Georgia Power

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Atlanta, GA 30308-3374

March 16, 2026

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

RE: Georgia Power Company Semi-Annual Nuclear Uprate Report; Docket No. 56002

Dear Ms. Tanner:

In accordance with the *Order Adopting Stipulation* issued by the Georgia Public Service Commission (the "Commission") in Docket Nos. 56002 and 56003 on July 31, 2025, Georgia Power Company hereby files its Semi-Annual Nuclear Uprate Report with the status of engineering and finalizing of contracts for the incremental capacity uprates at Plant Vogtle Units 1-2 and Plant Hatch Units 1-2.

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

Sincerely,

/s/ Jeremiah Haswell

Jeremiah Haswell
Director, Regulatory Affairs
Georgia Power Company
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Georgia Power Company's
Semi-Annual Nuclear Uprate Report

Reporting Period End Date: December 31, 2025



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Project Background

This Semi-Annual Nuclear Uprate Report ("Report") provides the status of the Extended Power Uprates ("EPUs") at Plant Vogtle Units 1-2 ("Plant Vogtle") and Plant Hatch Units 1-2 ("Plant Hatch"). This Report is filed pursuant to the Georgia Public Service Commission's (the "Commission") Order Adopting Stipulation, dated July 31, 2025, (the "Order") in Georgia Power Company's ("Georgia Power" or the "Company") 2025 Integrated Resource Plan ("2025 IRP"), Docket No. 56002.

EPU is a validated, proven process that has been implemented previously at Plant Hatch and Plant Vogtle, and by other nuclear electric utility operators, that delivers incremental capacity and energy gains. The objective of the EPU process is to increase thermal power (where the reactor produces more heat) to increase steam pressure and flow to the turbine generators, thus producing higher electrical output from the units without using additional fuel. The process includes an extensive analysis of plant systems and components to verify the capability of the EPUs and identify the modifications needed to support the power upgrade at each facility.

The EPU projects will modify key components of the units, including turbines, generators, large pumps and motors, and cooling systems, to allow the units to safely and reliably produce more electricity. Many of the modifications will replace existing components that are contemplated for future end-of-life replacement to enhance performance, and some will create incremental capacity gains from the increased thermal output of the EPU implementation. The Company identifies components as end-of-life when the component is expected to be replaced within the expected operating life of the plant. The EPU components include:

1. **Turbine Upgrade:** The high-pressure ("HP") turbine will be upgraded to handle the increased steam flow and pressure. HP turbines are the first to receive steam and experience the highest temperatures and pressures.
2. **Steam Cycle Upgrades:**
    a. **Feedwater Heaters:** (Hatch only) Preheat water entering the reactor, improving efficiency of the water heating process in the reactor.
    b. **Moisture Separator Reheaters (MSRs):** (Vogtle 1-2 only) Remove water droplets from the steam and reheat the steam before it enters the Low-pressure turbines, thus protecting the turbines and improving efficiency.
    c. **Steam Dryers:** (Hatch only) Remove moisture from the steam, like MSRs. Upgrading steam dryers ensures high steam quality and improves turbine efficiency and reliability under increased steam flow conditions.
    d. **Condensate Pumps and Motors:** (Hatch only) Move condensed steam from the condenser to the feedwater system. Upgrading will improve efficiency and ensure proper flows and pressures for the feedwater system.

e. **Cooling Tower / Circulating Water:** Provides an energy efficient way of removing heat from water that circulates through the condenser. Adding cooling towers, replacing fill material, and/or upgrading circulating water pumps will accommodate additional steam produced after the EPUs.

3. **Generator Upgrade:** The generator will be upgraded to handle the increased power output. Upgrades to the exciter and/or rotor are needed for increased generation.
4. **Maximum Extended Load Line Limit Analysis Plus (MELLLA+):** (Hatch Only) Expands the power/flow map to provide more operating flexibility for uprated plants to achieve full core thermal power.

Key Updates (July 1, 2025 – December 31, 2025)

General Progress Update

Schedule development for EPU project implementation made significant progress through the year. This progress has developed further confidence and reduced risk in the ability to complete the engineering analysis, licensing, and implementation periods as designed.

Plant Vogtle 1-2

1. Engineering Status

Westinghouse Engineering ("Westinghouse") analysis Step 1, Feasibility Engineering Analysis, was initiated April 2024 and completed October 2024. Step 2 of 3, Preliminary Engineering Study of the incremental capacity uprate, commenced with Westinghouse in November 2024 and is on track for completion in March 2026. This phase further refines the project scope that supports the uprate. Preparation of the License Amendment Request ("LAR") for the fuel transition is targeted for submittal to the Nuclear Regulatory Commission ("NRC") in the third quarter of 2027, with the uprate LAR planned for submittal to the NRC during the first quarter of 2029. Contract status details are included in Attachment 1.

2. On-going Vendor Equipment Testing

As of December 31, 2025, Southern Nuclear Company ("SNC") continues working with its vendors to perform factory acceptance testing to evaluate the upgraded rating of the step-up transformers associated with the uprate project. Testing is scheduled to conclude by June 2026.

3. Updated Incremental Capacity Gains

The vendor has provided updated efficiency projections that now range from 23-24 MW per unit (GPC 46.8% ownership), representing a 13.0% decrease from what was initially projected in the Company's 2025 Integrated Resource Plan. During the engineering analysis, an issue was identified with increasing the temperature of the reactor coolant system that would present a

long-term vulnerability to the Steam Generators. Accordingly, it was determined to target a lower temperature increase to mitigate that risk. The lower temperature increase target results in lower total MW gains per unit.

