Georgia Power

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

PUBLIC DISCLOSURE

August 16, 2024

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

RE: Georgia Power Company's Application for Certification of Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems;
Docket No. 55378

Dear Ms. Tanner:

In accordance with O.C.G.A. § 46-3A-1, et seq., and Georgia Public Service Commission (the "Commission") Rules 515-3-4-.06 through 515-3-4-.10, as applicable, and the Commission's Final Order on Georgia Power's 2023 Integrated Resource Plan ("IRP") Update, Georgia Power now files its Application for Certification of Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems ("Application").

This filing is covered under the trade secret rules of the Commission as explained in the enclosed documents regarding the basis for the assertion. This letter and the accompanying documents are submitted consistent with the Alternative Electronic Filing Procedures established by the Commission on March 17, 2020. In addition, the Company has conferred with Public Interest Advocacy ("PIA") Staff and is providing the agreed-upon number of printed copies of the Application.

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

Sincerely,

/s/ Jeremiah C. Haswell
Jeremiah C. Haswell
Director, Regulatory Affairs

Encl.

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BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION

GEORGIA POWER COMPANY
DOCKET NO. 55378

AFFIDAVIT AND BASIS FOR THE ASSERTION THAT PORTIONS OF THE INFORMATION SUBMITTED ARE PROTECTED TRADE SECRETS

As part of its 2023 Integrated Resource Plan Update ("2023 IRP Update"), filed in Docket No. 55378, Georgia Power Company ("Georgia Power" or the "Company") submits to the Georgia Public Service Commission its Application for Certification of Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems ("BESS"), including Attachments A through H, which contain information and data supporting the proposed projects, including sensitive terms and conditions contained within the Engineering, Procurement, and Construction ("EPC") Agreements and the Battery and Equipment Supply Agreements ("BESA"), pricing information, resource operational capability data, and development timelines, as well as certain information regarding the Company's proprietary planning processes, financial data, technology screening assumptions, generic technology and resource cost information, specific resource and technology cost information, economic analyses, including confidential details regarding current and future transmission projects (the "Information"). Certain portions of the Information are trade secrets of Georgia Power and Southern Company and their affiliates and is therefore protected from public disclosure under Commission Rule 515-3-1-.11.

The trade secret portions of the Information derive 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 their disclosure or use. Specifically, the trade secret portions of the Information contained herein include competitively sensitive pricing and operational capability data, including project development timelines where applicable, specific to the resources under contract and proposed to be developed. If the Information were made public, competitors, bidders, and suppliers could use the Information to unfairly manipulate the request for proposals process and competitive market to structure future bids and set an artificial price floor to arbitrarily increase prices to the detriment of the Company and its customers. Public dissemination of the Information would undermine Georgia Power's ability to negotiate the best price and contract terms and could harm the Company's ability to secure the best cost bids and resources for the benefit of customers.

The trade secret portions of the Information also contain competitively sensitive cost information related to available technology options, processes and data used by Georgia Power in analyzing resource addition schedules, financial data used in the Company's resource analyses, and other confidential details including data supporting resource economic evaluations. Public dissemination of the trade secret portions of the Information would allow Georgia Power's competitors and suppliers to have access to such processes and strategies and thereby gain an unfair competitive advantage in the marketplace. Competitors would obtain an unfair advantage because they are not required to reveal similar information and can utilize such trade secret portions of the Information to manipulate pricing and timing of supply to the disadvantage of Georgia Power. Competitors would also unfairly benefit in having access and insight into the Company's planning processes and methodologies. This competitive advantage for the Company's suppliers and competitors would mean that Georgia Power will potentially pay higher prices to suppliers, ultimately harming Georgia Power and its customers.

Additionally, the Information contains competitively sensitive cost information related to the prices Georgia Power has estimated for transmission equipment and specific details related to the Company's transmission infrastructure. Public dissemination of the Information would allow Georgia Power's competitors and suppliers to have access to the costs paid by the Company and insight into the Company's transmission planning process. Access to the Information would also allow competitors to gain specific insight into the Company's technical analysis regarding planned projects. Competitors would obtain an unfair advantage because they are not required to reveal similar information and can structure the pricing for competing products based on the Information. In the event the Information was released, it is quite likely that suppliers would use the Information to set the floor in establishing their own prices, thus artificially and inefficiently setting a market price that may not be representative of the best cost that the market could offer. Competitors would also unfairly benefit in having access and insight into the Company's planning processes and methodologies. This competitive advantage for the Company's suppliers and competitors would mean that Georgia Power will potentially pay higher prices to suppliers, ultimately harming Georgia Power. Finally, the Information includes details concerning Georgia Power's transmission infrastructure that may be used to pin-point vulnerabilities in the transmission system. Such portions of the Information contain Critical Energy Infrastructure Information ("CEII"), the distribution of which is subject to regulation under the Code of Federal Regulations Section 388.113.

The trade secret portions of the Information are subject to substantial procedures to maintain their secrecy. Only select Georgia Power and Southern Company personnel are granted access to the trade secret portions of the Information. Those personnel receive access only on a "need to know" basis. Parties outside Georgia Power and Southern Company affiliates and their legal counsel who have been granted access to the trade secret portions of the Information, if any, have been required to sign confidentiality agreements.

Jeffrey R. Grubb, first being duly sworn, deposes and states that he has reviewed the Application for Certification of Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems along with Attachments A through H filed in Georgia Power's 2023 IRP Update in Docket No. 55378 and that to the best of his knowledge the specific information designated as trade secret constitute trade secrets in accordance with O.C.G.A. § 10-1-761 (2021).

Jeffrey R. Grubb
Director, Resource Policy & Planning
Georgia Power Company

Subscribed and sworn to before me this 14 day of August, 2024.

Notary Public

My Commission expires:

DANA L MCLEAN NOTARY PUBLIC COWETA COUNTY GEORGIA EXPIRES APRIL 26, 2026

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BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION

GEORGIA POWER COMPANY
DOCKET NO. 55378

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As part of its 2023 Integrated Resource Plan Update ("2023 IRP Update"), filed in Docket No. 55378, Georgia Power Company ("Georgia Power" or the "Company") submits to the Georgia Public Service Commission its Technical Appendix to the Application for Certification of Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems ("BESS"), which contain information and data supporting the proposed projects, including sensitive terms and conditions contained within the Engineering, Procurement, and Construction ("EPC") Agreements and the Battery and Equipment Supply Agreements ("BESA"), such as pricing information, resource operational capability data, and development timelines (the "Information"). Certain portions of the Information are trade secrets of Georgia Power and Southern Company and their affiliates and is therefore protected from public disclosure under Commission Rule 515-3-1-.11.

The trade secret portions of the Information derive 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 their disclosure or use. Specifically, the trade secret portions of the Information contained herein include competitively sensitive contractual terms and conditions, pricing and operational capability data, including project development timelines where applicable, specific to the resources under contract and proposed to be developed. If the Information were made public, competitors, bidders, and suppliers could use the Information to unfairly manipulate the request for proposals process and competitive market to structure future bids and set an artificial price floor to arbitrarily increase prices to the detriment of the Company and its customers. Furthermore, public dissemination of the Information would undermine Georgia Power's ability to negotiate the best price and contract terms and could harm the Company's ability to secure the best cost bids and resources for the benefit of customers. In addition, terms included in the EPC agreements, as well as the BESA's, provide for the confidentiality and protection of the Information. This proprietary information cannot be disclosed publicly, and if disclosed could harm Georgia Power's ability to negotiate favorable terms with vendors in the future. . Lastly, the Company's competitors are not required to reveal or publish similar information.

The trade secret portions of the Information also contain competitively sensitive cost information related to available technology options, processes and data used by Georgia Power, financial data used in the Company's resource analyses, and other confidential details including data supporting resource economic evaluations. Public dissemination of the trade secret portions of the Information would allow Georgia Power's competitors and suppliers to have access to such processes and strategies and thereby gain an unfair competitive advantage in the marketplace. Competitors would obtain an unfair advantage because they are not required to reveal similar information and can utilize such trade secret portions of the Information to manipulate pricing and timing of supply to the disadvantage of Georgia Power. This competitive advantage for the Company's suppliers and competitors would mean that Georgia Power will potentially pay higher prices to suppliers, ultimately harming Georgia Power and its customers.

The trade secret portions of the Information are subject to substantial procedures to maintain their secrecy. Only select Georgia Power and Southern Company personnel are granted access to the trade

secret portions of the Information. Those personnel receive access only on a "need to know" basis. Parties outside Georgia Power and Southern Company affiliates and their legal counsel who have been granted access to the trade secret portions of the Information, if any, have been required to sign confidentiality agreements.

Jeffrey R. Grubb, first being duly sworn, deposes and states that he has reviewed the Technical Appendix to the Application for Certification of Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems along with Attachments A through H filed in Georgia Power's 2023 IRP Update in Docket No. 55378 and that to the best of his knowledge the specific information designated as trade secret constitute trade secrets in accordance with O.C.G.A. § 10-1-761 (2021).

Jeffrey R. Grubb
Director, Resource Policy & Planning
Georgia Power Company

Subscribed and sworn to before me this 14 day of August, 2024.

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Georgia Power Company's Application for Certification of the Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems

Docket No. 55378

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Georgia Power Company's Application for Certification of the Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems

Docket No. 55378

Applicant name, address, and principal place of business:

Georgia Power Company
241 Ralph McGill Blvd NE
Atlanta, GA 30308

Authorized person to receive notices or communications with respect to application:

Cheryl Johnson
Regulatory Affairs, BIN 10230
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Location for public inspection:

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- 01 Robins BESS Engineering, Procurement, and Construction Agreement
- 02 Robins BESS Battery and Equipment Supply Agreement
- 03 Moody BESS Engineering, Procurement, and Construction Agreement
- 04 Moody BESS Battery and Equipment Supply Agreement
- 05 Hammond BESS Engineering, Procurement, and Construction Agreement
- 06 Hammond BESS Battery and Equipment Supply Agreement
- 07 McGrau Ford Phase II BESS Engineering, Procurement, and Construction Agreement
- 08 McGrau Ford Phase II BESS Battery and Equipment Supply Agreement

Executive Summary

This Application for the Certification of the Robins, Moody, Hammond, and McGrau Ford Phase II Battery Energy Storage Systems ("BESS") projects ("Application") is made pursuant to O.C.G.A. § 46-3A-4 and Commission Rule 515-3-4-.07(2) and in accordance with the Order Adopting Stipulated Agreement issued by the Georgia Public Service Commission (the "Commission") approving the associated stipulation ("Stipulation") in Georgia Power Company's ("Georgia Power" or the "Company") 2023 Integrated Resource Plan ("IRP") Update in Docket No. 55378 ("2023 IRP Update Final Order"). As explained in the Company's 2023 IRP Update and this Application, 500 megawatts ("MW") of BESS are necessary to meet the needs of Georgia Power customers in the winter of 2026/2027 and beyond, and approval of this Application is in the public interest.

Per Items 7 and 8 of the Stipulation, the Company is authorized to develop, own, and operate up to 500 MW of BESS resources at various sites to be identified by the Company, including the Robins and Moody BESS projects, to meet customer needs in the winter of 2026/2027. This Application meets the requirement for the Company to file for expedited certification of the applicable projects once Engineering, Procurement, and Construction ("EPC") agreements have been executed. This BESS development is exempted from the request for proposal ("RFP") process under Commission Rules 515-3-4-.04(3)(f)(6) and (7).

