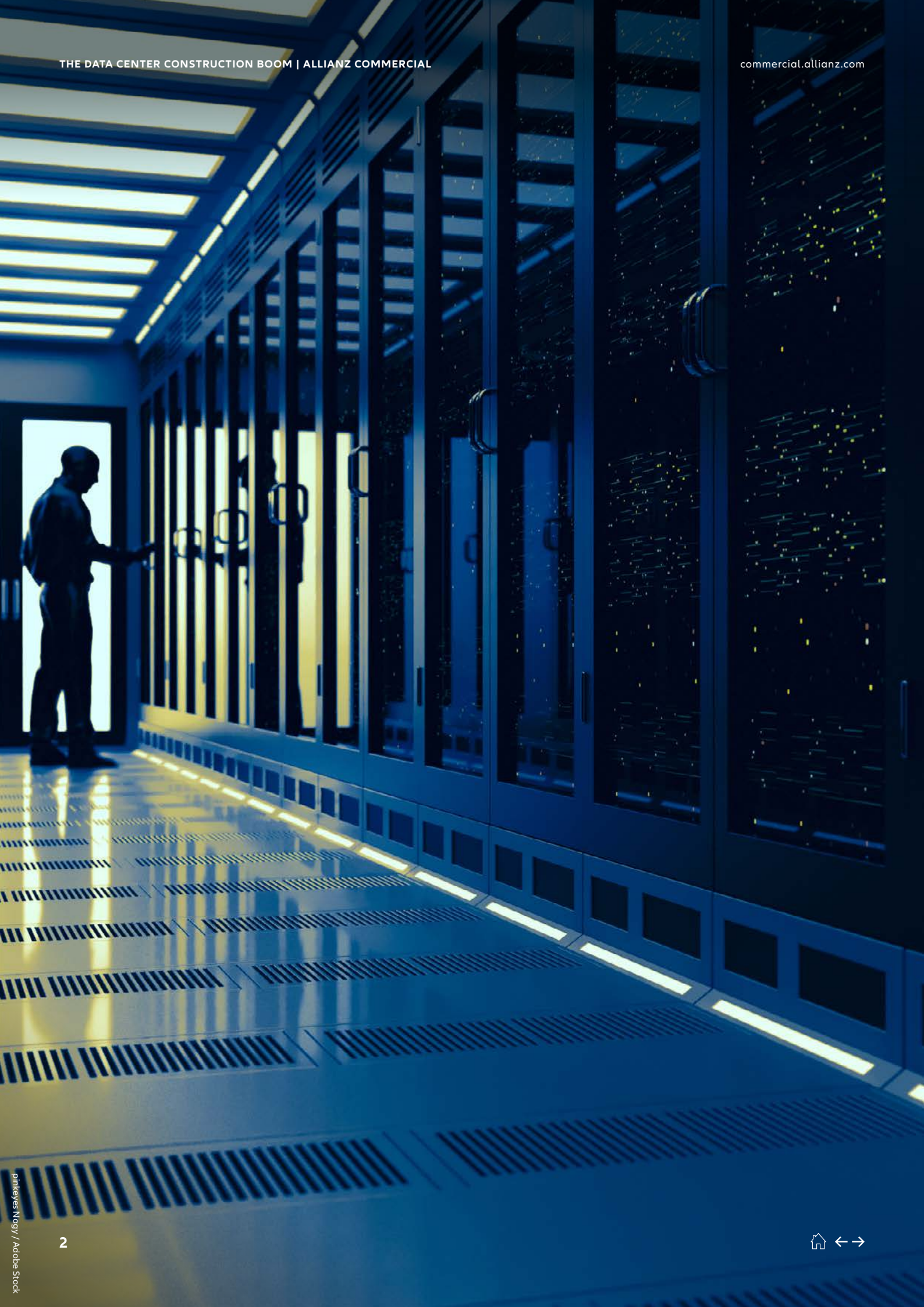
Khozinul / Adobe Stock

ALLIANZ COMMERCIAL

The data center construction boom

Emerging risk trends in the global buildout

commercial.allianz.com



pinkeyes Nagy / Adobe Stock

Contents

Executive summary

The global data center industry is experiencing unprecedented growth, driven primarily by artificial intelligence (AI) and cloud computing demands. This expansion presents both significant opportunities and complex challenges for operators, investors, and insurers.

Aimagin / Adobe Stock

nando / Adobe Stock

The great data center goldrush

The heavy computing power required by AI workloads, and growing global demand for AI technologies, has seen a rapid building boom take place to meet these needs.

While the physical facilities to house IT infrastructure and store, process, or disseminate data are nothing new, the energy-hungry needs of AI workloads, as well as the hardware and cooling systems to support them, are significantly greater than for conventional non-AI business applications. All this demands larger facilities, dependable energy sources, and a rapid response to the global surge in AI and cloud computing implementation.

Nearly $3trn will be spent globally on data centers by 2029, according to Morgan Stanley, with McKinsey estimating capital outlays of close to $7trn by 2030.

The hyperscalers go large

Major technology companies (the "hyperscalers") are spearheading this expansion. The leading US cloud providers – Amazon, Microsoft, and Google Cloud – accounted for 63% of global cloud revenue in Q2 2025, according to **Allianz Research.** Along with China's Alibaba, Tencent, and Baidu, they are investing billions into new server farms to support growing digital demand. In 2024, hyperscalers globally spent around $210bn on data center capital expenditures related to AI deployments.

Tech giants also planned enormous capital expenditure budgets for 2025 – Amazon plans around $100bn, Alphabet approximately $75bn, and Meta around $65bn. Much of this is being allocated towards AI infrastructure development.

The first commercial underwater data center in the world is now operational in China, while Amazon founder Jeff Bezos predicts that within the next 10 to 20 years data centers could even be built in space.

Global growth and hot spots

While the US remains the dominant market for data centers, significant growth is occurring worldwide, according to **Allianz Research.** The US saw over $74bn in construction investment in 2024.

China is also expanding its capacity at pace – Greater Beijing alone accounts for approximately 10% of global hyperscale capacity, with installed IT load projected to double to over 8GW by 2030. In Asia-Pacific overall, 3.2GW was under construction as of early 2025, with 13.3GW in planning, pointing to strong growth through 2026–27.

Europe – which traditionally lagged behind the US and China in AI investments – and the broader EMEA market is experiencing a 43% annual increase in pipeline activity, with London and Dublin as the largest markets (each with over 1GW capacity), followed by Amsterdam, Frankfurt, Paris, and Milan. These six cities account for around 45% of operating and planned capacity (4.6GW and 6.3GW respectively).

In the Middle East, Saudi Arabia's Public Investment Fund is expanding data centers with the launch of Humain, planning AI factories with hundreds of thousands of Nvidia GPUs (graphics processing units) over five years. This initiative faces regional competition from UAE's Stargate project, which is developing a campus in Abu Dhabi.

Can the building boom last?

Despite ongoing expansion, several factors could limit future growth. Unpredictable AI demand, technological advances, and implementation barriers have raised concerns about potential over-investment and stranded assets.

Bain & Company estimates $2trn in annual revenue is needed to fund computing power for projected 2030 AI demand, with an $800bn global funding shortfall anticipated. Major tech companies are already adjusting plans even as they announce new projects – Meta paused or reworked data center projects in 2022, while Microsoft paused construction on billion-dollar facilities in 2025 to reassess technological changes.

Technological disruptions could reshape requirements, exemplified by China's DeepSeek R1 chatbot, which reportedly cost just $294,000 to train compared to $100+mn for foundational models. Quantum computing breakthroughs and hardware efficiencies may further reduce infrastructure needs.

Additional headwinds include power constraints, supply chain issues, labor shortages, community opposition, and sustainability concerns.

Unprecedented speed and scale

Construction costs have escalated dramatically from $200mn-$300mn to projects exceeding $20bn. Average-sized facilities now cost between $500mn and $2bn, according to **Allianz Commercial** construction experts.

While hyperscalers dominate headlines with 100MW capacities, mid-sized data centers (1-5MW) remain active as organizations migrate to cloud services or upgrade facilities for AI capabilities. Edge computing will also be a significant component in the data center mix.

The industry's complexity extends beyond size, with facilities incorporating high-performance computing, advanced cooling, and on-site power generation, requiring thousands of workers and precise coordination to avoid costly delays.

Wirestock / Adobe Stock

MUZAQI / Adobe Stock

Key challenges and risks

Power supply concerns

Electricity demand from data centers worldwide is expected to more than double by 2030, reaching approximately 945TWh, according to the International Energy Agency. This surge is creating significant challenges.

Aging grid infrastructure, increased power demand, supply chain issues, and lengthy planning processes are causing delays for grid connections. Operators are increasingly turning to behind-the-meter solutions to generate their own power, including solar, wind, gas turbines, and nuclear options. Major tech companies are exploring nuclear power. The scale and complexity of data centers with on-site power generation introduces complex exposures.