Plant Hatch 1-2

1. Engineering Status

Engineering analysis for the incremental capacity uprates began with GE Vernova Hitachi Nuclear Energy in August 2025 and remains on schedule for completion in October 2027. This phase confirms the scope and prepares the documentation for the LAR. Currently, the LAR is scheduled for submittal to the NRC in the third quarter of 2027. Contract status details are provided in Attachment 2.

2. Updated Efficiency Projections

Current projected efficiency gains from the upgraded HP turbines are slightly below earlier estimates and now range from 23-26 MW per unit (GPC 50.1% ownership), representing a 15.7% decrease from what was initially projected in the Company's 2025 Integrated Resource Plan. Heat balance analyses to validate these assumptions are underway and scheduled for completion in March 2026.

3. Necessary Component Replacements

As a part of the engineering development of the Hatch 1-2 EPU project, SNC and vendor analysis of the HP Turbine and 4th Stage Feedwater Heaters identified that the existing components are degraded beyond Company management margin expectations and require replacement within the next several years. Accordingly, the Company has made the decision to move forward with procuring these assets for implementation during upcoming refueling outages.

Attachment 1 – Vogtle 1-2 Contract Status

Vendor	Project	Scope	Issue Date
Enercon	Heater Drain Pump Motors	Design	10/29/2025
	Uprate Engineering Analysis	MVAR evaluation	12/20/2024
GE Steam	Uprate Engineering Analysis	Feasibility assessment	5/29/2024
	Uprate Engineering Analysis	Full detailed uprate assessment	9/24/2024
Preferred Licensing Services	Uprate Engineering Analysis	Licensing consulting	8/29/2025
Sargent & Lundy	Moisture Separator Reheaters	Design	6/12/2025
Siemens	Generator Step Up Cooling	Evaluation for transformer upgrade	1/10/2025
	Generator Step Up Cooling	Install cooling to transformer	4/16/2025
TEI	Moisture Separator Reheaters	Procurement of MSRs	6/30/2025
Westinghouse	Uprate Engineering Analysis	Preliminary engineering	12/20/2024
	Uprate Engineering Analysis	Uprate engineering study	4/11/2024
Wheat Consulting	Uprate Engineering Analysis	Licensing consulting	9/2/2025

Additional Details:

Attachment 2 – Hatch 1-2 Contract Status

Vendor	Project	Scope	Issue Date
Energy Solutions	**Steam Dryer**[1]	Disposal	3/20/2025
Framatome	**U1 Feed Water Heaters**	Laser scanning	7/8/2025
GE Hitachi	**Steam Dryer**[2]	Replacement activities	3/12/2025
	Uprate Engineering Analysis	Analysis for plant uprate	7/2/2025
GE Steam Power	**Exciter Upgrade EX2100**	Additional engineering for uprated conditions	12/11/2024
	Generator Rotor[3]	Procurement of U2 generator rotor	9/16/2024
	High Pressure Turbine[4]	Procurement of HP turbines	10/3/2025
	Reactor Feed Pump Turbine[5]	Procurement in support of feed pump turbines	3/27/2025
	Uprate Engineering Analysis	Full detailed uprate assessment	9/24/2024
Barnhart	**4th Stage Feed Water Heaters**	Rigging & Lifting plans	9/12/2025
Enercon	**4th Stage Feed Water Heaters**	Design & Scoping	5/8/2025
	Condensate Pumps & Motors and Condensate Booster Pumps & Motors	Evaluation upsizing	4/15/2025
	Uprate Engineering Analysis	Miscellaneous Engineering support activities	9/2/2025
Hydroaire Service Inc	**Condensate Pumps & Motors**[6]	Procurement of condensate pumps & motors	6/30/2025
	Condensate Pumps & Motors and Condensate Booster Pumps & Motors	Design analysis	5/29/2025
ILD	**Steam Jet Air Ejector**	Stall resolution engineering analysis	9/20/2024
Excel Services	**Uprate Engineering Analysis**	Licensing consulting	10/9/2025
Preferred Licensing Services	**Uprate Engineering Analysis**	Licensing consulting	8/29/2025
Wheat Consulting	**Uprate Engineering Analysis**	Licensing consulting	9/2/2025
Pump Flo Bear Consulting	**Condensate Pumps & Motors and Condensate Booster Pumps & Motors**	Engineering Consulting/scope review	4/10/2024

Vendor	Project	Scope	Issue Date
Sargent & Lundy	**Condensate Demineralizer**	Capacity increase	3/14/2025
	Condensate Pumps & Motors and Condensate Booster Pumps & Motors	Design and engineering validation	5/13/2025
	Steam Dryer	Design	6/18/2025
	Uprate Engineering Analysis	Power ascension test plan & Vibration study	11/19/2025
TEI	**4th Stage Feed Water Heaters**[7]	Procurement of FWHs	8/28/2025
	Uprate Engineering Analysis	MSR inspections	11/14/2025

Additional Details:

1) This purchase order is associated with the EPU; however, it is not a capital expenditure because the Steam Dryer is an irradiated component and is subject to regulatory requirements for specialized disposal.
2) A contract was executed on March 12, 2025, to secure manufacturing for this long-lead component to meet the expected implementation timeline provided in the 2025 IRP.
3) A contract was executed on September 16, 2024, to secure forging slot for long lead time component to meet expected implementation timeline provided in the 2025 IRP.
4) A contract was executed on October 3, 2025, to secure forging and factory assembly slots for long lead time components that required replacement following engineering assessment.
5) A contract was executed on March 27, 2025, to secure manufacturing for these components to meet expected implementation timeline provided in the 2025 IRP.
6) A contract was executed on June 30, 2025, to secure manufacturing for these components to meet expected implementation timeline provided in the 2025 IRP.
7) A contract was executed on August 28, 2025, to secure manufacturing for these components that required replacement following engineering assessment.