# AI fuels data centre boom but UK must act fast to stay in the race



As generative AI transforms industries, data centres - the infrastructure powering this shift - are becoming central to global economies. “AI is the new oil, and data centres are the refineries,” said Craig Eadie, Managing Director of Straightline Consulting.

AI’s projected boost to GDP, up to 15 percent in industrialised nations over the next decade, is intensifying demand for compute power. Tools like Google’s Veo 3 demonstrate AI’s scale and ambition, but behind every model lies a vast digital infrastructure. Goldman Sachs forecasts global data centre power demand will grow 50 percent by 2027 and could rise 165 percent by 2030. Eadie expects half of that energy to be AI-related by 2025.

This growth is reshaping the data centre sector, accelerating innovation in construction, commissioning and design. Yet power access remains a critical constraint. The UK and EU are taking steps via AI Growth Zones and the AI Continent Plan, but local resistance and complex approvals pose barriers. Cities like Dublin and Amsterdam have already limited new projects due to grid strain and water use.

The United States, by contrast, offers faster deployment, raising concerns over data sovereignty. Bain & Company projects US power generation must increase by 26 percent by 2028 to meet AI demand, likely raising consumer energy bills.

Meanwhile, supply chains for key materials remain disrupted, inflating costs and delaying builds. The sector also faces a commissioning talent shortage, with Eadie calling it a generational crisis due to the specialised expertise required.

Geopolitically, where AI infrastructure is built matters. Hosting data centres offers economic and technological advantages but brings risks over sensitive data and national security. Countries leading in AI capacity gain strategic leverage in the global digital economy.

Investment is surging. Blackstone and the Canada Pension Plan recently acquired AirTrunk for $16 billion, betting on sustained demand. But the energy intensity of hyperscale data centres raises sustainability concerns. In the US, data centre electricity use could triple to 390 terawatt-hours by 2030, straining grids and increasing pressure on supplies of lithium, copper and uranium.

The UK and Europe face a clear inflection point. Without swift reforms to power infrastructure, planning policy, supply chains and skills pipelines, they risk losing ground in a strategically vital sector. Addressing these challenges with urgency could position the UK as a leader in sustainable AI, fuelling a future-ready digital economy.

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## Bibliography

1. <https://dcnnmagazine.com/data/artificial-intelligence/ai-is-the-new-oil-and-data-centres-are-the-refineries/> - Please view link - unable to able to access data
2. <https://www.ft.com/content/b2a3a617-8492-4e14-b50e-d4563a090514> - A report by Bain & Company warns that the surge in data centres, driven by the proliferation of artificial intelligence (AI), is expected to outstrip the United States' power supply by 2028. The consultancy projects that utilities will need to increase annual generation by up to 26% from 2023 levels to meet this demand. This escalation is anticipated to lead to a 1% annual rise in consumer electricity bills by 2032, highlighting the significant impact of AI on energy consumption and the broader economy.
3. <https://foreignpolicy.com/2024/10/28/ai-geopolitics-data-center-buildout-infrastructure/> - An article in Foreign Policy discusses the geopolitical implications of AI infrastructure, particularly focusing on data centres. It highlights that nations, rather than natural resources, will determine the locations of these facilities. The piece underscores the strategic importance of data centres in the AI era, noting that countries collaborating with tech companies to host these centres will gain economic, political, and technological advantages, while also addressing national security concerns associated with housing sensitive information.
4. <https://www.savills.com/impacts/market-trends/how-ai-is-supercharging-the-data-centre-sector.html> - A Savills report examines how artificial intelligence (AI) is transforming the data centre sector. It notes that the rise of generative AI has led to the creation of massive hyperscale data centres, which are energy-intensive. The report also highlights significant investments in the sector, such as Blackstone and the Canada Pension Plan's $16 billion acquisition of AirTrunk, and discusses the challenges related to energy consumption and the need for sustainable solutions in data centre operations.
5. <https://analyticsindiamag.com/ai-features/compute-is-the-new-oil/> - An article in Analytics India Magazine explores the analogy of 'compute is the new oil' in the context of AI advancements. It discusses how companies like OpenAI and Amazon are investing heavily in data centres to meet the growing demand for AI applications. The piece also touches upon the exponential growth in AI compute requirements and the challenges associated with scaling AI models, highlighting the central role of data centres in supporting this technological evolution.
6. <https://sprott.com/insights/the-ai-revolution-and-data-centers-a-new-frontier-in-energy-demand> - A Sprott article delves into the escalating energy demands of data centres due to the AI revolution. It projects that data centre electricity consumption in the U.S. could triple by 2030, reaching 390 terawatt-hours. The piece also discusses the critical materials required for data centre operations, such as uranium, lithium, nickel, and copper, and the potential supply challenges posed by the rapid expansion of AI-driven data centres.
7. <https://www.ajg.com/us/news-and-insights/features/2024/oct/ai-data-centers-powering-the-digital-economy/> - An article by AJG United States examines the role of AI data centres in powering the digital economy. It presents statistics on the proportion of global electricity demand attributed to data centres, cryptocurrencies, and AI, according to the International Energy Agency. The piece also discusses the projected growth in electricity consumption from data centres and the implications for energy security, highlighting the need for sustainable energy solutions to support the expanding digital infrastructure.