

News Release Archive

Georgia Power completes Condenser Vacuum Testing on Vogtle Unit 3

Verifies Unit 3 turbine system is ready for last major test, Hot Functional Testing, ahead of fuel load

ATLANTA, Dec. 14, 2020 /PRNewswire/ -- Georgia Power today announced the completion of the pre-operational condenser vacuum test of the Vogtle Unit 3 turbine system. The milestone marks another step for the Vogtle 3 & 4 nuclear expansion project towards operations and providing customers with a clean, carbon-free energy source for the next 60 to 80 years.

The test was conducted with the main turbine on turning gear and by operating supporting systems to establish the condenser vacuum, which is necessary to demonstrate the steam supply and water-cooling systems operate together and are ready to support hot functional testing and initial fuel load in the reactor.

The condenser is part of the plant's turbine system, separate from the nuclear reactor, that liquifies steam to be reused after it passes through the high- and low-pressure turbines to power a generator and produce electricity. The condenser vacuum test required multiple systems, including circulating water, condensate, auxiliary steam and condenser air removal, to be operated in an integrated manner after having been successfully tested individually.

In preparation for this milestone, the turbine was previously tested and rotated on its turning gear to verify it was assembled with quality and as designed. The main turbine system consists of one high-pressure turbine and three low-pressure turbines.

Once operational, the turbine will rotate at 1,800 revolutions per minute, propelled by steam produced by the unit's two steam generators using heat transferred from the nuclear reactor. The turbine blades turn the generator rotor to produce electricity.



2020 Milestones Achieved

- **Unit 4 Shield Building Roof Placement** - The two-million-pound roof of the Unit 4 shield building has been set into place. With this placement, there is now one last major crane lift remaining for Unit 4, the CB-20 module, which is part of the AP1000 reactor's advanced passive safety system.
- **Unit 3 Nuclear Fuel Receipt** – With the receipt of the first nuclear fuel assemblies in December, the site is preparing for the last major test remaining for Unit 3, hot functional testing, ahead of initial fuel load.
- **Completion of Unit 3 Cold Hydro Testing** – Confirmed the reactor's coolant system functions as designed and verified the welds, joints, pipes and other components of the coolant system and associated high-pressure systems do not leak when under pressure.
- **Emergency Preparedness Drill** – Vogtle 3 & 4 completed a required emergency preparedness exercise for a simulated emergency event for Vogtle Unit 3. Teams participated in the simulation and demonstrated their ability to effectively and efficiently respond and protect the health and safety of the public.
- **Vogtle 3 & 4 Operators Receive Licenses** – The Nuclear Regulatory Commission (NRC) issued the first operator licenses to 62 Reactor and Senior Reactor Operators for Vogtle 3 & 4. To receive a nuclear operator license from the NRC, license holders must demonstrate they possess the required knowledge, skills and abilities to safely and effectively operate the plant.
- **Completion of Closed Vessel Testing** – The completion of this milestone prepared Unit 3 for cold hydro testing. Closed vessel testing verified the pipes and valves in the Unit 3 reactor coolant system were installed as designed and helped ensure safety systems function properly.
- **Completion of the Structural Integrity Test and Integrated Leak Rate Test** – Both tests were completed in succession for Unit 3 and demonstrated the containment vessel meets construction quality and design requirements.

- **Placement of the final module for Unit 3** – The water tank that sits atop the containment vessel and shield building roof, known as module CB-20, is a major part of the AP1000 reactor's advanced safety system and will hold approximately 750,000 gallons of water ready to flow down in the unlikely event of an emergency to help cool the reactor.
- **Placement of the Unit 3 integrated head package (IHP) atop the reactor vessel** – Standing 48 feet tall, weighing 475,000 pounds and containing more than three miles of electrical cables, the IHP will eventually be used by highly-trained nuclear operators to monitor and control the nuclear reaction that will occur inside the Unit 3 reactor vessel.
- **Completion of Open Vessel Testing for Unit 3** – This successfully demonstrated how water flows from the key safety systems into the reactor vessel ensuring the paths are not blocked or constricted, and confirmed the pumps, motors, valves, pipes and other components of the systems function as designed.
- **Placement of the polar crane and containment vessel top for Unit 4** – This signified that all major lifts inside the containment vessels for both units are complete.

With more than 7,000 workers on site, and more than 800 permanent jobs available once the units begin operating, Vogtle 3 & 4 is currently the largest jobs-producing construction project in the state of Georgia.

Photos Highlight Progress

Follow the progress being made at the site of the nation's first new nuclear units in more than 30 years through the Plant Vogtle 3 & 4 Online Photo Gallery and Georgia Power's YouTube channel.