The threat of outages

Half of data centers reported experiencing at least one impactful outage in the past three years, with power issues being the primary cause (45%), according to the Uptime Institute. The consequences of outages have intensified as digital dependency grows and risks have been heightened by power demand, aging infrastructure, extreme weather events, and geopolitical uncertainty.

Human error remains a significant factor – configuration/change management failures and third-party network provider failures account for 50% and 34% of major network-related outages, respectively. Cyber-attacks on energy utilities have tripled in the last four years.

Site design and layout are key to reducing risks that could lead to outages. Basic data center requirements include separate power supplies, with diverse routes from different substations, plus self-generation. An even more comprehensive redundancy strategy is “mirroring”, when two or more data center facilities are replicated with identical data, operations, and functionality in real time. Larger operators are increasingly exploring this strategy in the face of heightened regulatory and reputational risks.

Supply chain constraints

As construction activity intensifies, the industry faces multiple challenges, including equipment tariffs, inflation impacting budgets, permitting delays, and logistics disrupted by geopolitical instability. Data center demand threatens to outpace the availability of components, materials, and specialized skills and labor.

Procurement lead times for many components are longer than ever due to increasing power requirements and capacity, with lead times for a new transformer at least a year. Transformer failures can cause major operational disruptions, while replacing custom-made equipment can create substantial delays. Supply constraints also affect GPUs, essential for AI, the most advanced of which are produced by a very limited number of manufacturers. In areas with elevated geopolitical tensions, this heightens supply chain risks. There is also increasing demand for critical minerals.

Land availability is a growing issue, with European and Chinese authorities implementing measures to manage data center growth and address community concerns.

Squeezed timescales on complex projects and competition for skilled personnel can affect a project’s execution quality, potentially causing disputes and compromising safety. Risk managers should engage closely with contractors to ensure adequate resourcing. Faulty workmanship and design defects are among the top causes of construction insurance losses, so securing equipment early and employing an experienced team, overseen by a specialist project manager, is essential.

Natural catastrophes, climate, and concentration risks

Large data centers in remote areas face heightened risks from natural disasters, such as severe convective storms and wildfires, and are further away from emergency response teams. Hiring contractors with experience of the local geography and climate is essential for developers.

Major hubs such as Northern Virginia, London, and Frankfurt concentrate critical infrastructure and equipment, which makes them particularly vulnerable to localized events.

Punyawee / Adobe Stock

Fire, heat and water

Lithium-ion batteries are increasingly used in server racks and present fire hazards, as was demonstrated by recent incidents in South Korea. Extreme heat can force data center shutdowns, to prevent equipment damage, causing service disruptions, while cooling demands mean large data centers can consume up to 5 million gallons (19 million liters) of water daily. Rising global temperatures pose a risk to over half of the world's top data center hubs. Cities facing a very high risk of water stress include Dubai, Los Angeles, Mexico City, Madrid, and New Delhi, according to Verisk Maplecroft.

As well as raising sustainability concerns, the high volumes of water needed for cooling carry risk of water damage, which can impact critical equipment and buildings, causing multi-million-dollar losses.

Opposition from local communities

Data centers face resistance from communities worldwide as their footprint expands. Resource-hungry facilities spark tensions over water consumption, infrastructure strain, and environmental impacts. In the UK, Anglian Water opposed a North Lincolnshire project citing water supply concerns, while in August 2025, a judge blocked Virginia's Prince William County Digital Gateway following homeowner litigation. Energy affordability fears are rising, with Bloomberg reporting wholesale electricity costs up to 267% higher near data centers.

Regulatory pressures on the horizon

Governments worldwide are implementing frameworks to address environmental impacts and cybersecurity concerns.

The EU Energy Efficiency Directive requires large data centers to report performance metrics starting 2024 and implement energy management systems by 2026.

In Asia, Singapore unveiled its Green Data Centre Roadmap in 2024, while China's data center action plan targets reducing Power Usage Effectiveness to below 1.5 and boosting renewable energy utilization by 10% annually.

The US lacks comprehensive federal regulation, with a patchwork of state and local requirements focusing on environmental impacts and resource usage, particularly water restrictions in drought-prone regions.

Insurance coverage for complex exposures

Allianz Commercial construction experts report a significant increase in the number of submissions they have received for data centers in recent years.

The complex nature of data center construction and operation requires specialized insurance coverage. Project-specific policies can include casualty coverage and professional liability, while builder's risk covers the project under construction and project cargo covers equipment transportation. Insurers can provide tailored policies for property damage, business interruption, and environmental liabilities for renewable energy.

Developers need the support of experienced construction underwriters who understand both core building and equipment requirements, as well as expert risk consultants to analyze vulnerabilities, improve resilience, and ensure compliance with evolving regulations.

The great data center goldrush

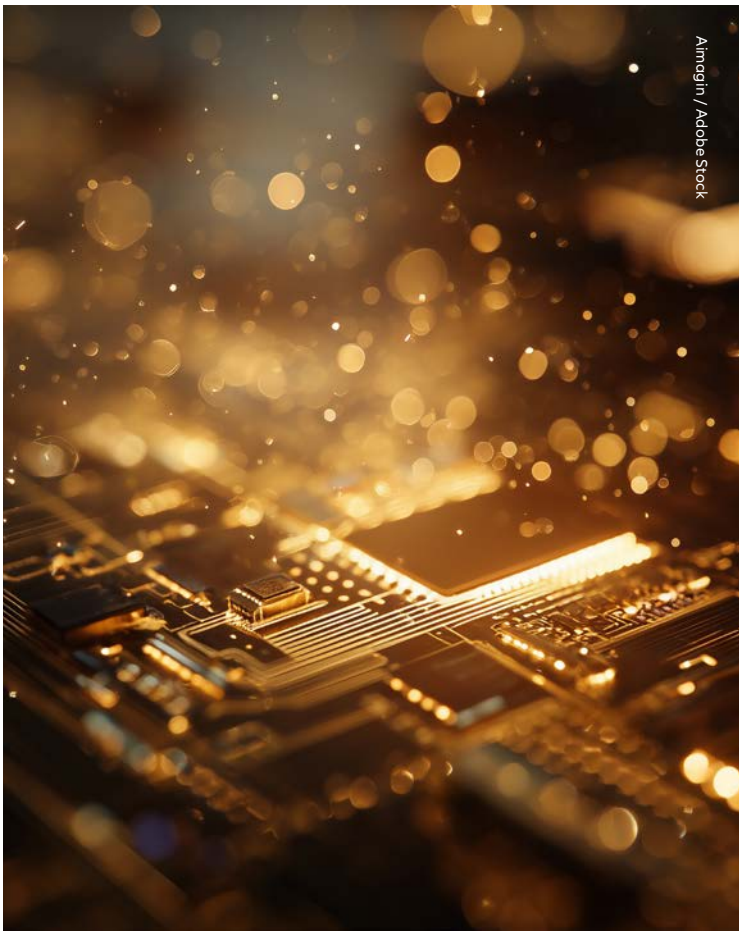
The march of AI technology globally relies on data centers to power it, and a building boom is underway to feed spiraling demand.

The names of some of the world's most ambitious data center projects say it all – Prometheus, Hyperion, Excalibur, Stargate. Whether it's the titans of Greek mythology, the sword of Arthurian destiny, or sci-fi portals to distant realms, they trumpet the might and magnitude of facilities that will house a vast galaxy of digital information.

The full capabilities of artificial intelligence (AI), and the data centers that train and power it, are as yet unknown, but its extraordinary creative and analytical abilities have the potential to transform our world, with profound consequences across almost all areas of life.

While the physical facilities to house IT infrastructure and store, process, or disseminate data are nothing new (the concept of the data center goes back to the 1940s), the computing power demanded by AI workloads, as well as the energy-hungry hardware and cooling systems to support them, is significantly greater than for conventional non-AI business applications.

A generative AI training cluster might consume seven or eight times more energy than a typical computing workload, according to MIT[1], and in real world applications, it is estimated a single ChatGPT query consumes between five[2] and 10 times more electricity[3] than a simple web search.


Aimagin / Adobe Stock

All this demands larger facilities, dependable energy sources, and a rapid response to the global surge in AI and cloud computing implementation.

"Data centers are particularly hot and rapidly growing," says **Darren Tasker, Head of Construction, Americas, at Allianz Commercial.** *"We're seeing significant-sized projects, from a billion dollars to those in the realms of $20bn. This breakneck buildout is fueling a rise in related infrastructure projects, particularly power plants, needed to fuel them."*

Such is the clamor for AI capabilities that nearly $3trn will be spent globally on data centers by 2029, say analysts from Morgan Stanley[4]. McKinsey calculates the capital outlays required for the buildout to be close to $7trn by 2030[5].

A building boom is underway to construct the infrastructure needed to support the digital economy, yet the pace of deployment risks falling behind escalating demand and rapidly evolving technology.