The 2023 IRP Update Final Order emphasizes that the "Stipulation represents a reasonable path to ensuring that Georgia Power can continue to serve its existing and growing customer base with the reliability that customers value and expect, while continuing to support Georgia's growing and thriving economy."[1] Through the approval of the 500 MW of company-owned BESS and the rest of the stipulated resource plan, the Company's forecasted incremental revenue associated with the state's extraordinary economic growth will have downward pressure on rates of at least $2.89 for the typical residential customer using an average of 1,000 kilowatt-hour ("kWh") per month in the next base rate case.[2]

This Application includes the following portfolio of sites identified by the Company to fulfill the 500 MW total of 4-hour duration lithium-ion BESS resources:

- 128 MW Robins BESS in Bibb County, GA,
- 49.5 MW Moody BESS in Lowndes County, GA,
- 57.5 MW Hammond BESS in Floyd County, GA, and
- 265 MW McGrau Ford Phase II BESS in Cherokee County, GA.

These new BESS projects are important capacity resources as part of the Company's well-balanced and diversified approach approved in the 2023 IRP Update Final Order. This strategy and approach will allow Georgia Power to continue providing reliable and cost-effective service as it navigates unique reliability

[1] 2023 IRP Update Final Order at 7.
[2] *Id.* at 8.

resource planning challenges, including increased and accelerated generation capacity needs and increased renewable resource penetration across the system.

The proposed BESS resource portfolio projects specifically meet the needs identified in the 2023 IRP Update docket in a cost-effective and strategic fashion. Furthermore, each BESS project will produce a variety of benefits. Each project will leverage existing transmission infrastructure. As such, these projects save time and avoid additional capital investment otherwise required to construct interconnection facilities and transmission system upgrades to charge and discharge the BESS. The proposed BESS resources will also provide energy arbitrage benefits by optimizing energy savings by shifting the energy from hours with a relatively low system marginal cost to hours with a relatively high system marginal cost. Furthermore, the resource portfolio helps minimize costs by maximizing economies of scale within the bounds of the transmission available for each site and by pursuing available tax credits through the Inflation Reduction Act ("IRA") and passing those benefits through to customers.

The Robins and Moody BESS projects will be primarily charged by the existing solar resources at each site. The BESS will thereby firm up the winter planning capacity of the existing solar facilities at both sites by storing energy that can then be dispatched by system operators to benefit the grid. Without BESS, the winter planning capacity for the solar resources at each site is 10% of the nameplate capacity of each facility. With the BESS, each facility can provide 100% of the solar nameplate capacity to meet winter capacity needs, thus maximizing the utilization and benefit of the existing solar resources and existing interconnection capabilities.

The Hammond BESS project is a standalone BESS that allows the Company to leverage existing infrastructure from the retired coal-fired Plant Hammond facility, where transmission capacity has been identified to be available by winter of 2026/2027. By repurposing Company-owned land and increasing tax incentives from the IRA, the Hammond BESS provides significant benefit to customers while aiding the Company in meeting its capacity obligations.

The McGrau Ford Phase II BESS project is also a standalone BESS that will expand on the McGrau Ford Phase I BESS, that the Commission provisionally approved in the 2022 IRP. The Company is able to leverage the development and site work, land acquisition, and contracting strategy from McGrau Ford Phase I BESS in developing the McGrau Ford Phase II BESS. For example, The Company is able to streamline the contracting and construction process by using the same construction partner and existing land. In addition, the preliminary design for McGrau Ford Phase I BESS facilitates the Company's ability to cost effectively expand the project level substation and generation tie line as compared to constructing a new project level substation.

The Company entered into EPC Agreements with Burns & McDonnell for the Robins BESS and McGrau Ford Phase II BESS projects and EPC Agreements with Crowder Industrial Construction, LLC. ("Crowder") for the Moody BESS and Hammond BESS projects. Both firms are well known for their extensive experience within the power industry, demonstrating their capability to contribute significantly to the projects. The Company's review of their proposals and engagement with these firms has established a solid foundation that has validated and reinforced the effectiveness of their execution strategies. The Company has

experienced personnel in place to provide oversight and appropriate execution of the EPC Agreement by these contractors and is highly confident in their ability to successfully execute these projects.

In addition, the Company executed Battery and Equipment Supply Agreements ("BESA") for all four projects with Tesla for the Megapack 2 XL. The Tesla Megapack 2 XL is a utility-scale energy storage solution with a modular design that provides for rapid deployment of BESS for high-capacity, large-scale projects.

By utilizing the Tesla Megapack 2 XL, the projects leverage the expertise of a top market supplier to procure timely and reliable BESS equipment. The Company has focused on developing relationships with a leading supplier who stands behind operational guarantees to ensure successful project deployment for customers' benefit.

The Company requests that the Commission consider this Application on an expedited timeline as required by the 2023 IRP Update Final Order and associated Stipulation, considering the capacity offered from this transaction will be used by the Company to meet its accelerated capacity needs described in the 2023 IRP Update.

Certification Requirements

Description of the Proposed Capacity Resources

The Company seeks to certify four 4-hour duration lithium-iron phosphate ("LFP") BESS projects, which will create a total of 500 MW of capacity and associated energy. The Company has contracted for all four BESS projects to reach commercial operation by November 2026 to meet capacity needs beginning in winter of 2026/2027. Each project will be comprised of Tesla Megapack LFP battery cell technology and power conversion systems. Projects are designed with initial storage capacities and augmentation schedules to ensure they maintain adequate energy capacity over the 20-year life of the resources. Figure 1 below provides additional project details and estimated performance metrics for the proposed BESS resources:

Figure 1 – Details & Estimated Performance Metrics for 500 MW Company-Owned BESS

	Robins	Moody	Hammond	McGrau Ford Phase II
Location	Warner Robins, GA	Valdosta, GA	Rome, GA	Ball Ground, GA
Commercial Operation Date	June 2026	May 2026	November 2026	September 2026
Battery Chemistry	LFP	LFP	LFP	LFP
Capacity (MW)	128	49.5	57.5	265
Duration (hours)	4	4	4	4
Energy Capacity (MWh)	512	198	230	1,060
Asset Life (years)	20	20	20	20
Site Round-Trip Efficiency ("RTE")(%)	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

To facilitate quick deployment, the Robins and Moody BESS resources will utilize existing solar interconnections and will be charged primarily by the existing Company-owned solar facilities near Robins and Moody Air Force Bases, respectively. These co-located BESS will, however, be constructed with the capability to grid-charge if constraints are not present on the transmission system.

The remaining balance of the 500 MW is proposed to be fulfilled by two standalone BESS projects that have been identified to be cost-effective for customers: the Hammond BESS project, to be located at the site of the retired coal-fired Plant Hammond, and the McGrau Ford Phase II BESS project, to leverage the ongoing McGrau Ford Phase I BESS project from the 2022 IRP.

Once developed, the Robins, Moody, Hammond, and McGrau Ford Phase II BESS projects will serve as dispatchable capacity resources that provide customers with a reliable and economical source of electricity required by the winter of 2026/2027. In addition, the resources will form a critical component of the Company's diverse generation portfolio, helping ensure the Company has the mix of technologies necessary to provide reliable and resilient electric service for all customers during all hours.

References to the 2023 IRP Update

The Application includes by reference the following material from the Georgia Power 2023 IRP Update, Docket No. 55378, filed on October 27, 2023:

(1) the 2023 IRP Update Load and Energy Forecast;
(2) the Resource Mix Study, as revised by the Supplemental Filing and Supplemental Errata filed on December 4 and December 7, 2023, respectively;
(3) the Economic Analysis of Capacity Resources, as revised per the Supplemental Filing on January 12, 2024; and
(4) the Technical Information Supporting the Proposal to Develop 178 MW of Battery Energy Storage Systems at Robins and Moody Air Force Bases.

Filing for expedited certification, this application is consistent with the 2023 IRP Update Final Order approved by the Commission and filed in Docket No. 55378 on April 26, 2024.

As stated in the 2023 IRP Update Final Order, the resource plan stipulated in the 2023 IRP Update was found by the Commission to "benefit all customers by preserving and protecting reliability and supporting the economic development of our state, all while placing downward pressure on rates for all customers."[3] The stipulated portfolio of capacity resources approved in the 2023 IRP Update Final Order includes the:

- Purchase of 750 MW of capacity and energy from Mississippi Power Company from January 1, 2024, through December 31, 2028.
- Purchase of 230 MW of capacity and energy from Santa Rosa Energy Center from the first of the month following Commission approval through December 31, 2028.
- Authority to develop, own, and operate over 1,300 MW from three simple cycle combustion turbines ("CTs") at Plant Yates.
- Authority to develop, own, and operate 500 MW of BESS, including 178 MW of 4-hour duration lithium-ion BESS at Robins and Moody Air Force Bases.
- Issuance of an expedited, narrowly tailored RFP for BESS resources in winter of 2027/2028

Figures 2 and 3 below reflect the capacity needs presented in the 2023 IRP Update and with the approved resource plan in winter and summer, respectively, and confirm the need for the portfolio of capacity resources approved in the 2023 IRP Update Final Order.

[3] *Id* at 7.

Figure 2 – Georgia Power Winter Capacity Need from 2023 IRP Update

Year	2023 IRP Update	With Approved Resource Plan in 2023 IRP Update Final Order
2023/2024	(964)	(1,203)
2024/2025	(1,352)	(1,821)
2025/2026	175	(575)
2026/2027	1,875	52
2027/2028	2,601	531
2028/2029	4,807	3,317
2029/2030	5,774	4,214
2030/2031	8,487	6,927
2031/2032	8,776	7,216
2032/2033	9,059	7,499
2033/2034	9,228	7,668
2034/2035	11,340	9,781
2035/2036	15,643	14,084
2036/2037	15,924	14,369
2037/2038	16,624	15,072
2038/2039	17,083	15,531
2039/2040	17,820	16,268
2040/2041	18,285	16,733
2041/2042	18,739	17,187
2042/2043	19,229	17,678

Notes:

- "Winter" includes December, January, and February. Therefore, the timing of a winter need splits two calendar years, which is why the Year column in the needs chart references two calendar years. For example, the reference to 2026/2027 includes December 2026 and January and February 2027.
- Negative values in black text indicate capacity above target reserve margin; positive values in red text indicate a need to add capacity; units are MW.
- Approved capacity resources and procurements from the 2022 IRP are included, except the capacity equivalence of battery energy storage from the 500 MW ESS RFP and the All-Source Capacity RFP in order to show total capacity procurement needs.
- The expedited BESS RFP for winter 2027/2028 is not included in values for the Resource Plan approved in the 2023 IRP Update Final Order in order to show total capacity procurement needs.

Figure 3 – Georgia Power Summer Capacity Need from 2023 IRP Update

Year	2023 IRP Update	With Approved Resource Plan in 2023 IRP Update Final Order
2023/2024	(623)	(1,077)
2024/2025	(1,975)	(2,214)
2025/2026	(482)	(1,447)
2026/2027	600	(1,456)
2027/2028	1,647	(1,131)
2028/2029	3,001	1,188
2029/2030	5,940	4,057
2030/2031	6,337	4,454
2031/2032	6,366	4,483
2032/2033	6,386	4,503
2033/2034	6,317	4,434
2034/2035	8,562	6,679
2035/2036	12,235	10,352
2036/2037	12,649	10,771
2037/2038	13,147	11,272
2038/2039	13,413	11,538
2039/2040	13,978	12,103
2040/2041	14,484	12,609
2041/2042	14,916	13,041
2042/2043	15,358	13,483

Notes:

- "Summer" includes the months June, July, August, and September of the given calendar year.
- Negative values in black text indicate capacity above target reserve margin; positive values in red text indicate a need to add capacity; units are MW.
- Approved capacity resources and procurements from the 2022 IRP are included, except the capacity equivalence of battery energy storage from the 500 MW ESS RFP and the All-Source Capacity RFP in order to show total capacity procurement needs.
- The expedited BESS RFP for winter 2027/2028 is not included in values for the Resource Plan approved in the 2023 IRP Update Final Order in order to show total capacity procurement needs.

