BEFORE THE

GEORGIA PUBLIC SERVICE COMMISSION

In the Matter of:	**)**	
GEORGIA POWER COMPANY'S	**)**	**DOCKET NO. 44280**
2022 RATE CASE	**)**	

DIRECT TESTIMONY AND EXHIBITS

OF

RAJENDRASINH (RAJ) RANA

ON BEHALF OF THE

GEORGIA PUBLIC SERVICE COMMISSION
PUBLIC INTEREST ADVOCACY STAFF

PUBLIC DISCLOSURE VERSION

October 20, 2022

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Exhibit

RR-1 Resume of Rajendrasinh (Raj) Rana

I. INTRODUCTION

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

A. My name is Rajendrasinh (Raj) Rana. I am the President of Rana Energy Consulting, LLC. My business address is 5988 Roundstone Place, Dublin, Ohio, 43016.

Q. MR. RANA, HAVE YOU INCLUDED A SUMMARY OF YOUR EXPERIENCE AND QUALIFICATIONS IN THIS TESTIMONY?

A. Yes. It is presented in Exhibit RR-1. This exhibit summarizes my educational background and professional experience.

Q. ON WHOSE BEHALF ARE YOU APPEARING?

A. I am testifying in the public interest on behalf of the Georgia Public Service Commission Public Interest Advocacy Staff (Staff).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to Georgia Power Company's (Company or Georgia Power) 2022 Rate Case filing as it relates to the Company's proposed transmission lines investment as part of the Grid Investment Plan (GIP). The other aspects of the GIP relating to the distribution lines and the transmission and distribution (T&D) station equipment are addressed in the testimony of Staff Witnesses Messrs. Paul J. Alvarez and Dennis Stephen. Many of the themes in their testimony relevant to transmission are repeated in my testimony and vice versa.

Q. WHAT IS YOUR PRIMARY CONCLUSION?

A. As explained in the rest of my Testimony, the Company is proposing to invest about $3.6 billion for transmission lines and associated station equipment during the three year period

2023-2025 on behalf of the customers. This represents a significant increase of 360% of over the annual transmission expenditure for the 2009-2021 period. The Company proposes to invest about $1.2 billion per year in transmission under the GIP over 2023 – 2025 as part of these massive transmission investments. Under the Grid Investment Plan (GIP) for 2023-2025, the Company is proposing to use the Company-defined age criteria solely to replace transmission lines and associated station equipment prematurely irrespective of their actual operating performance. Furthermore, the assets slated for replacement have passed periodic, objective tests and inspections and performing reliably. The industry standard and most economical way to replace transmission lines and the associated equipment is based on the approaches that the Company is successfully applying now under the Capital Maintenance programs. These approaches involve using performance metrics that are developed based on the results of the objective tests, monitoring, and data analysis to identify equipment for replacement. The GIP will not improve reliability for customers and will only reduce O&M costs only slightly. Instead, the GIP will unnecessarily impact the ratepayers significantly as the rates will increase. I will explain why premature equipment replacement is inappropriate, more costly, and unnecessary and recommend all proposed investments under GIP be rejected.

Q. WHAT DOCUMENTS DID YOU REVIEW AND EVALUATE IN PREPARING YOUR PPRE-FILED DIRECT TESTIMONY?

A. I have reviewed the Company's testimony, numerous data responses, and the 2022 Integrated Resource Plan (IRP, Docket Nos. 44160 and 44161).

II. OVERVIEW OF THE TRANSMISSION SYSTEM

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S TRANSMISSION SYSTEM.

A. As of December 31, 2020, Georgia Power's transmission system consisted of 46kV (2,756 miles), 69kV (105 miles), 115kV (5,831 miles), 230kV (2,482 miles), and 500kV (1,154

miles) lines totaling approximately 12,328 miles. In addition, the Company also owns approximately 1,776 transmission and distribution substations[1]. This transmission system and other Integrated Transmission System (ITS)[2] transmission facilities connected approximately 14,413 MW of the Company's installed generating capacity. The total Company residential, commercial, and industrial peak demand served in 2021 was approximately 16,214 MW.