What are data centers?

Data centers are the physical facilities that house the essential components of computing infrastructure, including servers, networking equipment, storage, cooling systems, fire suppression, uninterruptible power supply (UPS), and physical security. Electrical infrastructure, including backup power systems and cooling systems, is often duplicated – a practice known as redundancy – to ensure operations can continue in case of outage or failure.

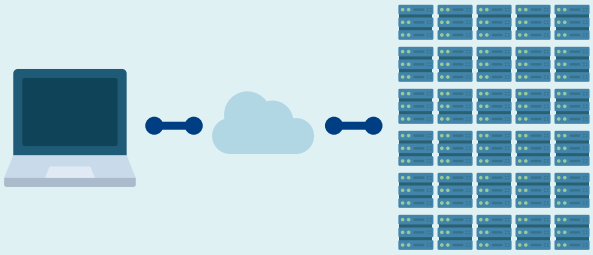
The main types of data center include:

Enterprise data centers

These are owned and operated by companies and customized for their own business use, usually on their premises or nearby.

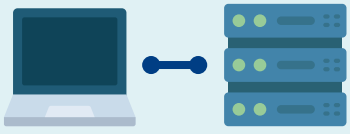
Colocation data centers

"Colos" are facilities where companies can rent space and network connectivity from a third-party provider to house their own servers and hardware.



Cloud data centers

Also called hyperscale data centers, cloud data centers are massive facilities operated by cloud service providers like Amazon Web Services (AWS) or Microsoft Azure for delivering high-performance, scalable computing resources.



Edge data centers

These compact, decentralized facilities process data closer to end users, reducing latency and boosting speed for real-time applications and local computing needs.

Is bigger better? The hyperscalers go large

The tech giants are building on a massive scale in the US and data centers are expanding globally, with significant investments and mega deals now crossing borders.

nanda / Adobe Stock

> The scaling of data center infrastructure at the scale and speed we're seeing is unprecedented

The leading US cloud providers – Amazon, Microsoft, and Google Cloud – accounted for 63% of global cloud revenue in Q2 2025, according to **Allianz Research**. Along with China's Alibaba, Tencent, and Baidu, they are investing billions into new server farms to support growing digital demand. In 2024, hyperscalers globally spent around $210bn on data center capital expenditures related to AI deployments. Tech giants also planned enormous capital expenditure budgets for 2025 – Amazon planned around $100bn, Alphabet approximately $75bn, and Meta around $65bn, according to a report from **Allianz Research**[6], and projected investment totals are expected to increase even further. Much of this is being allocated toward AI infrastructure development. Technology firms in China are keeping pace.

Developers are even eyeing up the oceans and space. The first commercial underwater data center in the world is now operational in China, while Amazon founder Jeff Bezos predicts data centers could be built in space in the next 10 to 20 years.

"The technology giants are constructing vast campus-like facilities and clusters of data centers with immense proportions and processing power," says **Chris Fancher, US Head of Construction Property at Allianz Commercial.** *"The scaling of data center infrastructure at the scale and speed we're seeing is unprecedented."*

Hyperscalers are likely to generate 60% of the industry's growth from 2023 to 2028, estimates the Boston Consulting Group[7]. In the same time period, the power demand share for enterprise data centers will decline from 10% to 5%, reflecting the ongoing migration of companies' data to the cloud or colocation providers. These "colos" will account for the remaining 50% of data center power demand by 2028.

The term "braggawatts" has been used to describe some of the hyberbolic claims made about capacity at the larger sites and "gigafactories" – the gargantuan hubs that can house 100,000 GPUs (graphics processing units).

Founder and CEO of Meta, Mark Zuckerberg, announced in July 2025 that the company would invest "hundreds of billions of dollars into compute to build superintelligence." Meta's first multi-gigawatt data center (Prometheus) will come online in 2026. "We're building multiple more titan clusters as well," Zuckerberg wrote on the social media platform Threads. "Just one of these covers a significant part of the footprint of Manhattan."

Investment in the Stargate project, a joint venture backed by OpenAI (the maker of ChatGPT), SoftBank, Oracle, and MGX to build infrastructure for OpenAI in the US could reach $500bn over four years. A flagship campus is under construction on a 900-acre site in Abilene, Texas, and five additional Stargate data centers are to be built in the US. The venture is also expanding activities to the UK, Norway, and the UAE.

In September 2025, Nvidia, one of the world's most valuable companies, announced plans to invest $100bn in OpenAI and supply it with high-performance data center chips.

Elon Musk's xAI, built Colossus in Memphis, Tennessee, in 2024. Touted as the "most powerful AI training system in the world", it was constructed in just 122 days. Now the company is expanding the project with Colossus 2, billed as the "first gigawatt AI training cluster".

Microsoft has also recently committed to several major AI investments. In September 2025, the company revealed three new data center initiatives: Fairwater in Wisconsin, described as "the world's most powerful AI data center"; a partnership with Nscale and Aker JV to construct a hyperscale facility in Jarvik, Norway; and a $30bn UK investment package, featuring the nation's largest supercomputer near London (developed with Nscale) that will house over 23,000 Nvidia GPUs.

Global growth: hubs, hot spots and emerging clusters

With data center expansion accelerating, clusters are growing in key regions, but demand continues to outpace new supply across core and emerging hubs.

In North America, major data center hubs saw supply and construction pipelines hit record levels in 2024, with over $74bn in construction investment (excluding land and software), according to a report by **Allianz Research**[8]**.** The main US data center hubs are in Northern Virginia (nicknamed "Data Center Alley" and home to more than 250), Dallas Forth-Worth, and Silicon Valley, with other key hubs in Chicago, the New York Metro area, and Los Angeles. Significant clusters are also growing in Atlanta, Columbus, and Phoenix.

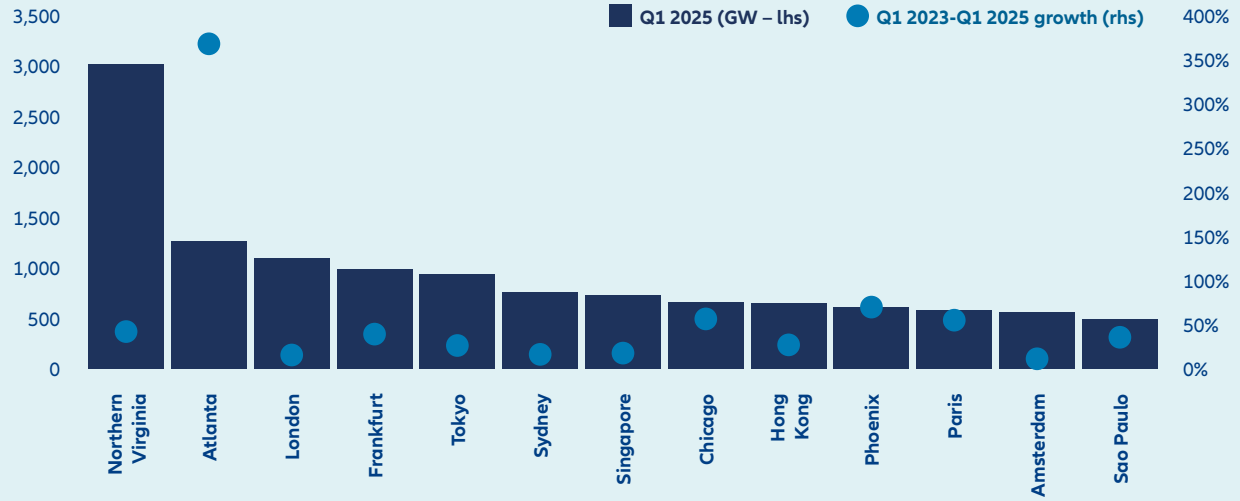
China's data center market is building out equally aggressively and Greater Beijing alone now accounts for roughly 10% of global hyperscale capacity, according to the report.

"Generative AI has become a structural driver of the global construction sector as the AI boom fuels a frenzy for data centers around the world," says **Ano Kuhanathan, Head of Corporate Research at Allianz Trade.** *"In the US, vacancy rates are tightening as supply can barely keep up, despite record-high construction pipelines. Meanwhile, in China, whose data center market is second only to the US, installed IT load is set to double from about 4.3GW in 2025 to over 8GW by 2030 as tech giants expand cloud infrastructure, equivalent to nearly $40bn in construction spending."*

The race for space

According to the real estate services firm CBRE's Global Data Center Trends 2025 report[9], power capacity limitations are driving intense "preleasing" activity (securing leases before buildings are completed) and pushing construction timelines into 2027 and beyond. Throughout various markets, cloud service providers and AI-focused enterprises are racing to lock in space early, leading to historically high net absorption levels, where more real estate space is leased and occupied than is vacated or demolished.

