-details/2023/SP-GLOBAL-REPORTS-4th-QUARTER-AND-FULL-YEAR-2022-RESULTS/default.aspx

would increase costs of credit, unless GA Power could get the GA PSC to increase Power's ROE above industry norms to compensate investors for increased risk with increased profits. Since Mr. Abramovitz could not say any of that he the question by saying, "We're talking about GA Power here. We're not talking about the average utility." [8]

Figure 7 GA PSC GA Power 2022 Rate Case 11/29/22



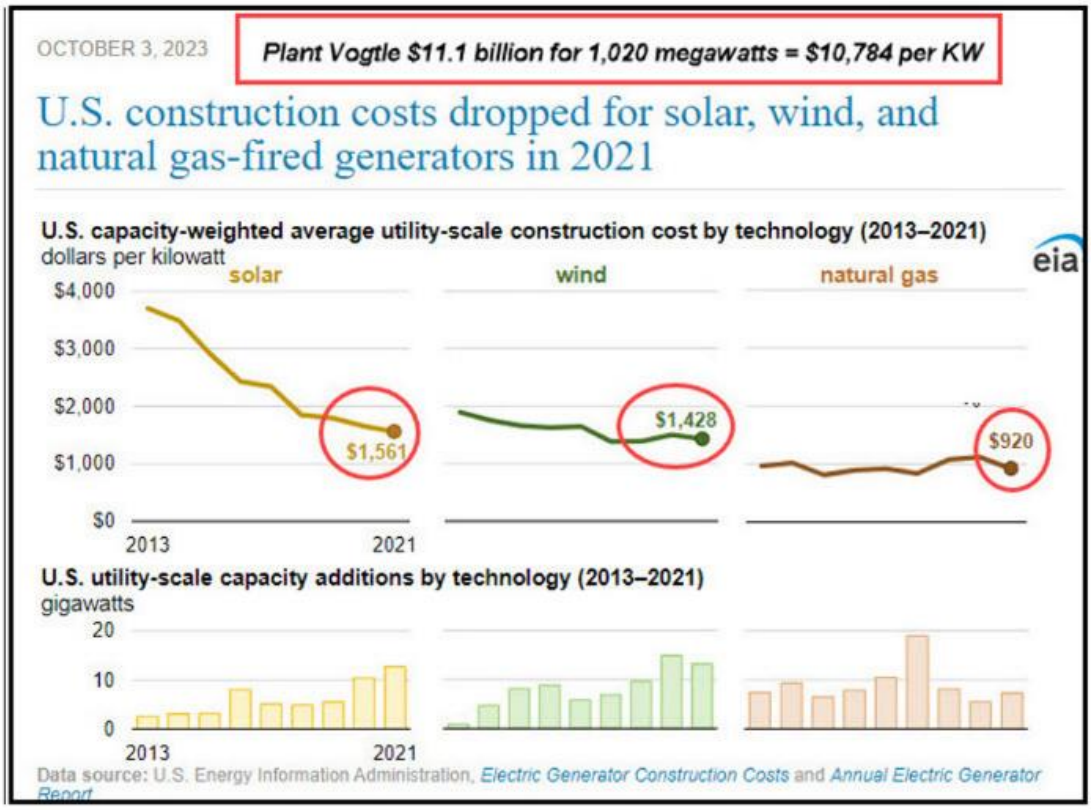
Q. Why do you say GA Power's 2019 and 2022 rate increases are gold plating?

Excessive capital accumulation under rate-of-return regulation is informally known as "gold plating" which is a term implying that too much money is spent on capital. One result of the Averch Johnson effect is that utilities spend too much money, for example spending $2 billion on a power plant that should only cost $1 billion. We saw this with Plant Vogtle, which cost GA Power ratepayers $11.1 billion (capital plus financing, on which GA Power also profits) for only

[8] PSC Docket No. 44280 Georgia Power 2022 Rate Case - 11/29/2022 - Day 1 - Part 1 https://www.youtube.com/live/vzzGKj63-r8?si=c9me44M-cM_dV4sI&t=5421 Timestamp 1:30:21

1,020 megawatts of energy. This astonishing $11 billion cost is so far above what any other type of energy would have cost it strains credulity to claim that the GA Public Service is regulating a monopoly utility in the public interest.