Q. PLEASE SUMMARISE THE TRANSMISSION LINES-RELATED REQUEST FOR WHICH THE COMPANY IS SEEKING APPROVAL IN THIS PROCEEDING.

A. The Company's primary focus is replacing its aging transmission lines and the corresponding station equipment. In this regard, the Company is seeking to recover its transmission capital investments since 2019 and those planned for replacement in the next three years (2023 – 2025) as part of the GIP[3] and proposing to add a few new transmission lines. The Company is also seeking to recover the corresponding depreciation expense. As part of the proposal, the Company is requesting a total of about $1.2 billion per year or $3.6 billion for transmission capital expenditures for the next three years.

[1] 2022 IRP

[2] Georgia ITS is the high voltage electricity transmission system owned individually by Georgia Power, Georgia Transmission Corporation, the Municipal Electric Authority of Georgia, and the City of Dalton, Georgia, and operated as an integrated transmission system by the ITS participants to provide reliable electric service to their customers.

[3] Direct Testimony of Aaron P. Abramovitz, Sarah P. Adams, Adam D. Houston, and Michael B. Robinson On Behalf of Georgia Power Company ("APA-SPA-ADH-MBR Direct"), p. 7 at 1.

III. TRANSMISSION CAPITAL PLAN AND GRID INVESTMENT PLAN

Q. PLEASE DESCRIBE THE COMPONENTS OF THE COMPANY'S GRID CAPITAL PLAN.

A. The Grid Capital Plan includes a request of about $2.3 billion[4] for transmission and distribution per year over the next three years (2023-2025), of which transmission is about $1.2 billion and distribution is about $1.1 billion per year. The Company has defined six types of investments as part of this proposed transmission grid expenditure plan. These categories (types) include[5]:

- **New Business**: Facilities required to provide service to new customers and new load.

- **Growth/Load Flow**: facilities required to address customer load growth and changing generation impacts. This includes new distribution feeders, new transmission lines and substations, and land for future use.

- **Commitments**: Facilities required for projects such as Department of Transportation relocations.

- **Reliability**: Facility upgrades that include substation relay modifications, replacement of obsolete equipment, insulation and grounding improvements, and grid modernization projects.

- **Capital Maintenance**: Includes replacement of broken poles, replacement of deteriorating conductor with an equivalent conductor, and replacing damaged or failed

[4] Trade Secret Attachment provided in response to STF-PIA-4-4
[5] Response to STF-REC-1-2

transformers and other equipment. This also includes cycle-based asset replacement programs that replace decaying poles, transformers, reclosers, and substation breakers.

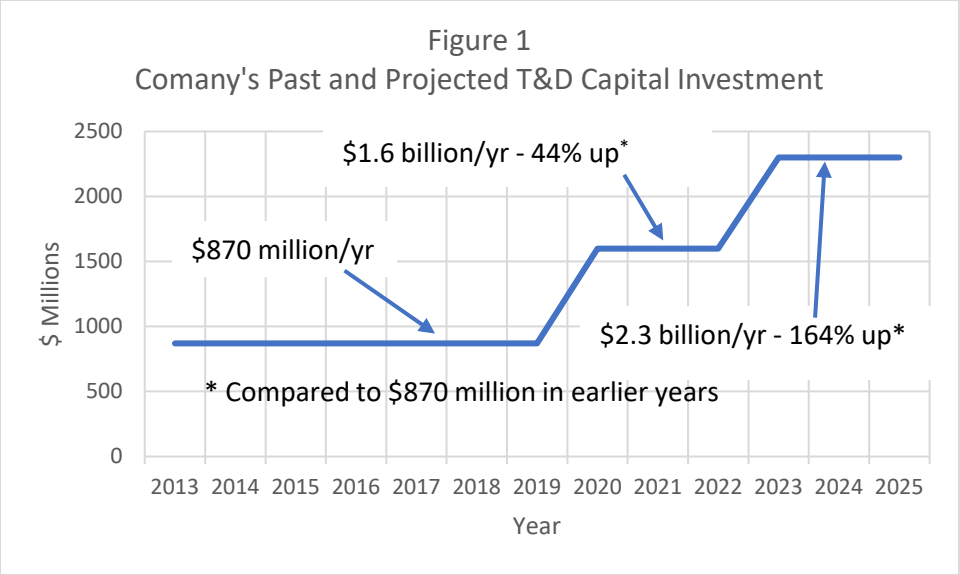
- **Grid Investment Plan**: Includes a multi-year plan to strategically increase expenditures primarily in the Capital Maintenance category to mitigate the risk of outages associated with assets and infrastructure that will be past their expected useful lives by 2031.

