UPTIME INTELLIGENCE GIANT DATA CENTER ANALYSIS 2026:

Giant data center power plans reach extreme levels

UII DATA REPORT 194 | JANUARY 2026

SUMMARY

Data from Uptime Intelligence's giant data center analysis indicates that proposed power capacity and investment tied to giant data centers and campuses are at unprecedented levels.

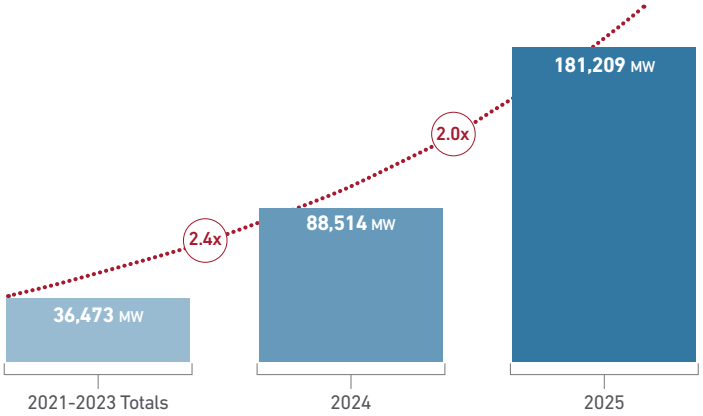
North America represents 80% of all planned power identifed in 2025 proposals. The largest proposals are multi-gigawatt AI campuses, that intend to build and operate their own off-grid energy infrastructure. Others plan to use the grid, plus on-site power generation, but on a smaller scale. (See *Many giant data center projects advance, despite risks.*)

ABOUT THIS DATA

Uptime Intelligence has identified more than 350 publicly announced projects for data center campuses with >100 MW power demand (announced since early 2021) and asseses their current progress against their initial proposals on a continuous basis. (N numbers are provided in the Demographics on the final page of this report.)
Uptime Intelligence expects 50% of >100 MW data center proposals to be built out. Of these, 50% will achieve their projected power capacity, translating into an expectation that 25% of total planned provisioned power identified will be actively utilized.

Proposed >100 MW data centers will consume vast power

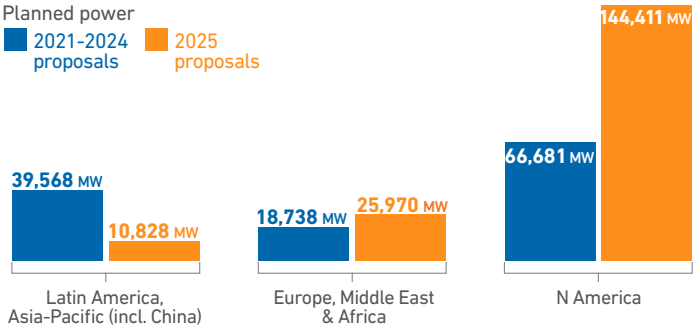
The power demand of giant data centers announced in 2025 has doubled compared with 2024.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

N America is planning the greatest increase in power demand

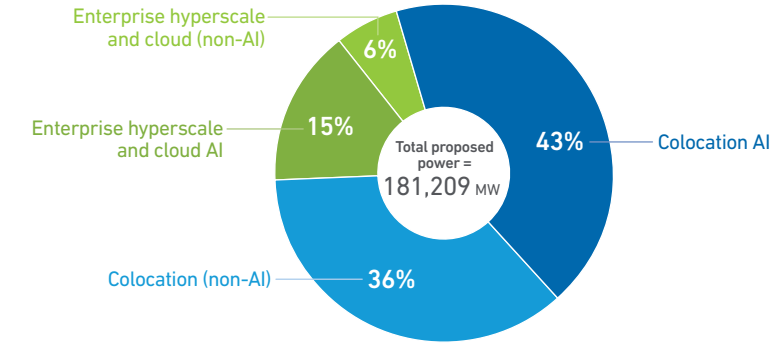
Surging data center power demands, particularly in N America, cannot be supported by power grids already operating under heavy strain (2021-2025).



