



£31bn AI investment faces short circuit from network crunch

What good are data centre commitments, if the UK cannot provide the grid connections to power them?

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AI investment and growth, that's the government promise following the recent UK-US tech prosperity deal. But behind the big numbers, the big headlines and the big talk is the worrying reality of the UK's ailing power infrastructure.

Microsoft alone announced a \$30 billion investment proposition for the UK. This announcement came on top of commitments from Google, Nvidia and CoreWeave. It was an amazing vote of confidence, suggesting the US continues to see potential in the UK – and Europe.

But those ambitions live or die on the delivery of data centres. And those data centres must have access to reliable and affordable power, to run 24/7.

The hype moment

Nvidia had a particular show of bonhomie, with founder and CEO Jensen Huang on stage with Prime Minister Keir Starmer and Secretary of State for Science Liz Kendall. The UK, we heard, was at a "Goldilocks moment", with [universities, startups and VCs converging to build a "golden network" for AI](#).

Huang had many positive words for the UK, noting it is the world's third largest market, with around 3,700 companies and 60,000 workers. To put that in perspective, that's more than there are welders in the UK.

More jobs are expected to follow, with Nvidia having promised to train 100,000 developers in AI by 2030.

Secretary of State for Business and Trade Peter Kyle talked about how the push for AI was not "just about London". The plans will reach across the country, to Belfast, Manchester and Edinburgh, he said, and beyond.

Nvidia plans to deploy 120,000 of its Blackwell GPUs, it said. As many as half of these should be up and running by 2026, for Microsoft, Nscale, OpenAI and CoreWeave.

Bytes or blocks

Judging by the slew of deals, the tech denizens of Silicon Valley are all in. For the beleaguered UK government, under pressure from various fiscal woes, this is extremely welcome.

But how is the UK actually going to execute on these big promises? The biggest risk is around power.

We're struggling to connect up new projects, both supply and demand. According to the most recent TEC register, the queue for connections runs into the late 2030s – there are 18 projects that are due to be connected in 2039.

This is an area on which National Grid is working. It has recently concluded an exercise requiring those in the queue to justify themselves and is working through this. In future, it aims to move to a more strategic way of thinking about how to deliver what we need as a country, rather than what investors want to provide.

How will this work with AI? Can we as a country avoid a new plague of zombie projects, this time comprised of speculative AI data centres?

New ways of thinking

If the government is serious about delivering on its AI growth plans, it will need more than just warm words and Silicon Valley-inspired photo ops.

AI data centres are exceptionally energy-intensive, requiring uninterrupted, high-quality electricity supply, large-scale cooling and ultra-low-latency fibre connectivity. They operate as "always-on" assets and are increasingly integrated with hybrid grid models, which may combine renewable generation, nuclear, gas-with-CCS and storage solutions.

As the UK's reliance on low carbon energy increases, there will be more pressure on the grid and grid planning.

Amidst the frenzy of AI announcements, National Grid [set out its own partnership with Emerald AI](#). The companies plan a live trial later this year, using Nvidia GPUs to adjust energy consumption dynamically – dialling a data centre up and down in response to the peaks and troughs of demand.

The UK has a generational opportunity to place itself at the heart of global AI infrastructure. The financial commitments already secured are significant, but their delivery hinges on infrastructure reform.

There is a need for accelerated action on grid connections, energy feedstock, logistics, and demand-side integration. Without this, investment will drift toward Ireland, Scandinavia and other regions offering more predictable conditions.

Ultimately, the battle for AI data-centre leadership is not about capital – it is about execution. If Britain can't solve its power puzzle quickly, these tech giants may find their prosperity elsewhere.

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