The Company has been replacing aging infrastructure and obsolete equipment as part of the Reliability and Capital maintenance categories even before the introduction of the Grid Investment Plan in 2019 and continuing now.

Q. WHAT IS THE ANNUAL AMOUNT OF THE COMPANY REQUEST FOR TRANSMISSION AND DISTRIBUTION SPENDING THROUGH 2025?

A. As shown in Figure 1, the Company proposes a massive program to invest $6.8 billion in T&D or about $2.3 billion per year during the period January 2023 through December 2025, which is an increase of 44 percent from the three-year accounting order period (2020 – 2022) of $1.6 billion per year and a whopping increase of 164 percent from prior accounting periods (2013 – 2019) of about $870 million per year. The T&D portion is about 47.4 % of the total revenue requirement[6] or 5.64% of the 11.9 % proposed increase, or $7.72 of the proposed rate increase of $16.29 per month.

[6] Direct Testimony of Aaron P. Abramovitz, Sarah P. Adams, Adam D. Houston, and Michael B. Robinson On Behalf of Georgia Power Company ("APA-SPA-ADH-MBR Direct"), Chart 1 Page 15.



Q. WHAT IS THE ANNUAL AMOUNT FOR TRANSMISSION EXPENDITURE BY CATEGORY?

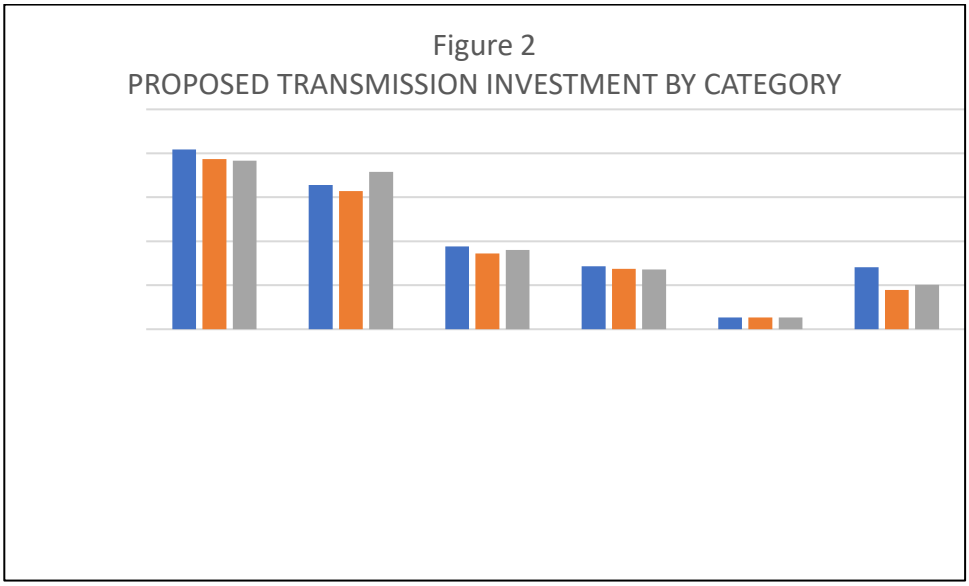
A. The annual amount of the Company's request for transmission for each category for the 2023-2025 period is shown in Table 1 and Figure 2. The Company is proposing to spend a total amount of about $576 million per year for the Capital Maintenance and Reliability categories in addition to the massive amount of about $333 million for the GIP category per year. The Company has been replacing aging and obsolete assets as part of the cycle-based asset replacement program under the Capital Maintenance category. This cycle-based asset replacement program is almost the same as proposed now under the GIP category except that under the GIP, the assets are planned to be replaced based on age, even though these assets are operating safely and reliably, and may have useful life left in such assets. The Company already has capital maintenance and reliability programs, including advance monitoring to replace infrastructure based on tests and monitoring. The purpose of these programs is to promptly identify the most critical asset replacement