Commission Rule Exception to the RFP Requirement in Rule 515-3-4-.04

Commission Rule 515-3-4-.04(3)(f)(6) and (7) provide exceptions to the Commission rule that requires the Company to procure supply-side resources through an RFP process. Commission Rule 515-3-4-.04(3)(f)(6) provides that the Commission shall expressly consider in each IRP, and make a determination in each IRP, whether to exclude from the RFP Process any new supply-side resources identified in the soliciting entity's approved IRP. Further, Commission Rule 515-3-4-.04(3)(f)(7) articulates the Commission's policy that investor-owned utilities under its regulation, such as Georgia Power, shall maintain a minimum percentage of their capacity as self-owned rate-based assets. Pursuant to the 2001 IRP Final Order, the Commission established the minimum ratio of self-owned assets to purchased power at 70/30. The Commission Rule provides that when the utility is nearing or finds that its self-owned capacity would fall below this minimum percentage (here, 70%), the utility shall inform the Commission of this eventuality in advance of the RFP Process and seek guidance from the Commission on how to proceed. The Company provided notice to the Commission that it was close to falling below the minimum ownership percentage as part of its 2022 IRP and 2023 IRP Update filings.

Accordingly, Items 7 and 8 of the Stipulation exempt these resources from the RFP process under Commission Rules 515-3-4-.04(3)(f)(6) and (7) for the 500 MW Company-owned BESS portfolio, including the Robins and Moody BESS projects. By developing new resources in accordance with these RFP exceptions in the Commission's Rules in addition to procuring resources through the typical RFP process, Georgia Power can continue providing its customers with reliable service and meet the timelines of customers' needs. To meet Item 9 of the Stipulation, Georgia Power is also issuing a narrowly tailored RFP on an expedited schedule to meet the capacity needed to serve customers during the winter of 2027/2028. It is critical that the Company leverage procurement options to maintain a diverse resource portfolio that includes market resources, Company-owned resources, and a balance of resource technologies to ensure a reliable and efficient generation fleet.

Robins BESS (128 MW) Construction Information

Cost-Benefit Analysis

Included as TS Attachment A to this Application is the Company's Economic Analysis with a cost-benefit analysis of all four BESS projects that reflects the costs and schedules from the BESA and EPC Agreement. This cost-benefit analysis uses the same basis as the referenced Economic Analysis of Capacity Resources from the 2023 IRP Update, as revised per the Supplemental Filing on January 12, 2024.

Site Selection Analysis

The Company selected the Robins site for its expedited deployment capabilities, primarily attributed to the existing solar facility at this location which ensures known transmission deliverability. This strategic choice allows the Company to leverage existing infrastructure, thereby eliminating the need for constructing new generator step-up ("GSU") project-level substations and eliminating potential expenses and long lead time projects associated with interconnection and network upgrades.

Fuel Use

The Robins solar facility will be the primary fuel source for the Robins BESS facility. The BESS will store the renewable energy during daylight hours and discharge the energy as needed to support grid operations and meet capacity needs. Additionally, the Robins BESS will primarily serve as a cost-effective, dispatchable capacity resource by optimizing energy savings. It will achieve this by shifting the energy from hours with relatively low system marginal cost to hours with relatively high system marginal cost. While it will primarily charge from solar energy, it can also charge from the grid if constraints are not present on the transmission system.

Estimated Annual Costs

Figure 4 below includes estimated annual costs. All costs are thousands of dollars in nominal terms.

Figure 4 – Robins BESS Estimated Annual Costs

Year	Estimated Annual Depreciation	Estimated Annual Debt and Equity Financing Costs on Capital Investment	Estimated Annual Income Taxes on Capital Investment	Estimated Fixed O&M	Estimated Insurance	Estimated Property Taxes	Estimated Annual Capital Additions
2024	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2025	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2026	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Estimated Annual Variable Costs and Operational Data

The Robins BESS will serve as a cost-effective, dispatchable capacity resource that will optimize energy savings by shifting the energy from hours with relatively low system marginal cost to hours with a relatively high system marginal cost. The variable costs for the Robins BESS include the cost to charge the battery and losses during charging and discharging. These costs are optimized by charging during low-cost periods and discharging during high-cost periods, although the exact cost to charge, and benefits of discharge, vary based on market conditions.

In addition, the BESS will fulfill a wider array of system and grid requirements beyond the more commonly recognized benefits of capacity value and energy value. BESS can be instrumental in providing cost-effective essential services for grid reliability, particularly operating reserves, leading to reductions in total system operational costs. As the energy mix evolves, these services and the role of BESS will likely become increasingly important in response to intermittent resource penetration and potential carbon pressure. Please see "TS Attachment B – BESS Operational Data" for annual operational forecasts.

Rates of Escalation of Cost

Post in-service capital, insurance, and operation and maintenance ("O&M") costs that are fixed are escalated per an assumed inflation rate of **REDACTED**, unless otherwise defined in contractual agreements. The inflation rate is based on a forecast of Gross Domestic Product Implicit Price Deflator ("GDPIPD").

Total Estimated Annual Average Cost per kWh

See "Estimated Annual Variable Costs and Operational Data" section above for applicable information for BESS technology.

Equivalent Availability Factors

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Capacity Factors and Duty Cycle

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Efficiency

The Guaranteed Site RTE through the BESA at commissioning completion is **REDACTED**.

Unit Lifetime

The unit lifetime for the BESS is 20 years, and this serves as the basis for both the accounting book life and for the engineering design life.

Estimated Environmental Impact

Other than impacts associated with land use for the new facility described below, Georgia Power does not anticipate that the BESS facility will have any environmental impacts related to the specific emission, production, or usage data categories outlined in GPSC Rule 515-3-4-.07 (2)(a)(3)(xi).

Georgia Power has conducted a full suite of environmental assessments and surveys for the Robins BESS site. During site development and operations, some intermittent environmental impacts may occur as a result of stormwater runoff due to precipitation. However, these impacts will be regulated by, and in compliance with, applicable state and federal requirements.

During facility operations, no direct air emissions or water usage are expected except as encountered during an emergency or other unplanned event. Some stormwater runoff is expected as a result of direct

rainfall, but this will be controlled by measures installed during facility construction and maintained for the life of the facility. Some limited solid waste disposal may occur as a result of normal operations. Battery recycling is expected as the BESS achieve their expected operational lifespan. Ash, scrubber sludge, high- and low-level nuclear waste will not be produced. Spent nuclear fuel will not be created. Approximately 12 acres of land will be used by this BESS project for the facility footprint, interconnection substation and any associated utility tie line(s), which provides adequate space for future augmentation needs.

Required federal, state, and local permitting have been evaluated as provided in the EPC agreement, and applicable requirements will be met at the appropriate times to meet all compliance obligations.

Lead Time

Lead times for major procurement items and services, including Medium Voltage ("MV") and Low Voltage ("LV") electrical equipment, Medium Voltage Transformers ("MVT"), the BESS, engineering, and geotechnical work, are detailed in "TS Attachment D – Robins BESS Activities and Critical Path Schedule".

Due to the accelerated long lead times associated with engineering and procurement necessary to develop the Robins BESS, the Company issued a Limited Notices to Proceed ("LNTP") on April 9, 2024, and June 11, 2024, with Burns and McDonnell to maintain the schedule and initiate the engineering and subsurface investigations at the site. This agreement has allowed Burns and McDonnell to finalize equipment specifications and be ready to place equipment purchase orders upon the EPC contract execution and filing.

Potential Socioeconomic Impacts

Average construction employment is projected to be 25 personnel. During peak employment periods, employment is projected to grow to approximately 55 personnel. This BESS resource will be monitored and controlled primarily by the Remote Operations Center in Birmingham, Alabama and therefore, the permanent staff will be limited to a few incremental Instrumentation and Controls ("I&C") technicians that will maintain and monitor the system locally. Like the Company's solar O&M strategy, the team will be based primarily out of Robins solar site and will support the needs of the BESS and solar site.

Robins BESS will provide additional electric service reliability to an area of the state that has seen significant growth but limited growth in electric generation development. In addition, and as discussed previously in this Application, Robins BESS will support the extraordinary economic growth occurring throughout Georgia. Supporting Georgia's growth will have both near-term and long-term positive economic impacts on the entire state's economy and will benefit all Georgia Power customers.

Special Design Features

The proposed project will utilize the Tesla Megapack 2 XL, which is a battery storage unit capable of charging and discharging real power and injecting and absorbing reactive power. The system is unique compared to other available BESS in the market because it arrives at site fully integrated and capable of outputting 480V alternating current ("AC") power. This integration greatly reduces commissioning timelines and allows the Megapack 2 XL thermal system to operate prior to backfeed being available at the site. The Megapack 2 XL features a modular design for increased energy density and includes multiple

inverters per container, making the loss of one inverter negligible to the system's overall performance. Each 4-hour container possesses a storage capacity of over 3,900 kWh.

Total Cost Estimate

The development of Robins BESS is estimated to cost approximately **REDACTED**, which is the total of the engineering, construction, oversight, and associated procurement cost of **REDACTED**, financing cost of **REDACTED**, and ad valorem taxes of **REDACTED**. Further detail on each of these components is provided in the subsections below.

Cost Expenditure Plan

Costs shown are in thousands of nominal dollars.

Figure 5 – Robins BESS Cost Expenditure Plan

Category	**2024**	**2025**	**2026**	**Total**
Planning	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Licensing	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
EPC Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
BESA Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Engineering/Design & Construction	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Start-Up	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Contingency	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Descriptions of each category are provided below:

- Planning – Preliminary studies and investigation ("PSI") and environmental support.
- Licensing – Not applicable.
- EPC Contract – EPC contract costs.
- BESA Contract – BESA contract cost.
- Engineering/Design & Construction – Internal technical engineering and services, interconnection, process safety management ("PSM"), vendor quality, construction power, information technology ("IT"), onsite security, pre-commercial operation labor and supplies, supply chain support, project controls, legal, builder's risk insurance, site controller, Prevailing Wage and Apprenticeship ("PWA") review, distribution, and asset management.
- Start-Up – Test energy and BESA provider support.
- Transmission – Design and construction of project level substation and generation tie-line to Robins interconnection substation.
- Contingency – Contingency.

Major Contracts

Georgia Power will directly purchase the battery systems from Tesla under a BESA, with the EPC contractor responsible for the engineering, design, procurement of balance of system components, civil grading, and on-site equipment installation.

Engineering, Procurement, and Construction

In August 2024, the Company entered into an EPC Agreement with Burns and McDonnell. This agreement was executed based on information learned through a comprehensive Supply Chain RFP process. Burns and McDonnell will bring extensive experience in the engineering and construction of BESS.

As the appointed EPC contractor, Burns and McDonnell is tasked with the engineering, procurement, and construction services necessary for the design and installation of the BESS at the Robins site. Georgia Power will directly purchase the battery systems from Tesla under a BESA. The EPC contractor will be responsible for the engineering, design, procurement and construction of balance of system components, civil grading, and on-site equipment installation.

Under the terms of the EPC Agreement, Burns and McDonnell will deliver all services for a fixed price, adhering to a detailed scope of work and specifications for Robins BESS.

The executed EPC Agreement between Georgia Power Company and Burns and McDonnell is included in the Technical Appendix to this Application.

Battery and Equipment Supply Agreement

In August 2024, the Company finalized a BESA with Tesla for the procurement of an integrated battery energy storage system, the Megapack 2 XL, for deployment at Robins BESS. This agreement was executed following a comprehensive Supply Chain RFP process. Manufactured at Tesla's Megafactory in Lathrop, CA, the basic storage component in the Tesla Megapack 2 XL is the lithium-iron phosphate (“LFP”) battery cell. These cells are assembled into battery modules and integrated into the Megapack units. Megapack’s modular design allows for easy scalability, connecting multiple units to meet project requirements. Each unit can store over 3.9 MWh of energy. The system arrives on-site fully integrated with initial testing completed, ready to deliver alternating current (“AC”) electrical output.

