

Nuclear solutions emerge as AI's energy needs keep surging

Article

The trend: Big Tech companies are turning to nuclear energy to power resource-hungry [AI models](#) as their sustainability goals conflict with [data centers'](#) extensive water and electricity needs.

- **Microsoft plans to buy nuclear energy from [Three Mile Island](#)**, which will be revived by 2028 and supply energy only to Microsoft's data centers once operational.
- **Google will buy energy from Kairos Power's upcoming small modular reactor (SMR)**, which is scheduled to be online by 2030.
- **Sam Altman-backed Oklo**, a nuclear energy startup, signed a deal with **Switch** to build SMRs to power data centers that already serve Google, **Nvidia**, **Tesla**, and others. However, the agreement is nonbinding, and Oklo doesn't yet have approval from the **Nuclear Regulatory Commission**.

These deals will take years to produce benefits for the Big Tech giants, as the nuclear reactors involved are either not currently in operation or haven't been built yet.

Why go nuclear? Switching to more sustainable methods of powering data centers could help reduce internal energy costs and enhance public perception of the companies—**55% of US adults think businesses need to take a public stance on climate change**, per Bentley University and Gallup.

- Last year, [Google's and Microsoft's energy consumption](#) each outpaced that of more than 100 individual countries.
- **Meta's** data center energy consumption increased 34% YoY in 2023.

Hurdles to address: Powering AI with nuclear energy could still be a pipe dream with many potential roadblocks—two [nuclear energy projects have already been blocked](#), though regulators' decisions didn't come from concerns about nuclear waste or safety.

- **Amazon's** plan to funnel energy from a nuclear power plant into a scalable data center was rejected by energy regulators because of the project's potential to affect local electricity grids and increase energy costs for consumers.
- **Meta scraped a reported deal with an existing nuclear power plant operator after a rare bee species was identified** next to where it would have built a data center. It's now looking for a new developer partnership to build a reactor in another location.

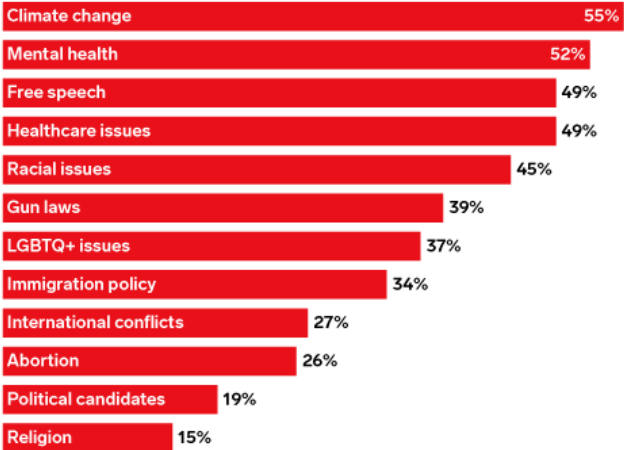
Our take: Operating nuclear sites—in addition to building [subsea cable infrastructure](#)—could add “energy provider” to these Big Tech giants' business descriptions. Regulators are already

scrutinizing how Google, Meta and others dominate their current fields, and **these moves could draw further regulatory attention.**

In addition, the manpower and resources needed to build and manage electricity plants and other infrastructure could spread the companies too thin.

Subjects US Adults Believe Businesses Should Take a Public Stance on, May 2023

% of respondents



Note: ages 18+
Source: Bentley University and Gallup, "Bentley-Gallup Business in Society Report," Oct 11, 2023

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