Figure 8 – Vogtle costs compared to U.S. construction costs [9]



Plant Vogtle was pursued by GA Power to maximize profits for them and their parent, Southern Company. It was clear in 2009, and especially in 2017 when the decision to proceed with Plant Vogtle was made, that GA Power's energy sales were flat and that their growth projections were incorrect. Flat energy sales were not unique to Georgia – this was true throughout the United

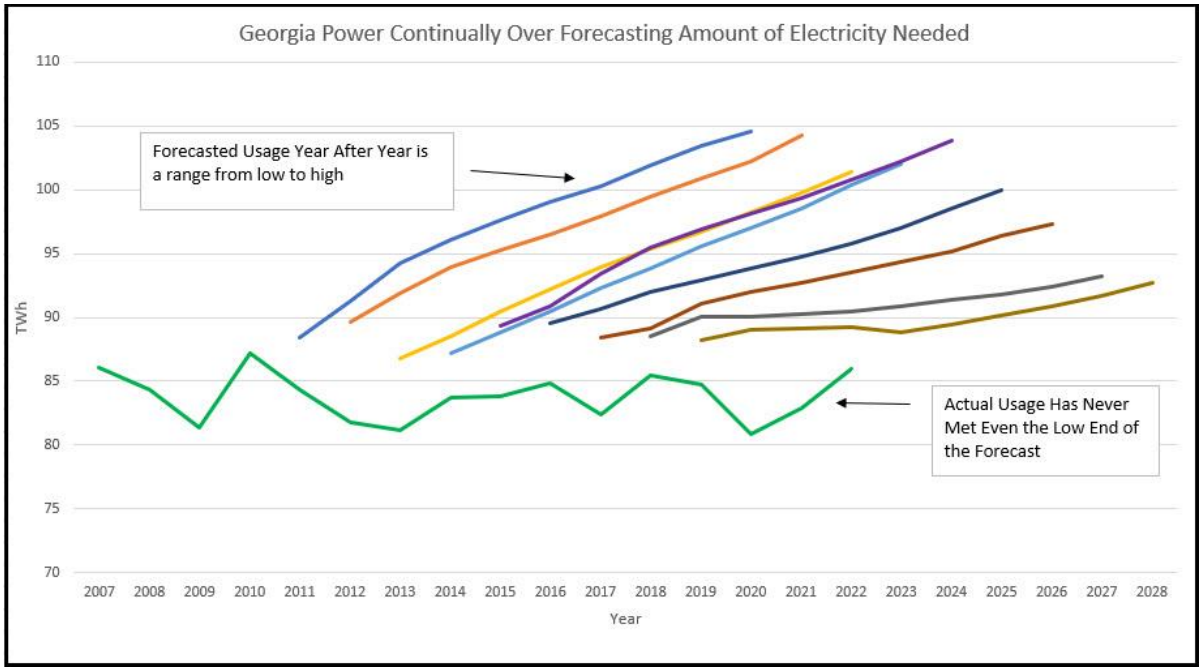
[9] U.S. construction costs dropped for solar, wind, and natural gas-fired generators in 2021, *Energy Information Administration*, 10/3/2023 https://www.eia.gov/todayinenergy/detail.php?id=60562

States. In order to continue to make capital investments and continue to grow Southern Company profits for investors, GA Power's strategy was to wildly exaggerate future energy sales in IRPs to maximize shareholder profit, which then led to large rate requests to pay for new generation capacity approved in their 2019 and 2022 IRPs. Pursuing inflated growth projections GA Power is able to deliver far more profits to shareholders

Q. Earlier you stated that GA Power inflates growth projections. What evidence exists for your belief?

GA Power must submit project future energy demand to FERC, the Federal Energy Regulatory Commission.[10] An examination of GA Power's growth projections between 2007 – 2022 shows wildly exaggerated future energy sales as depicted in this graph:

Figure 9 – GA Power forecasts plotted against actual [11]