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

Giant colo facilities proposed in 2025 will consume the most power

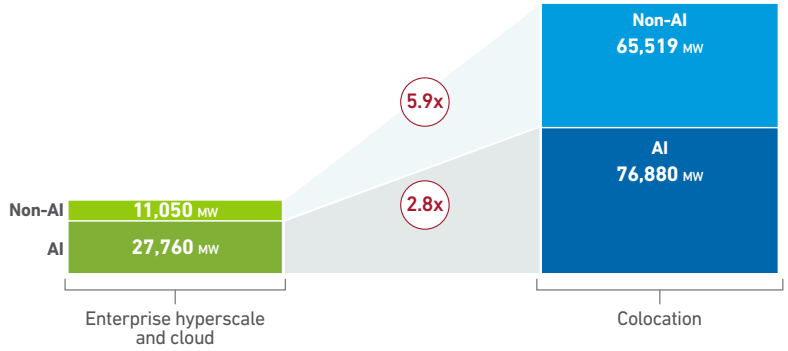
Colo accounts for 80% of the power demand proposed in 2025 and hyperscale and cloud, 20%. Almost 60% of total planned power demand is driven by AI data centers.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

Colocation power plans for AI are three times that of hyperscale and cloud

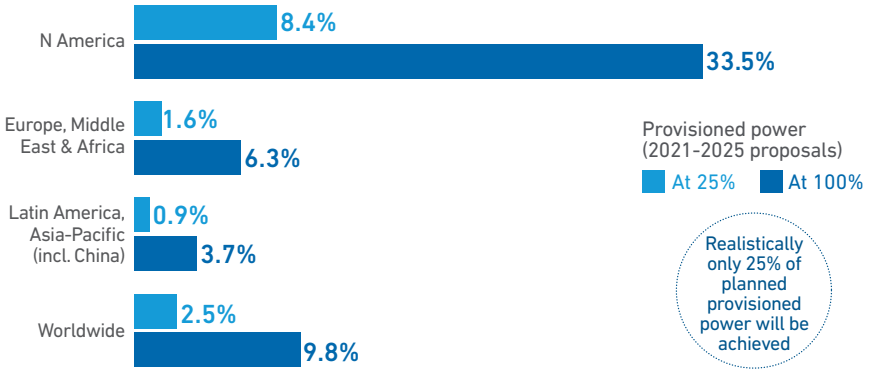
Although hyperscale projects attract the most publicity, new colocation facilities proposed in 2025 (often hosting hyperscale cloud workloads) will consume the most power.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

The share of electricity consumed by giant data centers is rising sharply

If built and fully utilized, planned giant data centers would consume one-third of N America's electricity and account for one-tenth of global electricity demand.

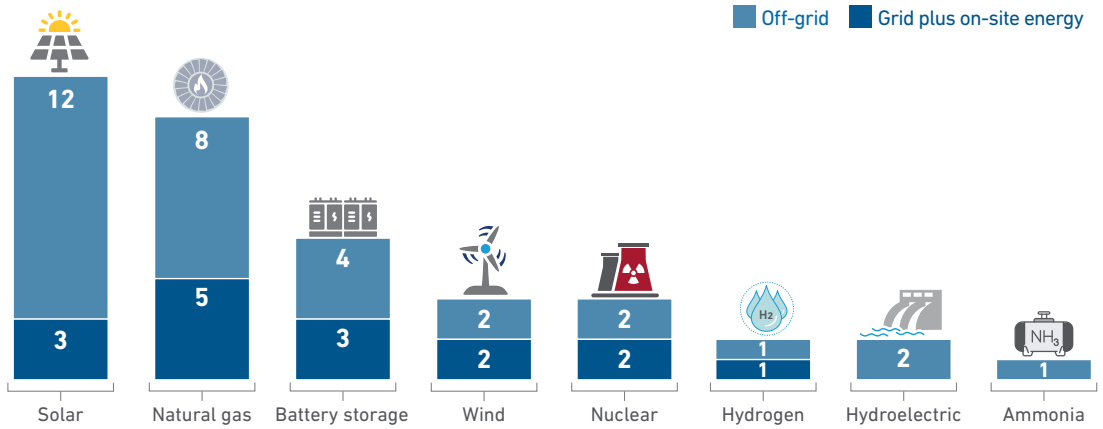


*(*International Energy Agency (IEA) reported worldwide electricity consumption in 2023)*

GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

Natural gas and solar are the preferred choices for off-grid power

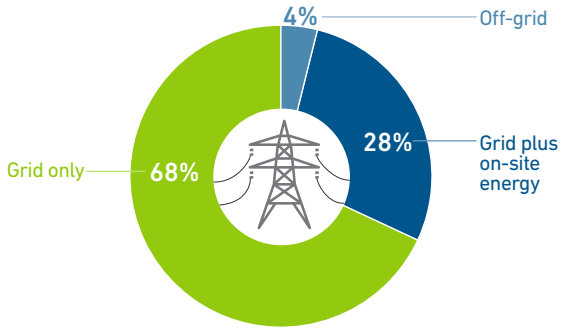
Operators expect to utilize a range of power sources in their 2025 proposals.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

Off-grid power is rising, grid use remains significant

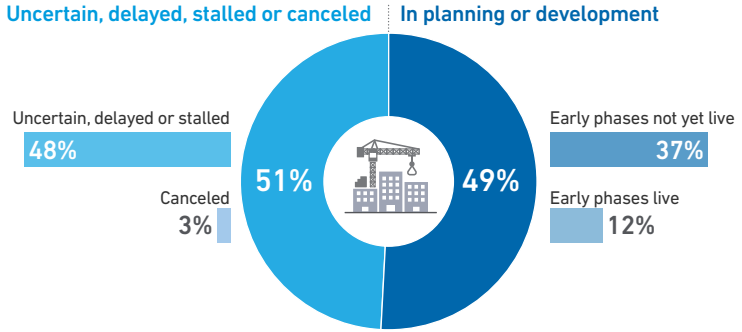
Two-thirds of 2025 proposals will require grid power alone. This will likely restrict expansion.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

More than half 2021-2024 proposals are stalled, delayed or uncertain

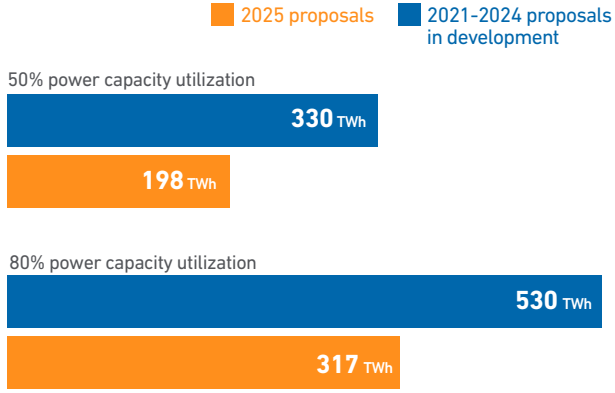
Only half (49%) of the 2021-2024 projects in planning or development are likely to go ahead. Current indications are that 51% of the 2021-2024 proposed projects will either not be built or will be scaled back.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

Giant data center power consumption could increase as much as 850 TWh

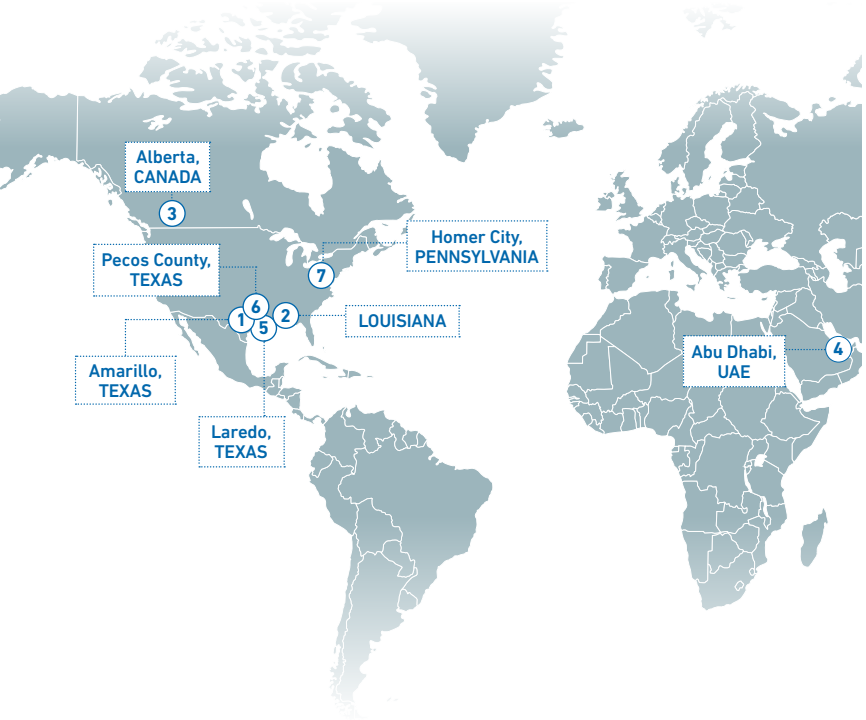
Power capacity utilization is likely to range between 50-80% based on factors such as average PUE, percentage of white space with energized IT and average utilization of the IT infrastructure.