Data center inventory by market and 2Y growth



Sources: CBRE, Allianz Research

In Asia-Pacific overall, 3.2GW was under construction as of early 2025, with 13.3GW in planning, pointing to strong growth through 2026–27.

Europe – which traditionally lagged behind the US and China in AI investments – and the broader EMEA market is experiencing a 43% annual increase in pipeline activity, with London and Dublin as the largest markets (each with over 1GW capacity), followed by Amsterdam, Frankfurt, Paris, and Milan. These six cities account for around 45% of operating and planned capacity (4.6GW and 6.3GW respectively).

In February 2025, the European Commission President Ursula von der Leyen announced plans to mobilize €200bn for investment in AI, including €20bn for gigafactories "to develop the most advanced very large models needed to make Europe an AI continent[10]."

Part of this initiative includes a collaboration between Deutsche Telekom and Nvidia to build Europe's first industrial AI cloud in Germany in 2026. The project will scale up the following year to become a gigafactory with 100,000 GPUs[11], providing advanced AI infrastructure for businesses, start-ups and universities.

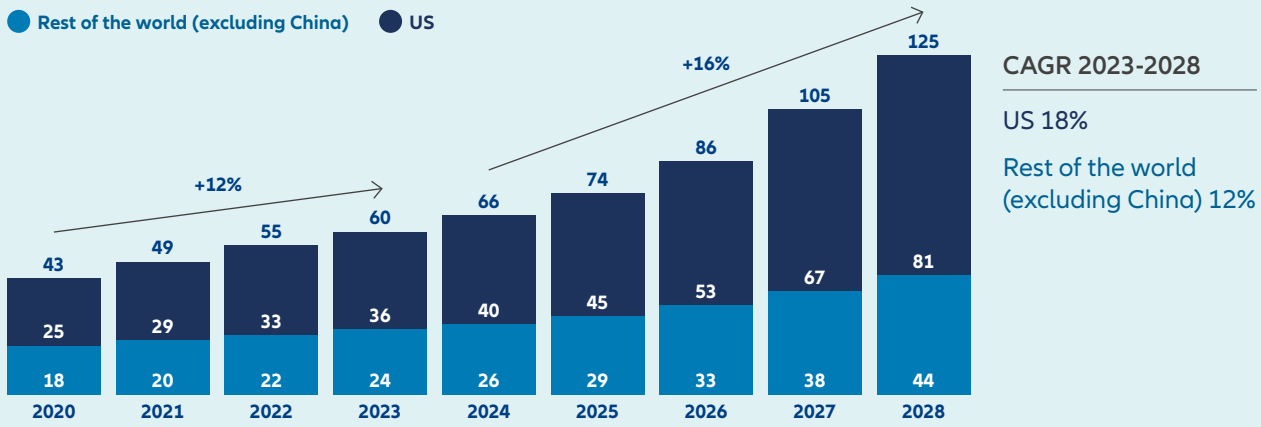
Saudi Arabia is expanding its data center buildout with the launch of Humain, an AI firm owned by the Kingdom's Public Investment Fund that is planning to build domestic AI factories powered by several hundred thousand of Nvidia's most advanced GPUs over the next five years[12]. Saudi ambitions will face competition in the region from the UAE, where Stargate is building a campus in Abu Dhabi.

Globally, CBRE reports[13] that data center demand continues to outpace new supply across both core and emerging hubs, despite limited power availability inhibiting growth in certain core hub markets. This has led to opportunities in new hotspots like Richmond (North America), Santiago (Latin America) and Mumbai (Asia-Pacific). AI-related training workloads and high-density compute deployments are also fueling multi-megawatt demand across Tokyo, Sydney and secondary hubs like Bogotá and Mumbai.

"This frenetic pace of growth could come crashing down if grid power shortages, land scarcity, and regulatory moratoria are not addressed," says **Kuhanathan.**

The US will continue to be the largest data center market

Total global data center power demand based on current and announced data centers (GW)*



Sources: BCG Global Data Center Model; expert interviews; MLPerf; Nvidia quarterly earnings; press releases; product datasheets.
Note: The datacenterHawk data source does not include China. CAGR = compound annual growth rate.
*The data in this exhibit reflects data center power demand growth based on announced pipeline of data center facilities (data center infrastructure-constrained scenario); additional data center facilities beyond those announced will be required to support computing power demand from the base case.

Can the building boom last?

The sector's future growth could be challenged by technological shifts, unpredictable AI demand, and financial challenges in scaling up to meet anticipated needs.

While there are no clear signs the growth in data centers has reached its peak, there could yet be a check on the industry's upward trajectory, according to **Darren Tasker, Head of Construction, Americas, at Allianz Commercial.** *"Future demand for AI is difficult to gauge, due to rapid technological advances and various barriers to widescale roll-out. This has led some commentators to voice fears about a bubble, over-investment, and the prospect of stranded assets."*

Around $2trn in annual revenue is needed to fund the computing power required to meet anticipated AI demand by 2030 (200GW), according to consultants Bain & Company[14]. However, even with AI-related savings taken into account, the world still has a shortfall of $800bn to keep pace with this demand, the consultancy believes.

AI is transforming computing infrastructure so quickly that some hyperscalers have already adjusted plans even as they announce new projects. At the end of 2022 Meta paused or reworked a number of data center projects[15] that were mid-development in order to rescope designs for AI workloads. In January 2025, Microsoft paused early construction work on parts of a multi-billion-dollar data center in Wisconsin, to "evaluate scope and recent changes in technology and consider how this might impact the design of our facilities."[16] Then in April, the company announced it was "slowing or pausing"[17] some of its data center construction, including a $1bn project in Ohio.

Future developments in AI algorithms could also disrupt the market. Silicon Valley was shocked in January 2025 by the launch of the Chinese DeepSeek R1 chatbot, which overtook ChatGPT to become the most downloaded free app on Apple's US App Store. Its developer claims it cost just $294,000 to train[18] – a fraction of the reported "over $100mn" cost for foundational models to be trained. DeepSeek said it used fewer and lower-grade – therefore cheaper – chips to train the model.

Quantum computing could be another gamechanger, enhancing AI performance with faster data processing and problem solving, which would reduce the compute demands of AI in the future. Breakthroughs in hardware and server efficiencies could also reduce the scale of infrastructure required.

These developments could all play out against a backdrop of headwinds and global instability that might further inhibit the sector's growth, including access to power, supply chain bottlenecks, skills and labor shortages, community objections, and sustainability concerns.

Wirestock / Adobe Stock

Risks and challenges


MUZAQI / Adobe Stock

RISKS AND CHALLENGES

A buildout of unprecedented speed and scale

The rapid pace of development and the sophisticated nature of data centers have redrawn the sector's risk landscape, leading to higher insured costs.

The construction of data centers has reached new heights in speed, scale and volume. On average, the cost per square foot (0.09 square meters) for a new data center is three to four times greater than that of a typical office building, reports the American Cement Association[19], which anticipates the data center buildout in the US alone will require nearly one million metric tons of cement over the next three years. Analysts found that over the past decade, inflation-adjusted spending on data centers has grown by nearly 850%, with a 55% jump in 2024.

The intricacies of AI infrastructure

With high-performance computing equipment, storage, networking, HVAC (heating, ventilation and air-conditioning), backup systems, fire suppression, and access routes, building a data center is a complex, multi-disciplinary undertaking. Increasingly, projects are also factoring in power generated on-site to reduce reliance on the electrical grid and build in business continuity. This has altered the risk profile of data centers and contributed to the increase in construction and insurance costs.

"These bigger data centers take up a very large acreage. The scale of a $20bn+ facility can involve tens of thousands of workers on site at peak times, with significant equipment and building supplies moving in and out," says **Chris Fancher, US Head of Construction Property at Allianz Commercial.** *"Timings can be very tight. This requires expert coordination, as any missteps can lead to potential losses or costly delays."*

Darren Tasker, Head of Construction, Americas, at Allianz Commercial, says: *"We have seen a significant increase in the number of submissions we have received for data centers in recent years. Construction costs used to typically be in the $200mn-$300mn range, maybe up to $500mn. Now they're expanding to industrial scale and we're working with some data centers with costs in excess of $20bn."*

Tasker says construction costs for average-sized data centers are generally around $500mn to $1.5bn or $2bn.

Activity is not only limited to the hyperscalers, **Tasker** adds. *"The tech giants are hitting the headlines, with their huge 100MW capacities, but we anticipate activity in mid-sized data centers, with 1-5MW capacities, to remain consistent for the next few years at least. Organizations continue to migrate their processes to the cloud or are upgrading their own data center facilities to train AI models, which is leading to upgrades of existing facilities."*

Although GenAI-related computing demand is projected to account for 60% of growth in data center power demand from 2023 to 2028, the Boston Consulting Group predicts it will still only represent about 35% of data center power demand by 2028[20] and that conventional business applications will account for over half of demand by 2028.

