



Bin 10230,  
241 Ralph McGill Boulevard, NE  
Atlanta, GA 30308-3374

## PUBLIC DISCLOSURE

February 15, 2023

Ms. Sallie Tanner  
Executive Secretary  
Georgia Public Service Commission  
244 Washington Street, SW  
Atlanta, GA 30334-5701

**RE: Georgia Power Company's Bi-Annual Hydro Modernization Report;  
Docket No. 42310 & 44160**

Dear Mr. McAlister:

In accordance with the Order Adopting Stipulation as Amended issued by the Georgia Public Service Commission (the "Commission") in the above styled docket, Georgia Power Company hereby files an original and fifteen (15) copies of its Bi-Annual Hydro Modernization Report for the period ending December 31, 2022. This Bi-Annual Hydro Modernization Report filing is the first report filing including Plant Burton and Plant Sinclair as approved in the 2022 Integrated Resource Plan Final Order under Docket No. 44160.

This letter and the accompanying documents are submitted consistent with the Alternative Electronic Filing Procedures established by the Commission on March 17, 2020.

Please contact Cheryl Johnson at 404-506-6837 if you have any questions regarding this filing.

Sincerely,

/s/ Kelley Balkcom

Kelley Balkcom  
Director, Regulatory Affairs  
Georgia Power Company  
[mmcclosk@southernco.com](mailto:mmcclosk@southernco.com)

**BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION**

**GEORGIA POWER COMPANY  
DOCKET NO. 42310 & 44160**

**BASIS FOR THE ASSERTION THAT THE  
INFORMATION SUBMITTED IS A TRADE SECRET**

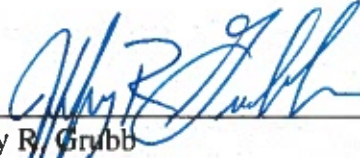
In accordance with the Order Adopting Stipulation as Amended issued by the Georgia Public Service Commission ("Commission") in Docket No. 42310 and 44160, Georgia Power Company ("Georgia Power" or the "Company") is providing to the Commission a Bi-Annual Hydro Modernization Report for the period ending December 31, 2022. The report contains proprietary cost data (the "Information") which constitutes trade secret information of Georgia Power, the Southern Company, and its affiliates, and is therefore protected from public disclosure under Commission Rule 515-3-1-.11.

The Information derives economic value from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use. Specifically, the Information contains confidential budgetary information related to projects at specific hydro generation facilities. Public dissemination of the Information would allow Georgia Power's potential suppliers and contractors access to such estimated costs, thereby bestowing insight into the Company's budgeted cost and timing of such expenditures. Such access would grant an unfair advantage to contractors and suppliers of the Company, who could use such information to artificially set bid and proposal prices during contract negotiations. This could lead to the Company having to pay a price higher than that which it would have paid on a level playing field.

The Information is subject to extensive efforts to maintain its confidentiality. Only select Georgia Power and Southern Company personnel and their legal counsel are granted access to the Information. Those personnel receive access only on a "need to know" basis. If a party outside of Georgia Power and Southern Company are granted access to the Information, the party is required to sign a confidentiality agreement with respect to the Information.

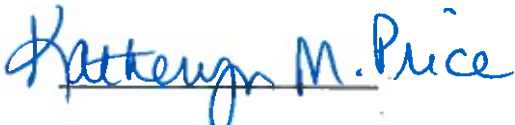
Signature Appears on the Following Page

Jeffrey R. Grubb, first being duly sworn, deposes and states that he has reviewed the attached document and that the information included in such document is accurate to the best of his knowledge and that the specific information designated as trade secret constitute trade secrets pursuant to Article 27, Chapter 1, Title 10 of the Georgia Code.



Jeffrey R. Grubb  
Resource Policy and Planning Director  
Georgia Power Company

Subscribed and sworn to before me this 14<sup>th</sup> day of February 2023.



Notary Public

My Commission expires: 2-6-24



## **Georgia Power Company's Bi-Annual Hydro Modernization Update For the Period Ending December 31, 2022**

This Hydro Modernization Update ("Update") is provided in accordance with the Order Adopting Stipulation as Amended (the "Order") issued by the Georgia Public Service Commission (the "Commission") in the matter of Georgia Power Company's 2019 Integrated Resource Plan ("IRP") under Docket No. 42310. As such, it provides information to allow the Commission to monitor Georgia Power Company's ("Georgia Power" or the "Company") modernization efforts at Plant Terrora, Plant Tugalo, Plant Bartletts Ferry, Plant Nacoochee, and Plant Oliver.

Beginning with this submittal covering the semiannual period ending December 31, 2022, this report also includes updates to the Commission on the modernization projects at Plants Burton and Sinclair, in accordance with the Order for Georgia Power's 2022 IRP under Docket No. 44160.

### **Summary of Work Performed by Site**

#### **Plant Terrora**



Plant Terrora Units 1-2 are part of the North Georgia hydro group. These units began commercial operation in 1925.

**Summary of Scope of Work:** The scope of work for Plant Terrora Units 1-2 includes generator rewinds, turbine replacements, and the replacement of the Balance of Plant (BOP) systems, such as lubricating oil, service water systems, 480V switchgear, and the plant control system.

**Project Status:** Major construction work at Plant Terrora is complete. Dual unit testing and the close out of remaining punch list items is complete. Units have returned to normal operation.