companywide to reduce reliability problems. The Capital Maintenance and Reliability categories address the same issues proposed under the Grid Investment category. Furthermore, the Company has advanced monitoring technologies installed on the system as part of the $10 billion it has invested over the last ten years as part of the Smart Grid plan to strengthen the reliability and resiliency of its network,[7] which alerts the operators when equipment may need repairs so it can be fixed before it breaks.

Table 2 - Transmission Investment By Category

CATEGORY	2023		2024		2025	
CAPITAL MAINTENANCE	[redacted]					
COMMITMENTS	[redacted]					
GRID INVESTMENT	[redacted]					
GROWTH/LOAD FLOW	[redacted]					
NEW BUSINESS	[redacted]					
RELIABILITY	[redacted]					
TRANSMISSION TOTAL	[redacted]					

Figure 2
PROPOSED TRANSMISSION INVESTMENT BY CATEGORY



[7] (Georgia Power; June 24, 2022 Release) https://www.georgiapower.com/company/news-center/2022-articles/georgia-power-requests-funding-to-support-essential-critical-investments-in-electric-grid-reliability.html

Q. HOW DO THE PROPOSED AVERAGE TRANSMISSION ANNUAL CAPITAL EXPENDITURES PROPOSED FOR THE 2022-2023 PERIOD COMPARE TO THE CORRESPONDING EXPENDITURES FOR THE 2014-2019 PERIOD?

A. As shown in Table 2[8], the average annual transmission capital expenditures for 2022-2031 are more than double those for 2014-2019. In addition to the Capital Maintenance and Reliability capital expenditures, which are projected to double the numbers for the 2014-2019 period, the Company is proposing to invest [redacted] per year in the Grid Investment plan, which is about [redacted] [9] of the proposed T&D capital budget.

Table 2 – Comparison of Average Transmission Capital Expenditures

Category	Transmission Capital Expenditures 2014-2019 ($ million)	2022-2031 ($ million)	Increase ($ million)	Percent Increase
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Q. THE COMPANY HAS CLAIMED THAT GROWTH IN GEORGIA IS ONE REASON THE GIP INVESTMENT IS NECESSARY. DOES THE DATA IN TABLE 2 SUPPORT THAT ASSERTION?

A. No. The Company is proposing capital investment increases of 173% and 150% for New Business and Growth / Load Flow, respectively. The Company is projecting increases in energy sales (MWhs), peak demand (MW), and the number of customers of less than 2% annually. The Company's proposed increases for New Business and Growth / Load Flow

[8] Trade Secret Attachment provided in response to STF-WG-2-1b
[9] Response to STF-PIA-3-3 a

should be more than sufficient to address growth in Georgia. The GIP is not necessary to address growth in Georgia.

Q. THE COMPANY HAS ALSO CLAIMED THAT AGING TRANSMISSION INFRASTRUCTURE IN GEORGIA PARTICULARLY IN METRO ATLANTA AREA IS ANOTHER REASON THE GIP INVESTMENT IS NECESSARY. DOES THE DATA IN TABLE 2 SUPPORT THAT ASSERTION?

A. No. The Company is proposing capital investment increases of 114% and 117% for Reliability and Capital Maintenance, respectively. Transmission assets have long lives and should not require massive replacements in a short period of time. The Company's proposed increases for Reliability and Capital Maintenance should be more than sufficient to address any service issues in Georgia. The GIP is not necessary to address service issues in Georgia.

Q. WHAT IS THE BREAKDOWN OF THE 2023-2025 PERIOD REQUEST FOR TRANSMISSION LINES?

A. The Company plans to replace/rebuild a total of [redacted] of lines in 2023, 2024, and 2025, respectively, and some transmission-related station equipment[10]. The proposed capital expenditures are about [redacted] for the 2023-2025 period under the GIP category.