Safety is crucial in the Megapack design. Each unit undergoes rigorous testing to ensure safe operation. Tesla’s advanced Battery Management System (“BMS”) monitors and regulates temperature, voltage, and state-of-charge, ensuring optimal performance. Tesla’s technology is well-proven and reliable with grid-scale batteries operational in over 65 countries.

The agreement includes a warranty that safeguards against equipment defects and guarantees against energy capacity degradation. In addition to the BESA, the Company will enter into a Long-Term Commitments Agreement (“LTCA”), which will provide an enhanced guaranteed energy retention capacity curve, as well as a Site RTE guarantee for each year of operation.

The executed BESA between Georgia Power Company and Tesla is included in the Technical Appendix to this Application.

Costs Associated with Construction

All construction costs are included in Figure 5 found in the above section titled "Cost Expenditure Plan."

AFUDC, Ad Valorem, and Sales Tax

Pre-commercial operation allowance for funds used during construction ("AFUDC"), ad valorem, and sales tax costs are shown in thousands of nominal dollars in the table below. Sales tax costs are estimated as zero for the BESA and EPC purchases due to applicable sales and use tax exemptions. An estimate of sales tax for items that are not exempt from sales and use tax, such real property materials and fixtures, is not available.

Figure 6 – Robins BESS AFUDC, Ad Valorem, and Sales Tax Estimates

	AFUDC	Ad Valorem	Sales Tax
2024	**REDACTED**	**REDACTED**	$0
2025	**REDACTED**	**REDACTED**	$0
2026	**REDACTED**	**REDACTED**	$0
Total	**REDACTED**	**REDACTED**	**$0**

Notes:

- The Robins BESS project property is planned as a bond lease. Therefore, no Ad Valorem or Payment in Lieu of Taxes ("PILOT") with respect to project property are due for tax years in the project's construction period.

Estimated Annual Capital Additions

Estimated annual capital additions over the life of the resource are included in Figure 4 found in the above section titled "Estimated Annual Costs."

Decommissioning/Dismantlement Costs

Estimated decommissioning and dismantlement costs assumed for the BESS resource are **REDACTED**. This value represents an estimated cost at the end of the life of the BESS.

Cost of Dedicated Transmission and Distribution Facilities

All costs of dedicated transmission and distribution are included in Figure 5 found in the above section titled "Cost Expenditure Plan." There are no costs associated with transmission projects for the Robins BESS since this project will utilize the existing interconnection at the Robins solar facility, as stated in the Transmission Screening Analyses filed on October 27, 2023.

Cost Comparison of Similar Projects

A cost comparison of projects similar by type, design, and capacity completed in the U.S. in the last five years is provided in "TS Attachment C – Cost Comparison of Similar Projects."

Activities and Critical Path Schedules

"TS Attachment D – Robins BESS Activities and Critical Path Schedule" details the activities and critical path schedule.

Lead Times for Major Procurement Items

See "Lead Time" section above for applicable information on lead times for major procurement items.

Description of Legal Relationships

There have been previous contractual relations wherein one or more suppliers involved in this project furnished equipment and/or services to one or more affiliates of the Southern Company. Other than these supply and services agreements, no other legal or contractual relations exist among the parties.

Other Information

The Company has no additional information to include at this time.

Cost Recovery

Georgia Power proposes to recover the costs associated with the construction of the Robins BESS in rate base and will reflect the operating expenses associated with the units in its retail cost of service. Regulatory treatment for these units will be consistent with the current treatment of Georgia Power's existing owned retail generation facilities.

Moody BESS (49.5 MW) Construction Information

Cost-Benefit Analysis

Included as TS Attachment A to this Application is the Company's Economic Analysis with a cost-benefit analysis of all four BESS projects that reflects the costs and schedules from the BESA and EPC Agreement. This cost-benefit analysis uses the same basis as the referenced Economic Analysis of Capacity Resources from the 2023 IRP Update, as revised per the Supplemental Filing on January 12, 2024.

Site Selection Analysis

The Company selected the Moody site for its expedited deployment capabilities, primarily attributed to the existing solar facility at this location which ensures known transmission deliverability. This strategic choice allows the Company to leverage existing infrastructure, thereby eliminating the need for constructing new GSU project-level substations and circumventing potential expenses and long lead time projects associated with interconnection and network upgrades.

Fuel Use

The existing Moody solar facility will be the primary fuel source for the Moody BESS facility. The BESS will store the renewable energy during daylight hours and discharge the energy as needed to support grid operations and meet capacity needs. Additionally, the Moody BESS will primarily serve as a cost-effective, dispatchable capacity resource by optimizing energy savings. It will achieve this by shifting the energy from hours with relatively low system marginal cost to hours with relatively high system marginal cost. While it will primarily charge from solar energy, it can also charge from the grid constraints are not present on the transmission system.

Estimated Annual Costs

Figure 7 below includes estimated annual costs. All costs are thousands of dollars in nominal terms.

Figure 7 – Moody BESS Estimated Annual Costs

Year	Estimated Annual Depreciation	Estimated Annual Debt and Equity Financing Costs on Capital Investment	Estimated Annual Income Taxes on Capital Investment	Estimated Fixed O&M	Estimated Insurance	Estimated Property Taxes	Estimated Annual Capital Additions
2024	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2025	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2026	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Estimated Annual Variable Costs and Operational Data

The Moody BESS will serve as a cost-effective, dispatchable capacity resource that will optimize energy savings by shifting the energy from hours with relatively low system marginal cost to hours with a relatively high system marginal cost. The variable costs for the Moody BESS include the cost to charge the battery and losses during charging and discharging. These costs are optimized by charging during low-cost periods and discharging during high-cost periods, although the exact cost to charge, and benefits of discharge, vary based on market conditions.

In addition, the BESS will fulfill a wider array of system and grid requirements beyond the more commonly recognized benefits of capacity value and energy value. BESS can be instrumental in providing cost-

effective essential services for grid reliability, particularly operating reserves, leading to reductions in total system operational costs. As the energy mix evolves, these services and the role of BESS will likely become increasingly important, with BESS benefits increasing in response to intermittent resource penetration and potential carbon pressure. Please see "TS Attachment B – BESS Operational Data" for annual operational forecasts.

Rates of Escalation of Cost

Post in-service capital, insurance, and O&M costs that are fixed are escalated per an assumed inflation rate of **REDACTED**, unless otherwise defined in contractual agreement. The inflation rate is based on a forecast of GDPIPD.

Total Estimated Annual Average Cost per kWh

See "Estimated Annual Variable Costs and Operational Data" section above for applicable information for BESS technology.

Equivalent Availability Factors

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Capacity Factors and Duty Cycle

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Efficiency

The Guaranteed Site RTE through the BESA at commissioning completion is **REDACTED**.

Unit Lifetime

The unit lifetime for the BESS is 20 years, and this serves as the basis for both the accounting book life and for the engineering design life.

Estimated Environmental Impact

Other than impacts associated with land use for the new facility described below, Georgia Power does not anticipate that the BESS facility will have any environmental impacts related to the specific emission, production, or usage data categories outlined in GPSC Rule 515-3-4-.07 (2)(a)(3)(xi).

Georgia Power has conducted a full suite of environmental assessments and surveys for the Moody BESS site. During site development and operations, some intermittent environmental impacts may occur as a result of stormwater runoff due to precipitation. However, these impacts will be regulated by, and in compliance with, applicable state and federal requirements.

During facility operations, no direct air emissions or water usage are expected except as encountered during an emergency or other unplanned event. Some stormwater runoff is expected as a result of direct rainfall, but this will be controlled by measures installed during facility construction and maintained for

the life of the facility. Some limited solid waste disposal may occur as a result of normal operations. Battery recycling is expected as the BESS achieve their expected operational lifespan. Ash, scrubber sludge, high- and low-level nuclear waste will not be produced. Spent nuclear fuel will not be created. Approximately 4 acres of land will be used by this BESS project for the facility footprint, interconnection substation and any associated utility tie line(s), which provides adequate space for future augmentation needs.

Required federal, state, and local permitting have been evaluated as provided in the EPC agreement, and applicable requirements will be met at the appropriate times to meet all compliance obligations.

Lead Time

Lead times for major procurement items and services, including MV and LV electrical equipment, site building fabrication, MVTs, the BESS, engineering, and geotechnical design work, are detailed in "TS Attachment E – Moody BESS Activities and Critical Path Schedule".

Due to the accelerated long lead times associated with engineering and procurement necessary to develop the Moody BESS, the Company issued a LNTP on June 13, 2024, with Crowder to maintain the schedule and initiate the engineering and subsurface investigations at the site. This agreement has allowed Crowder to finalize equipment specifications and be ready to place equipment purchase orders upon the EPC contract execution and filing.

Potential Socioeconomic Impacts

Average construction employment is projected to be between 20 and 25 personnel. During peak employment periods, employment is projected to grow to approximately 40 personnel. This BESS resource will be monitored and controlled by the Remote Operations Center in Birmingham, Alabama, and therefore, the permanent staff will be limited to a single additional I&C technician that will maintain and monitor the system locally. Like the Company's solar O&M strategy, the team will be based primarily out of the Moody solar site and will support the needs of the BESS and solar site.

Moody BESS will provide additional electric service reliability to an area of the state that has seen significant growth, but limited growth in electric generation development. In addition, and as discussed previously in this Application, Moody BESS will support the extraordinary economic growth occurring throughout Georgia. Supporting Georgia's growth will have both near-term and long-term positive economic impacts on the entire state's economy and will benefit all Georgia Power customers.

Special Design Features

The proposed project will utilize the Tesla Megapack 2 XL, which is a battery storage unit capable of charging and discharging real power and injecting and absorbing reactive power. The system is unique compared to other available BESS in the market because it arrives at site fully integrated and capable of outputting 480V AC power. This integration greatly reduces commissioning timelines and allows the Megapack 2 XL thermal system to operate prior to backfeed being available at the site. The Megapack 2 XL is modular design and includes multiple inverters per container, making the loss of one inverter negligible to the system's overall performance. Each 4-hour container possesses a storage capacity of over 3,900 kWh.

Total Cost Estimate

The development of Moody BESS is estimated to cost approximately **REDACTED** which is the total of the engineering, construction, oversight, and associated procurement cost of **REDACTED**, financing cost of **REDACTED**, and ad valorem taxes of **REDACTED**. Further detail on each of these components is provided in the subsections below.

Cost Expenditure Plan

Costs shown are in thousands of nominal dollars.

Figure 8 – Moody BESS Cost Expenditure Plan

Category	2024	2025	2026	Total
Planning	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Licensing	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
EPC Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
BESA Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Engineering/Design & Construction	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Start-Up	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Contingency	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Descriptions of each category are provided below:

- Planning – PSI and environmental support.
- Licensing – Not applicable.
- EPC Contract – EPC contract costs.
- BESA Contract – BESA contract cost.
- Engineering/Design & Construction – Internal technical engineering and services, interconnection, PSM, vendor quality, construction power, IT, onsite security, pre-commercial operation labor and supplies, supply chain support, project controls, legal, builder's risk insurance, site controller, PWA review, distribution, and asset management.
- Start-Up – Test energy and BESA provider support.
- Transmission – Design and construction of project level substation and generation tie-line to Moody interconnection substation.
- Contingency – Contingency.

Major Contracts

Georgia Power will directly purchase the battery systems from Tesla under a BESA, with the EPC contractor responsible for the engineering, design, procurement of balance of system components, civil grading, and on-site equipment installation.