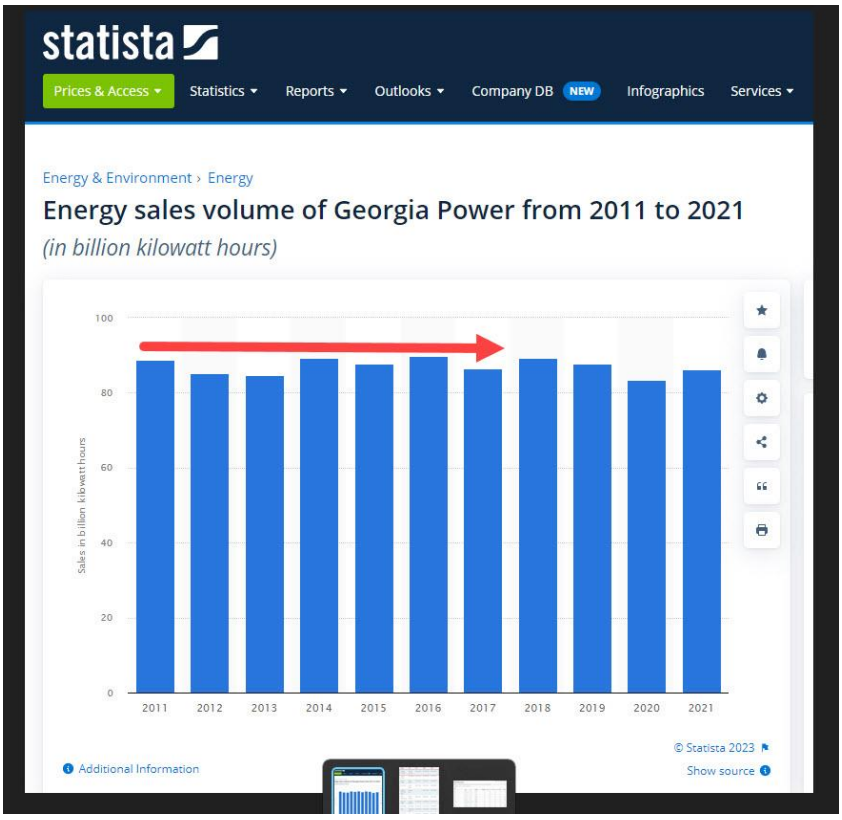


[10] Form No. 714 - Annual Electric Balancing Authority Area and Planning Area Report, FERC https://www.ferc.gov/industries-data/electric/general-information/electric-industry-forms/form-no-714-annual-electric/data

[11] Annual Electric Power Industry Report, Form EIA-861 detailed data files Electric Sales, Revenue, and Average Price https://www.eia.gov/electricity/data/eia861/

This graphic was created by plotting FERC forecasts that GA Power filed for summer and winter peaks using the colored lines to visually show the highs and lows, and the green line depicts actual sales. The highs are wildly exaggerated, and even the low end of their forecasts never touches the actual demand. In fact between 2007 and 2022 GA Power saw zero growth in in electricity sales, yet received authorization from the GA Public Service Commission to build two new reactors at Plant Vogtle in 2008, and the Commission recommitted to that project despite being aware in 2017 that the growth projections GA Power used for authorization had not materialized as seen in this chart. In fact, even in 2022 that growth had still not materialized. This lack of growth can be seen in this chart:[12]

Figure 10 – Energy sales volume of Georgia Power from 2011 to 2021



[12] Statista Energy sales volume GA Power from 2011 to 2021
https://www.statista.com/statistics/588262/energy-sales-of-georgia-power/

Although GA Power's sales did not grow, their rate increases did, resulting in a large expansion of their rate base, which is the figure on which GA Power earns their return on equity.

Figure 11 – Energy sales volume of Georgia Power from 2011 to 2021

Georgia Power Company		
Year	Retail Rate Base ($ Billion)	Retail Sales (TWh)
2007	11.21	86.08
2008	14.11	84.30
2009	*	81.35
2010	14.47	87.16
2011	14.31	84.30
2012	15.24	81.74
2013	15.79	81.18
2014	15.42	83.74
2015	16.01	83.80
2016	16.5	84.87
2017	17.54	82.40
2018	17.74	85.49
2019	19.11	84.70
2020	20.77	80.81
2021	21.65	82.94
2022	23.19	85.96
% Inc. 2007-2022	**50.3%**	**-1%**

*filing not available
Retail rate base from Ga PSC ASR reports
Retail sales figures from EIA 861: https://www.eia.gov/electricity/data/eia861/