## **Plant Tugalo**



Plant Tugalo Units 1-4 are part of the North Georgia hydro group. Plant Tugalo Units 1-2 began commercial operation in 1923. Plant Tugalo Units 3-4 began commercial operation in 1924.

**Summary of Scope of Work:** The scope of work for Plant Tugalo Units 1-4 includes generator replacements, turbine replacements, and replacement of the BOP systems, such as lubricating oil, service water systems, 480V switchgear, and the plant control system.

**Project Status:** Office areas and all laydown and parking areas are complete. BOP Engineering design is complete. Major BOP equipment procurement is complete. Unit 1 turbine and generator fabrication are complete and are being shipped to site. Georgia Power is currently awaiting FERC approval to proceed with installation of the new equipment.

## **Plant Bartletts Ferry 1-4**



Plant Bartletts Ferry Units 1-4 are part of the Chattahoochee hydro group. These units began commercial operation at varying times as shown below:

- Bartletts Ferry Units 1-2 in 1926
- Bartletts Ferry Unit 3 in 1928
- Bartletts Ferry Unit 4 in 1951

**Summary of Scope of Work:** The scope of work is limited to Plant Bartletts Ferry Units 1-4. The work on these units includes generator rewinds, turbine replacements, and replacement of the BOP systems, such as lubricating oil, service water systems, 480V switchgear, and the plant control system. Plant Bartletts Ferry Units 5-6 are not included in the scope of work at this time.

**Project Status:** Scope development is complete, and detailed design work will be completed in the first quarter of 2023. The new turbines are being fabricated. The generator rewind procurement package has been awarded. Some powerhouse activities, such as the crane modernization, have been completed. Unit 1 modernization work will follow with construction commencing upon the approval of the FERC license amendment.

## **Plant Nacoochee**



Plant Nacoochee Units 1-2 are part of the North Georgia hydro group. These units began commercial operation in 1926.

**Summary of Scope of Work:** The scope of work expected for Plant Nacoochee Units 1-2 includes generator rewinds, turbine replacement on Unit 2, and replacement of the BOP systems, such as lubricating oil, service water systems, 480V switchgear, and the plant control system.

**Project Status:** A scoping kickoff meeting has been completed and detailed design work has commenced. The Unit 2 turbine procurement is complete. The generator rewind procurement package is in development. Engineering and procurement activities have begun. Site preparation will begin in 2023 to support construction work on the units expected to begin in 2024.

## **Plant Oliver**



Plant Oliver Units 1-4 are part of the Chattahoochee hydro group. These units began commercial operation in 1959.

**Summary of Scope of Work:** The scope of work expected for Plant Oliver Units 1-4 includes turbine replacements and replacement of the BOP systems, such as lubricating oil, service water systems, 480V switchgear, and the plant control system. Additionally, generator rewinds will be performed on Units 3 and 4. Generator rewinds were previously completed for Units 1 and 2 during their maintenance cycles in 2015 and 2016, respectively.

**Project Status:** A scoping kickoff meeting has been completed and detailed design work has commenced. The procurement of new turbines (for Units 1-3) has been issued; the Unit 4 package is in development. The generator procurement package for Units 1-3 is in development; the Unit 4 package will be developed upon the award of the Unit 4 turbine package.

## **Plant Burton**



Plant Burton Units 1-2 are part of the North Georgia hydro group. These units began commercial operation in 1927.

**Summary of Scope of Work:** The scope of work expected for Plant Burton Units 1-2 includes generator rewinds/replacement, turbine replacements, and replacement of the BOP systems, such as lubricating oil, service water systems, 480V switchgear, the plant control system, and spillway gates.

**Project Status:** A scoping kickoff meeting will be scheduled during 2023. Initial work on the turbine and generator specifications will commence in the second quarter of 2023.

## **Plant Sinclair**



Plant Sinclair Units 1-2 are part of the Central Georgia hydro group. These units began commercial operation in 1953.

**Summary of Scope of Work:** The scope of work expected for Plant Sinclair Units 1-2 includes generator rewinds/replacement, turbine replacements, and replacement of the BOP systems, such as lubricating oil, service water systems, 480V switchgear, and the plant

control system.

**Project Status:** A scoping kickoff meeting will be scheduled during 2023. Initial work on the turbine and generator specifications has commenced.



PUBLIC DISCLOSURE  
Hydro Modernization Cost Report  
Project Monitoring Report thru December 31, 2022

Total Project  
(\$1,000s)