GIANT DATA CENTER ANALYSIS (UPTIME INSTITUTE 2026)

The largest planned data centers intend to use on-site natural gas as primary energy source

The seven largest AI campuses propose 45 GW of on-site off-grid power; six are in N America



Location	Date announced Campus	Owner/Investor	MW announced	Off-grid energy proposed
1. Amarillo, Texas, USA	Mar-25 Advanced Energy and Intelligence Campus	Texas Tech University System and Fermi America	11,000	Nuclear, natural gas, solar, wind
2. Louisiana, USA	Dec-24 Hyperion AI Data Center	Meta, Blue Owl	7,000	Natural gas, solar
3. Alberta, Canada	Dec-24 Wonder Valley AI Data Center	O'Leary Ventures, Greenview Industrial Gateway	7,500	Natural gas
4. Abu Dhabi, UAE	May-25 UAE-US AI Campus	Emirati AI and G42, OpenAI, Oracle, Nvidia, Cisco, SoftBank	5,000	Nuclear, solar, natural gas
5. Laredo, Texas, USA	Mar-25 Data City	Energy Abundance Development Corporation	5,000	Hydrogen, wind, solar, natural gas
6. Pecos County, Texas, USA	Aug-25 GW Ranch project	Pacifico Energy	5,000	Natural gas, battery storage
7. Homer City, Pennsylvania, USA	Jul-25 Homer City Energy Campus	Homer City Redevelopment and Kiewit, GE Vernova	4,500	Natural gas

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Demographics

Regional location 2021-2025 proposals (number of >100 MW proposals)

	2025	2021-2024	2021-25
N America	74	100	174
Europe, Middle East & Africa	36	54	90
Latin America, Asia-Pacific (incl. China)	17	96	113
TOTAL	127	250	377

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About Uptime Institute

Uptime Institute is the Global Digital Infrastructure Authority. With over 4,000 awards issued in over 122 countries around the globe, and over 1,100 currently active projects in 80+ countries, Uptime has helped tens of thousands of companies optimize critical IT assets while managing costs, resources, and efficiency. For over 30 years, the company has established industry-leading benchmarks for data center performance, resilience, sustainability, and efficiency, which provide customers assurance that their digital infrastructure can perform across a wide array of operating conditions at a level consistent with their individual business needs. Uptime's Tier Standard is the IT industry's most trusted and adopted global standard for the design, construction, and operation of data centers. Offerings include the organization's Tier Standard and Certifications, Management & Operations reviews and assessments including SCIRA-FSI financial sector risk assessment, the Sustainability Assessment, and a broad range of additional risk management, performance, availability, and related offerings. Uptime Education training programs have been successfully completed by over 100,000 data center professionals, such as the much-valued ATD (Accredited Tier Designer) and AOS (Accredited Operations Specialist). The Uptime Education curriculum has been expanded by the acquisition of CNet Training Ltd. In 2023.

Uptime Institute is headquartered in New York, NY, with offices in London, Sao Paulo, Dubai, Riyadh, and Singapore, and full-time Uptime professionals based in over thirty-four countries around the world. For more information, visit **www.uptimeinstitute.com**

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