Technical Information Supporting the Proposal to Develop 178 MW of Battery Energy Storage Systems at Robins and Moody Air Force Bases

# Summary

Georgia Power Company (“Georgia Power” or the “Company”) is requesting authority to develop, own, and operate up to 1,000 MW of Battery Energy Storage Systems (“BESS”) in its 2023 Integrated Resource Plan (“IRP”) Update. Approximately 178 MW of BESS resources are proposed to be added to existing Company-owned solar facilities at Robins and Moody Air Force Bases located in Houston and Lowndes Counties, respectively. By utilizing charging from the existing solar resources and leveraging existing interconnection facilities, the new BESS resources could achieve commercial operation by November 2026 and meet capacity needs beginning in the winter of 2026/2027. This report provides additional technical information to support the Company’s proposal to develop these BESS resources at existing Company-owned solar sites. If approved by the Georgia Public Service Commission (“Commission”), the Company will return to the Commission after executing a Battery and Equipment Supply Agreement (“BESA”) and an Engineering, Procurement, and Construction (“EPC”) agreement and will request certification of these BESS resources at that time.

# Technology

The Company proposes to add approximately 178 MW of 4-hour duration lithium iron phosphate (“LFP”) BESS to existing Company-owned solar facilities – 128 MW at the Robins Air Force Base solar facility and 49.5 MW at the Moody Air Force Base solar facility. To facilitate quick deployment, the proposed BESS resources will utilize existing solar interconnections and will be charged primarily by the existing solar resources. The BESS will, however, maintain flexibility to grid-charge if deliverability constraints are not present on the transmission system.

The BESS projects will incorporate LFP battery cell technology and power conversion systems provided by reputable manufacturers. The Company is currently engaged with multiple suppliers to manage their committed volume and lead times for these projects and other contracted projects with similar construction timelines. These projects will leverage current relationships with top market suppliers to procure timely and reliable BESS equipment. The Company has focused on developing relationships with trusted suppliers that understand and are able to stand behind construction and operational guarantees to ensure successful project deployment. Figure 1 below provides additional project details and estimated performance metrics for the proposed BESS resources.

Figure 1 - Details & Estimated Performance Metrics for Robins & Moody BESS

|  |  |  |
| --- | --- | --- |
|  | Robins | Moody |
| Location | Warner Robins, GA | Valdosta, GA |
| Commercial Operation Date | November 2026 | November 2026 |
| Battery Chemistry | LFP | LFP |
| Capacity (MW) | 128 | 49.5 |
| Duration (hours) | 4 | 4 |
| Energy Capacity (MWh) | 512 | 198 |
| Asset Life (years) | 20 | 20 |
| Round-Trip Efficiency (%) | 85 | 85 |

# Schedule

Figure 2 summarizes the project schedule, including estimated start dates for major milestones necessary to achieve November 2026 Commercial Operation Dates (“COD”). Estimated milestone dates are subject to change and will be updated through the project development process. Due to similar timelines, the schedule below is applicable to both Robins and Moody BESS.

After filing the 2023 IRP Update, the Company will begin selecting vendors and negotiating the BESA and the EPC agreement. The scope of the BESA will encompass the batteries and most major equipment. The scope of the EPC agreement will be more focused on engineering, construction, and procurement of equipment not covered by the BESA. Execution for all major contracts is planned for completion by the third quarter of 2024. As contract negotiations are ongoing, the Company will begin identification and procurement of long-lead items to manage the critical path of the projects. BESS construction activities are set to begin by the fourth quarter of 2025 with COD to occur by November 2026 to support meeting capacity needs for the winter of 2026/2027. The 12-month construction window includes civil, electrical, and mechanical construction and delivery, installation, testing, and commissioning of all equipment onsite.

Figure 2 - Estimated Project Schedule for Robins & Moody BESS

**REDACTED**

# Estimated Cost

A summary of preliminary cost estimates for the Robins and Moody BESS resources is provided in Figure 3. Costs are subject to change pending execution of the BESA and the EPC agreement. Economic analyses for these resources are found in the Economic Analysis of Capacity Resources document in the Technical Appendix. The economic analysis and associated workpapers contain information on the Company’s financing cost, assumed spending curves, plant operating costs, and other information impacting the revenue requirement for the proposed BESS resources.

Figure 3 - Estimated Costs for Robins & Moody BESS

|  |  |  |
| --- | --- | --- |
|  | Robins | Moody |
| Overnight Costs (millions of dollars) | **REDACTED** | **REDACTED** |
| In-Service Capital (millions of dollars) | **REDACTED** | **REDACTED** |

## Inflation Reduction Act

On August 16, 2022, President Biden signed Public Law 117-369, 136 Stat. 1818, commonly known as the Inflation Reduction Act (“IRA”) of 2022, into law. The Inflation Reduction Act’s incentives for energy storage projects in the United States took effect in January 2023. The passing of this law allows for standalone energy storage projects to qualify for investment tax credits (“ITCs”). Prior to the passing of the IRA, standalone energy storage projects only qualified for ITCs if exclusively charged from a solar facility.

Energy storage projects that commence construction after January 1, 2023, will receive a 6% ITC. If a project satisfies the prevailing wage and apprenticeship (“PWA”) requirements, it receives a bonus credit of 24% and will qualify for the full 30% ITC. For the proposed Robins and Moody BESS resources, the base assumption is that these projects will meet the PWA requirements and qualify for the 30% ITC benefit.

# Conclusion

The proposed Robins and Moody BESS projects utilize existing land, equipment, and agreements to streamline development and commercial operation of reliable, dispatchable resources. These assets will meet capacity needs beginning in winter of 2026/2027 and will benefit Georgia Power’s customers for many years to come. If approved by the Commission, the Company will return to the Commission after executing the BESA and the EPC agreement and will request certification of these BESS resources.