Year	Period Ending	2019 IRP										2022 IRP				Total Actuals	Total Project Forecast*
		Terrora Actuals	Terrora Project Forecast*	Tugalo Actuals	Tugalo Project Forecast*	Bartlett's Ferry Actuals	Bartlett's Ferry Project Forecast*	Nacoochee Actuals	Nacoochee Project Forecast*	Oliver Actuals	Oliver Project Forecast*	Sinclair Actuals	Sinclair Project Forecast*	Burton Actuals	Burton Project Forecast*		
2019	30-Jun	\$ 1,042	\$ 260	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -		\$ -		\$ -		\$ 1,042	\$ 260
2019	31-Dec	\$ 3,430	\$ 1,848	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -		\$ -		\$ -		\$ 3,430	\$ 1,848
2020	30-Jun	\$ 9,855	\$ 10,687	\$ 629	\$ 624	\$ 683	\$ 683	\$ 34		\$ 434		\$ -		\$ -		\$ 11,635	\$ 11,994
2020	31-Dec	\$ 15,498	\$ 18,624	\$ 5,508	\$ 5,443	\$ 1,734	\$ 1,734	\$ 6		\$ 3		\$ -		\$ -		\$ 22,749	\$ 25,801
2021	30-Jun	\$ 8,060	\$ 8,181	\$ 2,188	\$ 2,187	\$ 3,405	\$ 3,405	\$ 345		\$ 480		\$ -		\$ -		\$ 14,479	\$ 13,773
2021	31-Dec	\$ 8,449	\$ 7,694	\$ 18,030	\$ 17,473	\$ 11,287	\$ 11,315	\$ 1,352		\$ 521		\$ -		\$ -		\$ 39,640	\$ 36,482
2022	30-Jun	\$ 863	\$ 750	\$ 6,806	\$ 13,467	\$ 6,375	\$ 4,672	\$ 677		\$ 241		\$ -		\$ -		\$ 14,962	\$ 18,889
2022	31-Dec	\$ (166)	\$ -	\$ 19,111	\$ 19,762	\$ 13,844	\$ 14,461	\$ 2,923		\$ 4,954		\$ 683		\$ 1,300		\$ 42,649	\$ 34,223
2023	30-Jun			\$ -	\$ 11,033	\$ -	\$ 18,096	\$ -		\$ -		\$ -		\$ -		\$ -	\$ 29,129
2023	31-Dec			\$ -	\$ 7,858	\$ -	\$ 14,532	\$ -		\$ -		\$ -		\$ -		\$ -	\$ 22,391
2024	30-Jun			\$ -	\$ 11,713	\$ -	\$ 12,224	\$ -		\$ -		\$ -		\$ -		\$ -	\$ 23,936
2024	31-Dec			\$ -	\$ 7,965	\$ -	\$ 13,242	\$ -		\$ -		\$ -		\$ -		\$ -	\$ 21,207
2025	30-Jun			\$ -	\$ 10,098	\$ -	\$ 11,815			\$ -		\$ -		\$ -		\$ -	\$ 21,913
2025	31-Dec			\$ -	\$ 7,670	\$ -	\$ 12,996			\$ -		\$ -		\$ -		\$ -	\$ 20,666
2026	30-Jun			\$ -	\$ 3	\$ -	\$ 13,695			\$ -		\$ -		\$ -		\$ -	\$ 13,698
2026	31-Dec					\$ -	\$ 11,205			\$ -		\$ -		\$ -		\$ -	\$ 11,205
2027	30-Jun									\$ -				\$ -		\$ -	\$ -
2027	31-Dec									\$ -				\$ -		\$ -	\$ -
TOTAL		\$ 47,031	\$ 48,045	\$ 52,271	\$ 115,295	\$ 37,329	\$ 144,075	\$ 5,337	\$ -	\$ 6,633	\$ -	\$ 683	\$ -	\$ 1,300	\$ -	\$ 148,602	\$ 307,415

Sums and percentages may not add due to rounding.

Notes on Variances	
A	
B	
C	

\*Added once Project Forecast estimates are updated and approved. Currently includes Plant Terrora Project Forecast that was developed 1Q 2021, Plant Tugalo 3Q 2021, Bartlett's 1-4 4Q 2021.  
Measured against Total IRP Budgets from 2019 & 2022 = \$592,378. 2019 RP Budget - \$446,618; 2022 RP Budget - \$145,760 (Burton & Sinclair).



**PUBLIC DISCLOSURE**  
**Hydro Modernization Cost Report**  
**Project Monitoring Report - December 31, 2022**  
**Plant Terrera**

Actuals (\$1,000s)											
Year	Period Ending	Unit 1			Unit 2			Actuals	Project Forecast* (Developed 2/26/21)	% Variance (against Project Forecast)	Notes
		Turbine	Generator	BOP	Turbine	Generator	BOP				
2019	30-Jun	\$ -	\$ -	\$ -	\$ 594	\$ 31	\$ 417	\$ 1,042	\$ 260	300%	
2019	31-Dec	\$ -	\$ -	\$ -	\$ 1,678	\$ 303	\$ 1,449	\$ 3,430	\$ 1,848	86%	
2020	30-Jun	\$ 1,778	\$ -	\$ 12	\$ 3,949	\$ 1,582	\$ 2,534	\$ 9,855	\$ 10,687	-8%	
2020	31-Dec	\$ 972	\$ 1,551	\$ 802	\$ 4,512	\$ 2,648	\$ 5,012	\$ 15,498	\$ 18,624	-17%	
2021	30-Jun	\$ 3,222	\$ 1,277	\$ 2,666	\$ 498	\$ 3	\$ 395	\$ 8,060	\$ 8,181	-1%	
2021	31-Dec	\$ 4,970	\$ 921	\$ 2,070	\$ 129	\$ -	\$ 360	\$ 8,449	\$ 7,694	10%	
2022	30-Jun	\$ 564	\$ 28	\$ 92	\$ 192	\$ -	\$ (12)	\$ 863	\$ 750	15%	
2022	31-Dec	\$ (151)	\$ (19)	\$ 3	\$ 1	\$ -	\$ -	\$ (166)	\$ -	N/A	B
TOTAL		\$ 11,355	\$ 3,757	\$ 5,646	\$ 11,552	\$ 4,567	\$ 10,155	\$ 47,031	\$ 48,045	-2%	A
Current Estimate at Completion									\$ 47,070		

Sums and percentages may not add due to rounding.