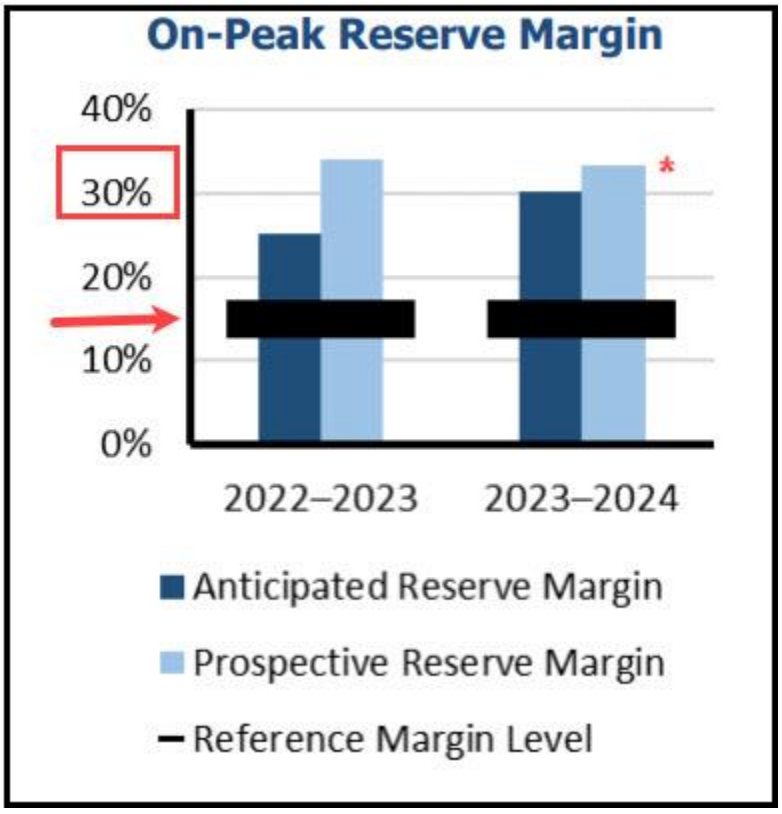
Note this does not include Plant Vogtle

Because GA Power is building far more capacity than required, GA Power's load factor is very low and their reserves are far too high.

Q. What evidence is there that GA Power's reserves are too high?

There are national guidelines for appropriate electricity reserves, which is how much generating capacity is available above what the grid is expected to need. These guidelines ensure vital U.S. interests in electric stability are met. According to NERC, the National Electric Reliability Corporation, the Southeast region, or SERC-Central, which includes Georgia Power, exceeds winter guidelines two-fold and summer guidelines by nearly three-fold. NERC recommends Summer and Winter reliability reserves for the SERC region of the U.S. to be 15% even before the additions of capacity from Plant Vogtle and the 2022 IRP. This excessive capacity costs costumers millions, if not billions of dollars.

Figure 12 SERC-Central Winter Reliability Assessment [13]



[13] NERC Winter Reliability Assessment 2023
https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_WRA_2023.pdf p. 26

Figure 13 SERC-Southeast Summer Reliability Assessment



Note that 2023 On-Peak Reserve Margin is 40%, nearly three times NERCs recommended 15% for this region and far above GA Power's state goal of 26% reserve margin which is already far higher than recommendations, and all of this is before the 2022 IRP and Vogtle capacity is added to the grid. [14]

Q. What evidence is there that GA Power's load factor is too low and how does that relate to reserve margin?

Reserve margin's purpose is to make sure GA Power, or any utility, has enough reserve capacity to meet peak demand. It says nothing about grid efficiency in terms of utilization of generation capacity. For that you must look at load factor. Load factor is the amount of power required from the grid over a period of time divided by the amount of energy that can be supplied by the grid.

[14] NERC Summer Reliability Assessment 2023
https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2023.pdf p. 26