Daniel Muller, Emerging Risks and Trends Manager at Allianz Commercial, adds that edge computing is also a significant component in the data center mix. *"As AI grows, so too will the need for edge data centers,"* **Muller** says. *"While training for AI models occurs in hyperscale facilities, operational systems increasingly rely on edge data centers, which reduce latency from over 100 milliseconds to under 20 milliseconds. This is essential for time-sensitive applications like autonomous vehicles requiring response times that are less than 10 milliseconds, or emergency services where every second impacts survival rates."*


Chinart / Adobe Stock

RISKS AND CHALLENGES

Power supply: bottlenecks threaten expansion

With AI set to drive soaring electricity demand, grid capacity and infrastructure are struggling to keep pace.

The electricity demand from data centers worldwide is set to more than double by 2030, to around 945Twh – slightly more than the consumption of the whole of Japan today, with its population of 124 million. AI will be the most significant driver of this increase, according to the International Energy Agency (IEA)[21], with electricity demand from AI-optimized data centers projected to more than quadruple by 2030.

"In the US, data centers are on course to account for almost half of the growth in electricity demand; in Japan more than half; and in Malaysia, as much as one-fifth," said IEA Executive Director Fatih Birol in April 2025. The agency reckons almost a third of electricity demand in Ireland could come from data centers by 2026.

Data centers require massive amounts of "compute power" – the energy needed to support their hardware, processing, storage, and cooling demands. AI workloads, in particular, are power-hungry. The large language models that train AI use such vast amounts of data they can cause surges in electricity demand that strain the power grid.

The computational demands of AI also call for high-density server racks. In the coming years, these could require 50 times the power of the server racks[22] that power the internet today. Packing racks closer together reduces latency and improves performance but consumes more power and generates more heat than traditional configurations.

"High-density server equipment with power-hungry GPUs means that cooling systems have to be adapted to manage potential risks," says **Daniel Muller, Emerging Risks and Trends Manager at Allianz Commercial.** *"They are also more vulnerable to power outages, which are a growing concern as increasing demands are made on the electrical grid."*

Reliable power is the foundation of data center resilience, adds **Muller.** *"For any data center, it's crucial to have reliable backup power systems in place. A thorough assessment of available energy sources and engaging multiple suppliers to provide redundancy are fundamental elements of a resilience strategy."*

Operators are taking control of their own power

A combination of aging grid infrastructure, increased energy demand, supply chain bottlenecks, and lengthy planning and permitting processes has resulted in delays for grid connections. Power constraints are extending construction timelines into 2027 and beyond as builders wait for utility upgrades[23].

In 2024, Dominion Energy, the utility company in Virginia's "Data Center Alley", warned that connections to the grid for new larger data centers (those that need more than 100MW) would increase by one to three years to as long as seven years[24]. Wait times can be up to 15 years in the UK[25] and up to seven years in Germany[26].

Data center operators are increasingly seeking to reduce their reliance on the grid by generating and managing their own power with behind-the-meter solutions. These could include solar panels, wind turbines, gas turbines, battery storage, microgrids, and nuclear reactors.

"Data centers require massive amounts of power to operate," says **Chris Fancher, US Head of Construction Property at Allianz Commercial.** *"As developers scramble to meet this need, we're seeing something of a transition away from renewable projects towards more traditional gas-fired projects and small nuclear reactors."*

> Inevitably, the construction of power generation facilities comes with its own set of risks, from project delays and cost overruns to environmental factors and unforeseen operational challenges

tonyv2112 / Adobe Stock

The nuclear option

The potential of nuclear power is already being explored by the larger data center operators. In March 2025, Meta, Google, and Amazon signed a pledge[27] with other large energy users to support the tripling of nuclear energy capacity by 2050. Amazon said it had invested more than $1bn in nuclear projects[28] over the past year.

In September 2024, Microsoft signed a 20-year power purchase agreement with Constellation Energy that will see the reopening of Unit 1 at the Three Mile Island nuclear plant in Pennsylvania, US, in 2028[29].

Google announced a deal in 2024 with startup Kairos Power to build seven small modular reactors, or SMRs, to power its data centers[30]. Still a nascent technology, SMRs are far smaller than traditional reactors and can be factory-assembled then transported to a location. Globally, there are more than 80 SMR designs at different stages of development across 18 countries, according to the European Commission[31]. Countries such as the US, UK, Canada, Japan, and South Korea are actively developing their own designs, while Russia and China connected their first SMRs to the grid in 2019 and 2021, respectively.

"Inevitably, the construction of power generation facilities comes with its own set of risks, from project delays and cost overruns to environmental factors and unforeseen operational challenges," says **Fancher.** *"The scale and complexity of data centers that include power generation plants on site introduce complex exposures, including property damage, business interruption, and environmental liabilities. Renewable energy technologies are exposed to multiple risks.*

"Data centers are being scaled up very quickly and deployed in new locations with large acreage. Emerging technologies introduce new underwriting complexities, and the threat landscape is expanding accordingly."

RISKS AND CHALLENGES

The threat of outages

The impact of outages has intensified as the digital economy has grown, with increasing business and personal reliance on interdependent digital services.

In 2025, half of data centers reported experiencing at least one impactful outage in the past three years, with power issues the main cause, at 45%, according to the Uptime Institute[32].

"Data centers usually have a high degree of built-in resilience when it comes to preventing outages, such as multiple independent diverse power feeds, UPS [uninterruptible power supply] and generator systems," says **Don Cockrill, Senior Risk Consultant, Property, at Allianz Risk Consulting.** *"However, when outages do occur, the 'blast radius' can be extensive, affecting many people, businesses and services, and inflicting significant financial and reputational losses."*

Increasing power demand, aging grid infrastructure, and extreme weather events can all heighten the risk of a power outage. Cyber-attacks and uncertainty arising from geopolitical instability are also adding pressure to power systems – cyber-attacks on energy utilities have tripled in the last four years[33] and have become more sophisticated with the use of AI.

Configuration issues, including software errors, incorrect labeling, and improper cable connections, highlight the significant role human error plays in causing outages. Configuration/change management failure and third-party network provider failure accounted for 50% and 34% of the most common causes of major network-related outages, according to findings by the Uptime Institute in 2025[34]. Configuration/change management issues also accounted for 62% of the most common causes of major IT system-/software-related outages.

Minimizing outage risk

Data centers generally include redundant or backup power supplies, redundant data communications connections, environmental controls, such as air-conditioning and fire suppression, and site security.

"Site design and layout are also key to reducing the risks that could lead to an outage," stresses **Cockrill.** *"Basic data center requirements include separate power supplies, with diverse routes from different substations, split into A and B supplies, often on a ring main, which increases reliability by creating a continuous power loop, plus self-generation."*

An even more comprehensive redundancy strategy is to use "mirroring", when two or more data center facilities are replicated with identical data, operations, and functionality in real time.

"This can be an effective form of disaster recovery and continuity planning, but of course it adds significant expense," says **Cockrill.** *"However, given the heightened regulatory and reputational risks the operators of global centers now face, as well as the threat of cyber crime and the consequences of subsequent downtime, it is a mitigation strategy larger operators are increasingly exploring."*

luchschenF / Adobe Stock

> "Cyber-attacks on energy utilities have tripled in the last four years

Power issues remain the top cause of impactful outages

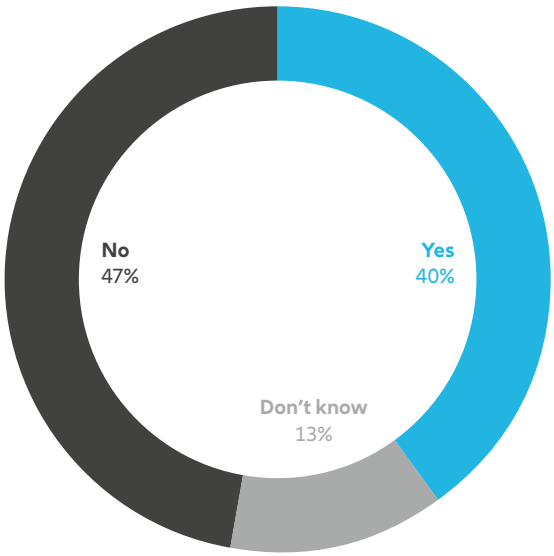
What was the primary cause of your data center's most recent impactful incident or outage? (n=96)

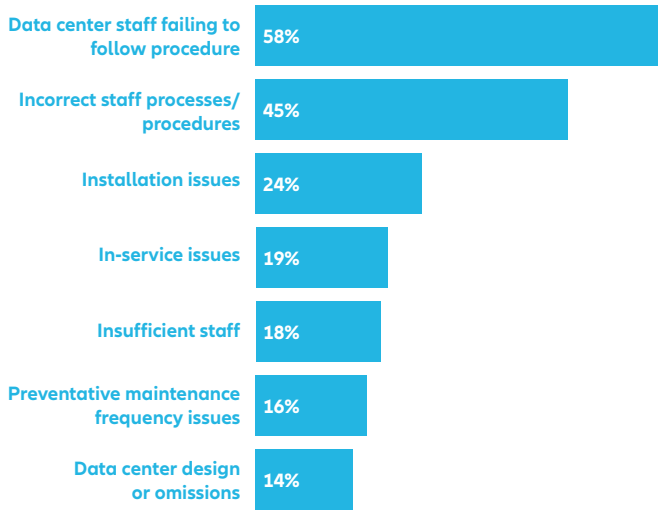
Power	45%
Cooling	14%
IT systems (hardware/software)	9%
Network	11%
Colocation provider	1%
Fire	2%
Third-party provider	2%
Information security-related	5%
Fire supression	6%
Unknown	4%

All figures rounded.
Source: Uptime Institute Global Data Center Survey 2025

Most common causes of major human error-related outages

Has your organization experienced a significant, serious, or severe IT service outage(s) that was caused by human error over the past three years? If so, what are their most common causes? (n=397)





Responses for "Other" and "Don't Know" are not included. Respondents could choose up to three causes.
Source: Uptime Institute Data Center Resiliency Survey 2025

RISKS AND CHALLENGES

Supply chain constraints could put the brakes on

The rapid acceleration of data center construction is creating competition for skills and resources as projects multiply in key markets.