Notes on Variances	
A	Projected final variance based on current estimate at completion.
B	Accounting system adjustments during period ending December 31, 2022.
C	

Notes:

\*Added once Project Forecast estimates are updated and approved. Final Project Forecast developed Q1 2021.  
Measured against 2019 IRP Budget - \$58,160

PUBLIC DISCLOSURE  
Hydro Modernization Cost Report  
Project Monitoring Report - December 31, 2022  
Plant Tugalo

Actuals (\$1,000s)															Actuals	Project Forecast*	% Variance (against Project Forecast)	Notes
Year	Period Ending	Unit 1			Unit 2			Unit 3			Unit 4							
		Turbine	Generator	BOP	Turbine	Generator	BOP	Turbine	Generator	BOP	Turbine	Generator	BOP					
2020	30-Jun	\$ 624	\$ -	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 629	\$ 624	1%		
2020	31-Dec	\$ 1,871	\$ 54	\$ 91	\$ 1,165	\$ -	\$ -	\$ 1,165	\$ -	\$ -	\$ 1,161	\$ -	\$ -	\$ 5,508	\$ 5,443	1%		
2021	30-Jun	\$ 1,109	\$ 165	\$ 551	\$ 132	\$ -	\$ 3	\$ 111	\$ -	\$ 3	\$ 109	\$ -	\$ 3	\$ 2,188	\$ 2,187	0%		
2021	31-Dec	\$ 4,497	\$ 1,727	\$ 7,002	\$ 1,231	\$ -	\$ 118	\$ 1,270	\$ -	\$ 731	\$ 1,330	\$ -	\$ 122	\$ 18,030	\$ 17,473	3%		
2022	30-Jun	\$ 3,263	\$ 160	\$ 3,052	\$ 121	\$ -	\$ 27	\$ 115	\$ -	\$ (11)	\$ 118	\$ -	\$ (41)	\$ 6,806	\$ 13,467	-49%		
2022	31-Dec	\$ 3,126	\$ 2,789	\$ 6,589	\$ 1,309	\$ 1,702	\$ 96	\$ 1,040	\$ 156	\$ 2,124	\$ 156	\$ 9	\$ 16	\$ 19,111	\$ 19,762	-3%		
2023	30-Jun													\$ -	\$ 11,033			
2023	31-Dec													\$ -	\$ 7,858			
2024	30-Jun													\$ -	\$ 11,713			
2024	31-Dec													\$ -	\$ 7,965			
2025	30-Jun													\$ -	\$ 10,098			
2025	31-Dec													\$ -	\$ 7,670			
2026	30-Jun													\$ -	\$ 3			
2026	31-Dec																	
2027	30-Jun																	
2027	31-Dec																	
TOTAL		\$ 14,489	\$ 4,895	\$ 17,292	\$ 3,959	\$ 1,702	\$ 245	\$ 3,701	\$ 156	\$ 2,848	\$ 2,876	\$ 9	\$ 100	\$ 52,271	\$ 115,295	0%	A	
														Current Estimate at Completion		\$ 115,408		

Sums and percentages may not add due to rounding.

Notes on Variances	
A	Increase from IRP submittal to current forecast driven by turbine pricing, generator replacement, GSU pricing, and trash racks scope.
B	
C	

Notes:  
\*Added once Project Forecast estimates are updated and approved. Final Project Forecast developed Q3 2021.  
Measured against 2019 IRP Budget - \$109,736

PUBLIC DISCLOSURE  
Hydro Modernization Cost Report  
Project Monitoring Report - December 31, 2022  
Bartletts Ferry

Actuals (\$1,000s)																		
Year	Period Ending	Unit 1			Unit 2			Unit 3			Unit 4			Actuals	Project Forecast*	% Variance (against Project Forecast)	Notes	
		Turbine	Generator	BOP	Turbine	Generator	BOP	Turbine	Generator	BOP	Turbine	Generator	BOP					
2020	30-Jun	\$ 683	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 683	\$ 683	0%		
2020	31-Dec	\$ 1,734	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,734	\$ 1,734	0%		
2021	30-Jun	\$ 2,886	\$ -	\$ 1	\$ -	\$ -	\$ -	\$ 519	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,405	\$ 3,405	0%		
2021	31-Dec	\$ 1,931	\$ 175	\$ 3,398	\$ 1,995	\$ 43	\$ 633	\$ 817	\$ 44	\$ 598	\$ 905	\$ 60	\$ 687	\$ 11,287	\$ 11,315	-0.25%		
2022	30-Jun	\$ 2,216	\$ 239	\$ 3,220	\$ 205	\$ 39	\$ 59	\$ 176	\$ 36	\$ 62	\$ 89	\$ 3	\$ 32	\$ 6,375	\$ 4,672	36.46%	B	
2022	31-Dec	\$ 3,350	\$ 939	\$ 6,973	\$ 23	\$ 662	\$ 163	\$ 0	\$ 675	\$ 161	\$ 42	\$ 726	\$ 131	\$ 13,844	\$ 14,461	-4.26%		
2023	30-Jun													\$ -	\$ 18,096			
2023	31-Dec													\$ -	\$ 14,532			
2024	30-Jun													\$ -	\$ 12,224			
2024	31-Dec													\$ -	\$ 13,242			
2025	30-Jun													\$ -	\$ 11,815			
2025	31-Dec													\$ -	\$ 12,996			
2026	30-Jun													\$ -	\$ 13,695			
2026	31-Dec													\$ -	\$ 11,205			
2027	30-Jun																	
2027	31-Dec																	
TOTAL		\$ 12,800	\$ 1,353	\$ 13,591	\$ 2,224	\$ 743	\$ 854	\$ 1,513	\$ 756	\$ 821	\$ 1,035	\$ 789	\$ 850	\$ 37,329	\$ 144,075	2%	A	
														Current Estimate at Completion		\$ 146,836		