Engineering, Procurement, and Construction

In August 2024, the Company entered into an EPC Agreement with Crowder. This agreement was executed based on information learned through a comprehensive Supply Chain RFP process. Crowder will bring extensive experience as a general contractor in the power industry.

As the appointed EPC contractor, Crowder is tasked with the engineering, procurement, and construction services necessary for the design and installation of the BESS at the Moody site. Georgia Power will directly purchase the battery systems from Tesla under a BESA. The EPC contractor will be responsible for the engineering, design, procurement and construction of balance of system components, civil grading, and on-site equipment installation.

Under the terms of the EPC Agreement, Crowder will deliver all services for a fixed price, adhering to a detailed scope of work and specifications for the Moody BESS.

The executed EPC Agreement between Georgia Power Company and Crowder is included in the Technical Appendix to this Application.

Battery and Equipment Supply Agreement

In August 2024, the Company finalized a BESA with Tesla for the procurement of an integrated battery energy storage system, the Megapack 2 XL, for deployment at Moody BESS. This agreement was executed following a comprehensive Supply Chain RFP process. Manufactured at Tesla's Megafactory in Lathrop, CA, the basic storage component in the Tesla Megapack 2 XL is LFP battery cell. These cells are assembled into battery modules and integrated into the Megapack units. Megapack's modular design allows for easy scalability, connecting multiple units to meet project requirements. Each unit can store over 3.9 MWh of energy. The system arrives on-site fully integrated with initial testing completed, ready to deliver AC electrical output.

Safety is crucial in the Megapack design. Each unit undergoes rigorous testing to ensure safe operation. Tesla's advanced BMS monitors and regulates temperature, voltage, and state-of-charge, ensuring optimal performance. Tesla's technology is well-proven and reliable with grid-scale batteries operational in over 65 countries.

The agreement includes a warranty that safeguards against equipment defects and guarantees against energy capacity degradation. In addition to the BESA, the Company will enter into a LTCA, which will provide an enhanced guaranteed energy retention capacity curve, as well as a Site RTE guarantee for each year of operation.

The executed BESA between Georgia Power Company and Tesla is included in the Technical Appendix to this Application.

Costs Associated with Construction

All construction costs are included in Figure 8 found in the above section titled "Cost Expenditure Plan."

AFUDC, Ad Valorem, and Sales Tax

Pre-commercial operation AFUDC, ad valorem, and sales tax costs are shown in thousands of nominal dollars in the table below. Sales tax costs are estimated as zero for the BESA and EPC purchases due to

applicable sales and use tax exemptions. An estimate of sales tax for items that are not exempt from sales and use tax, such real property materials and fixtures, is not available.

Figure 9 – Moody BESS AFUDC, Ad Valorem, and Sales Tax Estimates

	AFUDC	Ad Valorem	Sales Tax
2024	**REDACTED**	**REDACTED**	$0
2025	**REDACTED**	**REDACTED**	$0
2026	**REDACTED**	**REDACTED**	$0
Total	**REDACTED**	**REDACTED**	**$0**

Estimated Annual Capital Additions

Estimated annual capital additions over the life of the resource are included in Figure 7 found in the above section titled "Estimated Annual Costs."

Decommissioning/Dismantlement Costs

Estimated decommissioning and dismantlement costs assumed for the BESS resource are **REDACTED**. This value represents an estimated cost at the end of the life of the BESS.

Cost of Dedicated Transmission and Distribution Facilities

All costs of dedicated transmission and distribution are included in Figure 8 found in the above section titled "Cost Expenditure Plan." There are no costs associated with transmission projects for the Moody BESS since this project will utilize the existing interconnection at the Moody solar facility, as stated in the Transmission Screening Analyses filed on October 27, 2023.

Cost Comparison of Similar Projects

A cost comparison of projects similar by type, design, and capacity completed in the U.S. in the last five years is provided in "TS Attachment C – Cost Comparison of Similar Projects."

Activities and Critical Path Schedules

"TS Attachment E – Moody BESS Activities and Critical Path Schedule" details the activities and critical path schedule.

Lead Times for Major Procurement Items

See "Lead Time" section above for applicable information on lead times for major procurement items.

Description of Legal Relationships

There have been previous contractual relations wherein one or more suppliers involved in this project furnished equipment and/or services to one or more affiliates of the Southern Company. Other than these supply and services agreements, no other legal or contractual relations exist among the parties.

Other Information

The Company has no additional information to include at this time.

Cost Recovery

Georgia Power proposes to recover the costs associated with the construction of the Moody BESS in rate base and will reflect the operating expenses associated with the units in its retail cost of service. Regulatory treatment for these units will be consistent with the current treatment of Georgia Power's existing owned retail generation facilities.

Hammond BESS (57.5 MW) Construction Information

Cost-Benefit Analysis

Included as TS Attachment A to this Application is the Company's Economic Analysis with a cost-benefit analysis of all four BESS projects that reflects the costs and schedules from the BESA and EPC Agreement. This cost-benefit analysis uses the same basis as the referenced Economic Analysis of Capacity Resources from the 2023 IRP Update, as revised per the Supplemental Filing on January 12, 2024.

Site Selection Analysis

For fulfilling the remaining balance of the 500 MW of company-owned BESS approved in the 2023 IRP Update Final Order, the Company strategically selected the Hammond site to leverage existing infrastructure from the retired coal-fired Plant Hammond facility, where transmission capacity has been identified to be available by winter of 2026/2027. With repurposing Company-owned land and achieving higher tax incentives from the IRA, the Hammond BESS provides significant benefit to customers while meeting the Company's capacity obligations.

Fuel Use

The Hammond BESS will be grid charged, so it will pull energy from the grid as directed through AGC signals. Grid operators will utilize the BESS to provide both energy arbitrage and firm capacity benefits to minimize total system production costs while maintaining system reliability.

Estimated Annual Costs

Figure 10 below includes estimated annual costs. All costs are thousands of dollars in nominal terms.

Figure 10 – Hammond BESS Estimated Annual Costs

Year	Estimated Annual Depreciation	Estimated Annual Debt and Equity Financing Costs on Capital Investment	Estimated Annual Income Taxes on Capital Investment	Estimated Fixed O&M	Estimated Insurance	Estimated Property Taxes	Estimated Annual Capital Additions
2024	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2025	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2026	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Estimated Annual Variable Costs and Operational Data

The Hammond BESS will serve as a cost-effective, dispatchable capacity resource that will optimize energy savings by shifting the energy from hours with relatively low system marginal cost to hours with a relatively high system marginal cost. The variable costs for the Hammond BESS include the cost to charge the battery and losses during charging and discharging. These costs are optimized by charging during low-cost periods and discharging during high-cost periods, although the exact cost to charge, and benefits of discharge, vary based on market conditions.

In addition, the BESS will fulfill a wider array of system and grid requirements beyond the more commonly recognized benefits of capacity value and energy value. BESS can be instrumental in providing cost-effective essential services for grid reliability, particularly operating reserves, leading to reductions in total system operational costs. As the energy mix evolves, these services and the role of BESS will likely become increasingly important, with BESS benefits increasing in response to intermittent resource penetration and potential carbon pressure. Please see "TS Attachment B - BESS Operational Data" for annual operational forecasts.

Rates of Escalation of Cost

Post in-service capital, insurance, and O&M costs that are fixed are escalated per an assumed inflation rate of **REDACTED**, unless otherwise defined in contractual agreement. The inflation rate is based on a forecast of GDPIPD.

Total Estimated Annual Average Cost per kWh

See "Estimated Annual Variable Costs and Operational Data" section above for applicable information for BESS technology.

Equivalent Availability Factors

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Capacity Factors and Duty Cycle

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Efficiency

The Guaranteed Site RTE through the BESA at commissioning completion is **REDACTED**.

Unit Lifetime

The unit lifetime for the BESS is 20 years, and this serves as the basis for both the accounting book life and for the engineering design life.

Estimated Environmental Impact

Other than impacts associated with land use for the new facility described below, Georgia Power does not anticipate that the BESS facility will have any environmental impacts related to the specific emission, production, or usage data categories outlined in GPSC Rule 515-3-4-.07 (2)(a)(3)(xi).

Georgia Power has conducted a full suite of environmental assessments and surveys for the Hammond BESS site. During site development and operations, some intermittent environmental impacts may occur as a result of stormwater runoff due to precipitation. However, these impacts will be regulated by, and in compliance with, applicable state and federal requirements.

During facility operations, no direct air emissions or water usage are expected except as encountered during an emergency or other unplanned event. Some stormwater runoff is expected as a result of direct rainfall, but this will be controlled by measures installed during facility construction and maintained for the life of the facility. Some limited solid waste disposal may occur as a result of normal operations. Battery recycling is expected as the BESS achieve their expected operational lifespan. Ash, scrubber sludge, high- and low-level nuclear waste will not be produced. Spent nuclear fuel will not be created. Approximately 13 acres of land will be used by this BESS project for the facility footprint, interconnection substation and any associated utility tie line(s), which provides adequate space for future augmentation needs.

Required federal, state, and local permitting have been evaluated as provided in the EPC agreement, and applicable requirements will be met at the appropriate times to meet all compliance obligations.

Lead Time

Lead times for major procurement items and services, including GSU transformers, MV and LV electrical equipment, site building fabrication, MVTs, the BESS, engineering, and geotechnical design work, are detailed in "TS Attachment G – Hammond BESS Activities and Critical Path Schedule".

Due to the accelerated long lead times associated with engineering and procurement necessary to develop the Hammond BESS, the Company issued a LNTP on June 13, 2024, with Crowder to maintain the schedule and initiate the engineering and subsurface investigations at the site. This agreement has allowed Crowder to finalize equipment specifications and be ready to place equipment purchase orders upon the EPC contract execution and filing.

Potential Socioeconomic Impacts

Average construction employment is projected to be between 20 and 25 personnel. During peak employment periods, employment is projected to grow to approximately 40 personnel. The BESS asset will be primarily monitored and controlled by the Remote Operations Center in Birmingham, Alabama, and therefore, the permanent staff will be limited to a single additional I&C technician that will maintain and monitor the system locally.

Hammond BESS will provide additional electric service reliability to an area of the state that has seen significant growth, but limited growth in electric generation development. In addition, and as discussed previously in this Application, Plant Hammond BESS will support the extraordinary economic growth occurring throughout Georgia. Supporting Georgia's growth will have both near-term and long-term positive economic impacts on the entire state's economy and will benefit all Georgia Power customers.

Special Design Features

The proposed project will utilize the Tesla Megapack 2 XL, which is a battery storage unit capable of charging and discharging real power and injecting and absorbing reactive power. The system is unique compared to other available BESS in the market because it arrives at site fully integrated and capable of outputting 480V AC power. This integration greatly reduces commissioning timelines and allows the Megapack 2 XL thermal system to operate prior to backfeed being available at the site. The Megapack 2 XL is modular design and includes multiple inverters per container, making the loss of one inverter

negligible to the system's overall performance. Each 4-hour container possesses a storage capacity of over 3,900 kWh.

Total Cost Estimate

The development of Hammond BESS is estimated to cost approximately **REDACTED**, which is the total of the engineering, construction, oversight, and associated procurement cost of **REDACTED**, financing cost of **REDACTED**, and ad valorem taxes of **REDACTED**. Further detail on each of these components is provided in the subsections below.

Cost Expenditure Plan

Costs shown are in thousands of nominal dollars.

