EXPLAINER: ENVIRONMENT

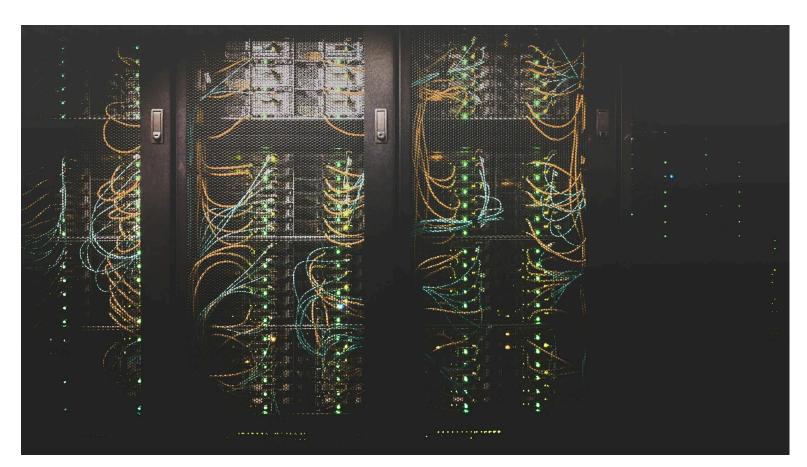
Georgia Power expects electricity demands to triple in next decade

The utility claims data centers are driving the accelerated need, but clean energy experts are skeptical



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A data center server stack Credit: Unsplash

Georgia Power projects that over the next decade the state will be leading the nation's second industrial revolution, led by artificial-intelligence-boosting data centers, which could triple the state's energy consumption.

According to Georgia Power's projections, the company's projected 12,000 megawatts load growth will triple by the mid-2030, which is consistent with the state's upward trending economic prospects the company cites as it requests a significant expansion of its energy capacity.

"The latest data continue to support Georgia Power's expectation for continued and robust economic growth in Georgia and the timing of new large loads," the company's Nov. 18 economic development outlook reads. "The pipeline of committed and potential economic development projects continues to grow."

The Georgia Public Service Commission is scheduled to vote by next 2025 on the company's long-term plans. The elected five-member board regulates Georgia Power and will determine whether new natural gas plants will be built, if more solar power capacity is added, and how much more electricity customers will pay when the company passes along rising costs.

Georgia Power is estimating that about 90 large-sized industrial projects could be built in Georgia before the end of the decade. Georgia Power has received commitments to purchase its electricity from about 70 prospective data center facilities should they be built inside the Peach State.

However, clean energy advocates are among the knowledgeable critics expressing skepticism about Georgia Power's projected list of commitments from large data centers, questioning the accuracy of energy demand forecasts over the next several years and what the company says are actual energy usage levels by new data centers.

Georgia Power is set to outline its proposals to meet projected energy demand in its 2025 integrated resource plan, a three-year operations forecast due to be filed in late January with the Georgia PSC. The filing will kickstart a process of hearings before state regulators and interested parties where expert testimony from Georgia Power and advocates for consumers and environmental protection are typically presented to chart the utility company's energy future.

As of Sept. 30, Georgia Power says the total pipeline of economic development projects expected through the mid-2030s has increased by 12,200 megawatts to 36,500 megawatts, with large-scale facilities accounting for 34,600 megawatts. All 25 of the committed large scale projects are expected to be in service by the end of 2028 or sooner, the utility company's quarterly report states.

"Thirteen of these projects have broken ground, and twelve are pending construction," the report said. "This evidence clearly indicates that these large load customers are materializing and making progress without material delays."

According to the U.S. Department of Energy data, centers consume 10 to 50 times as much electricity as the average commercial building.

A 2024 report from the <u>Barclays Equity Research</u> team estimates that data centers account for 3.5% of U.S. electricity consumption today, and the electricity use of those facilities could be above 5.5% in 2027 and more than 9% by 2035.

Maggie Shober, the research director at the Southern Alliance for Clean Energy, said she has concerns about the level of commitment Georgia Power is securing from the planned new data centers. Companies are committing to use Georgia Power as their electricity provider, but it does not guarantee they will build a data center in the state.

"Although these are scary numbers, I think there's a lot of speculation going on, especially in the data center industry, where people and companies that are interested in sort of flipping sites for data centers are absolutely scrambling to get into this queue. I think that a lot of these will ultimately never show up. I think it's going to be a challenge to figure out which ones and how do we determine that?"

After decades of almost non-existent demand growth for electricity in the U.S., the artificial intelligence revolution is expected to more than double data center electricity needs by 2030 based on current grid capacity, according to the Barclays report.

"Unlike other industries or energy-consuming activities which place fluctuating requirements on the grid depending on the time of day or year that can be managed to maintain overall reliability and capacity, AI operations are an 'always on' demand," Barclays senior research analysts Will Thompson and Betty Jiang wrote in the August report. "Data centres must operate continuously, 24/7/365, to function for users. In effect, AI energy demand can be considered a constant peak that leads to higher overall peak power demand across the grid.

"With the current focus on building data centre capacity that prioritises secure access to power over specific fuel type, meeting rising electricity demand while lowering emissions will likely be a monumental challenge for grid operators," the Barclays report said.

In April, the Georgia Public Service Commission approved Georgia Power's plans to expand its generation capacity by increasing its reliance on fossil fuels and adding more renewable energy by 2025. The company's integrated resource plan will be the next significant development since then.

Georgia Power is projecting the updated plans will save the typical residential customer about \$2.89 on their monthly bills from 2026 to 2028.

"At Georgia Power, our customers are at the center of everything we do, and we are unwavering in our commitment to provide them with clean, safe, reliable and affordable energy," Georgia Power CFO Aaron Abramovitz said in April.

State regulators already approved the company's request for natural gas or oil-burning generators and solar batteries to meet increasing demand from data centers and other large industrial users over the next decade. Regulators were warned by several clean energy groups against allowing Georgia Power to build three fossil fuel burning units at the legacy fossil-fuel facility Plant Yates in Coweta County.

Concerns linger for clean energy advocates like the Southern Environmental Law Center, anxious about what the upcoming request from Georgia Power will mean for the state's energy future. The company has also been given the green light by state regulators to delay the retirement of its coal-burning plants Bowen in Bartow County and Scherer in Monroe County.

If Georgia Power's projected electricity demands fall short, the company would still reap the financial benefits of adding new energy sources, said Jennifer Whitfield, SELC senior attorney.

"If you're over projecting, and you don't actually need to meet those demands, it's not the Georgia Power shareholders who are going to pay for that," Whitfield said. "It's going to be Georgia Power customers.

"That is a particular concern for overbuilding gas plants, because the cost of gas plants is for the fuel, and those costs get passed on directly to customers," Whitfield said. "George Power customers, in particular, have seen a bunch of increases. They've had a rate increase. They've had Plant Vogtle increases. The largest increase they've seen in the last few years is actually from fuel costs."

The Barclays research report found that sustainability appears to be a lower priority for the majority of data center companies.

"Data centre developers are prioritising land with access to untapped power sources, water, workforces and favourable regulation," the report says. "With the current focus on building data centre capacity that prioritises secure access to power over specific fuel type, meeting rising electricity demand while lowering emissions will likely be a monumental challenge for grid operators," the report says.

Whitfield said the commission has some ability to be creative with how it requires Georgia's Power to diversify its sustainable energy portfolio. The company's plans include some positives, she said, such as expanding solar and programs that benefit seniors living on fixed incomes.

"Is this going to be this moment where we decide, as Georgians, who we want to be? What kind of energy future do we want to have?" Whitfield said.

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