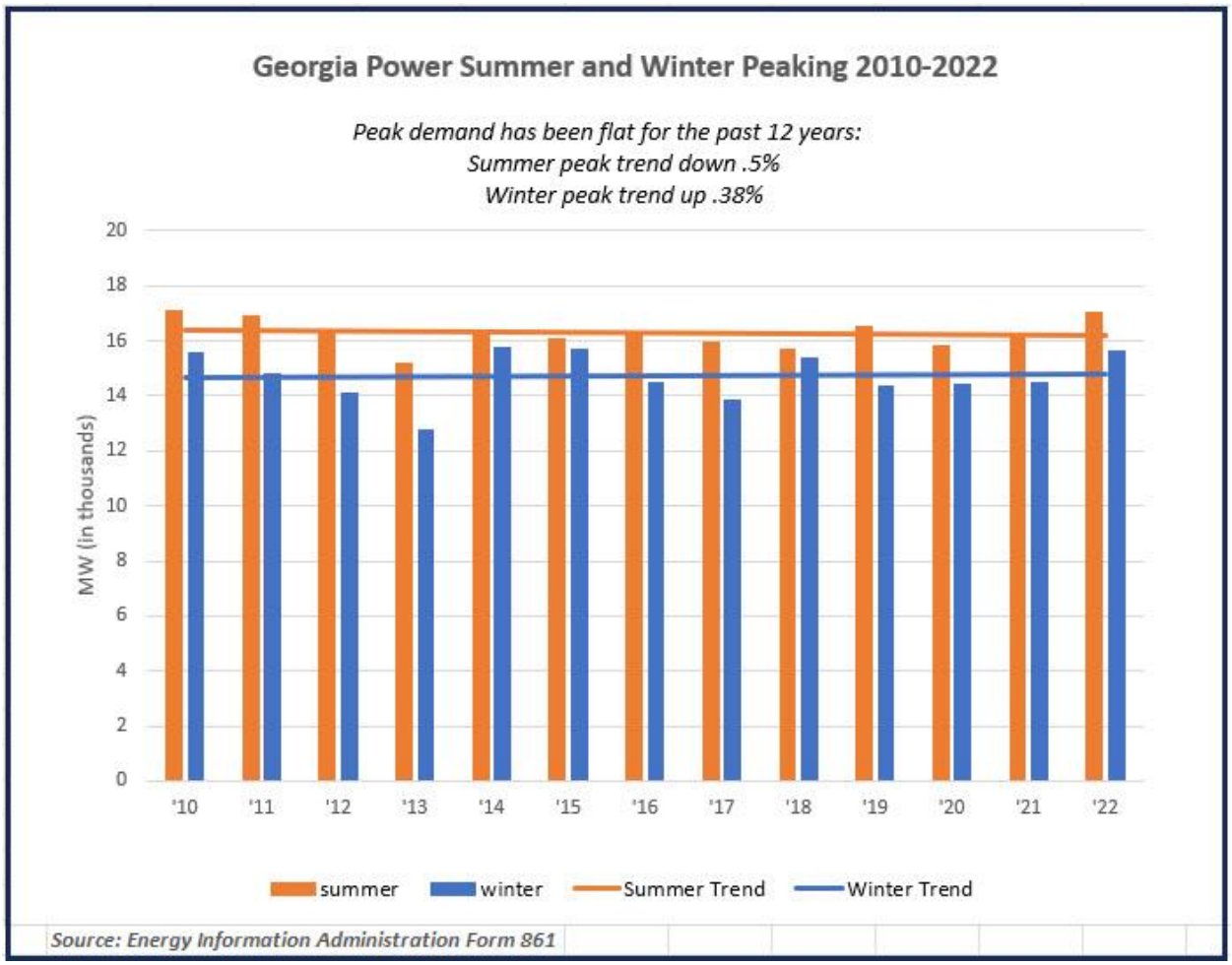
There usually isn't enough demand (or load) for energy around the clock and, as a result, the utilization of any power plant might only be half—or even less. The cost of the plant, however, remains the same. Therefore, regulators try to improve grid efficiency by requiring increases in system load factor, or a regulated utility is simply rewarded for adding generating capacity to meet system peak increases which is expensive for ratepayers and inefficient for grid utilization. Since GA Power is allowed to recover its costs, plus a return on equity, it is incented to build new capacity as previously discussed. Peaking electric facilities in Georgia are rarely turned on, but are needed for quick bursts of peak generation to prevent black outs. Electric rates must pay for this inefficient use of generating facilities. Even worse, peaking generation facilities are exempt from the Clean Air regulations and emit large amounts of pollution. Therefore it is in the public interest to have as high a load factor as possible, and that is achieved by reducing peak demand through any number of load shifting/load shaving programs.

Q. Georgia Power says that it needs a massive amount of new capacity to meet the state's economic growth and new demand, especially peak demand in winter. Is this true?

GA Power has chosen a new prediction model which it claims will be more accurate than its previous growth forecasting model, yet GA Power's past growth forecasting model was wrong for at least the past 15 years. This new model predicts much more aggressive growth than its previous more modest, but still inaccurate growth model. It hardly seems possible that a more aggressive growth model would bring accuracy when the previous model with modest growth predictions was consistently inaccurate. Furthermore, new loads in the 2023 IRP are redacted, along with just about every supporting detail, making analysis of GA Power claims to need astonishing amounts of new growth impossible to understand or believe. Furthermore, an analysis of the past 12 years of GA Power's winter peak and summer peak trend lines shows flat

growth and offers no insight into why GA Power thinks peak demand will spike 38% greater than it thought in 2022 during that IRP proceeding.

Figure 14 GA Power peak demand 2010 - 2022



These trend lines show normal weather-related variability but no growth. Furthermore, any increase in peak demand is easily managed with the addition of a residential demand response program, a program with great potential that GA Power has underutilized. This type of program is widely used in most states, would greatly benefit consumer engagement and put real downward pressure on rates instead of the false downward pressure on rates GA Power claims this IRP would produce.