Q. THE COMPANY HAS FOCUSED ON THE AGE OF INFRASTRUCTURE AS A DETERMINING FACTOR TO JUSTIFY THE REPLACEMENT OF TRANSMISSION LINES AND THE ASSOCIATED EQUIPMENT THAT HAVE EXCEEDED THEIR COMPANY-DEFINED USEFUL LIFE UNDER THE GIP

[10] Company Exhibit APA/SPA/ADH/MBR-8

CATEGORY. IS THIS A REASONABLE APPROACH TO JUSTIFY THE REPLACEMENT OF AGING TRANSMISSION ASSETS?

A. No. Using the Company-defined expected useful life is not a reasonable and cost-effective approach to determining the replacement of the transmission infrastructure. The Company's primary focus is on the age of the assets to develop the transmission replacement plan and uses a Companywide grouping method to identify the highest priority replacement based on age. The Company is employing a practice of proactively rounding up (grouping or clustering) the transmission assets for replacement based on age, not whether such assets are operating reliably and safely, and simply because they have exceeded their Company-defined expected useful life. The useful life can be used as a starting point for screening. Still, it must not be used solely in decision-making to target a transmission infrastructure for replacement. Replacement of aging infrastructure can reduce operations and maintenance expenses slightly, but prematurely replacing infrastructure before it shows signs of reduced performance or failure results in accelerated and unnecessary capital spending, which is not cost-effective. Identifying the highest priority replacements must be based on monitoring, inspections, and objective test data and analytics, not just because such facilities meet or exceed the Company-defined useful life criterion.

Q. WHAT CRITERIA DOES THE COMPANY USE TO JUSTIFY FACILITY REPLACEMENT UNDER THE GIP?

A. The criteria used for the transmission asset replacement by the Company are shown in Table 3[11]. The age of the transmission line (conductor or structure or both) is compared to the Company's thresholds for expected useful life to determine when a transmission line has exceeded the Company's criteria for expected useful life. As noted above expected useful life is a reasonable screen to determine which transmission lines may be best candidates for replacement but actual performance metrics should be the deciding factor. The expected useful life for conductors and structures of transmission lines is developed by Company's internal subject matter experts based on operational experience. The transmission line is a replacement candidate if the age of the transmission line under evaluation exceeds the Company's criteria for expected useful life. However, the cut-off percentages used in these criteria are also developed by Company's internal subject matter experts based on operational experience not supported by formal analysis. As part of the $10 billion grid reliability and resiliency initiative, the Company has installed new technologies, such as modern sensors, communications devices, and other hardware that allow transmission assets to be tracked and controlled remotely and collect health data remotely. New technologies also include analytical tools for processing, interpreting, and responding to data from transmission assets that use real-time performance data to guide asset replacement decisions rather than relying solely on the Company-defined useful life and aged-based asset replacement criteria without considering actual operating performance.

[11] Response to STF-WG-2-29 (a)

Table 3

Package	Equipment Replacement Criteria
Full Rebuild	75% of conductor and 50% of structures (in the same 75% portion) over the expected life
Partial Rebuild/Reconductor	25% of conductor over expected life, or 25% conductor and 50% of structures (in the same 25% portion over expected life), or a combination of the two making up 25% of the line
Full Reconductor	75% of conductor over the expected life

Q. WILL THE COMPANY'S AGGRESSIVE TRANSMISSIONNFRASTRUCTURE REPLACEMENT PLAN IMPROVE THE RELIABILITY FOR TRANSMISSION RATEPAYERS?

A. No, the Company has repeatedly indicated in this Rate Case filing and discovery[12] that the Company's transmission investment is not expected to improve current levels of customer reliability. Therefore, the proposed increase in transmission capital expenditure under GIP will result in increased customer rates without the benefit of customer reliability improvements.