Sums and percentages may not add due to rounding.

Variances	
A	Increase from IRP submittal to current forecast driven by turbine, generator, GSU, and electrical equipment pricing.
B	Accounting system adjustments during period ending December 31, 2022.
C	

Notes:  
\*Added once Project Forecast estimates are updated and approved. Final Project Forecast developed Q4 2021.  
Measured against 2019 IRP Budget - \$114,763

**PUBLIC DISCLOSURE**  
**Hydro Modernization Cost Report**  
**Project Monitoring Report - December 31, 2022**  
**Plant Nacoochee**

Actuals (\$1,000s)											
Year	Period Ending	Unit 1			Unit 2			Actuals	Project Forecast*	% Variance (against Project Forecast)	Notes
		Turbine	Generator	BOP	Turbine	Generator	BOP				
2020	30-Jun	\$ -	\$ -	\$ -	\$ 34	\$ -	\$ -	\$ 34	\$ -		
2020	31-Dec	\$ -	\$ -	\$ -	\$ 6	\$ -	\$ -	\$ 6	\$ -		
2021	30-Jun	\$ -	\$ -	\$ -	\$ 345	\$ -	\$ -	\$ 345	\$ -		
2021	31-Dec	\$ -	\$ -	\$ 628	\$ 724	\$ -	\$ -	\$ 1,352	\$ -		
2022	30-Jun	\$ -	\$ -	\$ 269	\$ 408	\$ -	\$ -	\$ 677	\$ -		
2022	31-Dec	\$ -	\$ -	\$ 1,716	\$ 1,062	\$ -	\$ 145	\$ 2,923	\$ -		
2023	30-Jun							\$ -	\$ -		
2023	31-Dec							\$ -	\$ -		
2024	30-Jun							\$ -	\$ -		
2024	31-Dec							\$ -	\$ -		
2025	30-Jun							\$ -	\$ -		
2025	31-Dec							\$ -	\$ -		
2026	30-Jun										
2026	31-Dec										
2027	30-Jun										
2027	31-Dec										
TOTAL		\$ -	\$ -	\$ 2,613	\$ 2,579	\$ -	\$ 145	\$ 5,337	\$ -		

Sums and percentages may not add due to rounding.

Notes on Variances	
A	
B	
C	

Notes:

\*Added once Project Forecast estimates are updated and approved. Final Project Forecast expected Q2 2023.

Measured against 2019 IRP Budget - \$44,117

PUBLIC DISCLOSURE  
Hydro Modernization Cost Report  
Project Monitoring Report - December 31, 2022  
Plant Oliver

Actuals (\$1,000s)																	
Year	Period Ending	Unit 1			Unit 2			Unit 3			Unit 4			Actuals	Project Forecast*	% Variance (against Project Forecast)	Notes
		Turbine	Generator	BOP	Turbine	Generator	BOP	Turbine	Generator	BOP	Turbine	Generator	BOP				
2020	30-Jun	\$ 434	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 434	\$ -		
2020	31-Dec	\$ 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3	\$ -		
2021	30-Jun	\$ 480	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 480	\$ -		
2021	31-Dec	\$ 521	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 521	\$ -		
2022	30-Jun	\$ 241	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 241	\$ -		
2022	31-Dec	\$ 4,017	\$ -	\$ 455	\$ -	\$ -	\$ 154	\$ -	\$ -	\$ 161	\$ -	\$ -	\$ 166	\$ 4,954	\$ -		
2023	30-Jun													\$ -	\$ -		
2023	31-Dec													\$ -	\$ -		
2024	30-Jun													\$ -	\$ -		
2024	31-Dec													\$ -	\$ -		
2025	30-Jun													\$ -	\$ -		
2025	31-Dec													\$ -	\$ -		
2026	30-Jun													\$ -	\$ -		
2026	31-Dec													\$ -	\$ -		
2027	30-Jun													\$ -	\$ -		
2027	31-Dec													\$ -	\$ -		
TOTAL		\$ 5,697	\$ -	\$ 455	\$ -	\$ -	\$ 154	\$ -	\$ -	\$ 161	\$ -	\$ -	\$ 166	\$ 6,633	\$ -		

Sums and percentages may not add due to rounding.