With construction activity intensifying, the industry faces widespread challenges including tariffs on equipment, inflationary pressures impacting budgets, lengthy permitting delays, and the disruption of logistics by geopolitical instability.

High demand for data centers is threatening to outpace the availability of critical components and materials, while competition is fierce for the specialized skills and labor needed to complete the buildout. With the hyperscalers simultaneously expanding their footprints on such a large scale, resource availability is likely to become a key concern.

"Procurement lead times for many components are longer than ever due to increasing power requirements and capacity," says **Don Cockrill, Senior Risk Consultant, Property, at Allianz Commercial.** *"Transformer procurement is a particular concern, with lead times for obtaining a new unit at least a year. Organizations that suffer a transformer failure could experience significant operational disruptions, as temporary transformer units might not provide full capacity.*

"Custom-made equipment designed for specific sites can create substantial delays when replacements are needed due to damage or failure. Supply constraints are also affecting GPUs, essential for AI, the most advanced of which are produced by a very limited number of manufacturers. In areas with elevated geopolitical tensions, this heightens supply chain risks. There is also increasing demand for critical minerals."

Available land is another concern, particularly in densely populated areas. Key European markets have imposed measures to manage data center growth – the Amsterdam area maintains a moratorium on mega-facilities over 70MW, forcing ultra-large developments to move to other cities or more remote locations, according to **Allianz Research**[35]. In China, the East-to-West Computing initiative redirects development from congested eastern cities to western regions. Secondary European markets in the Nordics, Spain and Eastern Europe are seeing a surge in projects as alternatives to hub constraints in the major FLAP data center markets (Frankfurt, London, Amsterdam, and Paris).

> Procurement lead times for many components are longer than ever due to increasing power requirements and capacity

The US trade body, Associated Builders and Contractors (ABC), calculates that 14%[36] of the group's members are under contract to perform work on data centers and indicates there is a backlog of 8.5 months on projects. Across the construction industry, the ABC reckons nearly half a million extra workers will be needed in 2025 alone. Labor shortages are also a concern in Europe, Asia, and Latin America.

"Squeezed timescales on complex projects and a competition for skilled engineers and contractors can affect a project's execution quality," says **Chris Fancher, US Head of Construction Property at Allianz Commercial.** *"A shortage of time and skills can also lead to contractual disputes and delays, as well as potentially impact safety standards. It's important for risk managers to get to know the contactors and parties involved to make sure they are adequately resourced.*

"Faulty workmanship and design defects are among the top causes of construction insurance losses, so securing equipment early and employing an experienced team, overseen by a specialist project manager, is essential."

RISKS AND CHALLENGES

Natural catastrophes, climate, and concentration risk: why location matters

The data center buildout in remote locations heightens natural catastrophe exposures.

The scale of some larger data centers has seen many of them spring up in remote places where space is available for their massive footprints, but which do not yet have the infrastructure to support their activities, such as sufficient grid capacity and transportation. These data centers can be exposed to natural catastrophe risk, particularly in US regions experiencing heightened storm frequency and severe weather events as climate change intensifies weather risks.

"With data centers in remote locations, we face a double-edged sword," says **Darren Tasker, Head of Construction, Americas, at Allianz Commercial.** *"We are not only seeing the intensification of extreme weather activity in those areas, but there is also an increase in the construction of data centers. These projects require space, so they are appearing in Texas and up into the Midwest, which are exposed to extreme weather events, especially severe convective storms."*

Wildfire is also a significant risk, given the remote locations these facilities are often built in. *"Wildfires can result in property damage and time element losses, as well as potentially huge third-party liability claims, making vegetation management extremely important to minimize exposure,"* says **Tasker.** Depending on where the power is sourced, service interruption is also an exposure.

"An experienced contractor with knowledge of the local geography and climate is crucial, whether it's hurricanes in the south or frozen conditions in the north. For example, they need to understand the effects of very cold conditions on heating or cooling systems, particularly in the construction phase, or during hot testing, when machinery or equipment is run under actual conditions. Data centers generate heat only when operational."


Sergey Nivens / Adobe Stock

Concentration intensifies risks

Data center hubs, such as those in Northern Virginia, London, and Frankfurt, concentrate critical infrastructure and equipment, making them particularly vulnerable to localized events, including storms, flooding, fire or wildfire.

"To avoid losses from natural catastrophes and prevent serious outages, it is important to split facilities across different regions for backup and to reduce this concentration risk," says **Tasker.**

RISKS AND CHALLENGES

Fire, heat and water

Lithium-ion batteries, soaring global temperatures, and water scarcity are all putting the heat on data centers.

Fires are generally rare in data centers, but the potential consequences of them can be serious, resulting in threat to human life, loss of equipment, and business interruption. Common ignition causes include open flames during the construction period, electrical failure, overheated equipment, issues with HVAC equipment, human error, and inadequate maintenance.

Lithium-ion batteries are increasingly being used in server racks in data halls. Unlike lead-acid batteries, which are usually installed in dedicated UPS or battery rooms, lithium-ion batteries are increasingly being integrated directly into UPS systems, forming compact, modular units.

"The fire risk associated with lithium-ion batteries is well documented, particularly in the context of electric vehicles and charging infrastructure," says **Daniel Muller, Emerging Risks and Trends Manager at Allianz Risk Consulting.** *"Thermal runaway in lithium-ion batteries typically occurs when cell temperatures exceed approximately 65°C [149°F], triggering self-sustaining chemical reactions that can escalate to over 600°C [1,100°F] and release toxic gases that can be corrosive and flammable. The cell temperatures that result in thermal runaway depend primarily upon the battery technology being used and the number of charge/discharge cycles the battery has been exposed to.*

Punyawee / Adobe Stock

"What makes this risk particularly concerning in data center environments is the potential for damaged cells to remain dormant before igniting unexpectedly – sometimes days or even weeks later – posing serious challenges for fire detection and containment."

Two significant fires in South Korea have highlighted the risks of lithium-ion batteries. In 2022, a lithium-ion battery fire in a major data center in Pangyo lasted for days, causing a prolonged outage at tech firm Kakao and its highly popular messaging platform KakaoTalk. Then in September 2025, a fire triggered by a lithium-ion battery explosion paralyzed government services, prompting the country's intelligence agency to raise the cyber threat level amid concerns cyber criminals could take advantage of the chaos that ensued[37].

