Data centre energy demands find their answer in nuclear electricity

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In the last month, Microsoft, Google, and Amazon have opted for nuclear energy as a key enabler of the AI revolution. Current and future generation nuclear reactors are to be deployed and partnered with big tech providing the power for their vast data centre expansions. Whilst the first movers are US projects, these are led by global mega-corporations with applications

Many organisations, including the big tech companies, have net zero or 100% low-carbon energy targets, but they also have growing 24/7 user demand for their services and thus a constant need for electricity. The conundrum of how to meet that requirement for clean, reliable, and secure base-load energy only has one real answer: nuclear.

Three things that suggest this is just the start of a tech and nuclear partnership powering the AI revolution:

Coalition of the ambitious provides certainty to end users and the supply chain

Like any major infrastructure project, political and financial support are paramount in decision making and providing certainty to the supply chain. This support has never been clearer with the goal to triple global nuclear capacity by 2050 announced by 25 countries at COP28 last year, endorsed by the nuclear industry through the @Net Zero Nuclear initiative, and supported by 14 major global banks and financial institutions **less than a month ago**. There is now a coalition of the ambitious ready to collaborate with the end energy users who are asking for nuclear power plants - the adage “if you build it, they will come” seems to be reversing "If they come, we'll build it".

This is the beginning of a wave, with electricity demand rising

The **International Energy Agency (IEA)** World Energy Outlook **last week forecast a sixfold increase** in electricity demand by 2050. The IEA’s Executive Director Fatih Birol described us as entering the “Age of Electricity“. While the need for this increased electrification is undeniable, electricity is an energy vector so we will need a mix of clean energy sources to generate it. Nuclear power is an essential component of the mix

It's Global – energy and data everywhere all at once

Energy makes the world go round, and indeed much of modern life now depends on digital technology that itself relies on power hungry data centres. The leaders and winner of this AI revolution will be those that can provide clean and reliable energy, so you can expect countries investing in their nuclear energy capabilities to have a head start.

Global demand for clean electricity is set to rise dramatically over the coming decades, driven by the need to decarbonize, to power economic development and meet the needs of almost a billion people still without regular access to electricity.

The emergence of data centres as a major new source of demand for clean electricity has only strengthened the imperative to accelerate deployment of clean electricity capacity, and the significant role of nuclear energy. The world needs energy, the world needs nuclear.

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