Notes on Variances	
A	
B	
C	

Notes:  
\*Added once Project Forecast estimates are updated and approved. Final Project Forecast expected Q3 2023.  
Measured against 2019 IRP Budget - \$119,842

PUBLIC DISCLOSURE  
Hydro Modernization Cost Report  
Project Monitoring Report - December 31, 2022  
Plant Sinclair

Actuals (\$1,000s)											
Year	Period Ending	Unit 1			Unit 2			Actuals	Project Forecast*	% Variance (against Project Forecast)	Notes
		Turbine	Generator	BOP	Turbine	Generator	BOP				
2020	30-Jun	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2020	31-Dec	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2021	30-Jun	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2021	31-Dec	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2022	30-Jun	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2022	31-Dec	\$ 151	\$ -	\$ 379	\$ -	\$ -	\$ 153	\$ 683	\$ -		
2023	30-Jun							\$ -	\$ -		
2023	31-Dec							\$ -	\$ -		
2024	30-Jun							\$ -	\$ -		
2024	31-Dec							\$ -	\$ -		
2025	30-Jun							\$ -	\$ -		
2025	31-Dec							\$ -	\$ -		
2026	30-Jun							\$ -	\$ -		
2026	31-Dec							\$ -	\$ -		
2027	30-Jun										
2027	31-Dec										
TOTAL		\$ 151	\$ -	\$ 379	\$ -	\$ -	\$ 153	\$ 683	\$ -		

Sums and percentages may not add due to rounding.

Notes on Variances	
A	
B	
C	

Notes:  
\*Added once Project Forecast estimates are updated and approved. Final Project Forecast expected Q4 2023.  
Measured against 2022 IRP Budget - \$85,405

PUBLIC DISCLOSURE  
Hydro Modernization Cost Report  
Project Monitoring Report - December 31, 2022  
Plant Burton

Actuals (\$1,000s)											
Year	Period Ending	Unit 1			Unit 2			Actuals	Project Forecast*	% Variance (against Project Forecast)	Notes
		Turbine	Generator	BOP	Turbine	Generator	BOP				
2020	30-Jun	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2020	31-Dec	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2021	30-Jun	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2021	31-Dec	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2022	30-Jun	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2022	31-Dec	\$ 424	\$ -	\$ 723	\$ -	\$ -	\$ 153	\$ 1,300	\$ -		
2023	30-Jun							\$ -	\$ -		
2023	31-Dec							\$ -	\$ -		
2024	30-Jun							\$ -	\$ -		
2024	31-Dec							\$ -	\$ -		
2025	30-Jun							\$ -	\$ -		
2025	31-Dec							\$ -	\$ -		
2026	30-Jun							\$ -	\$ -		
2026	31-Dec							\$ -	\$ -		
2027	30-Jun							\$ -	\$ -		
2027	31-Dec							\$ -	\$ -		
TOTAL		\$ 424	\$ -	\$ 723	\$ -	\$ -	\$ 153	\$ 1,300	\$ -		

Sums and percentages may not add due to rounding.

Notes on Variances	
A	
B	
C	

Notes:  
\*Added once Project Forecast estimates are updated and approved. Final Project Forecast expected Q3 2024.  
Measured against 2022 IRP Budget - \$60,355



*Sums and percentages may not add due to rounding*

*Sums and percentages may not add due to rounding*

Sinclair							
Turbine	Supply and install						
Generator	Supply and install						
General Contractor	Install						
Trash Racks	Supply and install						
Governor HPU Skids Unit 1	Supply	GPC73295-0013	REDACTED	REDACTED	REDACTED	REDACTED	
Governor HPU Skids Unit 2	Supply	GPC73295-0012	REDACTED	REDACTED	REDACTED	REDACTED	
Station Service Transformers	Supply						
Switchgear	Supply						
Lube Oil Skids	Supply						
Batteries	Supply						
Generator Step Up Transformer	Supply						
DCS Unit 1	Supply	GPC18391-0359	REDACTED	REDACTED	REDACTED	REDACTED	
DCS Unit 2	Supply	GPC18391-0361	REDACTED	REDACTED	REDACTED	REDACTED	
Bulk Heads	Supply						
Trash Racks	Supply Only						
Head Gates	Supply and install						
			REDACTED	REDACTED	REDACTED	REDACTED	
Sums and percentages may not add due to rounding.							
Burton							
Turbine	Supply and install						
Generator	Supply and install						
General Contractor	Install						
Trash Racks	Supply and install						
Governor HPU Skids	Supply	GPC73295-0010	REDACTED	REDACTED	REDACTED	REDACTED	
Station Service Transformers	Supply						
Switchgear	Supply						
Lube Oil Skids	Supply						
Batteries	Supply						
Generator Step Up Transformer	Supply	GPC70844-0015	REDACTED	REDACTED	REDACTED	REDACTED	
DCS Unit 1	Supply	GPC18391-0358	REDACTED	REDACTED	REDACTED	REDACTED	
DCS Unit 2	Supply	GPC18391-0360	REDACTED	REDACTED	REDACTED	REDACTED	
Bulk Heads	Supply						
Trash Racks	Supply Only						
Head Gates	Supply and install						
			REDACTED	REDACTED	REDACTED	REDACTED	
Sums and percentages may not add due to rounding.							

<sup>1</sup> PO's included when contract value exceeds \$100k following award of contract and issuance of PO.