"Both NFPA 855 and IEEE 1635 offer general guidance for battery energy systems in data centers, including specific provisions for lithium-ion technology," says **Muller.**

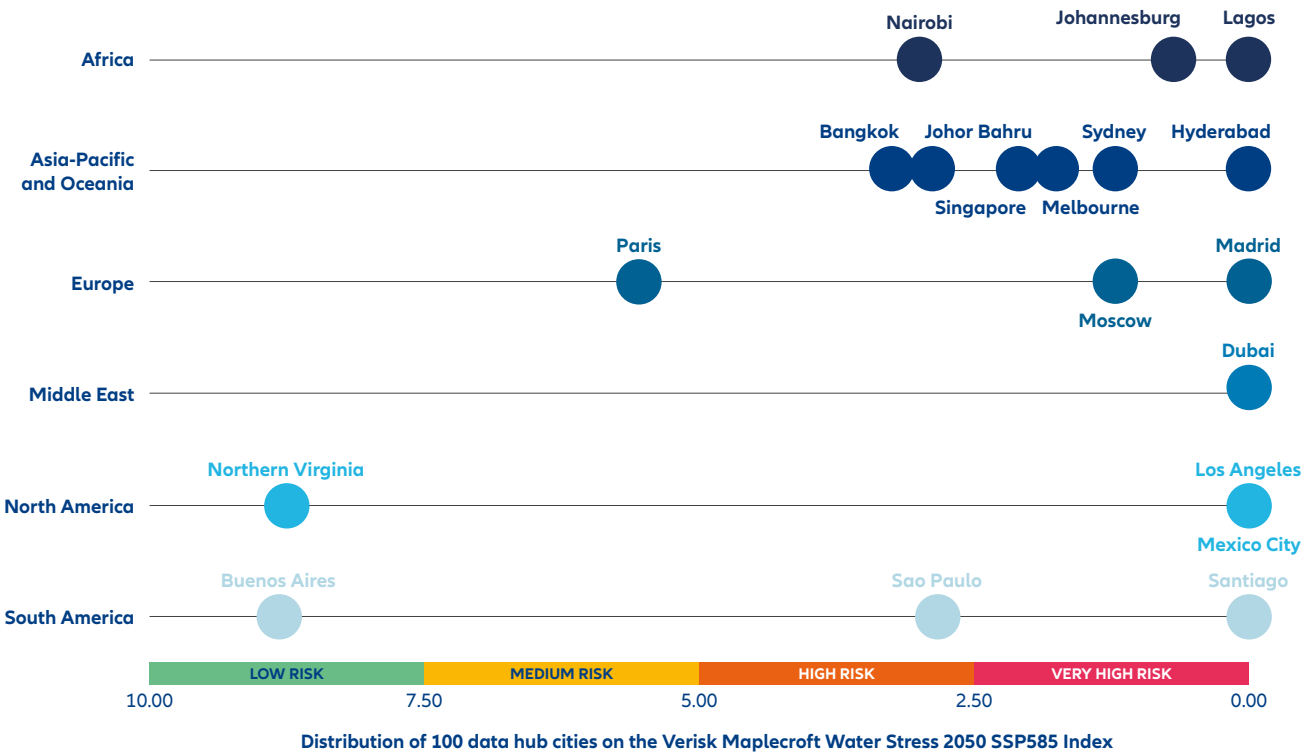
"Following best practices for battery storage, along with implementing robust fire suppression, monitoring, and ventilation systems, is essential to ensuring fire resilience and operational continuity in data centers."

Extreme heat and water scarcity

Data centers generate a lot of heat and chip density is growing, causing higher temperatures that necessitate more cooling. Large data centers can consume up to 5 million gallons (19 million liters) of water a day, equivalent to the water use of a town with a population of 10,000-50,000[38]. According to scientists at the University of California, each 100-word AI-generated email is estimated to use roughly one 500ml bottle of water[39].

In times of extreme heat, data center operators can be forced to shut down servers to prevent damage from overheating, causing service disruptions. During the UK's heatwave in July 2022, Google and Oracle were forced to take data centers offline[40], while in the US the same year, extreme temperatures in September triggered a significant outage at Twitter's California facility[41].

Middle East, Africa and parts of US face most severe water stress; risks rising in Asia



Distribution of 100 data hub cities on the Verisk Maplecroft Water Stress 2050 SSP585 Index

Source: Verisk Maplecroft, 2025

Growing cooling requirements will increase water and electricity demand and rising global temperatures pose a growing risk to the resilience of over half the world's top data center hubs, according to research by Verisk Maplecroft[42]. The risk intelligence company reckons 52% of global center data hubs will face "high" or "very high" water stress by 2030. This could see operators come into conflict with local communities over access to water – a political issue that could threaten social license to operate. Cities facing a very high risk of water stress include Dubai, Los Angeles, Mexico City, Madrid, and New Delhi.

"Immersion or dielectric cooling is one type of Direct Liquid Cooling that could be an alternative method to water for controlling temperatures in data centers," says **Don Cockrill, Senior Risk Consultant, Property, at Allianz Risk Consulting.** *"It is a relatively new technology for data centers and involves submerging servers in a non-conductive liquid rather than using water."*

Water damage

Water damage to a data center can be internal, such as from a sprinkler or cooling system, or external, from heavy rain. As well as giving rise to sustainability concerns, the high volumes of water necessary for cooling systems carry an inherent risk of water damage. Without adequate monitoring and maintenance, water cooling systems risk causing leaks from pipe failures, condensation, improper installation, or corrosion, potentially causing damage to critical equipment or the building structure itself.

"Water leaks are uncommon and most likely to come from cooling and fire systems," says **Cockrill.** *"However, water damage in a server room housing extremely expensive computer equipment can cause multi-million-dollar losses."*

RISKS AND CHALLENGES

Opposition from local communities

Data centers face objections from communities and local officials as their global footprint expands.

Resource-hungry data centers can spark tensions with local communities over resource consumption, the strain on local infrastructure, environmental concerns, energy affordability, property values, and land use.

As data centers proliferate, their sites have contributed to or exacerbated disruptions in over a dozen countries, reports the New York Times[43]. In many countries, activists, residents, and environmental campaigners have got together to block projects or call for more transparency.

Water is a particular concern as countries and businesses pursue AI infrastructure development. In the UK, Anglian Water has opposed plans for a data center in North Lincolnshire, citing water supply concerns in "the driest part of the country"[44] and potential flooding risks. Developer Greystoke claims its design is water-efficient with closed-loop cooling systems.

In August 2025, a judge blocked a project to build one of the world's largest data center developments, the Prince William County Digital Gateway in rural Virginia, after a lawsuit brought by local homeowners[45].

Ireland is seen by some as a case study for what could happen elsewhere in the future. The country has hosted a thriving tech scene for many years, with approximately 120 data centers around Dublin. But opposition has been mounting about environmental impacts, power usage and strains on the grid – official figures from 2024 show that Ireland's data centers consumed more electricity than all of its urban homes combined[46]. New data centers in Dublin are currently restricted by authorities to ensure energy stability and sustainability.

Concerns are also mounting that the costs of data centers' power usage will be passed on to consumers. Analysis by Bloomberg[47] found that wholesale electricity now costs as much as 267% more for a single month than it did five years ago in areas located near significant data center activity.

svitlini / Adobe Stock

> "Concerns are mounting that the costs of data centers' power usage will be passed on to consumers

RISKS AND CHALLENGES

Regulatory pressure on the horizon

The global data center industry faces an increasingly complex regulatory landscape, particularly around sustainability.

Governments worldwide are implementing frameworks to address environmental impacts, power constraints, and cybersecurity concerns. They can affect how and where data centers are built.

European regulators mandate energy efficiency, renewables, and waste-heat recovery for data centers, imposing strict Power Usage Effectiveness (PUE) targets and climate requirements. For example, The EU Energy Efficiency Directive (EED) introduces significant requirements for data centers. As of 2024, large data centers (with installed power over 500kW) must report energy performance metrics, including PUE annually. By 2026, data centers must implement energy management systems and explore heat reuse opportunities. The directive establishes a sustainability reporting framework requiring transparency on water usage and renewable energy percentage.

Dublin and Frankfurt now require proof of renewable power sourcing and limit annual permits to protect power grids.

Effective from January 2025, the EU's Digital Operational Resilience Act (DORA) regulations for financial entities (including data centers) establish digital operational resilience requirements, mandating robust risk management, incident reporting, and testing protocols to ensure continuous operations during cybersecurity incidents and technical failures.

In Asia, Singapore's Green Data Centre Roadmap was unveiled in 2024 and aims to support growth while accelerating energy efficiency, while China announced an action plan on the green development of data centers that specifies targets to accelerate the low-carbon transition of the sector. This includes lowering the average PUE of data centers to less than 1.5 and increasing the utilization rate of renewable energy 10% annually.

> Regulations are becoming more stringent, with 2030 a key deadline year for energy efficiency targets

Operators in the US face a complex regulatory landscape, with a lack of comprehensive federal regulation specifically for data centers. Regulations vary by state and locality, focusing mainly on environmental impacts, energy usage, and zoning requirements. State-level initiatives in California, Virginia, and New York have implemented stricter environmental standards, while water usage restrictions are emerging in drought-prone regions.

"Regulations are becoming more stringent, with 2030 a key deadline year for energy efficiency targets," says **Don Cockrill, Senior Risk Consultant, Property, at Allianz Risk Consulting.** *"This will impact many data centers. They might require upgrades, better power management, including load shedding and load sharing, and possibly storing power on site or giving it back to the grid during quiet periods.*

"All data center operators are obliged to report, but underreporting remains an issue," says **Cockrill.** *"Reporting is required for those above a certain capacity, but it's self-reported, and some data centers aren't reporting at all. Instances have occurred where tenants in colocation facilities refuse to share information with hosts. Additionally, enterprise data centers required to report under directives like the EU's Energy Efficiency Directive may be overlooked, possibly due to being registered as office buildings."*

RISKS AND CHALLENGES

Insurance coverage for complex exposures

Data center construction projects call for specialist insurance and expert risk management guidance.