The likelihood of a failure of an transmission line while in service resulting in a potential service interruption was calculated based on the ten-year transmission line outage data (2012-2021) provided by the Company in discovery. Furthermore, the cost of premature transmission line replacements was added to these likelihoods, arriving at the system-wide investment required to avoid one service interruption per year over the expected life of the reconstructed transmission line. The method for this calculation is explained in detail in

[12] Response to STF-WG-2-44

the companion direct testimony of Messrs. Paul J, Alvarez, and Dennis Stephens on behalf of Staff[13]

Table 4 - Likelihood of a Failure of a Transmission Line While in Service resulting in a service interruption

A	B	C	D	E
	Annual Likelihood of a Failure Resulting in a Service Interruption[14]	Average Number of Customers per Interruption[15]	Equipment Replacements Required to Avoid 1 Service Interruption per Year	Capital Required to Replace the Counts of Equipment Identified in D (per Georgia Power Cost Data)[16]
Transmission Line (46 kV - 230 kV)	0.00196 (2 in 1000 miles)	1,653	510	[redacted]

As shown in Table 4, the likelihood of a transmission outage while in service is very small based on the Company's outage data history for the past ten years. This is because the Company is already maintaining transmission lines and associated station equipment under the Capital Maintenance and Reliability improvement programs.

Q. IS THE COMPANY TAKING AN AGGRESSIVE APPROACH TOWARD TRANSMISSION INFRASTRUCTURE REPLACEMENT UNDER GIP?

[13] Direct Testimony of Messrs. Paul J, Alvarez, and Dennis Stephens on behalf of the Georgia Public Service Commission Public Interest Advocacy Pages 22 and 23 at 5 on Page 22
[14] Service interruption data per Trade Secret attachment provided in response to STF-WG-2-26; System-wide equipment counts by type from response to STF-WG-1-33.
[15] Average Customer Counts per service interruption data per Trade Secret attachment provided in response to STF-WG-2-26.
[16] Georgia Power cost data by equipment type per Trade Secret response to STF-WG-5-6 c i.

A. Yes, the Company is taking an extremely aggressive approach to replacing transmission infrastructure under the GIP, which is unnecessary and results in steep rate increases for customers. The Company already has a replacement program under the Capital Maintenance and Reliability categories which is increasing further in 2023 - 2025. Under these categories, the Company identifies and replaces assets requiring immediate replacement/repair based on objective inspections, tests, and other information.[17] The Company has relied on it in the past. It continues by using the industry-wide accepted, highly effective best practice of testing and inspecting each facility to identify the need for replacement. Such assets were repaired/rebuilt using informed decisions based on each facility's inspections, tests, and monitoring results rather than the age of the assets. As part of the GIP, the Company is clustering or grouping facilities to prioritize replacement by targeting the age of assets that exceeds the expected Company-defined useful life by 2031,[18] irrespective of their actual operating performance.

Q. IS THE COMPANY'S APPROACH HARMFUL TO RATEPAYERS?

A. Yes. This approach, from a financial perspective, is problematic in two ways : 1) the Company prematurely replacing assets that are performing safely and reliably with new ones that advance expenditures, and 2) unnecessarily resulting in a rate increase for the customers.

[17] Direct Testimony of Messrs. Paul J, Alvarez, and Dennis Stephens on behalf of the Georgia Public Service Commission Public Interest Advocacy Pages 19 at 7.
[18] Direct Testimony of Messrs. Paul J, Alvarez, and Dennis Stephens on behalf of the Georgia Public Service Commission Public Interest Advocacy Page 16-18.

Q. HOW SHOULD THE COMPANY'S APPROACH TO GIP BE MODIFIED TO PROTECT RATEPAYERS?

A. Transmission and distribution assets replacement prioritization must be based on objective testing and inspection results not just the age of the asset. This can be achieved by replacing assets using ongoing corrective maintenance (i.e., replacing/repairing an asset that has been damaged or has failed its tests or inspections or those rarely failed in service) as part of the Capital Maintenance and Reliability categories/plans.