<sup>2</sup> Estimated amount from Project Estimate

<sup>3</sup> This reflects change orders to the contract/purchase order

<sup>4</sup> From Initial Contract Amount to Current Amount

Notes on Variances	
A	Variances between the Estimated Amount and the Initial Contract Amount are the result of the differences between the screening level Estimated Amount compared to the actual contract that was procured and is reflected as the Initial Contract Amount.
B	Additional work related to rehabilitation and replacement of components not included in base scope.
C	Additional rotor stability frame due to safety concerns. Additional cleaning and handling of the generator rotor.
D	Documents issued for bid vs documents issued for construction.
E	Additional valve, differential pressure transmitters, and lifting frame modification.
F	Power and water cybersecurity suite equipment, operation station, and additional start up support.
G	"Estimated Amount" included in General Contractor Unit 2 value. Shown in Cell E9.
H	Limited Notice to Proceed - contract negotiations completed
I	Turbine and Generator scope issued a single contract due to an alternate bid
J	Transferred braking/jacking and vibration monitoring scope to vendor, added scope for online brush removal and terminal blocks.
K	Estimate includes supply and install. Originally estimated as Obermeyers, current strategy is replace in kind.
L	Includes U1 and U3 transformers
M	Steel indices
N	Storage Fees
O	Part associated with completing the final design.
P	Accounting system adjustments during period ending December 31, 2022.

**PUBLIC DISCLOSURE**  
**Project Change Orders**  
**Project Monitoring Report - December 31, 2022**  
**Material Change Orders (>\$100k)**

<b>Terrora</b>			
<b>Date CO Submitted</b>	<b>Description of Change Order Request</b>	<b>Dollar Amount Requested (1000\$)</b>	<b>Date Approved</b>
1/30/2020	Controls	REDACTED	5/13/2020
1/30/2020	Penstock manholes/platforms, turb/gen platform, air reciever tank, control room access	REDACTED	5/13/2020
5/14/2020	Unit 1/2 Turbine Increases.	REDACTED	5/14/2020
5/14/2020	Night Shift Coordinator	REDACTED	5/18/2020
6/23/2020	Terrora Isolation Valves	REDACTED	7/23/2020
10/19/2020	Terrora Overhead Crane uprate	REDACTED	10/19/2020
11/10/2020	Equipment and Startup support	REDACTED	11/24/2020
11/24/2020	Operations Procedures	REDACTED	11/24/2020
3/29/2021	Emerson Phase 2 Startup Support	REDACTED	4/12/2021
9/9/2021	Terrora Unit 1 & 2- New Lower Generator Guide Bearing Oil Basin Cover Proposal for American Hydro	REDACTED	9/9/2021
9/9/2021	Terrora Unit 1- LGGB Housing and Bridge Fit Reconditioning for American Hydro	REDACTED	10/8/2021
	34 Other Change Orders (<\$100k)	\$ 936	Multiple
	Total	\$ 6,157	
<b>Tugalo</b>			
<b>Date CO Submitted</b>	<b>Description of Change Order Request</b>	<b>Dollar Amount Requested (1000\$)</b>	<b>Date Approved</b>
10/14/2021	Online Brush Removal, Vibration Sensors, Braking/Jack System, and Terminal Blocks	REDACTED	11/30/2021
3/24/2022	Additional Electrical Hours Required	REDACTED	3/24/2022
3/24/2022	Tugalo Unit 1 sole plate, draft tube, and wheel pit repairs	REDACTED	3/24/2022
3/17/2022	By-Pass for the Temperature Control Valves	REDACTED	9/29/2022
7/8/2022	Tugalo Trash Rack and Structural Steel temporary Storage	REDACTED	9/29/2022
11/21/2022	Siemens GSU PO Reconciliation	REDACTED	11/21/2022
	14 Other Change Orders (<\$100k)	\$ 586	Multiple
	Total	\$ 2,734	
<b>Bartletts Ferry</b>			
<b>Date CO Submitted</b>	<b>Description of Change Order Request</b>	<b>Dollar Amount Requested (1000\$)</b>	<b>Date Approved</b>
8/31/2021	Additional Options and Engineering Studies	REDACTED	9/7/2021
2/5/2022	CPI increase in raw steel Price vs the Post-adjustment price for Headcover	REDACTED	4/5/2022
2/5/2022	CPI increase in raw steel Price vs the Post-adjustment price for Runner	REDACTED	4/5/2022
2/5/2022	CPI increase in raw steel Price vs the Post-adjustment price for Headcover	REDACTED	4/5/2022
3/8/2022	Bartletts U1-4 Powerhouse Crane Cost Change	REDACTED	4/21/2022
7/6/2022	Lifting and Handling Devices for Unit dis-assembly and re-assembly	REDACTED	8/30/2022
4/15/2022	Trash Gate Actuator Variance Post-Control	REDACTED	8/30/2022
8/18/2022	Additional Hours Needed to complete Mechanical Design	REDACTED	8/30/2022
5/16/2022	I&C Variance for years 2023 thru 2026	REDACTED	10/6/2022
9/2/2022	Generator Bearings	REDACTED	11/22/2022
11/17/2022	U1 and U2 Baffling in Thrust Tub	REDACTED	12/14/2022
8/30/2022	Log Powerhouse Crane – LCP (Lead Containing Paint) Removal and Storage	REDACTED	12/2/2022
	7 Other Change Orders (<\$100k)	\$ 112	Multiple
	Total	\$ 5,162	



**PUBLIC DISCLOSURE**  
**Procurement Status of Significant Components -- All Received**  
**Project Monitoring Report - December 31, 2022**