About Georgia Power

Georgia Power is the largest electric subsidiary of Southern Company (NYSE: SO), America's premier energy company. Value, Reliability, Customer Service and Stewardship are the cornerstones of the company's promise to 2.6 million customers in all but four of Georgia's 159 counties. Committed to delivering clean, safe, reliable and affordable energy at rates below the national average, Georgia Power maintains a diverse, innovative generation mix that includes nuclear, coal and natural gas, as well as renewables such as solar, hydroelectric and wind. Georgia Power focuses on delivering world-class service to its customers every day and the company is recognized by J.D. Power as an industry leader in customer satisfaction. For more information, visit www.GeorgiaPower.com and connect with the company on Facebook ([Facebook.com/GeorgiaPower](https://www.facebook.com/GeorgiaPower)), Twitter ([Twitter.com/GeorgiaPower](https://twitter.com/GeorgiaPower)) and Instagram ([Instagram.com/ga_power](https://www.instagram.com/ga_power)).

Cautionary Note Regarding Forward-Looking Statements

Certain information contained in this release is forward-looking information based on current expectations and plans that involve risks and uncertainties. Forward-looking information includes, among other things, statements concerning the expected schedule for completion of construction and start-up of Plant Vogtle units 3 and 4 and expected job creation and rate impacts as well as carbon emissions reduction goals. Georgia Power cautions that there are certain factors that can cause actual results to differ materially from the forward-looking information that has been provided. The reader is cautioned not to put undue reliance on this forward-looking information, which is not a guarantee of future performance and is subject to a number of uncertainties and other factors, many of which are outside the control of Georgia Power; accordingly, there can be no assurance that such suggested results will be realized. The following factors, in addition to those discussed in Georgia Power's Annual Report on Form 10-K for the year ended December 31, 2019, Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020, June 30, 2020, and September 30, 2020, and subsequent securities filings, could cause actual results to differ materially from management expectations as suggested by such forward-looking information: the potential effects of the continued COVID-19 pandemic, including, but not limited to, extended disruptions to supply chains and further reduced labor availability and productivity, which could have a variety of adverse impacts, including a negative impact on the ability to develop, construct, and operate facilities, including, but not limited to, Plant Vogtle Units 3 and 4; the ability to control costs and avoid cost and schedule overruns during the development, construction, and operation of facilities or other projects, including Plant Vogtle Units 3 and 4, which includes components based on new technology that only within the last few years began initial operation in the global nuclear industry at this scale, and including changes in labor costs, availability and productivity, challenges with management of contractors or vendors, subcontractor performance, adverse weather conditions, shortages, delays, increased costs, or inconsistent quality of equipment, materials, and labor, contractor or supplier delay, delays due to judicial or regulatory

action, nonperformance under construction, operating, or other agreements, operational readiness, including specialized operator training and required site safety programs, engineering or design problems, design and other licensing-based compliance matters, including, for nuclear units, the timely submittal by Southern Nuclear of the Inspections, Tests, Analyses, and Acceptance Criteria documentation for each unit and the related reviews and approvals by the NRC necessary to support NRC authorization to load fuel, challenges with start-up activities, including major equipment failure, or system integration, and/or operational performance; the ability to overcome or mitigate the current challenges at Plant Vogtle Units 3 and 4, including, but not limited to, those related to COVID-19, that could further impact the cost and schedule for the project; legal proceedings and regulatory approvals and actions related to construction projects, such as Plant Vogtle Units 3 and 4, including Public Service Commission approvals and NRC actions; under certain specified circumstances, a decision by holders of more than 10% of the ownership interests of Plant Vogtle Units 3 and 4 not to proceed with construction and the ability of other Vogtle owners to tender a portion of their ownership interests to Georgia Power following certain construction cost increases; the ability to construct facilities in accordance with the requirements of permits and licenses (including satisfaction of NRC requirements), to satisfy any environmental performance standards and the requirements of tax credits and other incentives, and to integrate facilities into the Southern Company system upon completion of construction; the inherent risks involved in operating and constructing nuclear generating facilities; the ability of counterparties of Georgia Power to make payments as and when due and to perform as required; the direct or indirect effect on Georgia Power's business resulting from cyber intrusion or physical attack and the threat of physical attacks; catastrophic events such as fires, earthquakes, explosions, floods, tornadoes, hurricanes and other storms, droughts, pandemic health events or other similar occurrences; and the direct or indirect effects on Georgia Power's business resulting from incidents affecting the U.S. electric grid or operation of generating or storage resources. Georgia Power expressly disclaims any obligation to update any forward-looking information.

SOURCE Georgia Power

For further information: Media Relations, (404) 506-7676 or (800) 282-1696, www.georgiapower.com

<https://southerncompany.mediaroom.com/2020-12-14-Georgia-Power-completes-Condenser-Vacuum-Testing-on-Vogtle-Unit-3>