Q. Why do you say GA Power's downward pressure on rates claims in this IRP are false?

It is not possible to have downward pressure on rates while adding new capacity and/or deferring retirement of old, uneconomical coal and gas plants. Both of those actions add costs. It is literally impossible to add costs and reduce rates. This makes no sense and is clearly false. The only way to put downward pressure on rates is to adopt programs that reduce costs. Full stop. GA Power's 2023 IRP filing asks for approx. 3000 megawatts of new capacity and approx.. 3000 megawatts of expensive coal and gas plant retirement deferrals. Taking any one of these will add significant costs. Together they will add enormous cost and most definitely will increase rates to pay for it.

Q. What is a likely impact to ratepayers if Georgia Power is authorized to increase generating capacity and defer coal plant retirements as it requests in this docket?

It would result in more pain for ratepayers, already under extreme duress from the previous nearly $20 billion of rate increases that have taken place just since the 2019 rate proceeding. These rate increases have added nearly $65/month to an average household's GA Power bill. In 2019's rate case hearings, Dr. William M. Cox with the GreenLink Group provided analysis[15] on behalf of the City of Atlanta on the expansion of the number of households that will be energy burdened if the $1.8 billion request for that rate case was approved. Dr. Cox's analysis predicted that the number of Atlanta households that are energy burdened would double if the $1.8 billion was approved in full, which it was.

In 2022 another rate increase of $1.8 billion took place. So in 2019 and 2022 we had two separate rate increases of $1.8 billion each and if Dr. Cox's analysis is correct, Atlanta

[15] Cox, William M. and Hawthorne, William L., GreenLink Expert testimony, GA PSC filing https://psc.ga.gov/search/facts-document/?documentId=178648

households who are energy burdened would have quadrupled. Then, in May of 2023 another $2.5 billion rate increase took place for the fuel cost recovery docket. And in August of 2023 another $2.1 billion was added to the rates for Unit 3 for Plant Vogtle. Last December, just last month, this commission approved a $7.56 billion rate increase for Vogtle Unit 4, along with $3.5 billion in financing charges, adding a total of $11.1 billion to rates. Those rate increases all total $19.26 billion.

Meanwhile, in 2022 over 240,000 GA Power customers were disconnected from power[16], with 68% of GA Power customers who are disconnected from power are people of color. Although GA Power has claimed that all this new demand will put downward pressure on rates, that is literally impossible if GA Power is authorized to add generating capacity to service this new demand as adding generating capacity will increase rates. That rate increase will take place in the rate hearing. In Georgia, GA Power files their IRP for new generating capacity separately from their rate increase request to pay for that new generation. In the past, GA Power has stated during IRP proceedings that it cannot estimate rate impacts as the IRP is not a rate proceeding and such impacts will be discussed at the rate proceeding where it belongs. It has done this again with their October 2023 surprise IRP filing. Then during the rate proceeding, GA Power will state that it is inappropriate to discuss generating capacity issues as those decisions were made during the IRP proceeding. In this way GA Power prevents any meaningful discussion of how their requests for generating capacity impact the ratepayer. Unless an expert like Dr. Cox is hired to assess rate increase impacts on GA Power ratepayers and how energy burden might expand along with steps

[16] GA Power Incremental Bad Debt report GA PSC filing December 2022
https://psc.ga.gov/search/facts-document/?documentId=192730

to reduce the pain of the ratepayer, steps that GA Power has never taken, this information is unknown.

Q. What if Georgia Power turns out to be right and more capacity is needed to power new businesses in Georgia?

The new businesses that Georgia Power wants to service are electric vehicle and EV battery manufacturers, solar panel manufacturers and data centers. All of these industries have clean-energy goals. Their needs can be readily met by rapidly deployable rooftop solar panels. If those businesses were to relocate or end, solar panels can be easily reclaimed and reused. Furthermore, Georgia Power is promoting gas-fired plants for the capital-based reasons and because its parent Southern Company owns numerous gas subsidiaries that profit from the use of gas in producing electricity. Finally, the PSC should not consider gas-fired capacity at all when 2023 was the hottest year in earth history and it is clear that climate change is accelerating.