Figure 11 – Hammond BESS Cost Expenditure Plan

Category	2024	2025	2026	2027	Total
Planning	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Licensing	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
EPC Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
BESA Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Engineering/Design & Construction	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Start-Up	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Contingency	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Descriptions of each category are provided below:

- Planning – PSI and environmental support.
- Licensing – Not applicable.
- EPC Contract – EPC contract costs.
- BESA Contract – BESA contract cost.
- Engineering/Design & Construction – Internal technical engineering and services, interconnection, PSM, vendor quality, construction power, IT, onsite security, pre-commercial operation labor and supplies, supply chain support, project controls, legal, builder's risk insurance, site controller, PWA review, distribution, and asset management.
- Start-Up – Test energy and BESA provider support.
- Transmission – Design and construction of project level substation and generation tie-line to Hammond interconnection substation.
- Contingency – Contingency.

Major Contracts

Georgia Power will directly purchase the battery systems from Tesla under a BESA, with the EPC contractor responsible for the engineering, design, procurement of balance of system components, civil grading, and on-site equipment installation.

Engineering, Procurement, and Construction

In August 2024, the Company entered into an EPC Agreement with Crowder. This agreement was executed based on information learned through a comprehensive Supply Chain RFP process for the Robins and Moody BESS projects. Crowder will bring extensive experience as a general contractor in the power industry.

As the appointed EPC contractor, Crowder is tasked with the engineering, procurement, and construction services necessary for the design and installation of the BESS at the Hammond site. Georgia Power will directly purchase the battery systems from Tesla under a BESA. The EPC contractor will be responsible for the engineering, design, procurement and construction of balance of system components, civil grading, and on-site equipment installation.

Under the terms of the EPC Agreement, Crowder will deliver all services for a fixed price, adhering to a detailed scope of work and specifications for the Hammond BESS.

The executed EPC Agreement between Georgia Power Company and Crowder is included in the Technical Appendix to this Application.

Battery and Equipment Supply Agreement

In August 2024, the Company finalized a BESA with Tesla for the procurement of an integrated battery energy storage system, the Megapack 2 XL, for deployment at Hammond BESS. This agreement was executed based on information learned through its comprehensive Supply Chain RFP process for the Robins and Moody BESS projects. Manufactured at Tesla's Megafactory in Lathrop, CA, the basic storage component in the Tesla Megapack 2 XL is LFP battery cell. These cells are assembled into battery modules and integrated into the Megapack units. Megapack's modular design allows for easy scalability, connecting multiple units to meet project requirements. Each unit can store over 3.9 MWh of energy. The system arrives on-site fully integrated with initial testing completed, ready to deliver AC electrical output.

Safety is crucial in the Megapack design. Each unit undergoes rigorous testing to ensure safe operation. Tesla's advanced BMS and regulates temperature, voltage, and state-of-charge, ensuring optimal performance. Tesla's technology is well-proven and reliable with grid-scale batteries operational in over 65 countries.

The agreement includes a warranty that safeguards against equipment defects and guarantees against energy capacity degradation. In addition to the BESA, the Company will enter into a LTCA, which will provide an enhanced guaranteed energy retention capacity curve, as well as a Site RTE guarantee for each year of operation.

The executed BESA between Georgia Power Company and Tesla is included in the Technical Appendix to this Application.

Costs Associated with Construction

All construction costs are included in Figure 11 found in the above section titled "Cost Expenditure Plan."

AFUDC, Ad Valorem, and Sales Tax

Pre-commercial operation AFUDC, ad valorem, and sales tax costs are shown in thousands of nominal dollars in the table below. Sales tax costs are estimated as zero for the BESA and EPC purchases due to applicable sales and use tax exemptions. An estimate of sales tax for items that are not exempt from sales and use tax, such real property materials and fixtures, is not available.

Figure 12 – Hammond BESS AFUDC, Ad Valorem, and Sales Tax Estimates

	AFUDC	Ad Valorem	Sales Tax
2024	**REDACTED**	**REDACTED**	$0
2025	**REDACTED**	**REDACTED**	$0
2026	**REDACTED**	**REDACTED**	$0
Total	**REDACTED**	**REDACTED**	**$0**

Estimated Annual Capital Additions

Estimated annual capital additions over the life of the resource are included in Figure 10 found in the above section titled "Estimated Annual Costs."

Decommissioning/Dismantlement Costs

Estimated decommissioning and dismantlement costs assumed for the BESS resource are **REDACTED**. This value represents an estimated cost at the end of the life of the BESS.

Cost of Dedicated Transmission and Distribution Facilities

All costs of dedicated transmission and distribution are included in Figure 11 found in the above section titled "Cost Expenditure Plan." There are no costs associated with transmission projects for the Hammond BESS, as stated in the "TS Attachment F – Transmission Analysis for Hammond and McGrau Ford Phase II BESS."

Cost Comparison of Similar Projects

A cost comparison of projects similar by type, design, and capacity completed in the U.S. in the last five years is provided in "TS Attachment C – Cost Comparison of Similar Projects."

Activities and Critical Path Schedules

"TS Attachment G – Hammond BESS Activities and Critical Path Schedule" details the activities and critical path schedule.

Lead Times for Major Procurement Items

See "Lead Time" section above for applicable information on lead times for major procurement items.

Description of Legal Relationships

There have been previous contractual relations wherein one or more suppliers involved in this project furnished equipment and/or services to one or more affiliates of the Southern Company. Other than these supply and services agreements, no other legal or contractual relations exist among the parties.

Other Information

The Company has no additional information to include at this time.

Cost Recovery

Georgia Power proposes to recover the costs associated with the construction of the Robins BESS in rate base and will reflect the operating expenses associated with the units in its retail cost of service. Regulatory treatment for these units will be consistent with the current treatment of Georgia Power's existing owned retail generation facilities.

McGrau Ford Phase II BESS (265 MW) Construction Information

Cost-Benefit Analysis

Included as TS Attachment A to this Application is the Company's Economic Analysis with a cost-benefit analysis of all four BESS projects that reflects the costs and schedules from the EPC and BESA Agreements. This cost-benefit analysis uses the same basis as the referenced Economic Analysis of Capacity Resources from the 2023 IRP Update, as revised per the Supplemental Filing on January 12, 2024.

Site Selection Analysis

For fulfilling the remaining balance of the 500 MW of company-owned BESS approved in the 2023 IRP Update Final Order, the Company strategically selected the McGrau Ford site to leverage the ongoing McGrau Ford Phase I BESS project, that was provisionally approved in the 2022 IRP. Given the existing site work, land acquisition, and contracting for McGrau Ford Phase I BESS, efficiencies in contracting and construction are obtained by using the same construction partner and Company-owned land. In addition, the preliminary design for McGrau Ford Phase I BESS provides an opportunity to cost effectively expand the project level substation and generation tie line as compared to constructing a new project level substation. This approach not only ensures cost savings but also capitalizes on economies of scale to reduce overall EPC costs.

Fuel Use

The McGrau Ford Phase II BESS will be grid charged, so it will pull energy from the grid as directed through AGC signals. Grid operators will utilize the BESS to provide both energy arbitrage and firm capacity benefits to minimize total system production costs while maintaining system reliability.

Estimated Annual Costs

Figure 13 below includes estimated annual costs. All costs are thousands of dollars in nominal terms.

Figure 13 – McGrau Ford Phase II BESS Estimated Annual Costs

Year	Estimated Annual Depreciation	Estimated Annual Debt and Equity Financing Costs on Capital Investment	Estimated Annual Income Taxes on Capital Investment	Estimated Fixed O&M	Estimated Insurance	Estimated Property Taxes	Estimated Annual Capital Additions
2024	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2025	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2026	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Estimated Annual Variable Costs and Operational Data

The McGrau Ford Phase II BESS will serve as a cost-effective, dispatchable capacity resource that will optimize energy savings by shifting the energy from hours with relatively low system marginal cost to hours with a relatively high system marginal cost. The variable costs for the McGrau Ford Phase II BESS include the cost to charge the battery and losses during charging and discharging. These costs are optimized by charging during low-cost periods and discharging during high-cost periods, although the exact cost to charge, and benefits of discharge, vary based on market conditions.

In addition, the BESS will fulfill a wider array of system and grid requirements beyond the more commonly recognized benefits of capacity value and energy value. BESS can be instrumental in providing cost-effective essential services for grid reliability, particularly operating reserves, leading to reductions in total system operational costs. As the energy mix evolves, these services and the role of BESS will likely become

increasingly important, with BESS benefits increasing in response to intermittent resource penetration and potential carbon pressure. Please see "TS Attachment B – BESS Operational Data" for annual operational forecasts.

Rates of Escalation of Cost

Post in-service capital, insurance, and O&M costs that are fixed are escalated per an assumed inflation rate of **REDACTED**, unless otherwise defined in contractual agreements. The inflation rate is based on a forecast of GDPIPD.

Total Estimated Annual Average Cost per kWh

See "Estimated Annual Variable Costs and Operational Data" section above for applicable information for BESS technology.

Equivalent Availability Factors

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Capacity Factors and Duty Cycle

See "Estimated Annual Variable Costs and Operational Data" section above and "TS Attachment B – BESS Operational Data" for applicable information for BESS technology.

Efficiency

The Guaranteed Site RTE through the BESA at commissioning completion is **REDACTED**.

Unit Lifetime

The unit lifetime for the BESS is 20 years, and this serves as the basis for both the accounting book life and for the engineering design life.

Estimated Environmental Impact

Other than impacts associated with land use for the new facility described below, Georgia Power does not anticipate that the BESS facility will have any environmental impacts related to the specific emission, production, or usage data categories outlined in GPSC Rule 515-3-4-.07 (2)(a)(3)(xi).

Georgia Power has conducted a full suite of environmental assessments and surveys for the McGrau Ford Phase II site. During site development and operations, some intermittent environmental impacts may occur as a result of stormwater runoff due to precipitation. However, these impacts will be regulated by, and in compliance with, applicable state and federal requirements.

During facility operations, no direct air emissions or water usage are expected except as encountered during an emergency or other unplanned event. Some stormwater runoff is expected as a result of direct rainfall, but this will be controlled by measures installed during facility construction and maintained for the life of the facility. Some limited solid waste disposal may occur as a result of normal operations. Battery recycling is expected as the BESS achieve their expected operational lifespan. Ash, scrubber sludge, high-

and low-level nuclear waste will not be produced. Spent nuclear fuel will not be created. Approximately 66 acres of land will be used by this BESS project for the facility footprint, interconnection substation and any associated utility tie line(s), which provides adequate space for future augmentation needs.

Required federal, state, and local permitting have been evaluated as provided in the EPC agreement, and applicable requirements will be met at the appropriate times to meet all compliance obligations.

Lead Time

Lead times for major procurement items and services, including GSU transformers, MV and LV electrical equipment, site building fabrication, MVTs, the BESS, engineering, and geotechnical design work, are detailed in "TS Attachment H – McGrau Ford Phase II BESS Activities and Critical Path Schedule".

Due to the accelerated long lead times associated with engineering and procurement necessary to develop the McGrau Phase II BESS, the Company issued a LNTP on April 26, 2024, with Burns and McDonnell to maintain the schedule and initiate the engineering and subsurface investigations at the site. This agreement has allowed Burns and McDonnell to finalize equipment specifications and be ready to place equipment purchase orders upon the EPC contract execution and filing.

Potential Socioeconomic Impacts

Average construction employment is projected to be 48 personnel. During peak employment periods, employment is projected to grow to approximately 120 personnel. The BESS asset will be primarily monitored and controlled by the Remote Operations Center in Birmingham, Alabama. Additionally, there will be permanent staff on site, estimated between 2-3 personnel, thereby creating long-term employment in Cherokee County.

McGrau Ford Phase II BESS will provide additional electric service reliability to an area of the state that has seen significant growth, but limited growth in electric generation development. In addition, and as discussed previously in this Application, McGrau Ford Phase II BESS will support the extraordinary economic growth occurring throughout Georgia. Supporting Georgia's growth will have both near-term and long-term positive economic impacts on the entire state's economy and will benefit all Georgia Power customers.