[illegible]

*Required Delivery Date reflects contractual requirement for vendor, but not delivery date required to meet commercial operation.*


[illegible]

*Required Delivery Date reflects contractual requirement for vendor, but not delivery date required to meet commercial operation.*

Total Project Estimate	Unit	Purchase Order Date	Required Delivery Date	Scheduled Delivery Date
<b>Bartlett's Ferry 1-4</b>				
Turbine Common	1	Actual 1/4/2021	3/15/2021	4/10/2023
Turbine Unit 1	1	Actual 6/25/2021	1/2/2023	4/13/2023
Turbine Unit 2	2	Actual 6/25/2021	1/2/2026	4/21/2025
Turbine Unit 3	3	Actual 6/25/2021	1/2/2024	11/17/2023
Turbine Unit 4	4	Actual 6/25/2021	1/2/2025	6/25/2024
Generator Unit 1	1	Actual 8/11/2022	1/31/2022	9/15/2023
Generator Unit 2	2	Actual 12/20/2022	2/1/2023	5/11/2026
Generator Unit 3	3	Actual 12/20/2022	2/6/2023	5/28/2024
Generator Unit 4	4	Actual 12/20/2022	2/13/2023	5/13/2025
General Contractor				
Trash Racks	1	Actual 11/11/2021	2/1/2022	Actual 8/12/2022
Governor HPU Skid Unit 1	1	Actual 7/27/2022	3/16/2023	6/16/2023
Governor HPU Skid Unit 2	2	Actual 7/27/2022	3/9/2026	6/8/2026
Governor HPU Skid Unit 3	3	Actual 7/27/2022	3/17/2024	6/12/2024
Governor HPU Skid Unit 4	4	Actual 7/27/2022	3/11/2025	6/10/2025
Station Service Transformers		Actual 9/10/2021	1/11/2023	4/27/2023
Switchgear	1	Actual 5/25/2021	1/18/2023	4/20/2023
Lube Oil Skids	1	Actual 5/21/2022	7/31/2023	8/1/2023
Lube Oil Skids	2,4	Actual 5/21/2022	7/31/2026	7/31/2026
Lube Oil Skids	3	Actual 5/21/2022	7/31/2024	7/31/2024
Batteries				
Generator Step Up Transformer U1	1	Actual 10/22/2021	3/1/2023	5/30/2023
Generator Step Up Transformer U2	2	Actual 10/22/2021	3/2/2026	3/18/2026
Generator Step Up Transformer U3	3	Actual 10/22/2021	3/1/2024	5/8/2024
Generator Step Up Transformer U4	4	Actual 10/22/2021	3/3/2025	5/13/2025
DCS	1-4	Actual 10/25/2021	6/16/2023	5/31/2023
Spillway Gate Hoists				
Head Gates & Trash Gates		Actual 4/27/2022	8/31/2022	3/31/2023
Actuators		Actual 3/18/2022	1/19/2023	2/20/2023
Powerhouse Crane		Actual 3/18/2022	1/2/2023	1/9/2023

Required Delivery Date reflects contractual requirement for vendor, but not delivery date required to meet commercial operation.



Project Filename: Georgia Hydro Modernization (Oliver)(Nacoochee)(Burton)(Sinclair)		Georgia Hydro Modernization (Oliver)(Nacoochee)(Burton)(Sinclair)			Page 1 of 2 Data Date: 26-Dec-22	
Activity ID	Activity Name			Rem Dur	Start	Finish
Georgia Hydro Modernization (Oliver)(Nacoochee)(Burton)(Sinclair)						
Projects						
Oliver						
LOE's						
LOE-ENG20	Engineering					
LOE-PROC20	Procurement					
LOE-CNST40	Civil Infrastructure Construction					
LOE-CNST54	Construction U1					
LOE-STUP54	Start-Up/Commissioning U1					
LOE-CNST64	Construction U2					
LOE-STUP64	Start-Up/Commissioning U2					
LOE-CNST74	Construction U3					
LOE-STUP74	Start-Up/Commissioning U3					
LOE-CNST84	Construction U4					
LOE-STUP84	Start-Up/Commissioning U4					
Nacoochee						
LOE's						
LOE-ENG30	Engineering					
LOE-PROC30	Procurement					
LOE-CNST50	Civil Infrastructure Construction					
LOE-CNST	Construction					
LOE-STUP	Start-Up/Commissioning					
Burton						
		PSC- Level 0			 Southern Company	

Project Filename: Georgia Hydro Modernization (Oliver)(Nacoochee)(Burton)(Sinclair)		Georgia Hydro Modernization (Oliver)(Nacoochee)(Burton)(Sinclair)			Page 2 of 2 Data Date: 26-Dec-22	
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Activity ID	Activity Name	Rem Dur	Start	Finish
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LOE's	
LOE-ENG40	Engineering
LOE-PROC40	Procurement
LOE-CNST104	Construction U1
LOE-STUP114	Start-Up/Commissioning U1
LOE-CNST144	Construction U2
LOE-STUP124	Start-Up/Commissioning U2
Sinclair	
LOE's	
LOE-ENG50	Engineering
LOE-PROC50	Procurement
LOE-CNST124	Construction U1
LOE-STUP104	Start-Up/Commissioning U1
LOE-CNST154	Construction U2
LOE-STUP134	Start-Up/Commissioning U2