Q. Recommendations

GA Power's surprise 2023 IRP filing is unreasonable, inappropriate, and should be disallowed for two main reasons:

1. Georgia Power's future load forecasts are flawed and this new forecasting method takes those flaws in the wrong direction and amplifies them. The commission should not allow GA Power to redact information proving a need for additional capacity when no other state commission allows such redactions, and which are unreasonable and violate the public trust. Flawed forecasting and redacted information on the need for growth are unacceptable behaviors for GA Power. The 2025 IRP, without redactions, is when the next decision point should be made for future load growth.

2. GA Power's grid is overbuilt and capacity factor is very low. The commission should direct GA Power to better utilize grid investments GA Power ratepayers have already before authorizing any new capacity.

If the commission were to proceed with this IRP and allow GA Power to expand capacity it should be done in the following ways:

1. Incorporate a residential demand response program following best practices from states with excellent DR programs that engage customers and compensates those who enroll. Only 10% of a utility's customer base need enroll to make meaningful reductions in peak demand. PEPCO's Two ways to save program is top notch.
2. Create voluntary residential time-of-use rate plans that direct consumers to reduce peak demand by compensating them for reducing energy use at peak time. Research from the Smart Energy Consumer Collaborative shows that when consumers are offered choices among various types of TOU rate plans to allow them to select one that meets their needs, they are more likely to enroll in such a plan than a traditional rate plan.[17] New TOU rates plans should include an online bill calculator that allows customers to have their data analyzed to identify the best plan for their lifestyle.
3. Incentivize commercial rooftop solar. A big flat roof—like a warehouse—is a perfect place for solar panels. According to Environment America's *Solar on Warehouses* report, "Putting solar panels on the nation's warehouses would be good for businesses, good for electricity customers, good for the grid and good for the environment."[18] In Georgia there are over 15,000 commercial warehouses with 540

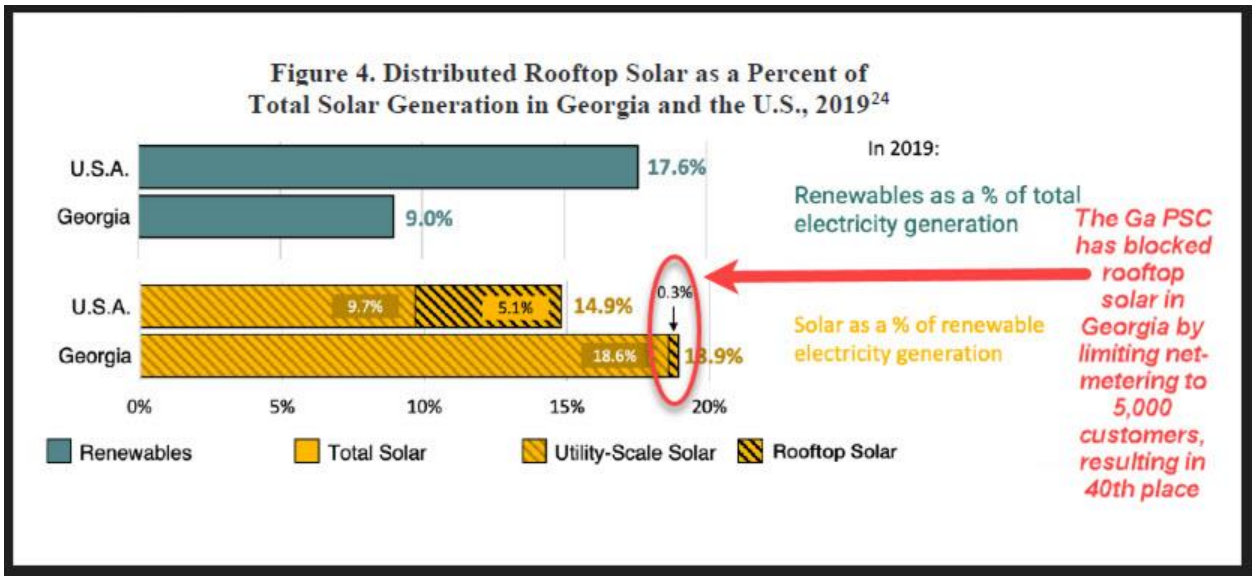
[17] Rate Design: What do consumers want and need? https://smartenergycc.org/rate-design-what-do-consumers-want-and-need/?_sf_s=rates

[18] Solar on Warehouses: Environment America 4/23/23 https://environmentamerica.org/center/resources/solar-on-warehouses/

million sq. ft. with potential 9688 GWh (gigawatt hours) of energy according to that same report. This would also eliminate pressure on farmland and forests being taken out of production for GA Power utility scale solar which is profitable to them and harmful to Georgia's farmland and forests.