Special Design Features

The proposed project will utilize the Tesla Megapack 2 XL, which is a battery storage unit capable of charging and discharging real power and injecting and absorbing reactive power. The system is unique compared to other available BESS in the market because it arrives at site fully integrated and capable of outputting 480V AC power with a. This integration greatly reduces commissioning timelines and allows the Megapack 2 XL thermal system to operate prior to backfeed being available at the site. The Megapack 2 XL is modular design and includes multiple inverters per container, making the loss of one inverter negligible to the system's overall performance. Each 4-hour container possesses a storage capacity of over 3,900 kWh.

Total Cost Estimate

Development of McGrau Ford Phase II BESS is estimated to cost approximately **REDACTED**, which is the total of the engineering, construction, oversight, and associated procurement cost of **REDACTED**, financing cost of **REDACTED**, and ad valorem taxes of **REDACTED**.

Cost Expenditure Plan

Costs shown are in thousands of nominal dollars.

Figure 14 – McGrau Ford Phase II BESS Cost Expenditure Plan

Category	2024	2025	2026	2027	Total
Planning	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Licensing	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
EPC Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
BESA Contract	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Engineering/Design & Construction	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Start-Up	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Contingency	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Descriptions of each category are provided below:

- Planning – PSI and environmental support.
- Licensing – Not applicable.
- EPC Contract – EPC contract costs.
- BESA Contract – BESA contract cost.
- Engineering/Design & Construction – Internal technical engineering and services, interconnection, PSM, vendor quality, construction power, IT, onsite security, pre-commercial operation labor and supplies, supply chain support, project controls, legal, builder's risk insurance, site controller, PWA review, distribution, and asset management.
- Start-Up – Test energy and BESA provider support.
- Transmission – Design and construction of project level substation and generation tie-line to McGrau Ford interconnection substation.
- Contingency – Contingency.

Major Contracts

Georgia Power will directly purchase the battery systems from Tesla under a BESA, with the EPC contractor responsible for the engineering, design, procurement of balance of system components, civil grading, and on-site equipment installation.

Engineering, Procurement, and Construction

In August 2024, the Company entered into an EPC Agreement with Burns and McDonnell. This agreement was executed based on information learned through a comprehensive Supply Chain RFP process for the Robins and Moody BESS projects. Burns and McDonnell will bring extensive experience in the engineering and construction of BESS and will leverage the site presence, design work and construction for the McGrau Ford Phase I project that will be worked in parallel with McGrau Ford Phase II. As the appointed EPC contractor, Burns and McDonnell is tasked with the engineering, procurement, and construction services necessary for the design and installation of the BESS at the McGrau Ford Phase II site. Georgia Power will directly purchase the battery systems from Tesla under a BESA. The EPC contractor will be responsible for the engineering, design, procurement and construction of balance of system components, civil grading, and on-site equipment installation.

Under the terms of the EPC Agreement, Burns and McDonnell will deliver all services for a fixed price, adhering to a detailed scope of work and specifications for the McGrau Ford Phase II BESS.

The executed EPC Agreement between Georgia Power Company and Burns and McDonnell is included in the Technical Appendix to this Application.

Battery and Equipment Supply Agreement

In August 2024, the Company finalized a BESA with Tesla for the procurement of an integrated battery energy storage system, the Megapack 2 XL, for deployment at McGrau Ford Phase II BESS. This agreement was executed based on the information learned through its comprehensive Supply Chain RFP process for the Robins and Moody BESS projects. Manufactured at Tesla's Megafactory in Lathrop, CA, the basic storage component in the Tesla Megapack 2 XL is the lithium-iron phosphate battery cell. These cells are assembled into battery modules and integrated into the Megapack units. Megapack's modular design allows for easy scalability, connecting multiple units to meet project requirements. Each unit can store over 3.9 MWh of energy. The system arrives on-site fully integrated with initial testing completed, ready to deliver alternating current electrical output.

Safety is crucial in the Megapack design. Each unit undergoes rigorous testing to ensure safe operation. Tesla's advanced BMS monitors and regulates temperature, voltage, and state-of-charge, ensuring optimal performance. Tesla's technology is well-proven and reliable with grid-scale batteries operational in over 65 countries.

The agreement includes a warranty that safeguards against equipment defects and guarantees against energy capacity degradation. In addition to the BESA, the Company will enter into a LTCA, which will provide an enhanced guaranteed energy retention capacity curve, as well as a Site RTE guarantee for each year of operation.

The executed BESA between Georgia Power Company and Tesla is included in the Technical Appendix to this Application.

Costs Associated with Construction

All construction costs are included in Figure 14 found in the above section titled "Cost Expenditure Plan."

AFUDC, Ad Valorem, and Sales Tax

Pre-commercial operation AFUDC, ad valorem, and sales tax costs are shown in thousands of nominal dollars in the table below. Sales tax costs are estimated as zero for the BESA and EPC purchases due to applicable sales and use tax exemptions. An estimate of sales tax for items that are not exempt from sales and use tax, such real property materials and fixtures, is not available.

Figure 15 – Hammond BESS AFUDC, Ad Valorem, and Sales Tax Estimates

	AFUDC	Ad Valorem	Sales Tax
2024	**REDACTED**	**REDACTED**	$0
2025	**REDACTED**	**REDACTED**	$0
2026	**REDACTED**	**REDACTED**	$0
Total	**REDACTED**	**REDACTED**	**$0**

Estimated Annual Capital Additions

Estimated annual capital additions over the life of the resource are included in Figure 13 found in the above section titled "Estimated Annual Costs."

Decommissioning/Dismantlement Costs

Estimated decommissioning and dismantlement costs assumed for the BESS resource are **REDACTED**. This value represents an estimated cost at the end of the life of the BESS.

Cost of Dedicated Transmission and Distribution Facilities

All costs of dedicated transmission and distribution are included in Figure 14 found in the above section titled "Cost Expenditure Plan." Costs associated with transmission projects to facilitate the charging and discharging of power from the McGrau Ford Phase II BESS project are provided in "TS Attachment F – Transmission Analysis for Hammond and McGrau Ford Phase II BESS". Such costs are not included in Figure 14 in the "Cost Expenditure Plan" section.

Cost Comparison of Similar Projects

A cost comparison of projects similar by type, design, and capacity completed in the U.S. in the last five years is provided in "TS Attachment C – Cost Comparison of Similar Projects."

Activities and Critical Path Schedules

"TS Attachment H – McGrau Ford Phase II BESS Activities and Critical Path Schedule" details the activities and critical path schedule.

Lead Times for Major Procurement Items

See "Lead Time" section above for applicable information on lead times for major procurement items.

Description of Legal Relationships

There have been previous contractual relations wherein one or more suppliers involved in this project furnished equipment and/or services to one or more affiliates of the Southern Company. Other than these supply and services agreements, no other legal or contractual relations exist among the parties.

Other Information

The Company has no additional information to include at this time.

Cost Recovery

Georgia Power proposes to recover the costs associated with the construction of the McGrau Ford Phase II BESS in rate base and will reflect the operating expenses associated with the units in its retail cost of service. Regulatory treatment for these units will be consistent with the current treatment of Georgia Power's existing owned retail generation facilities.

Conclusion

In the 2023 IRP Update Final Order, the Commission concluded that "the Stipulation is a well-reasoned and balanced resolution of the Company's 2023 IRP Update that will provide significant benefits to Georgia Power's customers, [including] customer protections, the assurance of downward pressure on customer rates, and the continued resiliency and reliability of the Company's electric system."[4] Consistent with the 2023 IRP Update Final Order, Georgia Power submits this application to request the expedited certification of 500 MW of Company-owned BESS projects at Robins, Moody, Hammond, and McGrau Ford Phase II sites.

These projects are necessary and cost-effective capacity resources to continue to reliably serve the state's economic growth, beginning in the winter of 2026/2027. The generation capacity provided by these 4-hour, dispatchable resources is a critical benefit of these projects, while the Company is also able to leverage existing infrastructure, including military base solar installations, a retired coal-fired generating site, and development adjacent to current substations. These projects save time and avoid additional capital investment by pursuing opportunities that have transmission capacity available as early as the winter of 2026/2027 to provide the best value to Georgia Power customers. Other benefits of these projects include energy arbitrage capabilities to optimize energy savings by shifting the energy output, including solar energy, from periods of relatively low system marginal cost to hours with relatively high system marginal cost. Additionally, the BESS will fulfill a wider array of system and grid requirements beyond capacity and energy value. It will provide cost-effective essential services for grid reliability, such as operating reserves, leading to reductions in total system operational costs. As the energy mix evolves, these services and the role of BESS will likely become increasingly important, especially with the rise of intermittent resources and potential carbon pressure. The Company will also pursue available tax credits through the IRA for these projects and pass those benefits through to customers.

The request in this Application complies with applicable Commission rules and is in the public interest; therefore, the Company requests that the Commission (1) certify the Robins, Moody, Hammond, and McGrau Ford Phase II projects; and (2) approve the total deemed certified amounts of the projects as shown in Figure 16 below.

Figure 16 – Total Cost Estimate of the 500 MW Company-owned BESS

Project Name	**Project Capacity**	**Total Cost Estimate**
Robins BESS	128 MW	**REDACTED**
Moody BESS	49.5 MW	**REDACTED**
Hammond BESS	57.5 MW	**REDACTED**
McGrau Ford Phase II BESS	265 MW	**REDACTED**
Total	**500 MW**	**REDACTED**

[4] 2023 IRP Update Final Order at 9.

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500 MW BESS Economic Analysis

2023 Integrated Resource Plan Update BESS Certification

Introduction

As stated in the 2023 Integrated Resource Plan ("IRP") Update, Georgia's economy has continued to thrive, bringing rapid economic expansion and an unprecedented increase in the demand for energy to the state. This rapid economic expansion requires Georgia Power Company ("Georgia Power" or "GPC") to develop or procure additional capacity resources so that it can continue to provide reliable electric service to its customers. Therefore, Southern Company Services ("SCS") and Georgia Power (collectively, the "Company") evaluated numerous resources that can provide the capacity necessary to meet its customers' energy needs during this period of extraordinary economic growth in Georgia. In accordance with the Order Adopting Stipulated Agreement issued by the Georgia Public Service Commission (the "Commission") approving the stipulation in Georgia Power's 2023 IRP Update Final Order in Docket No. 55378, the Company has identified 500 megawatts ("MW") of Battery Energy Storage Systems ("BESS") to meet customer needs in the winter of 2026/2027 and beyond. Consistent with the analysis provided to the PSC in the 2023 IRP Update, Georgia Power's Application for the Certification of the Robins, Moody, Hammond, and McGrau Ford Phase II BESS ("Application") includes updated economics that support the Company's Application.

Analysis Overview

In the 2023 IRP Update Economic Analysis, the Company compared the costs and benefits of various resource options to determine the least-cost solutions for meeting its capacity needs. This comprehensive evaluation considered a range of fuel prices and carbon price paths, resulting in five distinct planning scenarios. Utilizing the Aurora model, the Company quantified the production cost savings (commonly referred to as fuel savings). The economic evaluation incorporated the costs of new BESS resources, including in-service capital costs, maintenance capital costs, O&M costs, and other incremental costs to customers. The Inflation Reduction Act ("IRA") benefit of the Investment Tax Credits ("ITC") for BESS was also factored into the analysis. Additionally, the renewable integration benefit was assumed as a benefit for the BESS resources. The cost of the necessary transmission system upgrades was included. The analysis preserved the period assumed in the 2023 IRP Update economic analysis, which was sufficient for evaluating resources with varying unit lives and term lengths using the term equalization method. Therefore, these updated economic evaluations are consistent with the information provided in the 2023 IRP Update. For additional information, please review the 2023 IRP Update Economic analysis in Docket No. 55378.