Construction projects as complex and extensive as data centers require significant time and resources. *"They pose unique risks that demand specialized insurance,"* says **Darren Tasker, Head of Construction, Americas, at Allianz Commercial.**

The CEO of broker Aon, Greg Case, said in October 2025 that data center demand could generate more than $10bn in new premium volume in 2026 alone[48].

"Typically, these large construction projects require project-specific policies given their size, and the main reason for that is an insurer who is insuring these large projects wants to ensure that all of the parties on-site have adequate coverage," says **Tasker.**

"Project-specific policies can include casualty coverage, like wrap-up liability exposures and worker's compensation, plus professional liability for engineers and other professionals. On the property side, builder's risk covers the property while it is under construction and project cargo covers the transportation of equipment."

Beyond builder's risk, insurers can provide tailored policies that cover various risks, including property damage, business interruption, and environmental liabilities for the renewable energy sector. Additionally, natural resources insurance coverage can provide operational protection for power generation (excluding nuclear).

Clients need to work with an experienced team of underwriters who know the business and can support the project from beginning to end, including multi-year coverage and policy extensions as needed.

"You need experienced construction writers who can insure both the core and the shell of a data center," **Tasker** says, and add equipment to the policy when necessary. *"The hyperscalers have their own dedicated data centers, but most centers are built with bays that are leased out to other companies. The first question to ask is whether the insurance includes the actual servers and racks. Most of the time it does not."*

Input from risk consultants

During construction, specialist risk consultants can provide loss control programs customized for data center clients.

"These could include regular full-scope on-site surveys and more frequent hot work surveys, or surveys addressing areas of concern that emerge in the course of risk management, such as checking crane management or early access requirements," says **Stefan Thumm, Head of Risk Consulting, Natural Resources and Construction, Germany/Switzerland, at Allianz Commercial.** *"Developers face the daily challenges of stretched supply chains and constrained timescales on high-value projects. Risk consulting services can support a high quality of construction and timely completion, which minimizes the chance of major construction losses."*

For the operational phase, contingency arrangements, business continuity planning, restoration testing of systems, and supply chain management are all vital risk-management strategies for a data center project.

"Risk consultants can provide guidance on analyzing vulnerabilities, enhancing resilience, and ensuring compliance with evolving sustainability and environmental regulations," says **Daniel Muller, Emerging Risks and Trends Manager at Allianz Risk Consulting.** *"For example, at Allianz Commercial, our CAReS platform can help businesses evaluate how natural perils will affect their assets today and in the future."*

Whether dealing with property and fire protection, business interruption, cyber challenges, or marine risks like equipment transportation, multi-disciplinary risk expert teams can ensure robust construction, seamless installation, and enhanced cyber resilience.

References

1 MIT News, Explained: Generative AI's environmental impact, January 17, 2025

2 MIT News, Explained: Generative AI's environmental impact, January 17, 2025

3 Goldman Sachs, AI is poised to drive 160% increase in data center power demand, May 14, 2024

4 Morgan Stanley, Who Will Fund AI's $3 Trillion Ask?, July 25, 2025

5 McKinsey & Company, The cost of compute: A $7 trillion race to scale data centers, April 28, 2025

6 Allianz Research, Big beautiful data centers: How AI and infrastructure are giving a second wind to an ailing construction sector, October 7, 2025

7 Boston Consulting Group, Breaking Barriers to Data Center Growth, January 20, 2025

8 Allianz Research, Big beautiful data centers: How AI and infrastructure are giving a second wind to an ailing construction sector, October 7, 2025

9 CBRE, Global Data Center Trends 2025, June 24, 2025

10 European Commission, EU launches InvestAI initiative to mobilise €200 billion of investment in artificial intelligence, February 11, 2025

11 Nvidia, NVIDIA and Deutsche Telekom Partner to Advance Germany's Sovereign AI, July 13, 2025

12 Nvidia, HUMAIN and NVIDIA Announce Strategic Partnership to Build AI Factories of the Future in Saudi Arabia, May 13, 2025

13 CBRE, Global Data Center Trends 2025, June 24, 2025

14 Bain & Company, Technology Report 2025, September 2025

15 Tech Funding News, Meta on a "quest" to raise $29B to fund US AI data centre expansion, July 1, 2025

16 Wisconsin Public Radio, Microsoft pauses construction on portions of Mount Pleasant project, January 2, 2025

17 AP, Microsoft says it's 'slowing or pausing' some AI data center projects, including $1B plan for Ohio, April 9, 2025

18 CNN, China's DeepSeek shook the tech world. Its developer just revealed the cost of training the AI model, September 19, 2025

19 American Cement Association, New industry report predicts US will need 1 million tons of cement for AI infrastructure by 2028, June 19, 2025

20 Boston Consulting Group, Breaking Barriers to Data Center Growth, January 20, 2025

21 IEA, AI is set to drive surging electricity demand from data centres while offering the potential to transform how the energy sector works, April 10, 2025

22 Goldman Sachs, 1,000 homes of power in a filing cabinet – rising power density disrupts AI infrastructure, May 7, 2025

23 Allianz Research, Big beautiful data centers: How AI and infrastructure are giving a second wind to an ailing construction sector, October 7, 2025

24 Bloomberg, Data centers face seven-year-wait for Dominion Power hookups, August 29, 2024

25 Gov.uk, Clean energy projects prioritised for grid connections, April 15, 2025

26 International Energy Agency, Energy and AI, April 2025

27 Reuters, Amazon, Google sign pledge to support tripling of nuclear energy capacity by 2050, March 14, 2025

28 Amazon, 7 ways Amazon is thinking big about nuclear energy, May 27, 2025

29 Three Mile Island nuclear plant will reopen to power Microsoft data centers, September 20, 2024

30 TechCrunch, Google signed a deal to power data centers with nuclear micro-reactors from Kairos — but the 2030 timeline is very optimistic, October 14, 2024

31 European Commission, Small modular reactors explained

32 Uptime Institute, Global Data Center Survey 2025, July 2025

33 IEA, AI is set to drive surging electricity demand from data centres while offering the potential to transform how the energy sector works, April 10, 2025

34 Uptime Institute, Annual Outage Analysis 2025, May 2025

35 Allianz Research, Big beautiful data centers: How AI and infrastructure are giving a second wind to an ailing construction sector, October 7, 2025

36 CNBC, AI data center boom has to contend with realities of tough labor market, September 30, 2025

37 The Guardian, South Korea raises cyber threat level after huge data centre fire sparks hacking fears, September 30, 2025

38 The Washington Post, A new front in the water wars: Your internet use, April 25, 2023

39 The Washington Post, A bottle of water per email: the hidden environmental costs of using AI chatbots, September 18, 2024

40 BBC News, Heatwave forced Google and Oracle to shut down computers, July 20, 2022

41 CNN, Extreme California heat knocks key Twitter data center offline, September 12, 2022

42 Verisk Maplecroft, Majority of world's top data centre hubs face array of rising heat-related risks, July 9, 2025

43 The New York Times, From Mexico to Ireland, Fury Mounts Over a Global A.I. Frenzy, October 20, 2025

44 BBC News, Anglian Water objects to data centre plan, July 29, 2025

45 The Washington Post, Future of massive Prince William County data center in doubt after ruling, August 15, 2025

46 The Guardian, Ireland's datacentres overtake electricity use of all urban homes combined, July 23, 2024

47 Bloomberg, AI Data Centers Are Sending Power Bills Soaring, September 29, 2025

48 Insurance Insider, Aon to mobilise capital on 'monumental' data centre opportunity, October 31, 2025

About Allianz Commercial

Allianz Commercial is the center of expertise and global line of Allianz Group for insuring mid-sized businesses, large enterprises and specialist risks. Among our customers are the world's largest consumer brands, financial institutions and industry players, the global aviation and shipping industry as well as family-owned and medium enterprises which are the backbone of the economy. We also cover unique risks such as offshore wind parks, infrastructure projects or film productions.

Powered by the employees, financial strength, and network of the world's #1 insurance brand, as ranked by Interbrand, we work together to help our customers prepare for what's ahead: They trust us to provide a wide range of traditional and alternative risk transfer solutions, outstanding risk consulting and multinational services as well as seamless claims handling.

The trade name Allianz Commercial brings together the large corporate insurance business of Allianz Global Corporate & Specialty (AGCS) and the commercial insurance business of national Allianz Property & Casualty entities serving mid-sized companies. We are present in over 200 countries and territories either through our own teams or the Allianz Group network and partners. In 2023, the integrated business of Allianz Commercial generated around €18 billion in gross premium globally.

Further information and contacts

For more detailed information on construction insurance, please contact your regional Allianz Commercial contacts.

commercial.allianz.com

Email: az.commercial.communications@allianz.com

Allianz Global Corporate & Specialty SE, Königinstraße 28, 80802 Munich, Germany.

Commercial Register: Munich, HRB 208312

November 2025