4. Adopt net-metering for community and residential solar. Similar to commercial rooftop solar, there is tremendous untapped potential for rooftop solar with Georgia's residential and small-medium businesses, and tremendous desire for these programs. GA Power's monopoly franchise agreement granted to them by the people of Georgia through the state legislature a century ago never foresaw the ability of people to generate their own electricity through rooftop solar. This franchise agreement was not intended to mean that GA Power should use their political power and financial might from profits on electricity sales to harm ratepayers by blocking programs that benefit ratepayers such as net-metering, demand response and energy efficiency. Grid modernization and grid edge services and programs and devices all benefit consumers, or would if GA Power allowed them or if the GA PSC required it. Georgia is a top 10 sunny state but only ranks 40th in rooftop solar because GA Power will not allow the commission to adopt traditional net metering. At only .3% penetration, residential rooftop solar is a nascent technology and clearly needs assistance to gain a foothold in Georgia, which is why over 30 states have adopted net metering to create the assistance that their residential homeowners need.

Figure 15 Georgia's rooftop solar % of total generation



Claims that rooftop solar is a cross subsidy that benefits the wealthy and harms low- and moderate-income ratepayers fall apart when examining the income level of who puts rooftop solar on their homes. Furthermore, concerns net metering negatively impacting rates for low- and moderate-income homeowners is clearly false when considering the numerous programs that could be adopted to benefit such households, but aren't. For example, low utilization of GA Power's grid capacity is extremely expensive to low- and moderate-income households, and no one is proposing to improve GA Power's capacity factor to assist them. Furthermore, it was harmful to such households for GA Power to build Plant Vogtle, the most expensive energy choice possible, but that did not stop GA Power from pursuing an energy source that is eight to ten times more expensive than other sources. Indeed, if concern for low-and moderate-income households were real, lowering the ROE to utility industry norms would have significant and immediate downward pressure on rates but there is no mention of reducing GA Power's top tier ROE. No, blocking net metering for rooftop solar is not about

limiting harm to such households or preventing a cross subsidy. Blocking net metering is a strategy to protect GA Power as the only entity to produce electricity so that they may maximize profits, even as technology has changed around them.

Other states who have recently rolled back net-metering, such as California, should not be used as evidence that net-metering is a flawed program. California has used net-metering to benefit their homeowners for decades and is #1 in the nation in rooftop solar. Let's be honest: California is never used as an example for Georgia to follow no matter how well California is doing any area. The reverse should hold true now: California's decision to reduce net metering compensation should not be used in Georgia to deny residential ratepayers the ability to produce their own energy by assisting them with a program that enables them to afford home solar. In fact, Commissioner Tim Echols enjoys net metering on his home in Jackson County, courtesy of net metering he enjoys from his utility provider, Jackson EMC. Clearly it is a program that works and provides benefits to those lucky enough to have it, and net metering should be a program offered to GA Power ratepayers before adding any new generation to an already overbuilt and underutilized grid.

5. Invest in Energy Efficiency. According to the 2023 Utility Energy Efficiency Scorecard [19] produced annually by The American Council for an Energy-Efficient Economy (ACEEE) Georgia Power ranks 33rd in the nation with a score of us 27 points out of 100, a failing grade. Energy efficiency plays a crucial role in meeting our nation's energy needs and should play a much larger role in meeting Georgia Power customers' energy needs. Efficiency lowers customer energy bills, reduces energy burden, improves in-home comfort, enhances

[19] The American Council for an Energy-Efficient Economy (ACEEE)2023 report card https://www.aceee.org/sites/default/files/pdfs/U2304.pdf

resilience, and improves indoor air quality. It is widely known that energy efficiency investment helps utilities avoid energy, power plant, transmission, and distribution costs that would otherwise be passed onto customers. It plays a crucial role in decarbonization. And, when compared to fossil fuel resources such as natural gas power plants, efficiency is a clear least-cost energy resource. GA Power agreed in their 2022 IRP to "strive" to increase energy efficiency investments 15%, a paltry amount of increase for an already paltry investment. And strive means nothing. It can just as easily be done as not. It is up to the commission to regulate GA Power in the public interest and it is in the public interest for GA Power to maximize energy efficiency investments to benefit all ratepayers, particularly vulnerable populations: low- and moderate-income households. If we care about those people, and we do, then real changes need to be made to put real downward pressure on rates. Installing large amounts of new capacity will not do that.

Q. Does this conclude your testimony?

Yes