Summary of Study Results

The following tables represent the net present value ("NPV") of the net costs associated with each resource that was evaluated. The results are calculated by comparing the cost of each resource net of its benefits. The NPV is then divided by the capacity contribution of each resource to the Company's target reserve margins. This provides a $/kW result for comparison purposes. The results across each scenario are averaged and ranked to establish a relative ranking of each resource.

Ranking and Summary of Results (2024 NPV $/kW)

Rank	Project	LG0	MG0	HG0	MG20	MG50	Average
1	McGrau Ford Phase II BESS	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2	Robins BESS	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
3	Hammond BESS	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
4	Moody BESS	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Results for MG0 (2024 NPV $/kW)

2024 NPV ($/kW)	Robins BESS	Moody BESS	McGrau Ford Phase II BESS	Hammond BESS
Winter Capacity Equivalence	115	44.5	265	57.5
Assumed Life (years)	20	20	20	20
Capacity Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Accounting Lease	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Additional Sum	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
In-service Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Environmental	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Maintenance Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Fixed O&M	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
FT	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Revenue Requirement	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Term Equalization	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
System Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Energy Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Renewable Integration Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total Benefits	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Net Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Results for MG20 (2024 NPV $/kW)

2024 NPV ($/kW)	Robins BESS	Moody BESS	McGrau Ford Phase II BESS	Hammond BESS
Winter Capacity Equivalence	115	44.5	265	57.5
Assumed Life (years)	20	20	20	20
Capacity Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Accounting Lease	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Additional Sum	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
In-service Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Environmental	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Maintenance Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Fixed O&M	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
FT	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Revenue Requirement	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Term Equalization	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
System Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Energy Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Renewable Integration Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total Benefits	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Net Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Results for MG50 (2024 NPV $/kW)

2024 NPV ($/kW)	Robins BESS	Moody BESS	McGrau Ford Phase II BESS	Hammond BESS
Winter Capacity Equivalence	115	44.5	265	57.5
Assumed Life (years)	20	20	20	20
Capacity Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Accounting Lease	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Additional Sum	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
In-service Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Environmental	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Maintenance Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Fixed O&M	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
FT	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Revenue Requirement	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Term Equalization	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
System Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Energy Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Renewable Integration Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total Benefits	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Net Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Results for LG0 (2024 NPV $/kW)

2024 NPV ($/kW)	Robins BESS	Moody BESS	McGrau Ford Phase II BESS	Hammond BESS
Winter Capacity Equivalence	115	44.5	265	57.5
Assumed Life (years)	20	20	20	20
Capacity Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Accounting Lease	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Additional Sum	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
In-service Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Environmental	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Maintenance Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Fixed O&M	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
FT	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Revenue Requirement	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Term Equalization	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
System Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Energy Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Renewable Integration Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total Benefits	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Net Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Results for HG0 (2024 NPV $/kW)

2024 NPV ($/kW)	Robins BESS	Moody BESS	McGrau Ford Phase II BESS	Hammond BESS
Winter Capacity Equivalence	115	44.5	265	57.5
Assumed Life (years)	20	20	20	20
Capacity Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Accounting Lease	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Additional Sum	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
In-service Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Environmental	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Maintenance Capital	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Fixed O&M	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
FT	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Revenue Requirement	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Transmission	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Term Equalization	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
System Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Energy Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Renewable Integration Benefit	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total Benefits	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Net Costs	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Robins BESS

Scenario	MG0 Capability_ MWh	Generation_ MWh	Startups	Total_Hours_Run	Output_MWH	EFOR	Round Trip Efficiency
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Moody BESS

Scenario MG0

	Capability_MWh	Generation_MWh	Startups	Total_Hours_Run	Output_MWH	EFOR	Round Trip Efficiency
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

Hammond BESS

Scenario MG0

	Capability_MWh	Generation_MWh	Startups	Total_Hours_Run	Output_MWH	EFOR	Round Trip Efficiency
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

McGrau Ford Phase II BESS

Scenario MG0

	Capability_MWh	Generation_ MWh	Startups	Total_Hours_ Run	Output_MWH	EFOR	Round Trip Efficiency
2027	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2028	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2029	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2030	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2031	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2032	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2033	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2034	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2035	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2036	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2037	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2038	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2039	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2040	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2041	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2042	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2043	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2044	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2045	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
2046	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**

PUBLIC DISCLOSURE

Comparison of Lithium-ion Energy Storage Projects

Project	**Robins BESS***	**Moody BESS***	**Hammond BESS***	**McGrau Ford Phase II***	**American Pharaoh BESS (ref 1,2)***	**Trenton BESS (ref 3,4,5)****	**Nova Scotia Power BESS (ref 6,7)***
Plant Capacity MW	128	49.5	57.5	265	300	220	150
Duration (hours)	4	4	4	4	4	4	4
Estimated Completion Cost (k$)****	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	$450,000	$460,000	$258,000***
Estimated Project Cost ($/kW)	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**	$1,500	$2,091	$1,720
Location	Warner Robins, Georgia	Valdosta, Georgia	Rome, Georgia	Ball Ground, Georgia	Milwaukee, Wisconsin	Trenton, Michigan	Nova Scotia, Canada
Site	Existing	Existing	Existing	New Site	Existing	Existing	Existing
Owner	Georgia Power	Georgia Power	Georgia Power	Georgia Power	Black Mtn Energy Storage	DTE Energy	Nova Scotia Power
EPC Contractor	Burns and McDonnell	Crowder	Crowder	Burns and McDonnell	N/A	Motor City Electric Co	DNV Energy Systems Canada Inc.
Battery Type	LFP	LFP	LFP	LFP	LFP	LFP	LFP
Technology	Telsa	Telsa	Telsa	Telsa	BYD MC Cube Generation 1	Powin LLC	e-Storage, a brand by Canadian Solar, Inc
COD	2026	2026	2026	2026	2028	2026	2026

*Construction has not begun
**Construction began
***Converted from CAD to USD
**** Value excludes AFUDC and Ad Valorem

LFP- lithium iron phosphate

References:

1) https://www.msn.com/en-us/money/companies/texas-energy-company-proposes-states-largest-battery-storage-system-on-milwaukees-northwest-side/ar-AA1hiBe8#:~:text=The%20energy%20stored%20at%20the%20American%20Pharoah%20BESS,buy%20and%20sell%20power%20on%20a%20daily%20basis.
2) https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=491555
3) https://probidenergy.com/2024/07/10/powin-to-supply-880mwh-bess-to-dtes-michigan-coal-plant-site-project/
4) https://ir.dteenergy.com/news/press-release-details/2024/DTE-Energy-to-build-regions-largest-battery-energy-storage-center----at-site-of-retired-Trenton-Channel-coal-plant/default.aspx
5) DTE Energy Company - Motor City Electric Co. makes clean energy commitment with DTE Energy's MIGreenPower program
6) https://sustainablebiz.ca/e-storage-to-develop-150-mw-of-energy-storage-in-nova-scotia
7) NSUARB Board Decision - Nova Scotia Power Incorporated (M11539).pdf

This file has been redacted in its entirety.

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Georgia Power Company's 2023 Integrated Resource Plan Update
Certification Application for Robins, Moody, Hammond, and McGrau Ford Phase II BESS
Attachment F - Transmission Analysis for Hammond & McGrau Ford Phase II BESS
Docket No. 55378

I. Executive Summary

The Transmission Analysis supports the Company's request for approval of the transmission improvements necessary to accommodate the projects identified to fulfill the remaining balance of the 500 megawatts ("MW") of company-owned battery energy storage system ("BESS") resources approved in the 2023 Integrated Resource Plan ("IRP") Update Final Order. This filing includes the resources shown in Table 1 below.

Table 1: Generation Portfolio

Resource	Description
McGrau Ford Phase II BESS – 4 hr.	265 MW
Hammond BESS – 4 hr.	57.5 MW

The results of the analysis confirm the transmission improvements needed for the resources seeking certification in this application. The McGrau Ford Phase II BESS will be designated at 265 MW and will require transmission improvements, totaling $14,350,000. The Hammond BESS will be designated at the full amount and can be accommodated without any transmission projects.

II. Overall Analysis

As noted in the Executive Summary, the Transmission Analysis evaluated the portfolio of generation resources shown in Table 1 and confirmed the selection of these projects to fulfill the remaining balance of the 500 MW of company-owned BESS approved in the 2023 IRP Update Final Order. As mentioned in the executive summary, the McGrau Ford Phase II BESS requires transmission improvements, and the Hammond BESS can be accommodated without any transmission projects.

The Transmission Analysis noted a total incremental cost of $14,350,000 for these two BESS projects. Table 2 below provides the list of transmission projects attributable to the McGrau Ford Phase II BESS.

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Certification Application for Robins, Moody, Hammond, and McGrau Ford Phase II BESS
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Docket No. 55378

Table 2: McGrau Ford Phase II BESS Attributable Transmission Projects

Project	Planning Grade Estimate	Lead – Time (months)	Need Date	2024 TYP Need Date
REDACTED	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
REDACTED	**REDACTED**	**REDACTED**	**REDACTED**	**REDACTED**
Total =	**$14,350,000**			

III. Study Assumptions

- Load Flow Cases: Series 2024, Version 1 Base Cases
- Study years: 2027 – 2034
- Case Seasons: Summer Peak (S), Off-Peak (O), Daylight Shoulder (D), Dusk Shoulder (H)
- Load Levels:
    - Base Load Level
- Unit Off/Area Max Scenarios:

GPC Key Unit Out Scenarios:		GPC Area Max Scenarios:	
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**	• **REDACTED**	• **REDACTED**
• **REDACTED**	• **REDACTED**		
• **REDACTED**	• **REDACTED**		
• **REDACTED**	• **REDACTED**		
• **REDACTED**	• **REDACTED**		

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IV. Trade Secret Files

The table below identifies and describes the Trade Secret files developed in support of the Transmission Filing. These files are redacted in their entirety for the Public Disclosure version of the Transmission Filing.

Main Folder	Subfolder	Description
Transmission Load Flow Cases	Base Scenario Cases	2024 Version 1 load flow base cases with generation portfolio, prior queued items, and base committed loads.
	McGrau Ford Cases	Base cases with the addition of McGrau Ford Battery (265 MW 4-hr BESS)
	McGrau Ford + Hammond Cases	Base cases with the addition of McGrau Ford Battery (265 MW 4-hr BESS) and Hammond (57.5 MW 4-hr BESS)
Case Modification Files	Prior Queued Table	Contains all prior queued items as of 02/06/2024 added to version 1 load flow base cases.
	Load and Project Scripts	Contains all scripts used to modify 2024 version 1 load flow base cases.
	Sub, Mon, Con Files	Contains all definition files used in Unit Off and no unit off scenarios.
Load Flow Results Table	Overall Results Table	Contains worst loading results comparison to 2024 Ten Year Plan v1 cases.

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This file has been redacted in its entirety.

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CERTIFICATE OF SERVICE

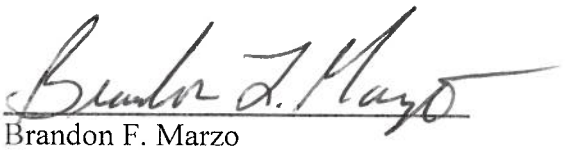
I hereby certify that I have this day served a copy of the within and foregoing GEORGIA POWER COMPANY'S APPLICATION FOR CERTIFICATION OF ROBINS, MOODY, HAMMOND, AND MCGRAU FORD PHASE II BATTERY ENERGY STORAGE SYSTEMS IN DOCKET NO. 55378 upon all parties listed below via electronic service or by hand delivery and addressed as follows:

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This 16th day of August 2024.



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