Q. DOES THE GIP DIVERT INVESTMENTS AWAY FROM WHERE THEY ARE MOST NEEDED?

A. All electric utilities are facing regulatory and public pressure to upgrade existing infrastructure while holding down costs and rates to customers and using the approved dollars wisely. The Company is requesting about $[redacted] per year for the next three years to proactively replace transmission assets based solely on age. The proposed GIP will dispose of some healthy, functional transmission assets and replace them with new ones, thus diverting investments from where they are most needed. On the other hand, if the Company continues to monitor and maintain its infrastructure transmission assets under the Capital Maintenance and Reliability categories and determines which assets are at the most significant risk of failure based on operating data and testing and where those failures would have the most significant impact, will result in transmission assets at risk receiving the full attention and priority they merit. This approach will prevent resources from being diverted away from more critical areas. It will also make the most efficient use of the Company's transmission investment dollars while ensuring the system operation is

safe and reliable. The Company's ongoing routine-based Capital Maintenance program for maintenance, repair, and replacement is simple to implement, and highly predictable, which helps with planning spending and investments.

Q. WILL THE COMPANY'S MAINTENANCE COST BE REDUCED SIGNIFICANTLY WITH THE PROPOSED GIP?

A. No. The Company's maintenance cost will not be reduced significantly with the proposed GIP. In most industries, such as manufacturing, revenue-generating assets are replaced due to increased maintenance costs or because newer assets have dramatic productivity improvements. The situation is different with the transmission asset management in electric utilities. There are no significant improvements in productivity, and maintenance cost is only slightly reduced with the new assets. The company's primary focus is replacing the infrastructure, and Operations and Maintenance (O&M) expense reduction is not the primary driver[19]. The O&M expense reduction savings by replacing the transmission assets with newer ones is only expected to be about $6 million annually.[20]

Q. DID THE COMPANY CONDUCT A COST-BENEFIT ANALYSIS TO EVALUATE THE DIRECT BENEFITS TO THE RATEPAYERS IN TERMS OF REDUCTIONS IN CUSTOMER OUTAGES AND DURATIONS OR RELIABILITY IMPROVEMENTS?

A. No. In this Rate Case filing and discovery, the Company indicated that a cost/benefit study was not conducted for the proposed transmission investments.[21] Furthermore, the

[19] Response to STF-PIA_3-3 f
[20] Trade Secret Attachment provided in response to STF-PIA-3-3.
[21] Trade Secret Attachment B provided in response to STF-PIA-3-7

Company did not perform the risk failure analysis[22] using the historical failure data to justify the transmission assets replacements offered under the GIP.

Q. DID THE COMPANY EXPLAIN WHY NOT?

A. Yes, in discovery[23], the Company indicated that such a cost/benefit study for transmission is unnecessary because the investment is needed to replace aging infrastructure.

Q. DO YOU HAVE ANY THEORIES AS TO WHY THE COMPANY IS PROPOSING SUCH A MASSIVE TRANSMISSION INVESTMENT PLAN THAT WILL NOT RESULT IN ANY RELIABILITY IMPROVEMENT?

A. One theory is that the Company is interested in unnecessarily growing the rate base.[24],[25] The Company is front-loading transmission investments under the pretext of GIP.

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[22] Response to STF-WG-2-40

[23] Response to STF-REC-4-1-b(ii)

[24]Direct Testimony of Messrs. Paul J, Alvarez, and Dennis Stephens on behalf of the Georgia Public Service Commission Public Interest Advocacy Page 14 at 2 -10.

[25] https://seekingalpha.com/article/4326014-southern-company-ceo-tom-fanning-on-q4-2019-results-earnings-call-transcript?part=single a couple of excerpts:

Our long-term outlook also continues to be driven by capital investment in our state-regulated businesses. Our investment plan of $40 billion for the 2020 through 2024 timeframe includes projected rate base growth at our state-regulated utilities of approximately 6%. This updated plan reflects a $2 billion increase over last year's 5-year forecast. The main driver of the increase is incremental investment related to new electric generation and additional safety related gas pipeline replacement programs. Of the total, 95% is expected to be invested in our state-regulated utilities with a continued emphasis on transmission and distribution modernization.

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The other thing, Ali, I think, I would look at is so we are talking about the $40 billion worth of investment, our depreciation over that time period is something in the range of $20 billion. So our net additions to rate base we think, is appropriate and prudent at about 5% a year in electric so maybe closer a little more than 10% a year in the natural gas business. The vast majority of expenditure in both of those categories is for modernization of transmission and distribution systems, which brings higher reliability for customers. We will get to a more aggressive modernization of the generating fleet overtime. But in the near term,

IV. CONCLUSIONS - SUMMARY AND RECOMMENDATIONS

Q. PLEASE SUMMARIZE YOUR TESTIMONY

A. As part of the Company's GIP, the Company will replace transmission lines prematurely. The practice of replacing equipment solely based on its age is not cost-justified and inefficient. This is because the GIP plan will:

- Replace transmission assets that are healthy and functioning safely and reliably and have some life left in them. This practice will increase the replacement cost unnecessarily,
- Not deliver customer reliability improvements sufficient to outweigh corresponding rate increases,
- Not reduce O&M expenditures significantly,
- Divert investment dollars away from funds needed in other important areas.

Instead, the replacement of transmission lines must continue based on the objective testing and inspection practices the Company is already using. These preventive, corrective, and condition-based maintenance practices allow the Company to determine the appropriate times for transmission line replacement. The Company's ongoing Capital Maintenance program and associated corrective maintenance for transmission replacement are simple to implement and highly predictable, which will result in transmission assets at risk receiving the full attention and priority they merit. Furthermore, this approach will make the most efficient use of the transmission investment dollars while ensuring the system operation is safe and reliable and will prevent resources from being diverted away from more critical areas.

Q. WHAT RECOMMENDATIONS DO YOU MAKE?

A. I recommend that the Commission require the Company to ensure that transmission assets replacement and rebuild projects are selected based on current health assessments and performance using physical inspections and objective tests under the ongoing Capital Maintenance and Reliability improvement plans, and not just based on the Company-defined age criterion.

I recommend that the Commission enhance the oversight of approved transmission investment to ensure confidence that reasonable project implementation cost estimates are being made, ensure estimates are reasonable, and ensure that transmission builds are appropriately managed and completed within the 2023-2025 timeframe to contain costs consistent with initial cost estimates (i.e., avoid cost overruns during replacements).

Furthermore, I recommend that the Commission consider limiting the transmission costs exceeding estimates by a certain percentage to ensure that the Company's capital expenditures on transmission infrastructure are cost-effective and prevent cost escalation.

Q. PLEASE SUMMARIZE THE SPENDING ADJUSTMENTS RECOMMENDED IN YOUR TESTIMONY

A. Table 5 below summarizes my recommended spending adjustments associated with the GIP. The details of these adjustments along with the other spending adjustments to the distribution lines and the transmission and distribution (T&D) station equipment spending are addressed in the companion testimony of Staff Witnesses Messrs. Paul J. Alvarez and Dennis Stephen. These adjustments are translated into revenue requirement reductions in the testimony and exhibits of Staff Witnesses Mr. Ralph Smith and Mr. Robert Trokey.

Table 5: Summary of Recommended Adjustments in Thousands

($ in millions)	2023	2024	2025	Total 2023-2025
Transmission Capital Requested	$1,237	1,125	1,187	$3,549
Grid Investment Plan Adjustments	(327.8)	(314.1)	(358.7)	($1,000.6)

Q. WHAT ARE THE BENEFITS TO THE COMPANY'S RATEPAYERS IF THE COMMISSION FOLLOWS YOUR RECOMMENDATIONS?

A. In the short term, the ratepayers will benefit by avoiding unnecessary rate increases. This is very important for ratepayers because multiple sources of significant rate increases will be coming in the next few years[26]. Furthermore, continuing the transmission assets replacement under the Capital Maintenance and Reliability categories based on objective tests and monitoring will ensure that the transmission assets at the highest risk for failure and where those failures would have the most significant impact will make the best use of the transmission investment dollars in ensuring safe and reliable transmission system. Also, the unnecessary replacement of healthy and performing transmission assets could be prevented, thereby not diverting the resources and investments from where they are most needed.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

[26] Direct Testimony of Messrs. Paul J, Alvarez, and Dennis Stephens on behalf of the Georgia Public Service Commission Public Interest Advocacy Page 11 at 9 - 19.

A. Yes.